Arts, Religion, and the Environment

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Arts, Religion, and the Environment

Exploring Nature's Texture

Edited by

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Sigurd Bergmann
holds a doctorate in systematic theology from Lund University and is Professor in Religious Studies at the Department of Philosophy and Religious Studies at the Norwegian University of Science and Technology in Trondheim. His previous studies have investigated the relationship between the image of God and views of nature in late antiquity, the methodology of contextual theology, visual arts in the indigenous Arctic and Australia, as well as visual arts, architecture and religion. He has initiated the *European Forum on the Study of Religion and Environment*, and ongoing projects investigate the relation of space/place and religion and 'religion in climatic change'. His main publications are *Geist, der Natur befreit* (rev. ed. *Creation Set Free*); *God in Context*; *Architecture, Aesth/Ethics and Religion* (ed.); *Theology in Built Environments* (ed.); *In the Beginning is the Icon*; *Så främmande det lika* (on Sámi visual arts, globalisation and religion); *Raum und Geist*: *Zur Erdung und Beheimatung der Religion*; and *Religion, Space and the Environment*. Bergmann was a co-leader of the interdisciplinary programme 'Technical Spaces of Mobility' (2003–07) and co-edited *The Ethics of Mobilities*; *Nature, Space & the Sacred*; *Religion, Ecology & Gender*; *Religion and Dangerous Environmental Change*; *Religion in Environmental and Climate Change, and Christian Faith & Earth*. 2011–12 he was a visiting fellow at the Rachel Carson Center for Environment and Society in München. He is editor of a book series, board member of several international journals, and former leader of the section for philosophy, history of ideas and theology/religious studies in the Royal Norwegian Society of Sciences and Letters.

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Reiko Goto Collins
was born in Japan and is an environmental artist and researcher. Her creative practice is concerned with empathic relationships with living things for over twenty years. Reiko is currently focused on the development of new work dealing with empathic relationships, sentience and collaboration with a horse, a philosopher and an animal behavior scientist. She has been a participant in the women's group, the Council for Uncertain Human Futures at the Institute for Advanced Studies in the Humanities, University of Edinburgh.

Tim Collins
is from the US and is an artist, author and planner and an honorary research fellow at the University of Aberdeen. He works across science and philosophy to develop projects related to nature, culture and public space. He is currently collaborating with an anthropologist and a social scientist. Together Tim and Reiko are principals in the Collins and Goto Studio in Glasgow. They are currently focused on developing new work around the Centre for Nature in Cities (CNC). The first project The Caledonian Decoy will be an installation and a series of programs that play with the time and space of a forest in an urban setting. It is scheduled for exhibition in the Intermedia Gallery at CCA, Glasgow, in 2017. Other recent exhibitions include Future Stratigraphy at the University of Sydney, Australia; plans are underway to exhibit a touring version of Plein Air in USA in 2018.

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Tim Ingold

is Professor of Social Anthropology at the University of Aberdeen, and a Fellow of both the British Academy and the Royal Society of Edinburgh. Following 25 years at the University of Manchester, Ingold moved in 1999 to Aberdeen, where he went on to establish the UK's newest Department of Anthropology. Ingold has carried out ethnographic fieldwork among Saami and Finnish people in Lapland, and has written on comparative questions of environment, technology and social organisation in the circumpolar North, as well as on the

role of animals in human society, on issues in human ecology, and on evolutionary theory in anthropology, biology and history. He has subsequently explored the links between environmental perception and skilled practice, with a view to replacing traditional models of genetic and cultural transmission with a relational approach focusing on the growth of skills of perception and action within socio-environmental contexts of development. These ideas are presented in his book *The Perception of the Environment* (2000). In more recent research, Ingold has followed three lines of inquiry that emerged from his earlier work, concerning the dynamics of pedestrian movement, the creativity of practice, and the linearity of writing. These all came together in his book *Lines* (2007), along with three edited collections: *Creativity and Cultural Improvisation* (with Elizabeth Hallam, 2007), *Ways of Walking* (with Jo Lee Vergunst, 2008) and *Redrawing Anthropology* (2011), and in his collected essays, *Being Alive* (2011). Ingold has gone on to write and teach on issues on the interface between anthropology, archaeology, art and architecture, leading to his book, *Making*, published in 2013. He is currently directing the project *Knowing From the Inside: Anthropology, Art, Architecture and Design* (2013–18), with funding from the European Research Council. Ingold's latest book, *The Life of Lines*, was published in 2015.

Karolina Sobecka
is an artist and designer who has been working at the intersection of art, science and technology, examining social arrangements that exploit, resist or accommodate technological change. Karolina's recent projects are centered on experimentation in the fields of climate engineering and synthetic biology, considered in the larger context of climate disruption. Karolina's work has been shown internationally and has received numerous awards, including from Creative Capital, Rhizome, NYFA, Princess Grace Foundation, Eyebeam, Vida Art and Artificial Life Awards and Japan Media Arts Festival.

George Steinmann
is a visual artist, musician and researcher based in Bern, Switzerland. He studied painting at the University of Applied Arts in Basel, as well as painting, sound and Afro-American culture at the San Francisco Art Institute. His work focuses on the relationship between contemporary art and science and the interconnectness of art, culture and sustainability. He has completed transdisciplinary projects and conceived multimedia-based exhibitions at the Helmhaus Zürich, Salo Art Museum, Kunsthaus Interlaken, Kunstverein Kassel, Villa Elisabeth Berlin, Museum of Contemporary Art Helsinki, Kunsthalle Bern, Art Gallery of Ontario Toronto, The Contemporary Arts

Centre Cincinnati, Winnipeg Art Gallery, Centre Pasquart Biel, Lokaal 01 Breda, Centre for Contemporary Art and Architecture Stockholm, Gallery Heike Strelow Frankfurt/M., Pori Art Museum, Centre for Contemporary Art Nairs, and the ERES Foundation München. Steinmann also works as a musician, and his concerns include solo performances and tours (including many jazz festivals) with his own band and African-American artists such as Grammy Award winner Johnny Clyde Copeland. In recognition of his multidisciplinary work and lectures, Steinmann was awarded an honorary doctorate by the philosophical-historical Faculty of the University of Bern. His books include *Blue Notes* (Nürnberg/Zürich 2007), *Komi—A Growing Sculpture* (Bern 2007) and *Art without an Object but with Impact* (Basel 2012).

CHAPTER 1

Introduction: Exploring Nature's Texture

Sigurd Bergmann and Forrest Clingerman

Abstract

Humans are meaning-making animals. This introduction explains how this insight can serve as a starting point for explorations into the connections between art, nature, and spirituality.

Keywords

environmental aesthetics – nature – theology – ethics

From the *Either-or* to the *And*

Now that we are on the threshold of the Anthropocene epoch, how should humans envision and understand their place in the world? Do humans possess the necessary cultural tools to imagine new possibilities and relationships with the natural environment at a time when our material surroundings (the very system that supports us physically and spiritually) is under siege? To answer questions like these requires more than scientific explanation. Resolution will come from knowledge formation that takes seriously the moral, philosophical, and aesthetic perspectives human beings implicitly rely on to engage with the world. The answers, in other words, will come through the human community opening itself to an interdisciplinary – and even spiritual – exploration.

In that vein, this book addresses the imaginative possibilities of addressing the breakdown of the human relationship with the environment through the visual arts. Bringing together contributions from artists, theologians, anthropologists and philosophers, it investigates the arts as an important contemporary bridge between culture and nature, as well as between the human and more-than-human world. This bridge is nearly elemental, insofar as the visual arts highlight the perceptual and affective dimensions of our knowledge of the world. Visual art furthermore cultivates society's capacity to connect letters and sciences with the complex layers of the public square: with social

movements, political constellations, economic power holders, other cultural actors such as media, and the like. In the context of the emerging environmental humanities, the arts act as the strong substantial force of what Wassily Kandinsky called the connecting 'and' in his famous 1927 essay of that name (1973). For Kandinsky, connecting is the task of the arts, with the aim of overcoming our current social time of 'either-or.'

Underlying the work of the present book is a simple but important claim: humans are 'meaning-making animals.' Within a biological framework, humans organize and interpret experience, and through this process human reflection transcends biology. The human encounter with the world might be described as an attempt to intertwine the many facets of existence in a meaningful way. As the vibrant field of environmental aesthetics has shown, this intertwining is not simply a passive operation. We are creative beings as well: we construct and create works of meaning that re-imagine and re-interpret our sense of the world. To encounter the world, therefore, is a profoundly aesthetic experience, at least when we take the term 'aesthetic' in an embodied way that acknowledges the word's rootedness in perception.

But unlike what early modern philosophers of aesthetics suggested, our perceptual encounters cannot not reside solely in disinterested observation. Rather, environmental artists, philosophers and theologians see how closely connected sensing and acting are. Indeed, Arnold Berleant's call for an "aesthetics of engagement" (1992) in relation to the environment is a forceful reminder of how the active human perception of the world – the activity of aesthetic engagement – provides the much-needed groundwork for how we act and react to our physical, intellectual, and spiritual location. Insofar as perception is not mere reception, but equally an active engagement and possible transformation, we seek an aesth/ethics. Specifically, the essays collected here point toward an aesth/ethics of nature and culture that constitutes an intertwining of both theory and practice; it seeks a union of reflection and action in the space of being.

Certainly the connection of thinking and acting happens in all spheres of existence. But there is something unique about the realm of human artistic creation. The authors here argue that an interconnecting aesth/ethics is nowhere more apparent than in the human creation of artworks. Artworks are not mere decoration, but endeavors to interrogate the meaning of being human. Artworks distill and intensify the aesthetic engagement with the world; they also challenge our preconceptions. Acknowledging the intertwining of nature and culture that exists in the work of art thus raises other questions: How might the work of art facilitate our interpretation of the meaning of environments? When humans seek meaning, how do the arts provide a reflexive way of perceiving the meaning of the world? Can artworks offer a way to transcend

the power of other forms of human artifacts – especially technological ones – found in-between humans and environments? The authors in this collection of essays reflect on these questions in order to show the interconnection between the human urge to create meaning and the natural world that serves as our surroundings.

Another way to explain this is to say that the present authors have gathered together to *explore nature's texture* in and through the cultural work of the arts. The notion of texture emphasizes not the alleged deep and unseen part of a natural phenomenon or artwork, but instead invites us to gaze on the surface. Talking about nature's texture forces us to stay in touch with the material appearance of life, rather than speculating about its inherent qualities. Indeed, placing nature's texture into conversation with the unseen air and the atmospheric – areas more frequently discussed in environmental humanities – is one of the more thought-provoking questions that results from this collection. Experiencing nature's texture is in that way regarded as an essential skill of "being alive" through "perceiving the environment" (the titles of two of Tim Ingold's influential works).

Throughout this book, nature's texture is encountered in different ways. While texture in the sciences refers to different qualities of the surface of material and geological phenomena, textures in the arts are qualities that lead the eye to what happens visually on the canvas, textile, or other medium. The texture of an artwork represents the elementary sphere wherein meaning can arise. Necessarily, it allows the unseen to take place and shape, and bodily it allows senses, the sight and the touch, to start to interact. Talking about nature's texture in this context overcomes the reduction of simply seeing (and interpreting) nature and expands human bodily-being-in-touch with life and its carrying forces. Several of the artistic processes that are presented here allow for such a synesthetic mode of approaching the environment. Touching, seeing and interpreting nature, as well as experiencing the atmosphere and our weather lands in flux, will hopefully in this way also be encouraged through this volume. Exploring nature's texture through ethics, the arts and faith can then turn into a rich tool to manifest what Goethe had in mind by claiming that "only in the world she becomes aware of herself." Only within nature and the world the human can become aware of herself.

The Context of Exploring Nature's Texture

A focus on embodied perception recognizes the ways that context and perspective informs reflection and engagement. It is only fitting, then, to acknowledge the context from which these essays emerged. The work of this collection

originated in a seminar workshop held at the Ernst Haeckel Haus in Jena, Germany, in the Spring of 2014. The director of the Ernst Haeckel Haus and distinguished theoretical biologist, Olaf Breidbach, was pivotal in hosting this event (tragically at the time of the seminar itself Breidbach was battling a severe illness, and he has since passed away). This project was unique in drawing together well-established scholars and artists to show the ways that the arts foster distinctively human capacities of imagination, empathy, and creativity. Throughout this project, the collaborators have seen how the visual arts exercise our abilities to see the world in new and hopeful ways. The workshop in Jena in 2014 made it also possible to continue and deepen an earlier initiated cooperation of artists, biologists, scholars of religion and philosophers in the same thematic field with a certain focus on landscape. This earlier event took place on the island of Hiddensee in the German part of the southeastern part of the Baltic Sea in May 2010, and its results have been published in 2013.

While this volume directly emerged from workshops in Hiddensee and Jena, it also has roots in larger interdisciplinary conversations around the environment. Especially since the 1970s, environmental challenges have led to a process of several relatively interconnected, valuable responses in previously autonomous disciplines: the environmental sciences and climatology, social science research on the environment, and the increasing synergy of disciplines in the so-called *environmental humanities*. This mobilization in the sciences and humanities has gone hand-in-hand with the emergence and development of environmentalism in the sphere of social movements, which again has had an impact on society and culture, especially including politics – from local to global – as well as the economy. An important insight comes out of these discussions: "spaces-in-between" are of specific interest as "nature" always takes place between people, and between humans and other beings. This "in-betweenness" exists because we are caught in the tensions between multiple levels of relationality. "[T]hese tensions become productive only when our political encounter with nature finds a unity amidst the differences in our interpretations of space" (Clingerman 2015: 135). Therefore it should not be surprising that the artists and scholars in this volume explore the complexity of the spatial in-betweenness with and within nature.[1]

Undoubtedly, the invention of the notion of *environmental humanities*, to which also this volume intends to contribute, has done much good in starting to heal the asymmetry between the faculties in the global academy.

1 For a discussion of how the ecological turn and the spatial turn are interconnected see the special issue of *Worldviews: Global Religions, Culture, and Ecology* (Vol. 20, No. 3, 2016) on the theme of "Spatial turns in religion and the environment," edited by Sigurd Bergmann.

Interdisciplinary collaboration centered in the humanities is significant for facilitating a more holistic reflection on human inclusion in the environment. Since the theoretical and methodological limits of earlier models of (environmental) science still represent a hindrance for in-depth and integrated cooperation in some ways, one can almost intuit the beginning of a new, alternative mode of scholarly exploration of the world. For example, due to their global success climatologists have begun to confront the limits of empirical analysis and computer-based simulations – discovering, in effect, that human beings are not as easy to predict and include in simulations as initially hypothesized. Facing a question, such as how much suffering a human can take and how he or she might respond, leads scientists intellectual tools of the environmental humanities. The study of religion plays a unique role in this: religious belief systems are veterans in dealing with suffering and uncertainty. Religious traditions provide values, as well as skills of empathy and compassion, for the path to a new sustainable and ecojust world.

Seeing, Wondering, and Connecting

This volume contains nine chapters, placed in such a way as to elicit links across the authors' reflections, as well as with awareness to the unique conversation that emerges in the volume between artists and scholars. In fact, the theme of *connections* is pivotal: connections about the relationship between aesthetics, nature, culture, and the work of art. But before we can fully engage the connections made, it is important to show how rooted our experience of art and nature is in perception (in the case of visual arts, this is particularly the sensation of sight). We also must acknowledge the affective and reflective dimensions of wonder. In the case of both nature and art, wonder is a nearly liminal state, found between thinking and sensing, interpreting and encountering. Through the themes of seeing, wondering, and connecting, the chapters raise different discussions surrounding the experience of art and nature, as well as the entanglements between them. Themes and motifs raised by the authors include such things as empathy, imagination, ethics, science and technology, wildness versus cultivation, and our interpretation of both art and nature.

The first two chapters orient the reader to provide the reader with an venue to explore human perception and seeing. In Chapter 2, theologian *Sigurd Bergmann* reformulates one of the book's central questions – "how might the work of art facilitate our interpretation of the meaning of environments?" – into something more spatially focused: What does art do to me as the space and spirit where I am? For Bergmann, space is understood as an essential

all-embracing quality of life. To better grasp this, a phenomenological understanding of atmospheres assists to overcome dichotomist modes of perceiving, thinking and acting. Time is in such a view not homologous to space but rather integrated in an overarching way; art is regarded as a skill of encountering the future by compressing the past.

Following Marcuse's understanding of the critical function of art, art appears as a place of a manifested utopia where the future and past encounter each other, a place that transfigures "the space where I am". Theologically regarded the production of art, and the reception of artifacts as a place-within-nature reveals the skill of humans to fabricate meaning and to experiment creatively with modes of existence which are able to manifest authentic utopia based on reminiscence. Reflecting about the Triune Spirit as a liberator of nature, the Spirit appears as a "being-of-the-one-in-or-with-the-other."

What is true for theology might also become true for environmental arts: Not propositional knowing but prepositional knowing is at core. Art works might then be regarded as products from human skills to manifest how the one lives within and for the other and how past and future encounter each other. Environmental art, departing from the intrinsic value of nature and sometimes also from a neo-animistic understanding of its spiritual life, rather advocates empathy and respect than commodification and utilitarian usage. Can art, in comparison with technology, assist in placing the artifact at the nexus between the material reproduction of our daily life, our relationship to nature, our social relations and our world view and belief, and serve as a critical and constructive mediator? Can its erotic beauty and its capacity for neo-animating produce a countervailing power that resists and overcomes commodification and alienation? After an analysis of Aboriginal Art in Australia, which inspires such a view about the continuum of time in space, the chapter ends with a reflection about weather. The connection weather and religion is depicted historically and J.M.W. Turner's paintings are studied as inventions of "weather" in the modern sense. Being alive now means to be exposed to a continuous flow of change and not to command any certainties. Weather teaches us to accept to be at the mercy. Turner and his color paintings therefore offer an outstanding place where one can become aware of being within the world, and to discover and accept the world with all its power of change within oneself.

Artist *Karolina Sobecka* complements the theoretical and aesth/ethical meditations of Bergmann by calling for an atmospheric turn in design, environmental aesthetics and cultural theory in Chapter 3. She focuses on the air and its non-visuality that prevents it from capturing our imaginations. According to her, the unseen has to be invoked conceptually, and this requires distance. However, the imperceptibility of the air is in part due to the fact that it

is everywhere: if it disappeared, we would notice its lack instantly. So what are some strategies to bring the atmosphere into focus, to wrestle a bit of tangibility out of the vastness, invisibility and complexity of this abstraction? What could be some experiments on the materiality of the air that would help us shape its imaginary? The author's reflections are anchored in her art work, for example, the performative pieces that she has called "CloudServices," as well as a recent workshop with artists, scientists and geoengineers on the descriptions of experiments on the atmosphere. At the hands of Sobecka, the notion of atmosphere overcomes dichotomies between nature and culture, and the transition to an atmospheric worldview follows what might be described as modernity's shift from a solid to a fluid worldview. Sobecka explores the atmospheric turn in different artistic experiments which are inspiringly described in detail in the chapter, and she interconnects them to different philosophical elaborations, revealing the exciting potentials of an atmospheric turn. Her chapter concludes with a thought provoking inspiration of a new way of approaching change: "As we're experiencing the atmospheric turn, internalizing uncertainty and change as inherent aspects of our reality, we can start discerning not only what change means, what continuity and curvature mean, but also start to understand nuance about how various rates of changes of different entities interact and synchronize, start building our ways of seeing differently premised on uncertainty and variability."

The next three chapters form a tryptich on a sense of wonder, which is elemental in human encounters with religion, nature, and art. Indeed, the topic of wonder pervades the origins of this volume, insofar as Ernst Haeckel's work was paradigmatic for a transdisciplinary and imaginative view of the world. Visiting the impressive Ernst Haeckel House in Jena, one cannot only dive into the laboratory, library and working rooms of the influential biologist and inventor of modern "ecology" in the house that Haeckel himself built as his living and working space, but one will also find strongly expressive and colorful paintings on the walls. Beside his career as a scientist Haeckel had also developed his arts of painting where mythology and biology are intertwined in quite a peculiar artistic mode (Breidbach 2006).

In Chapter 4, theologian *Whitney A. Bauman* develops a deeper reading of Haeckel's work in the context of spirituality, nature, and art. Bauman departs from a central quote in Haeckel's writings which misleadingly has led to an understanding of the ecologist as some type of precursor to contemporary mystical environmentalists: "The whole marvelous panorama of life that spreads over the surface of our globe is, in the last analysis, transformed sunlight." (Haeckel 1900: 139). However, nothing could be further from the truth, at least based upon his own self-understanding. Haeckel was arguing for a

monistic, materialistic understanding of the world against what he perceived as the dogma of theology and the wrong-headedness of German idealism in philosophy. He thought the emerging scientific method – relying on sensory observations and experimentation – would provide the new framework for understanding everything, including all things human. What we see as 'wonder' in his art works and in his writings were to him attempts at explaining this monistic, evolutionary 'scientific' view of the world. Of course, such a reading to him was 'wonder-filled' in the sense that wonder is that which continuously keeps the observer focused on the new and unknown. Haeckel was, like Alexander von Humboldt before him, engaged in bringing together what were at the time disparate sciences: geology, evolution, zoology, embryology, physics and cosmology, and his newly coined 'ecology', in the construction of a new, naturalistic worldview that brought all of these things together into a single explanatory story. He argued that the guiding principles for such a story would be the old Greek trinity of: goodness, beauty, and truth. Many of the connections he made between various plant and animal organisms, and between the various sciences, were depicted in a number of his paintings and sketches. The most well-known of these can be found in his *Kunstformen der Natur*. He sought in these drawings to sketch out the similarities in forms across many very different and very diverse species and in doing so challenged the dominant theological aesthetics of the Christian west at the time. Bauman's chapter analyzes some of Haeckel's sketches and paintings and the way that he challenged three primary aesthetic categories through them: that between biotic and abiotic things in the world, that between plant and animal life, and that between humans and the rest of the animal world. It was from within these curious borders and crossings that Haeckel wondered most about constructing a naturalistic worldview that would fundamentally shift how we understood humans within the rest of the evolving planetary community.

Art without an Object but with Impact (*Kunst ohne Werk aber mit Wirkung*) is the title of a project realized by the Swiss artist *George Steinmann* together with Bauart Architects Ltd Bern for the ARA Region Bern Ltd. Steinmann's contribution shows his workings of the artist by reproducing his artist's talk from the originating workshop. The talk published here provides a reflection by the artist on meaning of this work, especially how it can be understood in connection with other areas of research and inquiry. This transdisciplinary process for the new headquarters of Switzerland's leading wastewater treatment facility (each day 90 million liters of wastewater is cleaned by the wastewater treatment system before it is returned to the river Aare) began in July 2008 and ended in December 2011. The project, presented in this chapter, is based on two Interventions. In 'Intervention A', water from three curative mineral springs of

the Engadin valley in Eastern Switzerland (well-known in medieval times and described by Paracelsus) has been added to all water-based material and elements used for the construction of the building. Although the effect of this step remains immaterial and invisible, the mineral water itself and its energy are in the building as 'information', which penetrates the material and creates a resonating space. In 'Intervention B', a Water Advisory Board (*Wasserbeirat*) has been convened to discuss the various problems pertaining to water. Key topics given by the artist were 'Gender and Water', 'The Aesthetics of Water', 'Human Rights and Water Sanitation', 'Potential Agricultural Water Pollutants', 'Water Strategies in Switzerland', and 'Global Water Initiatives', among others. Resulting from the roundtables, a 'Forum for Water' (*Wasserforum*) was established in the new building. The close cooperation of all participants, including the construction workers, as part of the artist's strategy, neutralizes the traditionally decorative role of the artist and leads to a critical examination of the artist's role in building-site art projects in general. By combining sociopolitical, aesthetic, natural scientific, and communicative elements, Steinmann has realized a transdisciplinary contribution to the field of art as research.

Anthropologist *Tim Ingold's* chapter also offers a self-reflection of the author, giving Ingold's personal reflection about the pendulum of an anthropologist who moves forth and back between science and art. Over a forty-year career in environmental anthropology, the author has found himself drifting inexorably from an engagement with science to an engagement with art. This was also a period during which science increasingly lost its ecological bearings, while the arts increasingly gained them. This chapter traces this journey in the author's own teaching and research, showing how the literary reference points changed, from foundational texts in human and animal ecology, now largely forgotten, through attempts to marry the social and the ecological inspired by the Marxian revival, to contemporary writing on post-humanism and the conditions of the Anthropocene. For Ingold this has been an Odyssey – a journey home – to the kind of science imbibed in childhood, as the son of a prominent mycologist. This was a science grounded in tacit wonder at the exquisite beauty of the natural world, and in silent gratitude for what we owe to this world for our existence. Today's science, however, has turned wonder and gratitude into commodities. They no longer guide its practices, but are rather invoked to advertise its results. The goals of science are modeling, prediction and control. Is that why, more and more, we turn to art to rediscover the humility that science has lost?

The next three chapters bring the theme of connections into more explicit relief. In the seventh chapter, collaborative environmental artists *Reiko Goto* and *Timothy Collins* take the reader to the Black Wood in Scotland, where they

have undertaken long-term explorations in the lens of environmental art. What does it mean to have an empathic relationship with a forest landscape? Can art contribute to this idea in any fundamental way? This chapter focuses on two years of creative work that focused on a woodland, in a small community of Rannoch in the southern Highlands of Scotland. In order to observe the place the artists took on three residencies beginning with the community and working within the forest itself. They also did a residency with the regional museum, and the archives of the Forestry Commission. They did a final round of work with Forest Research for a period of months. Methods included walking and talking in the forest, consideration of the records or the 'cultural ecology' which emerged in the archives and records and eventually considering what was missing, they began to think about the social ecologies with a social scientist, and began an ongoing discussion and mapping of Gaelic place names.

Their work in the Forest yielded a number of insights built around empathy, the understanding of the other. We understand the other through facial expression, tone of the voice and body gesture. Our body is like a container or substance that holds and transmits our thoughts and feelings. A person's state of mind can be described as a metaphor through body and mind relationship. These metaphors can take many forms, such as visual, mathematical, linguistic, and musical. As is seen by Goto and Collins, a place name is a metaphor that provides a possibility for empathy. This raises an important question for the authors: how are empathic interrelationships between people and land revealed in the cultural records that attend the Black Wood? The artists are interested in how a reading of history and its application in the present can reshape perception and normative value. To do this work, they tried to think about and experience the forest from different perspectives. Thinking about that place as a local community asset, as one of the largest most southern Caledonian forests to be managed; and as a historic landscape that was lived in, worked in and fought over for centuries. Looking at the broader landscape, the Gaelic place names reveal the passage of wildlife and farm animals along with impressions and ideas about land formation, colors and history. In this complex historical record of experience, we find ideas that support contemporary perception that is rich and useful as a broad context to be used as we think about future forests.

Philosopher *Arto Haapala* approaches Chapter 8 to show how gardens represent a connection between nature, aesthetics and human design. Environmental aesthetics has, according to him, been traditionally concerned with two spatial areas – natural environment and built environment. A paradigmatic case of the former is architecture, of the latter untouched wilderness. But there are interesting cases which fall somewhere in-between human

design and nature – gardens and parks are prime examples. Here the author studies aesthetic problems of small-scale managed nature, small gardens and parks which are typically parts of an individual property, a house or a housing estate. Haapala argues that there are two sets of principles that can be applied when appreciating gardens and parks aesthetically: those drawn from nature, and those drawn from built environment. Unlike many contemporary aestheticians, he argues that there is no uniform concept of the *aesthetic*. This can be shown, for example, by looking at the ways in which our aesthetic judgments of nature differ from judgments of artifacts, including works of art and architecture. The author argues against theorists such as Allen Carlson, Holmes Rolston and Marcia Eaton, who claim that the aesthetic appreciation of nature is somehow conditioned and ruled by concepts and categories from natural sciences. Different kinds of categories are relevant in understanding and appreciating artifacts, but not in nature appreciation. This dichotomy is reflected in our aesthetic judgments of gardens and parks. Often gardens are managed to the degree that they are completely artifactualized, natural objects are used as materials for various kinds of human-made things. But also wilderness can dominate gardens – at least to a certain degree.

In the following chapter theologian *J. Sage Elwell* unfolds a rich meditation on the work of Hans Breder and Ana Mendieta, as well as an accompanying interview with Hans Breder. Ana Mendieta (1948–1985) was a Cuban-born painter, sculptor and performance artist. The earth and the feminine were dominant and consistent themes throughout her brief career and are presented most powerfully in her *Silueta Series*. Mendieta described the *Silueta Series* as 'earth-body' sculptures. For these pieces she created outlines of her own body and the female form generally in natural materials ranging from flowers and branches to fire. This chapter examines Mendieta's exploration of earth and body in her *Silueta Series* and includes an interview with her former teacher, lover, and collaborator Hans Breder. The first section of the chapter presents a brief biographical sketch of Breder and Mendieta followed by an exploration of their independent and collaborative work together, attending in particular to the place of the body and/in nature in Mendieta's *Silueta Series* and Breder's body-mirror series. The second section interrogates their work in order to understand the dialectical aesth/ethics of the sacred/profane liminality where embodiment meets environment. This section explores the relationship between Breder and Mendieta's differing, but parallel, aesthetic sensibilities and the concomitant ethical commitments they imply. The final portion of the chapter includes a 2016 interview with Hans Breder – one of the last before his death – wherein he reflects on Mendieta's life and work.

Chapter 10 serves as a conclusion for the volume, implicitly showing why our seeing, wondering, and connecting are vital in the current circumstances. Theologian *Forrest Clingerman* concludes this volume with an examination into the aesthetic roots of environmental amnesia. In the context of hypermodernity – a world that is in the confusing space at the fuzzy border between such things as the secular, sacred, global, local, economic, scientific, and technological sphere of human existence – he asks whether we should dwell on the meaning of our surroundings. This suggests a tension: on the one hand, the human understanding of environments (both built and natural spaces) implicitly shows our need to connect who we are and where we exist. On the other hand, there also exists a tension between a seemingly basic immediacy of environmental experience and our mediating interpretation of environments, which creates a "crisis of meaning." That is to say, we continue to acknowledge the need for a multivalent relationship with the environment, but simultaneously often fall into an understanding of actual environments that is utilitarian, flattened, and distorted. Returning to a theme found in Bergmann's chapter, Clingerman suggests that we have lost a sense of "the space that I am," and thus we have become unable to find adequate sense of how to dwell in places, landscapes, and environments. This chapter suggests that this crisis of meaning has aesthetic roots, and in turn, how the arts might serve as critique and antidote. To argue this point, Clingerman first explains how at least part of our current crisis of meaning is the result of our environmental amnesia, or the lack of understanding the temporal and spatial thickness of our surroundings. This amnesia is not merely a forgetfulness of how to encounter environments in general; it is equally a loss of home and place. Next, he shows how environmental amnesia is rooted in the breakdown of our aesth/ethics of place. There are aesthetic roots to our environmental amnesia, especially when we understand aesthetics as related to perceptual interactions. A local ethics is needed, but lest this ethics becomes mired too deeply in the past, so too imagination is a tool for understanding a place-focused ethics. Finally, the chapter concludes by drawing on sentiments found in the chapters by Goto and Collins, Steinmann, and Sobecka: the human experience of the arts – as perceptually penetrating our relationship with space and time – become an imaginative practice of combatting the effects of environmental crisis.

Throughout, the authors of this volume are attempting to break some longstanding boundaries in order to fully explore the artistic and material dimensions of nature's texture. As a result, the individual chapters contribute to a larger transdisciplinary dialogue between the activity of artists and the meditations of philosophers and theologians. With this in mind, the editors hope that these studies and reflections offer a hopeful alternative to the overhumanized

future envisioned by some narratives of the Anthropocene. What is desired throughout these essays, in sum, is a recuperation of the bonds between culture and nature, art and science, spirit and matter.

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PART 1

Seeing

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CHAPTER 2

With-In: Towards an Aesth/Ethics of Prepositions

Sigurd Bergmann

Abstract

What does art do to me as the space and spirit where I am? Inspired by Marcuse, art for me appears as a place of a manifested utopia where the future and past encounter each other, a place that transfigures the space where I am. The chapter title "with-in" tries to delineate how the one lies in the other, the perceiving/knowing of oneself in the environment and the environment become aware of itself within the human. Reflecting about the Triune Spirit as a liberator of nature, the Spirit appears as a "being-of-the-one-in-or-with-the-other." What is true for theology might also become true for environmental arts: Not propositional knowing but prepositional knowing is at core. As God appears as the God of the Here and Now within lived spaces of creation also environmental arts emerge as skills to manifest in space how the one exists and lives *in, with and for* the other and how the one emerges *out of* the past *into* the present and future. Artworks might then be regarded as products from human skills to manifest how the one lives within and for the other and how past and future encounter each other. Environmental art rather advocates empathy and respect than commodification and utilitarian usage. Can art, in comparison with technology, assist in placing the artefact at the nexus between the material reproduction of our daily life, our relationship to nature, our social relations and our world view and belief, and serve as a critical and constructive mediator? Can its erotic beauty and its capacity for neo-animating produce a countervailing power that resists and overcomes commodification and alienation?

Keywords

art – environment – Spirit – space – empathy

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Der Mensch kennt nur sich selbst, insofern er die Welt kennt, die er nur in sich und sich nur in ihr gewahr wird. ("The human being only knows

herself as far as she knows the world, which she only becomes aware of in herself, and only in the world she becomes aware of herself")

GOETHE 1817–24: 306–309

Goethe's programmatic statement was formulated against the classical imperative "Know yourself!" which he accused of being designed to confuse and to produce a false introspectiveness that leads the senses away from the environment. Today it seems what beckons is not the Oracle of Delphi's wisdom to know oneself, but the late modern one-dimensional man characterized by autocracy, egocentrism, and anthropocentrism. In a culture of self-mirroring and self-measurement, Goethe's formulation makes us aware of the significance of our surrounding world, nature, and the environment. Only by perceiving the environment within ourselves can one gain knowledge about oneself. The world and the self are indissolubly interwoven.

Art Making Me Aware of the World as Space Within

One way to promote and foster such a reciprocal perception of the self in the world and the world in the self takes place through art, whether through the production or the reception of art. In this view, art receives not simply the capacity to educate and sharpen our senses with regard to our surroundings, but also occurs as a practice that affects the world as well as me. To stay in Goethe's words, art makes me aware about the world around and within me, and it makes nature aware about the human within itself.

What I have circumscribed as nature, environment, and world should in the first place be interpreted as space and place. While modernity has continued the legacy of Western thinking where time and history have been given priority in our understanding of reality, spatiality appears for me nevertheless as the foundational category of living. Without denying time as an existential of being, the German word *Raum* expresses both dimensions of the English notions of space and place, and represents the fundamental quality of being alive.

Space is hereby understood as an essential all-embracing quality of life, where a phenomenological understanding of atmospheres assists to overcome dichotomist modes of perceiving, thinking, and acting (Bergmann, 2014). In such a view, time is not homologous to space but rather integrated in an

overarching way. Inspired by Wagner's vision of time turned into space[1] and alluding to a poetic Sami formulation – so far away the close, so present the past (See Valkeapää 1994) – I regard art as a skill of encountering the future by compressing the past. Art becomes, in such a perspective, a place where time turns into space. It creates a location where lived space – that is the synthesis of physical and mental space – becomes perceivable and memorable. It helps to experience the memorability of nature within and around us and it allows us to perceive ourselves in the mirror of nature. Art does something to me as the space where I am, and it does something to me as the spirit which I am.

Orientational Knowledge

George Steinmann's photograph of a primal forest in Finland, in his project *In the Midst on the Margins* (figure 2.1), visualizes what I have in mind. The artist has visited "places that no longer have any clear visual, spatial, or social coding" and without any "perspectival orientation." Steinmann approaches the forest as a place to look "for categories that point towards the future." In his eye, "forests provide a wealth of information relating to the future viability of society" (george-steinmann.ch).

Even if I emotionally approach such a place with a painful uncomfortableness that might mirror my background of being born and raised in open, flat lands in northern Germany, it also strongly engages both intuition and reason. Is it difficult and nearly impossible to orient oneself properly at such a place?

FIGURE 2.1
Kaitajärvi, Lemi, Finland, *George J. Steinmann, photograph. Black and white print; 24 × 36 cm; July 26, 2001*
HTTP://WWW.GEORGE-STEINMANN.CH/13MARGINS.HTML. MARCH 26, 2014

1 In the second half of the first act: *Du siehst, mein Sohn,/zum Raum wird hier die Zeit.* (You see, my son,/here time turns into space.)

Or is it the overwhelming wealth of the vegetation's morphology that gives birth to both discomfort and curiosity? The photograph itself will not offer any answer and neither will the artist. The key to understanding oneself within the world will rather be revealed by the forest itself. Rather than formulating an answer, it is the question and the process of seeking that draws imagination into a tempting and transforming process. The forest can then both embrace and reject. It can either allow or refuse me entrance. The photo does something to me as it challenges and changes the space where I am. It accurately establishes a relation between its own and my place. How does it point to the future? How are our futures connected? Maybe by growth? What can the long timeline of growth of vegetation in such a place teach about social growth and our limited narrow understandings of economic growth? Can it encourage prioritizing orientational knowledge (*Orientierungswissen*) over power driven instrumental knowledge (*machtförmiges Verfügungswissen*)? (See Kurt 2007). If art serves as a place where the skill to compress the past for the future can emerge and where we learn to know ourselves within nature, it sometimes seems necessary to let art move us into "the midst on the margins," where the experience of non-locatedness, disorientation, and overwhelming diversity serves as a necessary presupposition to leave this world behind and become able to perceive, think, and act anew.

In such a view, art offers a deeply critical practice – or should we say a 'critical place' – as it radically challenges the foundations of our self-understanding and the understanding of the world. Environmentally conscious artwork questions and transforms conventional ontologies and epistemologies, and even if it cannot necessarily immediately replace these, it can cultivate the ground and fertilize the soil wherein new seeds can grow and new fruits can be harvested. If I am "the space where I am," to express it in the words of Noel Arnaud (qtd. in Bachelard 1969: 137), external and internal space, the inner and the outer world, represent a common continuum where imagination and remembrance, experience and reflection grow together. Artwork enters "the space where I am" and provokes it by establishing a place from where "the space where I am" is seen anew. Even if art has historically developed many powerful, illuminating, decorating, prettifying, and obscuring practices, my understanding of environmentally conscious art implies a necessary critical moment.

Environmental Art as Critical Place of Manifested Utopia

An environmental artwork can also be characterized as a place-creating process; to be more specific, as an artistic creation of 'critical place' (Bergmann

2016). Similar to the reflections about "critical place-based pedagogy" in the field of environmental education (Gruenewald 2003: 3–12), where one acknowledges a specific intrinsic value in places for the enhancement of critical awareness and empathy, such an understanding of environmental art as critical places creates rooms, lands, and territories where and wherewith human critical skills can grow and flourish. At such critical places, nature can serve in the way that Goethe imagines in the introductory quote: Environmental art creates a critical place where it is nature that generates the self-awareness of men and women. At such critical places the human becomes aware of herself in and within the world. Exploring nature's texture would then focus the human who explores herself in the mirror of nature, but nature also explores the human as a living part of her own texture. The critical place of environmental art (and art critic) is to reveal the reciprocity and interaction of this double deep exploration: exploring oneself within the texture of nature and letting nature explore itself.

Critical places, enhanced by environmental art, further serve as ecological places of cosmic making-oneself-at-home (*Beheimatung*), and they offer places for the development and maturing of empathy and compassion for and with the strange. They offer places for remembrance as well as for experimentation with utopias, not yet seen but nevertheless sensible emerging places of the future.

Herbert Marcuse's interpretation of the performance of art can serve as a guiding principle here. For Marcuse, art's radical potential is partly found in the "political Eros" that rebels against a repressing reality principle, and partly in the ability to retain "the promise of happiness together with the aims that has not yet been reached" (1975: 70).

Marcuse also asserts that the individual's lack of freedom is reflected in the autonomy of art. Art makes a critical contribution to the struggle for liberation through its aesthetic form. For Marcuse, art is an authentic utopia based on reminiscence. For me, art therefore appears as a place of manifested utopia where the future and past encounter each other. It is a place, or convergence point, that transfigures the space where I am.[2]

In such a view, the task of art is to compress the past and the future in a way that the future ahead of us can again become open and our inner eye can find a path to see and slowly walk into it. In what sense this not-yet-seen but see-able quality in art represents an emancipated, liberated state of being that cannot

2 See Clingerman and Dixon (2011) on places as convergence points in *Placing Nature on the Borders of Religion, Philosophy and Ethics*.

possibly be decided by principles. Only by experimenting in the creative frame of artistic freedom may horizons widen and new shores become visible.

Theologically, one can find an analogy to this view in God's promise to Abraham to lead the people to "a land that I will show you" (Genesis 12:1). The Promised Land exists already; it becomes visual in the Creator's eye and can be shown. Similarly, art will gain some kind of divine power if we regard it, by following Marcuse, as holding the power to create an authentic utopia based on reminiscence. Art can arrange new utopias, it can show and visualize not-yet-seen lands and places.

Hereby art can nearly be circumscribed as erotic. In Plato's view the erotic desire for the attracted develops as an active power which draws the one to the other, and which enters the circle of reciprocal attraction of love and beauty. Early Christian theologians were deeply fascinated by platonic interpretations of the erotic and have revised and integrated them into their belief system where God as the uttermost source of love draws the creatures into an ongoing process of reciprocal attraction so that human beings advance on the path of deification, becoming godlike.

Alluding to such views today might allow us to describe even art as a mode of entering the process of reciprocal attraction where the imagination and bodily experience of anticipated utopias unfold a divine power to draw the creatures and the creation into a process of liberation. Art would, in such a perspective, serve as a divine tool to draw the creation closer toward the Creator. It would serve as a political Eros where seeing the land that God shows us encourages the first step to move closer towards it. Certainly such an interpretation of art would produce a couple of questions with regard to the historical context of late antiquity Eastern theology as well as to the link between Plato's Eros and Marcuse's utopia. Nevertheless, the patristic vision of God's love that draws the created beings closer and closer towards the Creator and a liberated cosmos (as described in Oratio 2.76 of Gregory of Nazianzus) might generate a new imaginative power for faith communities as well as for artistic commitment, and it might encourage and nurture new constructive interactions between churches and artists. Every sacred space is, by the way, following such a foundational code, where the uncreated divine and the created earthly and historical meet at a specifically designed built environment. Might we then also regard environmental art as a similar sacred space for experiments with our anticipated common sustainable future? Provokingly formulated, art as religion?

Austrian artist Joseph Anton Koch was deeply impressed by Kant's philosophy and the ideas of enlightenment and liberation. In his famous paintings of a waterfall which increases its enormous force on the way downhill, Koch has

FIGURE 2.2 Das Opfer Noahs, *Joseph Anton Koch. c. 1803; 86 × 116 cm*
STÄDEL MUSEUM, FRANKFURT AM MAIN

used a strong metaphor from natural scenography to visualize the power of reason and the human strength to move towards his/her liberation.

In this scene (figure 2.2) Koch depicts the state of humanity after the flood (Genesis 8:20–22). Threatening cold gray and dark colors in the background are contrasted with warm green and yellow tones. The ark is stranded on a steep hill; it now belongs to the past. Dark clouds are driven out of the picture towards the upper left and a warm and sunny sky appears from the back. Greening leaves on the trees, some uprooted and still bearing wounds from the storm and flood, clouds soaked in sun glitter, flourishing lands, and animals now free and grazing fresh feed, all bathing in the light of a new given life.

While the peacock in the foreground represents the resurrected Christ, the whole of Creation is here in a state of resurrection, orientated towards its peaceful future. In the light of the rainbow, which according to the biblical story has been set up in the sky by the Creator as a promise to never again destroy the gift of life on Earth, the land enjoys its release after the flood. In a thanksgiving ceremony, Noah lights a ritual fire, also including the slaughter and sacrifice of animals. In the landscape, wild and tamed animals rest, and drink and play together in the vision of a peace that embraces the whole

creation. The flow of water is also carefully designed, its power restricted to a graceful flowing downhill into the lake.

In a driven way Koch intertwines the remembrance of the violent past with the experience of a peaceful state of being and thanksgiving after the disastrous flood. His image breathes hope and future; it opens new horizons for the new world to come and, in this way, it visualizes an image that might illustrate what I intended with my reference to Marcuse's understanding of art as authentic utopia. Koch's artistic creation of landscape, weather, figures, animals, all-embracing color, and sounds of harmony and peace express an image of a new life for all created. It leaves the viewer of the painting in an expectant attitude of gratitude and deep assurance.

Linking this back to Goethe's demand to entangle the self and the world, artworks develop the skill to locate, embed, and embrace the self *with-in* the world by anticipating the liberated future through compressing the past, and by offering unique spaces of being alive within the lived spaces of natural and built environments (e.g., Ingold 2011, Lefebvre and Nicholson-Smith 2009, and Soja 2000).

Following Goethe, the human only becomes aware of herself *in* nature, and s/he only becomes aware of nature in herself. Only by being alive with-in nature can awareness about oneself and nature take place. Even more exciting would be to expand such a view and depart from the statement that nature also can become aware of herself in the mirror of the human. Not far from the theology of late antiquity in the East one might continue and formulate that in the process of art the human – as a microcosm of the world – allows creation to become aware of itself. In turn, artwork appears as a skill to mediate between Creator and creation and that mirroring oneself in the screen of the environment also implies a mirroring of nature within the human. In such a view, art is a skill to become aware of oneself with-in the world, and serves nature as way to become aware of herself with-in the human.

My title "with-in" tries to delineate how one lies in the other, the perceiving/knowing of oneself in the environment and how the environment becomes aware of itself within the human. It further indicates how time turns into space and how the encountering of past and future takes place within spatiality. And it suggests locating art 'in-between' and 'with-in' the world as a creation and man/woman as its microcosm. Theologically regarded, the production of art and the reception of artifacts as a place-within-nature reveals the skill of humans to fabricate meaning and to experiment creatively with modes of existence which are able to manifest authentic utopia based on reminiscence (Breidbach 1991: 241).

Following my earlier reflections about the Triune Spirit as a liberator of nature, saying that the notion of Spirit can be circumscribed as a "being-of-the-one-in-or-with-the-other" (Bergmann 2005: 9). In some kind of "metaphysics of the prepositions," God's work in, with, and for creation needs to be interpreted as a dynamic care which unites past and future (proto-eschatologically) and takes place within rather than from without.

Prepositional Knowing – At Home in, with, and for the Other

What is true for theology might also become true for environmental arts: not propositional knowing but prepositional knowing is at the core of both. As God appears as the God of the 'Here and Now' within lived spaces of creation, so also environmental art emerges as a skill to manifest in space how the one exists and lives *in*, *with,* and *for* the other, and how the one emerges out of the past *into* the present and future. Artworks might then be regarded as products of human skills to manifest how the one lives within and for the other[3] and how past and future encounter each other. They work as tools for establishing refuges where liberation can take place. Art is a mode of existence within a larger process of *Beheimatung* (making-oneself-at-home-on-earth) and art offers an arena for nature to encounter the human in one common space and history.

As such, environmental artworks cannot be fetishized as objects for the establishing of a hierarchy of values for exchange processes. For example, money serves as a superior fetishized commodity which alienates humans, nature, and things in an economy of trade which is mainly steered by desire for the accumulation of capital. Artwork, in the sense that I have described here, seeks to re-establish our perception of what Marx called "the physical relation between physical things" (Marx 1976: Vol. 1, Chapter 1, Section 4).

If anyone is an artist, as Joseph Beuys rightly stated, artistic skills belong to the deeper spiritual skills of every human. If art is regarded as authentic utopia, it serves as a radical alternative to the process of fetishization by fabricating meaning within and for the human community and within and for the larger animated created community of all living beings. Environmental art, departing from the intrinsic value of nature and sometimes also from a

3 See Heike Strelow's "The Connective Power of Art" (2007) on George Steinmann and relationality.

neo-animistic understanding of its spiritual life, advocates empathy (see Goto and Collins 2012) and respect rather than commodification and utilitarian usage. Can art, in comparison with technology, assist in placing the artefact at the nexus between the material reproduction of our daily life (see Haapala's discussion of 'everydayness' in his chapter), our relationship to nature, our social relations, and our worldview and belief, and serve as a critical and constructive mediator? Can its erotic beauty and its capacity for neo-animating produce a countervailing power that resists and overcomes commodification and alienation? How can believers experience art in such a view as part of the Spirit's inhabitation in creation and an on-going process of making-oneself-at-home? Can art establish places where humans can feel at home on earth and where earth can be at home within God?

From *Either-or* to *And* and *Within*

Prepositions are spatial and mobile acrobats in our language. With only a few letters they are able to interconnect elements and to locate these within a web of interrelations. Furthermore, they are able to indicate and shape patterns of motion. Complex nuances in spatial and mobile relations between things and persons can be expressed in some kind of a linguistic geography. *From* here *to* there, with-*in* or with-*out*, *for* or *with* the other. My plea above for prepositional rather than propositional thinking follows Wassily Kandinsky's encouragement to end the times of the 'either-or' and instead to focus on the 'and,' which he demanded in his famous essay *und* (1973: 97–108).

In this essay Kandinsky summarized the task for the new century: artists have to take the lead for all human beings to end nineteenth century conflicts, separations, and oppositions and to replace the 'either-or' with 'and.' According to Kandinsky, the old way of thinking was connected to increasing specialization which caused separation and split, for example, in the world of machines and employment. Kandinsky characterized his own time as a singular chaos where quick choices between this or that enforced a tragic and fatal outwardness. For him, the alternative to this was synthesis. The artist is encouraged to explore relations, harmonies, and soundings in the interplay of culture and life. In 1927 Kandinsky was already able to anticipate the social movement for sustainability, environment, and ecosophy that would emerge in the 1970s.

Kandinsky's plea should, in my view, be widened to not only include the 'and,' but also focus on the 'in.' Not only how the one *and* the other relate to each other, but also how the one dwells *within* the other needs to be investigated.

George Steinmann's *Art without an Object but with Impact* in the waterworks in Bern (also presented in this book) exemplifies architectonically manifesting the power of the 'with-in' as a deepening of Kandinsky's demand for the 'and' that is at the core of this chapter. The building was constructed with concrete that had been infused with water from medieval wells in the Engadin Alpine region. Although nothing of the water can be seen in the structure, its energy and information permeate the whole. Art, though without a work, unfolds its impact. The border between the inside and the outside is radically permeated, and a space of resonance appears within this built environment. The unseen but efficient water turns the building into a critical place for the permanent enhancement of the deeply sustainable. In Steinmann's building water does what the Spirit has been believed to do in Jewish and Christian faiths; that is, it dwells within the created and unfolds his/her life-giving energy for the best of creation. It also connects with animistic modes of belief where matter and life forms always are animated with and inspirited by unseen forces.

One might fruitfully connect my definition of the Spirit as one's being with, in and for the other to another of Kandinsky's central ideas, the understanding of culture as a triangular movement. The cultural process appears for Kandinsky as a triangle which has to be set into motion by art and which artists in this way can move forward and upward. The spiritual task of the arts in his view is to set the cultural triangle into motion. Consequently, Kandinsky's paintings also explore the mysteries of synaestethics and mobility (figure 2.3). Colors

FIGURE 2.3 *Wassily Kandinsky, colored woodcut. 1912*
KLÄNGE (MUNICH: PIPER, 1913)

enter a subtle interplay which leads to emergence of sounds, which the observer can approach visually as well as – somehow – acoustically. Patterns of motion run through a canvas, where synergies appear in what strikingly might be circumscribed as symphonies in motion.

In his famous work *The Spiritual in Art,* Kandinsky explained the method of art which has to strive to reveal "the inner necessity" of life by reducing and removing what only refers to externalities. In this way, art successfully visualizes the life force that animates things and "that, since it animates us too, allows us to join with them and experience their affectivities and pulsations from within" (See Ingold 2013).

Art, Technology, Fetishization, Integration

Art and religion move close to each other in such a view, insofar as both approach reality in a non-instrumental way that departs from an attitude of gratitude where life appears as a gift rather than as a commodity. The world appears as a lived and animated space which one can only approach with respect and dignity. Aesthetics represents a deeply ethical mode of being alive in this context. It appears as a prepositional *aesth/ethics*, where the perception and awareness of being alive within a complex texture of interrelations demands self-critical and careful dealing with the gifts of life. In this sense, art should be regarded as a radically alternative model for engineering and technology, rather than to uncritically follow the instrumentalistic and reductionistic paths of contemporary science and technology.

Long before machines took power over modern daily life, Karl Marx acknowledged the power of technology as a central force in the emerging capitalism of his time. In the commodified relations between humans and things, such as the worker and his products, technical artefacts played an important role. Technology, he observed, "discloses man's mode of dealing with Nature, and the process of production by which he sustains his life, and thereby also lays bare the mode of formation of his social relations, and of the mental conceptions that flow from them" (1976: 352).

In such a context, art has a deeply critical task to revise the alienation of things and persons. For Marx, the process of commodification and alienation of the relations between humans and things became understandable as a process of fetishization. As he has clearly shown, modernity builds on the commodified relations between humans and things, including the alienating split of human workers and the products of their labor. According to Marx, the shift

from the perception of the "physical relation between physical things" to fetishization has its roots in the accelerated trading system. How can art and religion today challenge the contemporary power constellation and seek and offer alternative paths? How can art anticipate a utopia beyond the power of the machines?

One way, which most certainly would have received Kandinsky's sympathy, is to deepen the framework of so-called "integral theory" and to let artistic creativity move from the margins to the center of knowledge production. Practical wisdom – about why we should do what – would then be at the core, rather than knowledge of imperial colonialization and domination of nature (See Maxwell 1984).

According to integral theory, environmental problems should be approached in a multifaceted way (O'Brien and Hochachka 2010; Wilber 2000). Geographers Karen O'Brien and Gail Hochachka (2010: 89–102) formulate six reasons why integral theory is necessary for climate change responses:

(1) Both interior and exterior dimensions of climate change must be better recognized.
(2) Integral theory emphasizes all four quadrants of social life (I, we, it, its) and thus interconnects four perspectives (subjective, intersubjective, objective, and interobjective) in a way that makes it possible to perceive and interpret phenomena in different ways: from an inside or an outside perspective and from a singular or plural perspective (Wilber 2006).
(3) Integral theory acknowledges the diversity of different lines of the development of human beings.
(4) It recognizes that worldviews and values are changing.
(5) It further recognizes the diversity of needs and motivations, and hence responses to climate adaptation.
(6) Finally, integral theory encourages integral methodological pluralism.

While O'Brien and Hochachka are discussing climate change, these six points also offer a guide for why and how environmental art might contribute to the demand to reflect the 'and' and 'within.' Integral theory here replaces ordinary understandings of eclectic science, where interplays of different spheres of life constantly and structurally are neglected. Such neglect consequently leads to a violent separation of life worlds along the classical imperial rule of *divide et impera*. Integral theory claims to develop an epistemology for the 'and' and 'within' rather than upholding the epistemology and biopolitics of the 'either-or.'

Aboriginal Art of the Inside

Looking for an artwork that can follow such a path indicated by integral theory takes me directly back to a visit in Australia, where I tried to come a bit closer to the expressions and contexts of Aboriginal art. While Kandinsky's reflection about the spiritual in art remains embedded in a dichotomist thinking where the material and the spiritual form each other's opposites, Aboriginal culture anchors reality, and especially spatiality and materiality, in the spiritual. Life and spirituality belong to each other. Art represents not just one more sector in the differentiated society, but art is – similar to most other indigenous cultures – a substantial part of ordinary life. In human ecology it serves as a tool for survival, physically as artefact, and spiritually as a carrier of meaning and as a bridge to the animating forces. In Aboriginal Australia, one can even claim: "Art *is* religion" (Miu 2009).

The natural environment has a central significance in Aboriginal arts and religion. The land has been created by the mythical animals in the dreamtime. The walking ancestors have shaped it, and visual arts offer a space where one can continuously hand over, reconstruct, and transcontextualize the spiritual continuum. Many Aboriginal pictures offer a kind of spiritual map referring to existing places, sites, and regions while also expressing and manifesting mythical stories about the totemic animals and the ancestors' history – then and now. Dreamtime takes place in the image. The production of art is in itself a personal religious experience, and at the same time, it is a public practice (Taylor 1999).

Howard Morphy summarizes the spiritual content of the image: "Aboriginal art contains a fourth dimension – the 'inside.' Aboriginal art is as conceptual as it is perceptual. It is concerned with ideas and processes more than with appearances, and the perspective that it illuminates is that from the inside" (2000: 130). A bit paradoxically, one might formulate that the outside is the inside, and the inside expresses the outside. The physical landscape reveals its inner essence by art shaping form and color in the picture. The pictorial figuration creates a space where, using a classical Christian expression, the Spirit gives life to the then and now of the dreamtime. The arts of the Aboriginals express in the same picture a spiritual interpretation of life and a concrete perception; it is, in Morphy's words, "as conceptual as it is perceptual." What I formulate as art encountering the past and compressing it for the future is taking place in Aboriginal art, where the understanding of time – rather as a spatial continuum than a continuous flow of change – is different from our Western concepts. The dreaming does not aim at an event that is closed and limited in space and time. Dreamtime must be understood "as an everywhen" (Stanner 1979: 23–40, 29).

FIGURE 2.4 Warlugulong, *Clifford Possum Tjapaltjarri and Tim Leura Tjapaltjarri, acrylic on canvas. 1976, 168.5 × 170.5 cm*
ART GALLERY OF NEW SOUTH WALES, SYDNEY

What characterizes an Aboriginal landscape painting is its narrative dimension. The image offers – by applying established standards of scales, proportions, signs, and perspectives – a map over a terrain and its natural geography as well as a cultural map with historical, mythical, and social narration. The narration takes place in the painted space and can explain the form and design of the landscape. The image offers a spiritual geography, it grounds spirituality and embeds it in the land.

Warlugulong (figure 2.4) was created in 1976 when the artists presented dreamtime walkings through large parts of Australia. The title references a forest fire that was taking place in the dreamtime at a place with the same name. It was initiated by the bluetoothed reptile Lungkata who wanted to punish his

sons because they had not shared the meat of a kangaroo which they had hunted. In the upper part of the painting one can follow the traces of the escaping sons; the traces of a mythical snake are also visible. The artists have turned the image up and down several times, which makes it necessary to change perspective when observing it. The mythical animals' creative movements are depicted, as well as natural topographies and historical events. Such an image never intends to show how it really was, but serves as an interpretation of a dynamic tradition where the past and present are entangled.

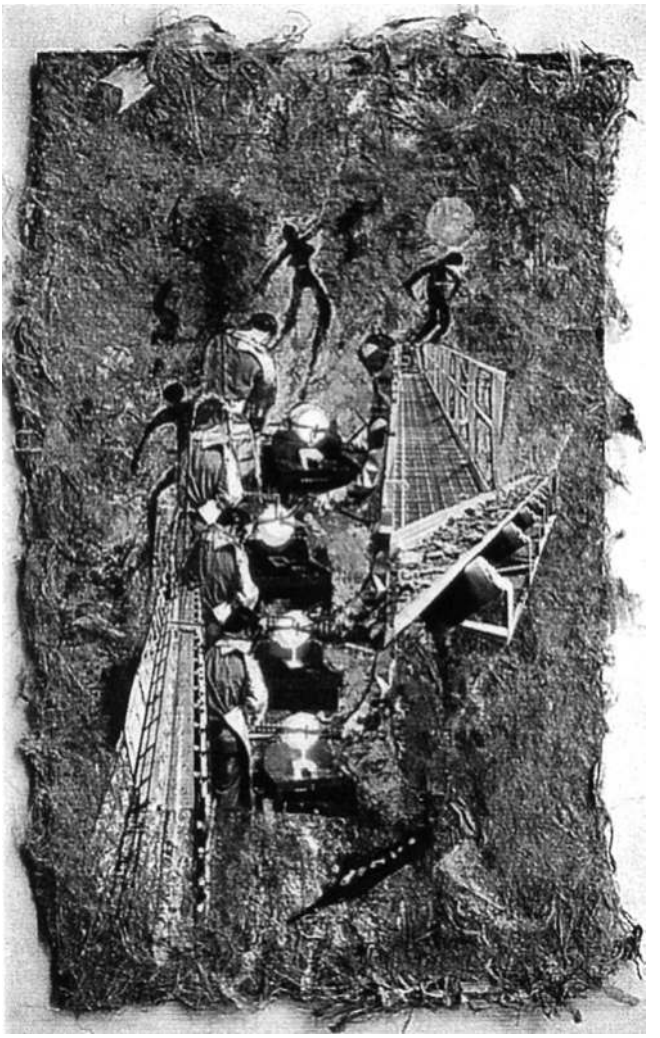

FIGURE 2.5 What Value Life, *Norma MacDonald, acrylic, fiber on handmade paper. 1997; 50 × 30 cm.*

Norma MacDonald has throughout her whole life struggled with the wounds of colonization and sought reconciliation with her family's violent history. Her image uses elements from the landscape and its vegetation, which offers a substance and material space where she can shape the narration of colonial violence and where she can overcome it. In other words, nature offers both the place and the healing material for spiritual growth and intercultural reconciliation (figure 2.5).

Pictures like these are of course dependent on a specific cultural context and they cannot simply be copied or transferred easily into our own late modern world. Creative cooperation in Australia nevertheless shows that a transformation of what is usually – and a bit mistakenly – called traditional painting can smoothly interact with modern modes of painting. Pictures where Aboriginal painters together with non-Aboriginal artists produce common images reveal an impressive and fascinating capacity of transcultural exchange.

Aboriginal art, which in its richness can never be fully grasped by others, here serves to visualize another integrated expression of what land, environment, nature, and world are *within* and *for* us, what is possible, and that the demands of integral theory to science can without doubt meet their counterparts in artistic work. For Christian theology, Aboriginal art offers a wonderfully provocative expression of the spiritual *in* the natural and a vital injection for the catalyzation of reflecting how the Spirit is 'taking place' within environments.

Regarding my plea for a prepositional *aesth/ethics*, Aboriginal art can provide us with a further substantial challenge as it lets the present and future emerge from within the past. The past never ends but materializes itself as the present. The eternal life forces are animating our present and our future life. Concepts such as sustainability appear in such a perspective as rather poor and one-sided even if they manage to do well in our contexts. The rich embeddedness of the present in the past, which the Aboriginal together with many other indigenous cultures can teach us, appears as a necessary reminder of our timely and spatial fragility which is anchored deeply in the prehistory of our lands and ancestors, and which we constantly repress and violate in a collective cultural narcissism of a self *without* rather than *within* the world.

At the Mercy – Weather Changing Art, Science and Religion

Remembering the wisdom from Aboriginal art about the continuum of time in space, I can approach the environment within me in a new way by approximating weather. Even if weather belongs to the essential conditions of our bodily life, it seems to be a non-issue rather than a theme that keeps us busy. Certainly

weather forecasts are regarded as so important that they are located directly after the political news in media reports. And certainly many people listen carefully to the meteorologists' prognosis about what awaits us for tomorrow. Even if our built environments and our mostly indoor activities are rarely dependent on weather conditions, as was the case for most people working in the fields 150 years ago, weather continues to fascinate and enchant us.

Ordinary language about good or bad weather creates an illusion of a relation between the human and the weather. Of course, weather is neither good nor bad; weather simply is. It does not care about humans. It can neither be controlled nor mastered, even if geoengineering cherishes hopes to achieve such a power and we have awakened a desire for total control over our environment (Clingerman 2014: 6–21). Weather simply does not take humans into account.

In a similar way, as human life is dependent on light which surrounds us and makes it possible to see and perceive, to orient and to move and act, weather also simply surrounds and embraces us. It is "the very temperament of being" (Ingold 2011: 130). According to Ingold, the flux of wind and weather remind us that we are alive in an open world: "In this mingling, as we live and breathe, the wind, light and moisture of the sky bind with the substances of the earth in the continual forging of a way through the tangle of lifelines that comprise the land" (115). In such a perspective, weather is not just a surrounding physical element; it is fundamental for every living being which takes air into the organism by breathing. Living in the world of weather, every being is destined to combine the elements of weather in the continuation of existence.

To be alive in such a sense means to exist within the weather, to be exposed to sun that shines, to rain that falls, to wind that blows. Karolina Sobecka, in her chapter in this book, suggests that we are "thinking *with* air as well as thinking *about* air". Many humans, although protected from direct exposure to wind and weather are still deeply affected by weather changes. Weather conditions impact on our well-being and our mental as well as our physical sensitivities. Being under the weather is expressed in German with the appropriate adjective *wetterfühlig*, to be emotionally connected to the weather. Alluding to Goethe again: Do we only know ourselves as far as we know the weather, which we only become aware of in ourselves, and only in the weather do we become aware of ourselves? Is weather something that takes place as much within the human as around her?

Our modern understanding of weather in the lens of science is relatively brief. This started with the technical inventions and use of instruments for measuring temperature and air pressure in the seventeenth century, but our modern view of weather seems to be rooted mainly in the systematic observation of

clouds in the sky which Luke Howard, inspired by Carl von Linné's systematization of plants, pioneered in 1802. In a famous poem, Goethe honored Howard for his heroic feats and in re-reading it we can still sense how dramatically our ancestors must have experienced this approach to turning the uncertainty and unpredictability of weather into a rationalized system. Meteorology was certainly established by Aristotle in his work with the same title, but he only loosely collects a couple of observations without really systematizing them, and without any intention to create a safe predictability. For Aristotle, weather remains embedded in the movement of the stars, which he regarded as divinities, and his meteorology elaborates the existence of weather within the divine configuration rather than dissipates it as modern meteorology does. Aristotle refers to his older philosophical forefathers, the pre-Socratic thinkers, and he is mostly busy with inscribing weather into the scheme of the four elements, fire, air, water, and earth, and to locate it in his overarching view of movement (Aristotle 2014: Book 1, Chapters 2–3.)

Weather change therefore represents for Aristotle a natural part of the world's bodily space (*Weltenkörper*) and as such is an outspring of the first movement which again is anchored in the unmoveable origin of all. It is interesting that Aristotle is clearly emphasizing life as taking place in the space between earth and sky even if he regards this as a consequence of the divine movements in the upper world sphere. Meteorology, in its classical as well as in its modern version, is capable of maintaining the old wisdom of being alive in the fragile zone of being in between earth and sky. I am reminded of Percy Bysshe Shelley's well-known words:

> I am the daughter of Earth and Water, and the nursling of the Sky;
> I pass through the pores, of the ocean and shores;
> I change, but I cannot die –
>
> "The Cloud," 1820

As weather reveals one of the most open, unpredictable and uncontrollable conditions of life, its uncertainty has been interpreted as an elementary screen for interaction between creation and Creator. As such, although it certainly does not do anything else than 'weathering,' weather has also served as a screen for the projection of God's presence and moral relation to his/her created beings. In one common view, weather has been understood as the most just and equal gift of God to all on Earth because sunshine, rain, and wind are given equally to all. Weather does not know any difference with regard to those which it nurtures. In such a view, weather is an expression of God's love for creation and his practice of sharing equally both the gifts and challenges

of life without any consideration of the individual. As everyone can be struck by (good or bad) weather, everyone is equally valued and loved by the creator. On the one hand, in such a religious code the weather represented a respect for every person.

On the other hand, disasters and catastrophes are represented as punishment for sin, when humans do not fulfil their tasks as images of God, and when the relation between God and man/woman is broken. Injustice, lack of solidarity, oppression of the poor, and violence against each other result in God's reaction, which uses a dramatic weather change to reveal a pedagogical intention. Through the uncertainty of weather God stays in touch with his/her created world. Weather serves – which we can clearly observe in Koch's painting – as a natural scene and screen for reading the Creator's relation and interaction with the creation. It offers a kind of moral barometer. The relationship of morality and weather is sometimes violently intimate, so that the medievals blamed so-called 'weather witchcraft' and specific 'weather witches' (figure 2.6) for catastrophes such as rain and flooding, thunderstorms, and bad harvests.

While Tim Ingold has shown that modern empirical scientific meteorology mainly represents the inversion of knowledge, the religious interpretation is different: it meets God's eye and reads God's feelings and thoughts in the weathered book of nature. Today such a code is definitely fading, even if extreme weather can still be experienced emotionally as something that is connected to our social structures and sins. The increasing consciousness of anthropogenic climate change and our increasing vulnerability with regard to uncertain weather conditions have in some zones continued along the paths of the old religious codes, strikingly summarized in Michael Northcott's book *A Moral Climate* (2007). However, not many would regard global warming as God's punishment for an unjust and unsustainable distribution of resources on the planet. Rather we are looking for rational social and economic reasons in our own mismanagement.

Even if climate science again and again claims that weather is one thing and climate another, human beings as nurslings of earth and sky and bodily beings upheld by wind and weather need to experience the power of climate change in 'weather lands' and contexts of dependence and empathy with the weather. Science seems to be unable to assist such a transformation of global scales into concrete bodily life worlds and lived spaces where weather empowers the living. Both art and religion seem to have better conditions to achieve such an adaptation to dramatic and dangerous environmental change. Art must thereby not only serve as an illustrator of rational climate science, but can follow its own traditions and foster the senses with regard to the perception of the environment and especially changes in weather. It contributes to

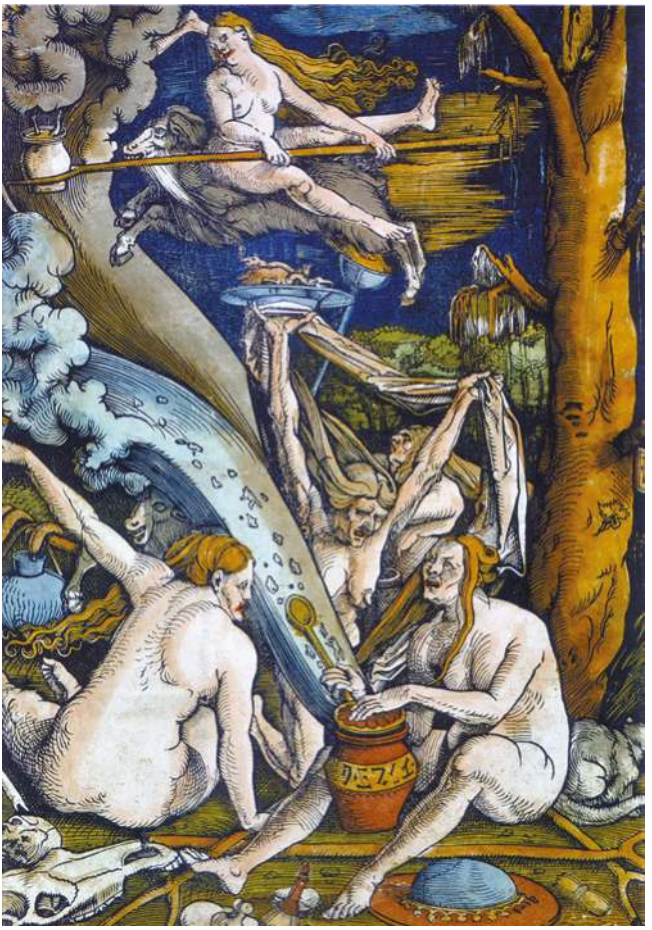

FIGURE 2.6 Witches, *Hans Baldung, woodcut. 1508*
HTTP://UPLOAD.WIKIMEDIA.ORG/WIKIPEDIA/COMMONS/0/07/BALDUNG_HEXEN_1508_KOL.JPG

the ongoing meteorological turn (as Sobecka discusses in her chapter in this book). Religion must not necessarily only serve as a moral imperative that transforms normative conclusions from climate science into mobilizing behaviors to establish what scientists would regard as more sustainable. Religion rather can mobilize its own skills to interpret the God of the 'Here and Now' and to explore the Spirit who gives life in manifold liberating patterns. For example, the richness of religious language emphasizing weather as a spiritual force would enrich our tools for interpreting change and creatively adapt it in a most constructive way.

One of my most fascinating teachers about the inner quality of weather and the respect for its changeability and impact on the whole of our life is William Turner, with whom I will round off my reflections about the significance of the *with-in* in environmental art and its prepositional *aesth/ethics*.

Following German art historian Heinz Ohff (1987), Turner should be acknowledged as the artist who "invented" weather. While landscapes have been painted throughout the history of European art, it was a late Romantic landscape painting that explored the entanglement of weather conditions, such as light, humidity, air, and evaporation with our human inner sensitivities. First Masaccio and Bellini in the fifteenth century explored landscapes as spaces, and weather appeared later in the seventeenth century as a phenomenon in its own right when the Netherlandish painters depicted misty atmospheres, storm clouds over the sea, and dark gray skies. At that time, weather mostly appeared as a part of topography, as framing the land and surrounding it from above. It was William Turner who, in his later years, first established weather as a central visual theme for painting (figure 2.7).

FIGURE 2.7 Inverary Pier, Loch Fyne: Morning, *J.M.W. Turner, oil on canvas. C. 1845; 91.4 × 121.9 cm*
PAUL MELLON COLLECTION, YALE CENTER FOR BRITISH ART, NEW HAVEN, CONNECTICUT

Ohff discusses why weather appeared so late in the history of art despite its central significance in the human ecology through the ages. Ohff's preliminary answer is that it might have been some kind of general discomfort to be completely at the mercy of this external power. He asks, does weather provoke an experience and consciousness about one's volatility which is threatening? (1987: 15) Given the strong and strange reactions to Turner's moving and arresting large paintings – where the powerfulness of weather in all its unavailability is overwhelming – the observer might support such an explanation. One can wonder if it still is the same feeling of being completely dependent on something that outside our power creates both a sensitive attraction and a disturbing quality of human life that we would like to suppress rather than accept. Does weather remind us all too much of life's vulnerability and volatility? Does it disturb and question our identity as autocratic beings with the power of feasibility of all?

If there is some truth in this, and I think there is, Turner's paintings and other expressions of the embracing power of weather over our lifeworlds are carrying an essential wisdom which is necessary to cultivate for our future (see figures 2.8 and 2.9). Living in 'weather lands' then means accepting and not resisting life under uncertain conditions. It means respecting the dignity of change, resting in the givenness of life, and sharing each other's empathy rather than nourishing the illusion of autocracy. Safe shores are no longer in sight, only flowing light, misty uncertainty, and an atmosphere where the earth still is being created. Turner is a master of such insight and his paintings create deep feelings.

In his dispute with John Ruskin, Turner appeared as a liberal person who held metaphysics at a distance. His skill in painting clouds and mist was respected by and honored by Ruskin, who nevertheless interpreted it as a pantheistic mode of de-deification. Clouds and other weather elements were now achieving an intrinsic value; they were turned into symbols for human being, life, and existence rather than referring to the divine. Ruskin complained about Turner's "faithlessness." In his view, 'weather lands' turned into a surrogate for lost gods.

For us, Turner can serve as a master of a modern mode of existence where the danger and uncertainty of "life in turmoil," to use Rilke's striking expression, is exposed at its peak. Being alive now means to be exposed to a continuous flow of change[4] and to not command any certainties. Weather teaches us to accept to being at the mercy of something larger than us. Turner and his colorful paintings therefore offer me an outstanding place where I can become

4 The concept of change here is inspired by George Bataille, who understood it as alteration including both composition and decomposition.

FIGURE 2.8 Light and Color (Goethe's Theory – the Morning after the Deluge – Moses writing the Book of Genesis, *J.M.W. Turner, oil on canvas. 1843; 78.7 × 78.7 cm*
TATE BRITAIN, LONDON

FIGURE 2.9 The Deluge, *J.M.W. Turner, oil on canvas. 1805; 142.9 × 235.6 cm*
TATE BRITAIN, LONDON

aware of being within the world, and to discover and accept within me the world with all its power of change. Looking at these paintings makes me spiritually and bodily aware of the dramatic power of the gift of life in 'weather lands.' They might be located in the context of an emerging and accelerating modernity but nevertheless they represent an encounter with the Spirit who gives life and vivifies volatile and vulnerable beings in unpredictably changing environments.

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CHAPTER 3

The Atmospheric Turn

Karolina Sobecka

Abstract

Sobecka suggests the need for an atmospheric turn, which requires we think *with* air as well as think *about* air. She focuses on the air and its non-visuality, which prevents it from capturing our imaginations. The unseen has to be invoked conceptually, and this requires distance. At the same time, the imperceptibility of the air is in part due to the fact that it is everywhere: if it disappeared, we would notice its lack instantly. So what are some strategies to bring the atmosphere into focus, to wrestle a bit of tangibility out of the vastness, invisibility and complexity of this abstraction? What could be some experiments on the materiality of the air that would help us shape its imaginary? Sobecka explains further using examples of her artistic work, such as her 'CloudServices' projects, which propose using the atmospheric clouds and the micro-organisms in them as the material substrate for data transfer and storage, and a series of workshops with geoengineers on our relationship with the atmosphere.

Keywords

atmosphere – design – environmental art – geoengineering

Try asking everyone around you what image comes to mind when they think 'climate change' or 'air.' Chances are you will get as many answers as people you ask. These concepts, so commonly mentioned today, have no shared representation in our collective imagination. Despite that, as Peter Sloterdijk has suggested, the present context of atmospheric disruption, and the corresponding collective alertness, call for a meteorological turn in design, environmental aesthetics, and cultural theory. But for highly visual creatures like ourselves, the non-visuality of the air prevents it from capturing our imaginations. It is transparent to our other senses as well: we don't smell it, hear it, taste it, or feel it. The unseen has to be invoked conceptually, and this requires distancing. However, the imperceptibility of the air is in part due to the fact that it is everywhere: if it disappeared, we would notice its lack instantly. So what

are some strategies that would allow us to bring the atmosphere into focus, to wrestle a bit of tangibility out of the vastness, invisibility, and complexity of this abstraction? What could be some experiments on the materiality of the air that would help us shape its imaginary? These are the questions I posed to participants in a recent workshop in which a group of artists, scientists, and engineers gathered to produce descriptions of possible experiments on the atmosphere.

We can start by performing an operation on the abstraction of the atmosphere. The ubiquity of the air makes us think of it as 'negative space,' the background against which the figures stand out. We can re-form this figure-ground relationship, foregrounding the atmosphere. We can now see it as the medium that connects us all, that carries vital substances and signals between us – that sustains all living forms and allows us to communicate. Then we can begin to map out some of the many points of our interaction with it. Breathing, for instance, is one example of this interaction, so natural as to be unnoticed. Our lungs consist of around 300 million alveoli – tiny air sacks whose combined surface, if laid out flat, would cover 75 square meters. This extensive area of our viscera is in constant contact with the air rhythmically drawn inside and exhaled out. While the intimacy of this interaction might be lost on our contemporary minds trained in conceptualizing the air in terms of gas concentrations rather than its co-action with our body, it is perhaps no wonder that it underlies the closeness of the concepts of air and life: the word 'spirit' not that long ago connoted both the gaseous substance of breath and the soul that departs us with the last breath, commingling affect and matter, and complicating our understanding of corporeality.

Most activities look different when we foreground the atmosphere. Walking – or any movement really – is primarily a pneumatic activity, compressing the air in front of us and letting it expand behind us. Sprinters compete by forcefully pushing their body against the barrier of air. We can also see ourselves as elements in the thermodynamic system interacting with the air through transfer of energy: our bodies radiate heat which is transferred to the surrounding air, forming a narrow, blurry boundary layer of our immediate thermal environment. Moreover, the air serves as the medium carrying information, from the sound waves propagating between our larynxes and our eardrums, to radio and Wi-Fi. Our ability to occupy the air influences the positioning of the human in relation to the earth: it gives us the possibility of aerial perspectives, and with them we gain the God's-eye view and lose the limit and the humbleness of the horizon.

The atmosphere might be in fact a concept that allows us to sidestep the conventional dualisms of nature and culture. Sigurd Bergmann discusses

philosopher Gernot Böhme's "ecological aesthetics of nature," in which atmosphere is the central notion. Bergmann writes that in Böhme's approach,

> human beings should no longer maintain a distance from nature, but should rather seek to participate in the natural life cycle that deploys all of their faculties. … The atmosphere allows us to interpret the relation of the qualities of the environment and the human being's *sich-befinden* (Böhme 1995: 23). … The atmosphere emerges in the space between the outer surrounding of the human and its inner bodily-spiritual *Befinden*. The atmosphere is not at all a diffuse, unclear, non-determined, shallow or subjective entity, but it offers us a notion that emphasizes in an exciting way the interconnectedness of the inner and the outer, the bodily and the spiritual, the surrounding and the inhabitation.
>
> BERGMANN, 2012: 336.

"Experiencing atmospheres," continues Bergmann, "in fact, dissolves the distinction between subject and object, between the creator or user and the built environment. It is the encounter and the interaction between them that becomes the focus for our meditation".

Such exercises in reframing might be particularly poignant today since the air has become an important arena of inquiry, not only due to the atmospheric disruption, but also because the language of the atmospheric processes enables us to theorize about the ephemeral entities that are prevalent in our data and economics-focused reality: informational objects such as networks of networks, forecasts, models, or financial instruments.

The transition to an atmospheric worldview follows what might be described as modernity's shift from a solid to a fluid worldview. Margaret Cohen links it to the rise of globalized international trade, enabled by oceanic trade routes that carry 96 percent of the world's freight. She writes: "As Hegel declares, 'the sea is the greatest means of communication,' making it the Internet of its time. The focus of Marx, Benjamin, or Foucault on *terra firma*, on territorialized spaces like the nation state, the city, the colony, the home, and the factory, would have surprised Hegel and, indeed, his early-modern predecessors, who lived with a keen awareness of the waterways of global capitalism" (2004/5).

It can be argued that we have now entered the next phase-change: to an atmospheric worldview. This is evident in culture and aesthetics, but also in the parallel rise of conceptual business. With the Information Age and the shift to an economy based on information and knowledge production, the Internet itself and the deceptively 'dematerialized' flows of data have become our

primary abstraction. "It helps to imagine that there was one other past mutation in the commodity economy," writes McKenzie Wark. "It shifted from the enclosure of the commons as private property, to the industrial production of the thing as private property. There's a leap in the form of abstraction there. Not just land and its produce but labor and its produce can be commodified, rationalized, quantified, and so on. Perhaps what we are living through is a second great mutation in the commodity form, from product to information" (Wark n.d.).

The most apt metaphor for the opaque algorithmic processes, hazy digital identities, and reconfigurable networks becomes the cloud, with its ungraspability, obscureness, and ephemerality. The language of the air and the values it carries are immediately co-opted by our new socio-technologies such as 'sharing economies.' Our ideologies of the soil, rooted in concepts of territory and real estate, are replaced by ideologies of the air, of things shared, common, unpredictable, and without edges.

Thus today we are thinking *with* air as well as thinking *about* air, and it is critical that we examine not only the matter of air, but also the way we contain it in descriptions, and the way in which they are simultaneously used to describe conceptual entities of our economy invested in control of information flows.

Transforming Forms

Wark writes that artists belong to a class of form makers, makers of symbolic form, ritual form, social form, and so on. And artists belong to the hacker class, "that class which makes the new out of the old, which transforms forms" (2014). Artists contribute to creating or transforming cultural frames and imaginaries, which in this case would be a way of imagining the atmosphere that can orient our material actions and interactions with it.

This idea of experimentation on the material and on the imaginary of the air guides my own art practice, which is concerned with how the social systems inscribe us into the materiality of the planet, and in particular how they interact with the climate. My projects are focused on technology – as a key site through which we define the human interaction with nature. My practice follows an interventionist model: I construct and deploy devices, media, or practices to engage with the public and with communities of practitioners in the fields of research and innovation. One of those devices, the Cloud Machine, is a DIY device sent into the atmosphere on a weather balloon that sprays out cloud condensation nuclei and water vapor to make small, temporary clouds

(see figures 3.1 and 3.2). It is based on a climate-engineering proposal to create brighter, more reflective clouds that would shield the earth from the sun's radiation.

Through this lens, each deployment of the Cloud Machine explores a different set of issues related to the context in which it is performed.

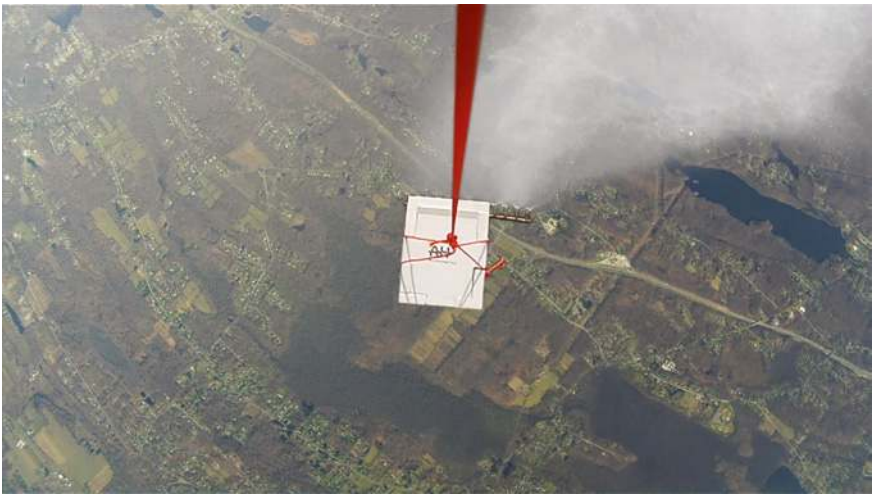

FIGURE 3.1 *View of the Cloud Machine from the overhead camera.*

FIGURE 3.2 *Installation view, the Cloud Collection at ZERO1, San Jose.*

FIGURE 3.3 *Preparing the cloud mixture during a launch event in San Jose.*

A launch in San Jose, California (see figure 3.3), was an opportunity to focus on California's cloud seeding practice, intensified by the ongoing drought and the necessity of being imaginative about where water is sourced. The State of California sees atmosphere as a kind of aquatic environment. Just this summer, Los Angeles County contracted North American Weather Consultants (which has been seeding clouds since the 1960s) for a $500,000 project to increase rainfall by 10–15 percent. The current research attempts to track and tap the atmospheric rivers to release them in a controllable fashion. It is just one commercial activity in a long history of attempts at modifying the weather. To explore it with our Cloud Machine launch organized with ZERO1, an art and technology organization in San Jose, I decided to structure our events to comply with current regulations for weather modification. This included producing a public announcement about the intention to modify the weather and holding a town hall-style meeting for the public and stakeholders. Here's the text of the ad I created for a local paper.

> NOTICE OF INTENTION
>
> ZERO1 HEREBY GIVES NOTICE OF INTENTION TO CONDUCT A WEATHER MODIFICATION PROGRAM
>
> NATURE AND PURPOSE: The purpose of the program is the creation of a small temporary cloud to benefit the global understanding of the

> atmosphere and of everything. The cloud will be created by dispersal of water vapor and Cloud Condensation Nuclei (NaCl). A weather balloon will deliver the dispersion device into the atmosphere. The intended effect of the operation is to evoke wonder and curiosity, and to encourage discussion about environmental issues and attempts to control nature.
>
> LOCATION OF PURPOSE: Project operation will be conducted during the period between August 2nd and August 7th. Airborne operation would utilize air space over Santa Clara County, and portions of Stanislaus County. The target area for the operations is the Diablo Range of eastern Santa Clara County. Area adjacent which may be subject to the effects of the operation will be in Santa Clara Valley and San Joaquin Valley.
>
> LICENSEE: The project will be operated by the weather modification consultant Amateur Human.
>
> PUBLIC HEARING: The hearing is open to the public and will be held at ZERO1 Garage, August 2nd at 6pm. ZERO1 invites the public to examine the details of the program and to take part in the discussion of the social and ethical aspects of human attempts to counteract the human impact on the planet.

De-minimis experiments are defined as those whose physical impact is so small as to not be measurable. However insignificant their physical impact, they might still have a large impact on the imagination. If we would add just one artificial cloud to the landscape, so small as to be imperceptible from the ground, would we change anything? In a sense we would have changed everything – it would now be a geo-engineered landscape, a categorically different way of understanding the land.

Art is often seen as cutting through those intellectual interpretations by giving us some direct access to the underlying phenomena. This immediacy, however 'real,' is instantly framed. Landscape is such an image – which depicts a perception of nature as well as including the notions of how we envision and construct it. One of my other projects, titled Anti-Image, attempts to use image production to explore models of production of knowledge. Observers position themselves at points on a geographical grid and take pictures of the sky at the same time that a satellite captures an image of the same geographical location (see figures 3.4 and 3.5). The premise of the project is to construct an image equal to and the opposite of the satellite's, by stitching together all of the observers' pictures. These two images, of clouds seen from both sides, represent two different perspectives.

FIGURE 3.4 *Screenshot of looking at the results of the Anti-Image event in Tel Aviv.*

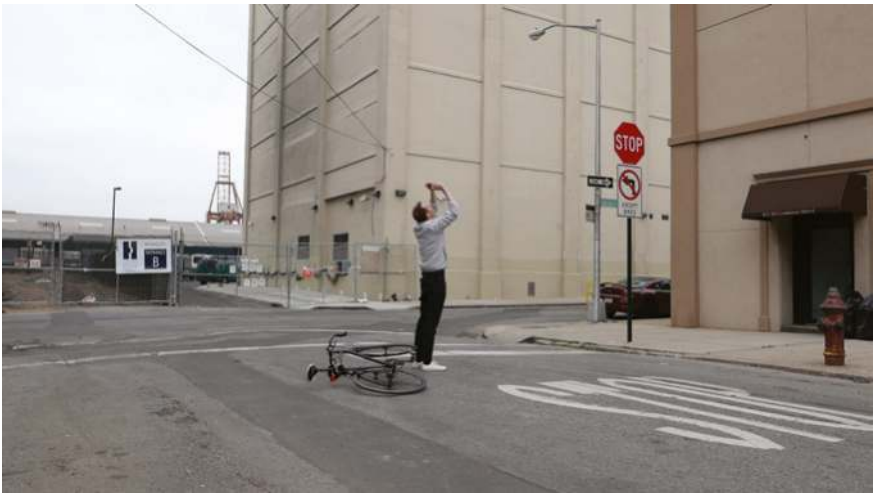

FIGURE 3.5 *A participant takes a picture at his assigned GPS location in Brooklyn.*

Social organization of these two different modes of knowledge production is modeled in their spatial organization and in relation to the subject.

A smartphone app (see figure 3.6) lets observers self-organize in different locations at the times of satellite flyovers.

The satellites for which we provide alternate perspectives are AQUA and TERRA, deployed to observe the atmosphere to inform our ability to understand climate processes. NASA asks citizen participants for ground-truth observations of the other side of the clouds.

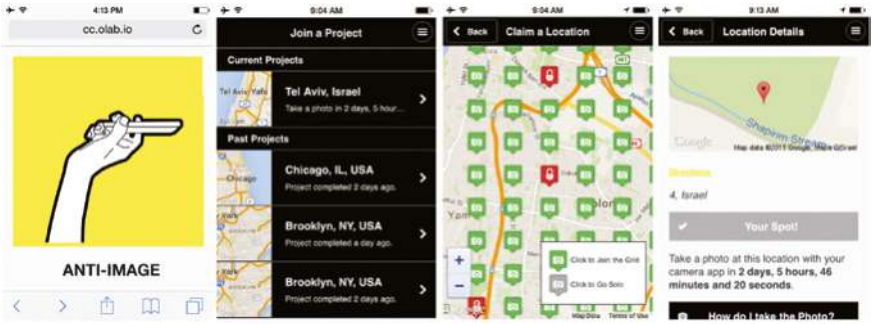

FIGURE 3.6 *Screenshots of the Anti-image app.*

The Anti-Image project attempts to construct a new sensor: an array of connected nodes deployed in a collective act of looking. By arranging ourselves into this socio-technological apparatus, we're creating a high-resolution organ of a new visuality that is representative of the way we relate to each other and to the physical system we are embedded in, and of our ability to imagine a future that is rooted in interconnectedness.

It grew out of a project that appropriated the process through which the street level perspective informs the meaning extracted from aerial images. Trained experts used to pore over the aerial images using their specialized knowledge to 'read' them, decoding the abstraction created through the distancing of the camera. Today this process is aided by sophisticated machine learning algorithms that are trained on collections of human judgments made at the terrestrial surface called 'ground truth.' These human observations are internalized by the machine, which can then correlate the visual mark of an object seen from above with the human experience of this object from a ground perspective. The practice of ground truth is adapted in this project as a site for creative intervention, centered on the subjectivity of the human judgment – the fact that it contains not only impressions of the same quantifiable measures recorded by the satellite instruments, but also moods and feelings, a much more nuanced imprint of how cloud cover affects the entire environment underneath it and a sense of how that information relates to the observer. The aim here is to inculcate the machine, and the model of the future of the planet it creates, with the human perception of climate disruption, that might perhaps include empathy, a sense of terror and unknowing.

Aerial imagery was a transformation in seeing that showed the connections between the society's structure and the physical world they're embedded in. Technologies of seeing from above have always been linked not only to knowledge, but also to control. TERRA and AQUA satellites, as technologies of aerial

vision, participate in fostering the threat of perpetual visibility and controllability. But what they track is the clouds, not humans and their activity. While this seems more benign in comparison, it poses a risk of a different kind: one of creating an illusion that nature is knowable, predictable, and controllable.

In contrast to a satellite's single massive cone of vision that converges knowledge and power in a single eye, the geometry of our vision is produced by a multitude of overlapping short cones. This kind of short-sightedness is necessary if one is to counter the thinning of ethical relationships that comes with the long view. It instills in us the experience of the limit of knowledge. Slavoj Zizek describes how meaning arises out of such limits:

> Let us recall the difference between modern satellite meteorology and the traditional wisdom about the weather, which "thinks locally." Modern meteorology assumes a kind of metalanguage view on the entire atmosphere of the Earth as a global and self-enclosed mechanism, while traditional meteorology involves a particular viewpoint within a finite horizon: out of some Beyond which, by definition, remains beyond our grasp, clouds and winds arrive, and all one can do is formulate the rules of their emergence and disappearance in a series of "wisdoms." The crucial point is that "meaning" can emerge only within such a finite horizon: weather phenomena can be experienced and conceived as "meaningful" only in so far as there is a Beyond out of which these phenomena emerge, following laws which are not directly natural laws – the very lack of natural laws directly connecting actual weather here and the mysterious Beyond sets in motion the search for "meaningful" coincidences and correlations. The paradox is that although this traditional "closed" universe confronts us with unpredictable catastrophes which seem to emerge "out of nowhere," it none the less provides a sense of ontological "safety," of dwelling within a self-enclosed finite circle of meaning where things (natural phenomena) in a way "speak to us," address us (1997: 160).

If the satellite view represents a triumph of humanity's ability to free itself from constraints of the Earth, as Clive Hamilton suggests, our new visuality stands for being enmeshed in and physically part of the earth (2013). The participants are connected using technology already embedded in the population. Most of us today have on us a high-resolution camera with a geo-location capacity and connection to a network. All of those cameras triggered in synchronicity can add up to an image that is as massive a technological feat as images produced by propelling our photographic instruments into Earth's orbit.

The reason the atmosphere is the object of so much observation is that it evades mathematical representation. The chaotic nature of the atmospheric

processes makes clouds resistant to being known, resistant to this possessive mode of seeing and its purpose of anticipation and control. Instead of having a formula that allows the calculation of the atmosphere's future, the approach of ever more finely-grained seeing is adapted to aid the prediction.

Our crowd-sourced image is an artifact of the experience of looking at the sky simultaneously. It's not only a networked seeing, it's seeing together. It's a collective action that directs our attention to the atmosphere. It is a view constructed from a messy human activity with gaps, contradictions, and overlaps; noisy and high resolution; containing inconsistencies and errors. This collective seeing frustrates efforts to reduce it or capture it in a formula, but adds up to an image that can potentially exceed the breadth of the satellite image, while embracing the connectedness to earth and the awareness of limits.

Perhaps it is the acceptance of unknowing that is the hallmark of the atmospheric mindset which ushers in a probabilistic mode of thinking rather than deterministic. Our atmospheric worldview translates to what Sigurd Bergmann describes in his chapter as "living in 'weather lands,'" which then "means accepting and not resisting life under uncertain conditions. It means respecting the dignity of change, resting in the givenness of life, and sharing each other's empathy rather than nourishing the illusion of autocracy". Can a new social order then emerge from this new mode of seeing, an order which has no center, is characterized by no overarching perspective but many local focal points, and is based on inherent interrelatedness?

Bergmann further discusses Tim Ingold's two notions, of the "construction perspective" and the "dwelling perspective." He concludes with a proposal to "start with the perception of space, environment and place, and to develop reflexivity in a new mode that keeps the dimension of perception alive in thinking and acting".

This is very much the kind of approach I adapted in the workshop mentioned at the beginning of my essay, the workshop that was devised as a project called *A Machine For Making The Future*. It brought together experimentalists from the fields of art and science to work in interdisciplinary groups on proposals for experiments on the material and the imaginary of the air, atmosphere, and the climate. It took place at the Scripps Institution of Oceanography in La Jolla, California. The event mirrored a workshop on Low Environmental Impact Solar Radiation Management Experiments held at the Institute for Advanced Sustainability Studies in Potsdam, Germany, a few days earlier.

The Potsdam event was limited to a group of scientists and engineers in the field of climate engineering, who were asked to produce descriptions of experiments that they expected would have negligible environmental impacts. Climate engineering is the deliberate and large-scale intervention in the earth's climate system that aims to counteract global warming. It is an umbrella term

for two types of measures: carbon dioxide removal and solar radiation management (SRM). Climate engineering thinking has been reawakened at Paul Crutzen's suggestion (2006), and for the last ten years has been moving from the speculative fringes of science toward more mainstream discussions. It was developed largely by climate modelers and, due to how controversial it is, has remained in the realm of models and speculation. Proposed field tests have never taken off due to concerns about intellectual property issues and about a lack of governance framework for research and experimentation.

The Potsdam workshop focused on the SRM schemes, which propose to reduce the amount of sunlight reaching the earth, most prominently by increasing cloud cover and by delivering sulfate particles into the stratosphere, thereby creating haze and blocking some of the incoming solar radiation.

The La Jolla event (see figures 3.7 and 3.8) closely followed the Potsdam workshop, which meant La Jolla participants didn't see the report from it or the list of experimental descriptions produced there, and their work wasn't done in response to the work done at Potsdam.

In addition to producing a list of alternative experiments, rooted in the perception of space, environment, and place, the mirror event aimed to be a reflection on the process of experimentation and what might be thought of as its work in the mode of Ingold's "construction perspective." The La Jolla event broadened the group of experimentalists to include artists and designers, and explicitly aimed to contrast imaginaries of the future coming from

FIGURE 3.7 *UCSD, Scripps Institution of Oceanography, site of the Low Environmental Impact Climate Engineering Mirror Event.*

FIGURE 3.8 *UCSD, SIO, a group of participants at the Low Environmental Impact Climate Engineering Mirror Event.*

groups of 'experts.' By broadening the range of what we imagine and give form to in experimental design, we broaden the scope of futures that can be enabled through experimentation.

The Potsdam workshop participants were aware of our mirror event and the fact that they knew it was to take place changed the dynamic. It put their single authority as experts under a question mark. It didn't even matter how 'useful' our experiments might be – the fact that they were being designed signaled that an alternative is possible, that the group of science and technology experts is only one of many possible voices able to produce these descriptions.

Experimentation

The title of the mirror event was borrowed from Hans-Jorg Rheinberger who writes that experiments can be described as "machines for making the future." They are composed of two elements, the well-understood "technical objects," and the objects of investigation – the "epistemic things." He writes, "They are not simply experimental devices that generate answers; experimental systems are vehicles for materializing questions. They inextricably cogenerate

the phenomena or material entities and the concepts they come to embody" (1997: 28).

Field experiments, in contrast to more controlled lab experiments, take into account their subject's interconnectedness with the ecosystem it is a part of. The experimental system has to be broadened to include the parts of the physical system the subject interacts with. In publicly performed experiments, the experimental system is even broader and can be argued to also contain the politics, the public, and the scientists themselves. This is what turns them into social experiments that test the reaction of the public to the emerging technologies and shape its framing in the popular imagination.

Experimentalists, defining a range of possible experiments, construct a range of futures. Answering my question about the criteria for defining "potentially informative" experiments, the organizers of the Potsdam workshop said that there were no official criteria but they suspected that "there would be a form of natural selection for the experiment ideas. The participants will challenge the ideas, and throw out those that would not be useful or would be impractical." The invited participants meanwhile would be "people with the right expertise in the matters at hand." The range of possibility constructed in the Potsdam workshop was narrowed by simply narrowing the group of people having access to considering the designs for experiments on the atmosphere. The aim of the mirror event was to construct a parallel range of possibilities that, when considered next to the Potsdam list, can help us reflect on the role and process of experimentation.

The Potsdam workshop explicitly brought together only technical experts, sidestepping potential complications regarding research governance, ethics, or experimental priorities. However, by producing a list of potential experiments, it was already operating on the social imaginary of nature and the atmosphere, i.e. imagining it in a way that orients our material action. To guard against the biases of the 'engineering mind' that imagines the atmosphere as controllable and that designs the tools for that control, the mirror event was an attempt to construct a different imaginary.

The list of the experimental designs in La Jolla ranged from visualizing the collective breath of a performing choir to creating an artificial experience of being enveloped in a different thermal and visual environment when a cloud comes over the sun above us. Most of them focused on the local and the particular, on the feeling over thinking, and on the everyday experience over abstracted forms. They produced moments of a kind of sensory attunement with natural world that can only be maintained temporarily before falling back on some kind of intellectual understanding. We cannot reason without abstractions, but we cannot make decisions without feeling. Complex systems can't

be experienced directly, whether it's the atmosphere or a system of economics, politics, or climate, and so we need to have a way of thinking about them that includes affect and belief.

The cloud metaphor holds other meanings than the rationalistic language of physics of flows, and perhaps opens a possibility for another kind of thinking: one based on how it escapes capture by scientific description. It can signal the embrace of extreme particularity that thwarts any attempts at abstracting, just as clouds still evade being contained in mathematical models due to the particularity of every cloud at every moment. "How is it that we have made the world so cloudy and ephemeral?" asks Orit Halpern. "Cloudiness takes on a new logic, no longer hiding some invisible truth. We have abandoned the search for a natural, true, and objective order. This is not necessarily a bad thing. Bounding rationality, trading with algorithms, speculation is not about full information, but immersion into the data mist. If we dispel the dream of objective surveillance over space, perhaps we can imagine different modes of 'visualization' and, ultimately, imagination. The artists have unearthed the potentiality of ephemerality and invisibility, – if we cannot see objectively, then perhaps we can see differently" (2015: 44).

And the atmosphere points to ways of seeing differently. For a start, Brian Massumi, looking for "semiotics willing to engage with continuity," writes in *Parables for the Virtual* about a Bergsonian revolution in seeing a motion path as an irreducible movement rather than a succession of points. A transformation can be (and is) only retrospectively constructed as multitude of 'positionings.' But while it's moving, a body carries its own indeterminacy. The body is both real – a sensing body as an unmediated experience, and abstract, containing incorporeal dimension of indeterminacy. It is "inextricably linked to concepts of potential and process and, by extension, event – in a way that bumps 'being' straight into becoming" (2002: 5) For Massumi one of the consequences of this reframing is the idea that "the concept of nature concerns modification not essence" (7). In "The Phenomena of the Non-Visual," Michelle Addington discusses another formulation of overcoming the "freeze frame" problem of positionings, by adapting the approach borrowed from the sciences' need to describe intractable problems. That is, shifting the frame of reference from Cartesian to Lagrangian. In a Cartesian system, defining the coordinates of an object fixes the object in space, and when time is added as a variable to a Cartesian system, the resulting frame of reference is said to be Eulerian. In Addington's view, "Eulerian frames of reference are used extensively to objectify complex physical phenomena – by plucking out certain moments, one can develop a series of still 'pictures.' The Eulerian frame is an idealized frame – pure geometries lead to closed mathematical relationships.

Lagrangian frames of reference, rather than being idealized, are premised on uncertainty and variability. The coordinate system has its origin not at a point fixed in space, but at the center of the subject" (2007: 45).

As we experience the atmospheric turn, internalizing uncertainty and change as inherent aspects of our reality, we can start discerning not only what change means, what continuity and curvature mean, but also start to understand nuances of how various rates of changes of different entities interact and synchronize, start building our ways of seeing differently premised on uncertainty and variability.

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PART 2

Wondering

∵

CHAPTER 4

Wonder and Ernst Haeckel's Aesthetics of Nature

Whitney Bauman

Abstract

Haeckel was, like Alexander von Humboldt before him, engaged in bringing together the – at that time, disparate – sciences of geology, evolution, zoology, embryology, physics and cosmology, and his newly coined "ecology," in the construction of a new, naturalistic worldview that brought all of these things together into a single explanatory story. He argued that the guiding principles for such a story would be the old Greek trinity of goodness, beauty, and truth. Many of the connections he made between various plant and animal organisms, and between the various sciences, were depicted in a number of his paintings and sketches. The most well-known of these can be found in his *Kunstformen der Natur*. He sought in these drawings to sketch out the similarities in forms across many very different and very diverse species and in doing so challenged the dominant theological aesthetics of the Christian West at the time. This chapter analyzes some of these sketches/paintings and the way that he challenged three primary aesthetic categories: that between biotic and abiotic things in the world, that between plant and animal life, and that between humans and the rest of the animal world. It was from within these curious borders and crossings that Haeckel wondered most about constructing a naturalistic worldview that would fundamentally shift how we understood humans within the rest of the evolving planetary community.

Keywords

Ernst Haeckel – non-reductive materialism – immanent aesthetics

• • •

> The whole marvelous panorama of life that spreads over the surface of our globe is, in the last analysis, transformed sunlight.
>
> HAECKEL 1900: 139

⁘

This often-quoted epigram by Ernst Haeckel suggests that he was some type of precursor to contemporary mystical environmentalists. However, nothing could be further from the truth, at least based upon his own self-understanding. Haeckel was arguing for a monistic understanding of the world against what he perceived to be the dogmatic understanding of dualistic theology and the wrong-headed understanding of German idealism and its twin materialism in philosophy. He thought the emerging scientific method – relying on sensory observations and experimentation – would provide the new framework for understanding everything, including all things human. What we see as "wonder" in his artworks and in his writings were to him attempts at explaining this monistic, evolutionary "scientific" view of the world. Art and aesthetics were key to his method of knowing the natural world (Breidbach 2015: 13–14). This was so much the case that he argued vehemently for science and the arts in education to replace the theologically-based dogma that was being taught in German schools at the time (See, e.g., Weber and Breidbach 2006). Of course, such a reading to him was "wonder-filled" in the sense that wonder is that which continuously keeps the observer focused on the new, unknown, and at times unexpected patterns found in and throughout the diversity of bodies and forms within the natural world.[1]

Haeckel was, like Alexander von Humboldt before him, engaged in bringing together the – at that time – disparate sciences of geology, evolution, zoology, embryology, physics, and cosmology, and his newly-coined "ecology" into the construction of a new, naturalistic worldview that brought all of these things under a single explanatory story. He argued that the guiding values for such a story would be the old Greek trinity of goodness, beauty, and truth; yet, this trinity did not originate in some transcendent realm, but rather emerged in the process of nature-naturing. From crystals, to the most simple, single-celled life in nature, to "societies" of complex cells that made up plants, humans, and other animals, Haeckel found beauty, forms, and patterns throughout. Typical of his musings on nature's beauty is the following quote:

> Whether we marvel at the majesty of the lofty mountains or the magic world of the sea, whether with the telescope we explore the infinitely great wonders of the starry heaven, or with the microscope the yet more surprising wonders of a life infinitely small, everywhere does Divine

1 I want to thank the Humboldt Foundation and the Ernst Haeckel Haus at Schiller Universität in Jena for making this research possible. I also want to thank Lisa Sideris for organizing and inviting me to a conference at Indiana University on "Wonder," for which an earlier draft of this chapter served as my talk.

> Nature open up to us an inexhaustible fountain of aesthetic enjoyment (1919: 18.)

Many of the connections Haeckel made between various plant and animal organisms, and between the various sciences, were depicted in a number of his paintings and sketches, whether sketching his beloved medusa (jellyfish) or comparing embryos of various species. Some of the most well-known of these sketches can be found in his book *Kunstformen der Natur* from 1904. He sought in these drawings to sketch out the similarities in forms across many very different and very diverse species, and in doing so he challenged the dominant theological aesthetics of the Christian West at the time. This chapter analyzes some of Haeckel's sketches and paintings and the way that he challenged three primary aesthetic categories: that between biotic and abiotic things in the world, that between plant and animal life, and that between humans and the rest of the animal world. It was from within these curious borders and crossings that Haeckel wondered most about constructing a naturalistic worldview that would fundamentally shift how we understood humans as part of the rest of the evolving planetary community.

Challenging the Theological Aesthetics of Creation

It is important to place Haeckel in his context when we are looking at his aesthetics. What he was arguing against is just as important as what he was arguing for, when reflecting on his aesthetics. The German Romantics of the nineteenth century deeply influenced Haeckel, as did the emerging scientific story of "nature" coming from the likes of people such as Linnaeus and von Humboldt, and the emerging sciences of geology, zoology, botany, and eventually Darwin's evolution. As such, the influx of knowledge about other cultures made possible via faster modes of transportation and the influx of knowledge about the natural world made possible by advances in the microscope (the small) as well as the telescope (the large) led to shifts toward closer examinations of the natural world and the differences of humans and other life forms therein. As Marsha Morton points out, "Nature [for Haeckel] was seen as a wonderland of new aesthetic enjoyment, provided by the telescope and microscope, in which poetry was immanent" (2009: 65). As for many others of his era, the story provided by theology and the church in Europe broke apart for Haeckel under the pressure of the growing understanding of geological time and the immense diversity of life forms extant and extinct on the planet. The deep past was literally being discovered in the fossilized rock formations of

the present, and the knowledge being produced by the sciences was challenging the future presented by the church and opening up new possibilities for becoming on the horizon.

The transcendent source of beauty – goodness and truth – was being questioned and with it the aesthetics of transcendence that ordered the world "from above." The hierarchy of God-humans-nature and the dualism of spirit/matter (and along with it good/bad) were being turned on their head. Haeckel enters into this world as this turning is in full swing. His mother and father were friends of Friedrich Schleiermacher, who attended many dinners at the Haeckel house (prior to his birth) and was the source of many theological ideas imparted to Haeckel by Haeckel's parents. The turn to experience in Schleiermacher and his idea of religion as dependency upon God turned for Haeckel into the turn to reasoned experience and dependency upon Nature (2008: 18). He was also very much influenced by the demythologizing of Jesus and the first historical Jesus scholars of the nineteenth century. (2008: 90). Finally the idea of "religion as human projection" found in the ideas of Feuerbach (among others) seemed to make much more sense for Haeckel within the emerging naturalistic worldview he was constructing. (2008: 84). In all of these shifts there was a turning away from the transcendent and supernatural as the source for value, meaning, and truth, and towards an immanent framework based upon what we could know through reasonable deliberation of data from the natural world observed through our senses. Haeckel's struggle was that of articulating a shift in meaning, value, knowledge, and aesthetics away from the dualistic and transcendent theological model and toward that of an emergent, immanent, naturalistic model based upon the emerging scientific story of the planet and its life forms (including humans).

Haeckel understood art, language, history, religion, and all other things human as emergent from the same evolutionary process that brought us all other life. And, he was by no means a materialist reductionist in the way that we would think of that term today. His three part or "trinitarian" monism (composed of matter, energy, and subjective/inner experience) was, rather, an attempt to explain all existence without resorting to dualism (as in theology) and without undermining either spectrum of reality (as in Hegelian idealism or Marxist materialism).

What we see as "wonder" in his artwork and in his writings were to him attempts at explaining this monistic, evolutionary "scientific" view of the world, which navigated a third way between materialism and idealism without resorting to dualism. Wonder was not something found at extreme ends of ideological spectrums but in the everyday examination of life. In doing so, I argue, he ends up returning wonder to the world by replacing the transcendent

monotheistic God with immanent Nature. In other words, his version of monism returns wonder to the world through making the God of theism (or better deism) into the living Nature of monism:

> Insofar as wonder can function as a kind of wound in the everyday…it must again be emphasized: just as a wound ceases to be itself when it heals, wonder is only wonder when it remains open. Wonder opens an originary rift in thought, an unsuturable gash that that both constitutes and deconstitutes thinking as such.
>
> RUBENSTEIN 2010: 10–11

In a sense, the category of "wonder" (captured in Haeckel's natural aesthetics) is not much more than an old corrective for idolatry. Wonder (*thaumazien* for Aristotle and the Greeks) is that which, as Mary Jane Rubenstein suggests in the quote above, holds open the space for life to spring forth or emerge. It is the refusal to allow our thinking to be a form of what Heidegger calls "enframement" and, instead an opting for *poeisis* (1977: 3–35). This opting for *poeisis* is closely related to Aristotle's *via media* or "middle way." The extremes of idealism or materialism lead toward a distortion of the world and our knowledge of it, just as much as the imbalance of humors according to Hippocrates and Aristotle lead to illness in the human body. "Balance" or "a middle way" seems like a strange place to locate wonder, but I want to argue that far from merely being a method of temperance and a "reasonable and balanced" approach to understanding the world, the *via media* is grounded in wonder; and this method is taken up by the German Romantics, including Ernst Haeckel and his search for a *naturwissenschaftliche Weltanschauung*. Haeckel's "middle way" is perhaps not also unrelated to the technologies of scale – the microscope and the very small/close, and the telescope and the very large/far away – that suggest a sense of wonder for the unfolding of life experienced by humans on earth as somewhat "in between."

Again, as Rubenstein notes in *Strange Wonder*, according to Aristotle, at the base of all of our knowledge is not certainty, but wonder. It is that which keeps our concepts open to an ever-changing world, disabling a secure connection between thoughts/ideas and things, or language/concepts and entities in the world; it enables the world to be a living, mattering entity. It is this deep attention to the mattering of the world of everyday experience that brings Aristotle to a different epistemological method than that of his teacher Plato. Aristotle was working out a *via media* between the idealism of Plato and the materialism of Democratus and formulated a sort of hylomorphism in which the essence and material were related to one another. This hylomorphic idea was to

be picked up by Haeckel in describing the relationship between matter/energy or material/ideas, ultimately culminating in his theory of recapitulation: ontogeny recapitulates phylogeny.[2] Going too far in either direction – erasing ideals from matter or erasing matter from ideals – trapped the world into either a function of instrumental scientific calculation or a function of philosophical (and/or theological) dogma. Either way, both are from the human perspective and turn the world into that which can be understood (and later used) by humans.

This reading of Aristotle is, of course, one reading, but it is consistent with the ways in which wonder has often been associated not with the aberrant or exceptional, but with the habits, repetitions, and regularities of the natural world (Daston and Park 1998: 109–134). Many natural philosophers of Ancient Greece, like German Romantics of the nineteenth century, sought wonder in what they perceived to be the everyday realities of nature-naturing. In a way, the fact that there was order at all, that life kept on going, seemed to be the cause of more wonder than the irregularities and so-called miracles that have been at times seen as 'wondrous' if not fetishized into some sort of spectacle. We might say this is a reading from a third space, that necessary space of relationality relating one thing to another and through which all identities are made possible (See Bhabha 1984). Or, similarly, we might call this space of relationality a queer space: Darwin's theory of evolution, after all, argued that in reality there are no real species distinctions; rather, species are shifting constantly throughout time and have common origins. Reality is the evolving flux of life; species are nomenclature and categorical tools (See Hogue 2008). Whatever we might want to call it, this 'third space,' or 'queer space,' or 'middle space' might also be thought of as the space of lived, present experience between knowledge of the very small and close (made realizable through geology and the microscope) and the very large and far away (made realizable through cosmology and the telescope). Finally, the temporality of this 'third space,' where wonder seems to bubble up in the everyday, might best be understood as a turn away from tradition and the past (theology and culture) and a freeing of possibilities for the future (through scientific knowledge), both of which allowed for a focus on the present and our experiences of the present. Rather

2 Robert J. Richards describes his biogenetic law well: "A chief feature of Haeckel's evolutionary doctrine that supposedly distinguishes his views from those of Darwin is the principle of recapitulation. Haeckel put the principle thusly: The organic individual … repeats during the quick and short course of its individual development the most important of those changes in form that its ancestors had gone through during the slow and long course of their paleontological development according to the laws of inheritance and adaptation" (2008: 148).

than our minds being captivated merely by transcendent "far off" or "distant" things, ideas, and places, the goal was much more to focus on the here and now (Latour 2013: 27–48). Whatever else the 'third,' 'queer,' or 'middle' space signifies, it is meant to signify the place of the living grounds of relationality which refuses reification and or totalizing epistemological claims. Staying with this space enables us to pay deep attention to the shifting pluralities that make up our embodied realities.

Haeckel worked within this present, immanent, middle space to articulate his understanding of monism and nature aesthetics. He marveled at the enormous diversity of life forms, and the similarities and patterns he saw throughout nature, even recognizing a diversity in sex and sexuality, as his support of Magnus Hirschfeld's Institute for Sexuality Studies would suggest (Hirschfeld 1914: 282–284). Haeckel realized that evolution meant the uncoupling of identity from foundations that were laid out in some teleological order by God. He knew this would mean an increase in the diversity of what counted as possible ways of being in the world. Evolution meant the end of God-created order, and for Haeckel this was good news and freeing. It was only through observing nature from this 'third space' that the *poiesis* (or self-organizing emergence) of life could be really understood and respected. The theological dogma and certainty of the Middle Ages, and the open disdain the church had for wonder, was an example of thinking that trapped life. The church most often during this period counted wonder as a slippery slope falling away from the truths of the church and toward a heretical view of the world: think Bruno, Teresa of Avila, Francis, Copernicus, and others who had a countervailing view from that of the hierarchical view. (Daston and Park 1998: 120–134). At the opposite end of the spectrum, the so-called 'scientific revolution' and swing toward mechanism and reductive materialism also trapped the world into units that would make all of life available to instrumental reason and efficient causality: what Martin Heidegger termed 'enframement' (1977) and that which Horkheimer and Adorno warned against in their *Dialectic* (2002: 191–195).

Haeckel's monism wanted to navigate a way out of reductionistic and dualistic thinking, which cut us off from the source of beauty, goodness, and truth that could be experienced from the natural world. Again, he drew largely from Spinoza in equating God and Nature, and in equating spirit and matter with a common substance. His understanding of nature was also very much influenced by the romantic turn in German thought that came about in reaction (in part) to the mechanization of the Industrial Revolution. In this way, he wanted to avoid the pitfalls of falling into idealism and materialism, and any form of dualism, and in this way, he creates a monistic and animated understanding of the world, which we might today call a type of emergent, religious naturalism.

This is not a monism that does away with pluralism; as stated before, Haeckel's substance had a triune structure to it (matter, energy, and subjective experience). There was room for diversity in Haeckel's monism, despite some of his culturally located short-sighted ideas and his belief that science would eventually solve all mysteries of the world. Still, his method depended upon that middle space of wonder, which refused closure, to "un-do" what had become the received worldviews in the West. It allowed for the wonder of the natural world to come into view with eyes anew: in short, undoing, and unknowing enabled a form of *poeisis* that allowed life to appear in new ways. Again, I'm not arguing that Haeckel was an apophatic, postmodern thinker. He was, after all, a scientist looking for better understandings of the way the world actually is. His *Riddle of the Universe* (for instance) claimed that eventually the naturalistic worldview would solve all of life's riddles (1900: 274). What I am arguing is that he recognized that received knowledge was wrong and that a new method for understanding the world should have built-in mechanisms for allowing knowledge to be challenged and changed. He might agree, then, with Catherine Keller that,

> Linguistic forms are no sin – as long as they braid in their own unsaying. That is what as living events of language – allegory, paradox, symbol, metaphor in their epochs – *do* after all, that is the *poeisis* of language itself, its "making," its becoming: "words stretch, crack, will not stay still" (2014: 74).

What Haeckel was clearly arguing against was metaphysics which for him was the language of certainty that closes entities off from the world, creating certain objects in the world, and the world eventually into a certain object. This closure of metaphysics is of the same type that Carolyn Merchant describes in her now classic *The Death of Nature* (1980). The complete closure of chance and wonder in the natural world through a mechanization which was little more than bringing Newtonian mechanics to bear on all of the natural world (geology, evolution, physiology, etc.). Haeckel, among others of the monist society were responding directly to such closure, whether it be in the form of the idealism/dualism of dogmatic theology (especially the Catholic Church), or the closure of a reductive materialism that he saw going on in what was, at that time, disparate and specialized, scientific traditions (which were perhaps manifest in the bureaucratic and mechanistic nature of the Industrial Revolution).

From this perspective, it is no surprise that Haeckel draws from Bruno (who himself drew from apophatic theology), and even places his own intellectual work in continuity with Bruno, Copernicus, and Luther, in arguing for a reformation in the ways that we understand the world. What all of these

thinkers practiced, to varying degrees, is what might be called the art of unknowing. In contemporary queer theory, Judith Halberstam has linked such apophatic moments of realization with "the queer art of failure" (2011). These thinkers were engaged in purposefully failing their performances of the received traditions of wisdom, and failing to take orthodoxy as an answer to life's riddles. This doesn't mean they saw the world from an objective standpoint, but it does mean that these failures, these spaces of unknowing enabled a sense of wonder to re-ignite curiosity about the world: and these curiosities literally transformed the worlds into different ways of becoming.

Haeckel's own version of unknowing can be seen in his refusal of human access to bare facts in the world, a refusal which many scientists of his time (not to mention our own) did (do) not like.[3] Part of this refusal involved attacking the dominant philosophy of his era, which he saw as taking a wrong turn with Kant in assuming "*das Ding an sich*" and a transcendent realm of *a priori* knowledge. For Haeckel this was another way to maintain a dualistic worldview: a possibility for a totally other that was not accessible through the sensory experience of relationality. Such an other not only re-inscribes a non-relationality as the essence of identity, but also suggests that what we can know is based upon 'like.'[4] This is, in my mind, what distinguishes Derrida's *différance* and Butler's abjections from Kant: for the latter two that which is other is a result *of* relation not prior *to* relation, but I digress. Haeckel also argued against Kant's understanding of *a priori* principles and knowledge. For Haeckel these were not *a priori* claims, but rather emergent in the process of years and years of cultural and linguistic evolution, and the detritus left over from these processes (1905: 10–11). He was edging (again) closer to postmodern understandings of "bio-power" than to Kant on this one. He did agree with Kant's emphasis on the hermeneutical task of understanding the world, but not because it's 'true form' was somehow inaccessible to us: rather because human reason is incapable of exhausting a world that is constantly changing. This 'uncertainty' is simply the result of insisting that history is a part of evolution and geology (which is what Darwin's and Haeckel's conclusions implied).[5]

3 See, e.g.: "No science of any kind whatever consists solely in the description of observed facts" in Ernst Haeckel's *The Wonders of Life: A Popular Study of Biological Philosophy* (1905: 5–6).

4 Though Haeckel himself does not make this epistemological connection, Eduardo Kohn draws this out in his *How Forests Think: Toward an Anthropology Beyond the Human* (2013: 87).

5 On Kant's false move to the a priori/ideal in his epistemology, Haeckel writes, "This dogma is erroneously built on the correct idea that our knowledge, obtained through the senses, is imperfect; it extends only so far as the specific energy of the senses and the structure of the phronema admit. But it by no means follows that it is a mere illusion, and least of all that the external world exists only in our ideas" (1905: 69).

From this perspective one could argue that placing humans within an evolutionary framework, also places history in nature, and thus becomes a necessary condition for post-modern questions of knowledge construction and hermeneutics. In a way, Haeckel's own effort to prevent such a 'slip' (into infinite regress) can be found in his understanding of ecology.

Ecology, as Haeckel saw it, was the science that brought together the particular organism in relationship to a community of organisms. His theory of recapitulation (ontogeny recapitulates phylogeny), where ontogeny is the particular/material and phylogeny is the form/ideal, itself is also a product of his *via media* approach to the natural world. What he argued was that every individual goes through the history of 'lower' organisms in its own individual development. The environment and context of that organism is what forces evolutionary changes. This environment and context also includes, for Haeckel, language and culture. Ecology, then, becomes the context and container for understanding the world around us thereby preventing a slip into infinite regress: if we can get a better understanding of the overall ecosystem into which we are born into, then we can manipulate it in ways that bring about the best, most beautiful, and truest life possible. This is, perhaps, where Haeckel's system became too closed off from the evolving source of life and thus where he fell into some problematic thinking.

He did, as we all do, interpret nature from his own context, and perhaps allowed for too much conceptual closure of 'the environment' and not enough critique of his cultural location in his interpretation. He didn't have much of a concept of evolving ecosystems and he also read back into nature his own historical-social location which led to a host of euro-centric readings of evolution: most famously captured in his drawings of the evolutionary tree. Europeans, as for most scientists and philosophers of his time, were at the top of the evolutionary scale: and in this sense, evolution was progressive. Perhaps the notion of a progressive history and story was something which Haeckel uncritically smuggled in from the theological dogma he fought so vehemently against. Perhaps also, the closure of the world in the form of ecosystemic or environmental closure, and his mistaking of his own cultural beliefs in general as 'natural' were also hangovers from the metaphysically hierarchical world he argued against. Regardless, this belief in association with the emerging science of eugenics would have tragic and disastrous effects in the early half of the twentieth century: not just in Europe with the Nazis, but also in the sterilization procedures and other eugenic projects in the United States. Haeckel's failures, along with other scientists of his era, do not have to be our own and we must learn from these previous mistakes. As Lorraine Daston and Katharine Park point out in

Wonders and the Order of Nature: wonder can be equally a source for horror as for awe (1998: 173–214). Concepts of beauty, truth, and goodness, even if seemingly based in the "natural world," must always be critically scrutinized for their cultural-historical limitations and so we should not fall into the phenomenological trap of thinking that wonder and awe are guides to any sort of unmediated experiences of our 'true' selves, our 'true' feelings, or the 'true' reality of the natural world. We are never 'at one' with ourselves or with nature in any sort of unmediated way. This confusion was, perhaps, Haeckel's largest mistake.

Nevertheless, Haeckel's aesthetics of nature challenged many boundaries and categories during his time. In these challenges, Haeckel was far from 'calm and collected' but rather was swept up in the *Kulturkampf* of the nineteenth century and pigeonholed by some theologians as a dogmatic evolutionist against religion. It is this picture of Haeckel that still largely remains intact (as any quick Internet search will reveal). Unfortunately, this painting of Haeckel as merely an example of the 'conflict' model between religion and science, as an atheist, reductionist materialist, and even by Daniel Gassman in *The Scientific Origins of National Socialism* as a step along the way to Nazi ideology, has meant that his nature aesthetic and indeed his non-reductive naturalism have both been largely ignored since World War II. I argue that Haeckel can offer an alternative basis for a naturalistic, scientific worldview from that of the reductive, instrumental model. One of the keys to this alternative, non-reductive naturalism is found in the boundaries he challenges with his nature aesthetics. Now that I have fleshed out some of the context for his 'aesthetics from below' and placed it into dialogue with the Greeks but also within the context of the *Kulturkampf* of his time, I'd like to spend the rest of this chapter examining some of the ways in which his art challenged (and still challenges) some long-held boundaries within the natural world. Through challenging the boundaries between living and dead, plants and animal, and humans and the rest of the natural world, I argue that Haeckel's nature aesthetics provide a resource for contemporary religious naturalisms and contemporary aesthetics of immanence in general.

Challenging the Boundary between the Living and the Dead

Central to understanding Haeckel's nature aesthetic is his understanding of the origins of life. For Haeckel (coincidentally as for evolutionary theorists today) all life emerges from the sea. This was, in itself, an important move in the eighteenth and nineteenth centuries: from the depiction of an idyllic garden as

the origin of life, to that of the mysterious and even chaotic sea (Morton 2009: 77–82). Such a change marked also the move from a created order to an idea of life evolving (somewhat chaotically and haphazardly). Oddly enough, such a reading of life evolving from the sea, as Keller has pointed out in *Face of the Deep*, fits well metaphorically with the idea of life evolving from the *tehom* in Genesis 1, though it clearly flies in the face of theologies in which an omnipotent creator god creates all life and forms out of nothing. It is this latter reading that excited Haeckel (and others) because for him this signaled a moving of aesthetics of creation from the hands of a creator god to that of an emergent process in the natural world.

The process of moving from abiotic life to life follows the story, not of a creator god, but of the spontaneous generation of monera, for Haeckel. Again, this spontaneous generation or *poeisis* was the creative transition from life to non-life. These monera "arose from the primeval ocean through the operation of purely physical and chemical conditions and were the origin of all living forms" (Morton 2009: 63). Monera were single-celled organisms, made up by an energy event which brought together "albuminous combinations of carbon" (Haeckel 1876: Chapter 15). They contained merely one particle of the protoplasm, which Haeckel believed was the source of what we might call an internally driven 'life.' Protoplasm is the soul/energy that is found in all living things. Though even in abiotic life, there is a precedence for biotic life: as Haeckel's *Kristallseelen* (Crystal Souls) work toward the end of his life makes clear. The difference between biotic and abiotic life is merely the distinction between self-organizing life and life which is acted upon purely by external factors. In a way, just as Haeckel converts the process of creation from that of a transcendent God to that of an immanent process in Nature, so here Haeckel moves the 'ether' from beyond to an immanent place within and around living organisms.

Prior to the formation of monera, the development of life was more akin to crystalline structures, which is one reason Haeckel pays so much attention to the patterns that make up crystalline and abiotic structures: for him these patterns are also found in biotic life, except for now each individual organism begins to 'remember' the world – via the protoplasm – and pass those 'memories' on to their progeny. The transition from abiotic life to biotic (ensouled) life, then, is more a transition of the locus of organization of a life than anything else. In other words, whereas rocks and crystals and other forms of abiotic life are 'shaped' by the environment and climate around them, beginning with monera, entities begin to react to and interact with their surroundings (1905: 33–34). This means, among other things, that life i3s continuous with non-life, and that physics, chemistry geology, and biology can all begin to fit together

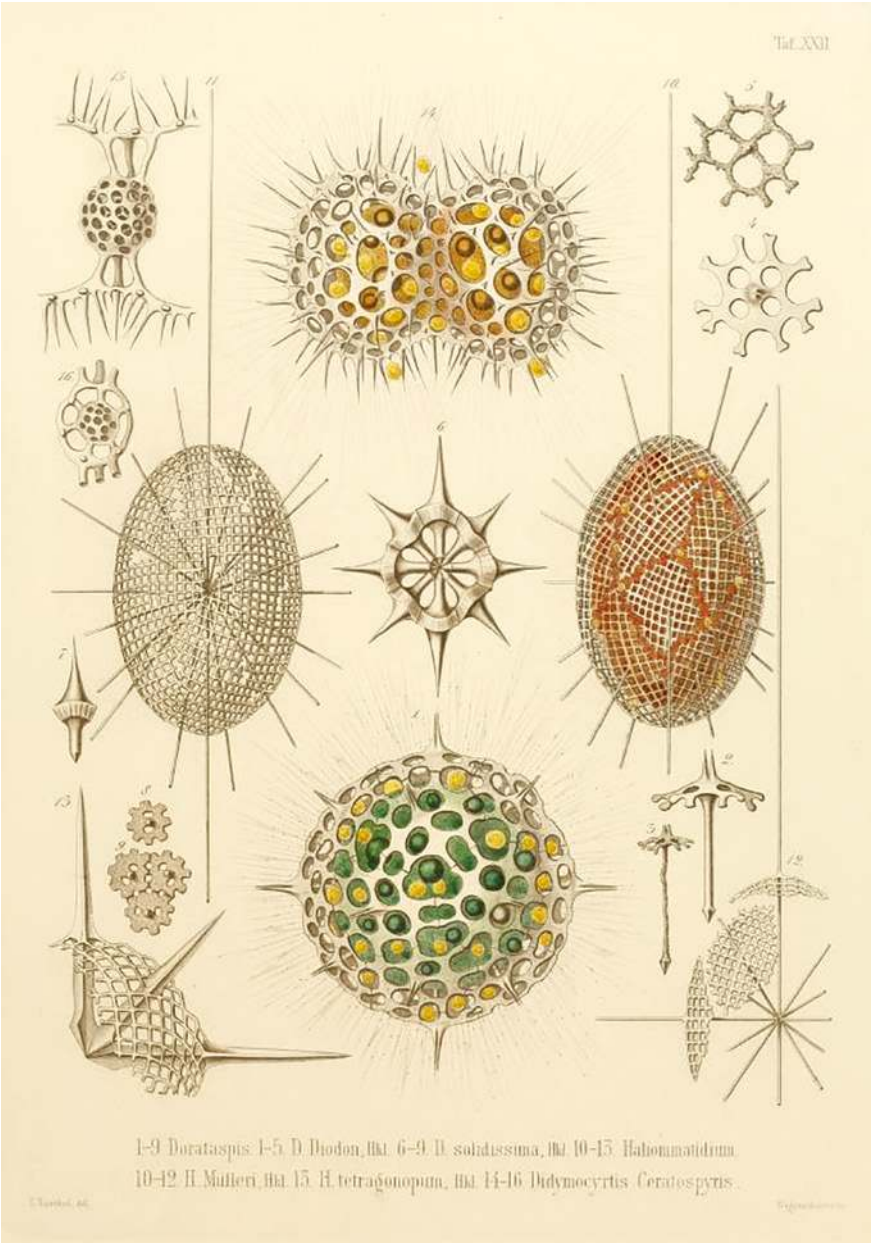

FIGURE 4.1 *Tafel XXII, Ernst Haeckel.*
FROM *DIE RADIOLARIEN* (BERLIN 1862)

into a planetary story: a story in which life, energy, soul, feeling, and eventually thought and consciousness can be explained within an immanent framework.

To my mind, nothing captures the movement from abiotic to the biotic better than Haeckel's drawings of Radiolarians. These are monera in which the protoplasm has come together internally to produce a nucleus, and in which mineral structures have created a hard surface or boundary delineating the inside and outside of the cell. In the sketches in image one, you can see clearly how crystalline patterns and protoplasm come together to produce single celled organisms with a nucleus. Such organisms blur the boundaries between the biotic/abiotic by bringing them together into a single organism. One cannot exist without the other. One can also see in figure 4.1 the importance of the microscope for bringing about a better understanding of the diversity of forms and patterns within the natural world. Such complexity, thought Haeckel, can only be understood through empirical observation: not *a priori* assumptions about 'created' forms into which all life must fit. In addition, figure 4.1 makes it easy to see just how much the *Jungendstil* influenced and was influenced by closer observations of nature. Moving up Haeckel's evolutionary tree leads us to the plant and animal worlds, which he understood as on an emergent continuum.

Challenging the Boundary between Plants and Animals

Part of what Haeckel wanted to show in his drawings was the continuity between forms in nature, and the ways in which these forms combine together to form new organisms. In the language of emergence, forms (a crystalline structure and single cell) come together to produce something more from nothing but.[6] Depending on how one divides the forms, or structures, one sees different aspects of nature or a given organism. This is one reason that Haeckel preferred drawings and sketches of nature to the emerging technology of photography. For Haeckel, photographs took something away from the multiperspectival way in which a single organism might be observed: from different angles, at different depths, inside and outside, etc. This embeddedness within the natural world was strengthened by his sense that all biotic life shared in some level of 'soul' (through the protoplasm), and that all forms also evolved. There was, for Haeckel, no fixity, *telos*, or container by which the natural world

6 For a brief description of emergence see: Ursula Goodenough and Terrence Deacon's "The Sacred Emergence of Nature" (2008).

could be made to appear to us as it really was, even if he did adhere to some sort of 'progressive' elements overall in evolution.[7]

As Mike Hogue argues well in his book the *Tangled Bank*, Darwin's *Origin of Species* and *Decent of Man* were about the recognition that there are no unchanging forms in nature: rather forms too evolve. In other words, there are no distinct species. As Haeckel notes in the opening of this chapter: everything is transformed sunlight, all else is nomenclature. This means that the hermeneutic task is central and again, paying attention to the many 'voices' of nature is important. It also comes very close to the insight of Deleuze and Guattari in the twentieth century that the virtual is the real (1987: 93–98). The ever-changing flux of embodied life is the really real, our fixing of forms is (as Whitehead notes) misplaced concreteness or an abstraction (1925: 51–58). This opens up our thinking toward multiple forms of agency and actants that we find in many forms of the so-called New Materialisms.[8]

Because of this flux in forms, Haeckel was interested in what we might think of as transitional forms of nature: those that blur the boundary between living and dead (discussed above) and human and animal (discussed below). Perhaps no animal was more studied for this transitional reason as his beloved Medusae (jellyfish). Jellyfish, for Haeckel, represented well the shift from plant life to that of animal form. Its reproductive cycles, though varied, often involve polyp-style offspring that seem more plant like (and attach to other sea life), which then grow into free floating organisms. On the one hand, who is to say where a single jellyfish ends and begins: the life cycle is continuous; matter is continuously transformed into these elegant, magnificent creatures. On the other hand, their behaviors blur the boundaries between plant and animal life: acting in similar ways to both types of life.

In figure 4.2, one can see different views of the internal structures that make up this particular jellyfish on the periphery of the sketch. This is indicative of Haeckel's embedded understanding of observation: how one observes and at what level of life one observes makes a difference in terms of how we understand what an organism is and the world around us in general. The two

7 Haeckel's support for arts and education was in part due to the fact that evolution could be regressive or progressive. See, e.g., Erika Ellis, *The Reception of Ernst Haeckel in America: Monism and the Prophet of Evolution* (1998: 70). On the other hand, his understanding of evolution does seem to imply a progressive tone toward more complexity and advancement. See, e.g., Eric Paul Jacobsen, *From Cosmology to Ecology: The Monist Worldview in Germany from 1770 to 1930* (2005: 98).

8 See, e.g., Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (2010) and Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (2007).

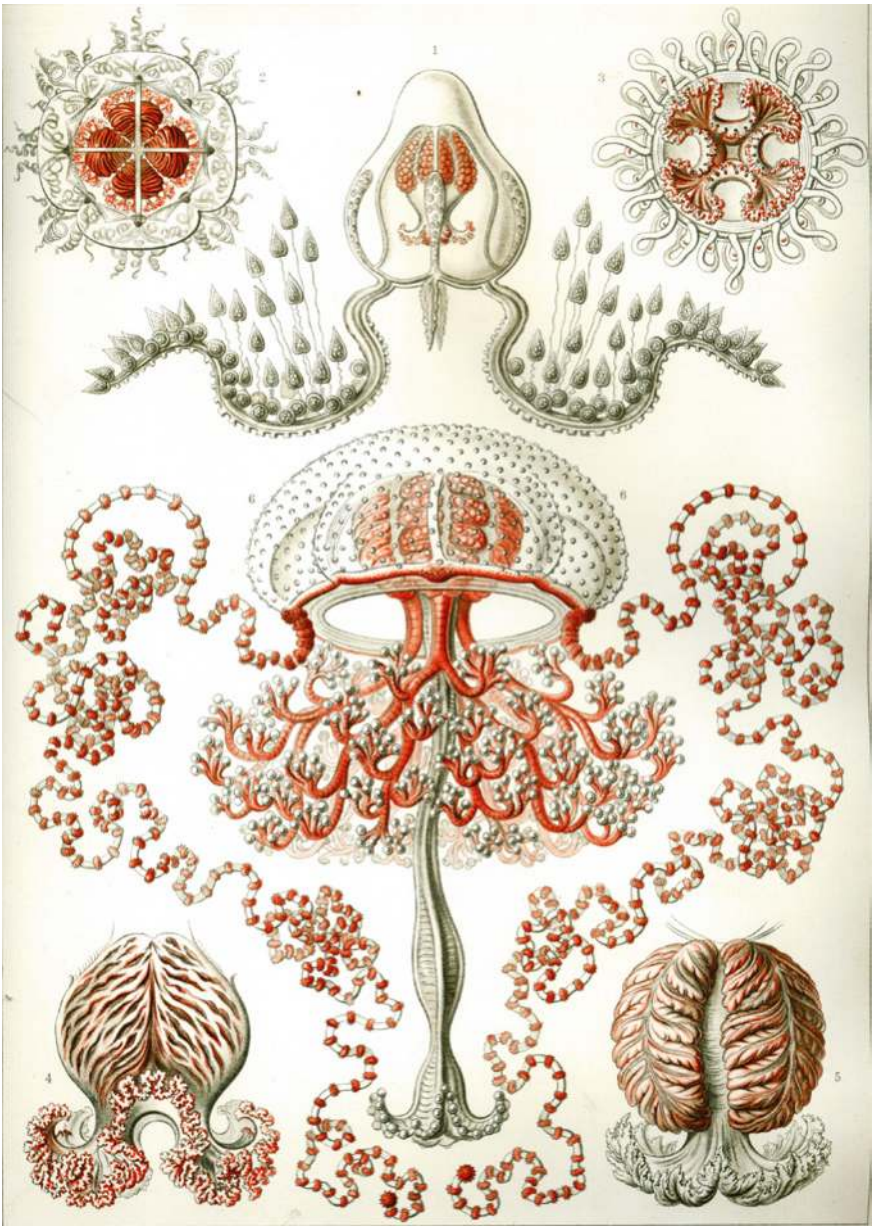

FIGURE 4.2 *"Anthomedusae," Ernst Haeckel.*
FROM *KUNSTFORMEN DER NATUR* (1899).

central structures in the sketch provide us with the more plant-like features of the jellyfish, while the bottom two structures begin to sketch out part of the more animal (tissue) like structures of the jellyfish. The top two structures belie Haeckel's desire to find symmetry and order within the natural world. Taken together, this plate represents the micro-macro structure that Haeckel captures in his theory of recapitulation (a form of hylomorphism). It also reminds us of the continuity of life and the continuous interaction of the internal state of an organism with its surroundings (or ecology). This embeddedness and relatedness did not stop at the plant and animal levels of life for Haeckel (and some other evolutionary thinkers), but extended also to the human levels of life.

Challenging the Boundary between Humans and Animals

Another aesthetic move on the part of Haeckel, and evolutionary thinkers in general, was the decentering of humans that takes place in an evolutionary, naturalistic worldview. In his understanding of evolution, history is emergent, as is rational thought and all human projects, and there are predecessors in other forms of life. For Haeckel the worst part of monotheistic understandings of the world was, following Feuerbach, that humans had merely projected the Human writ large as the center, creator, and sustainer of the universe. This "gaseous vertebrate animal," as Haeckel called it in his more combative debates with theists, was the greatest delusion that kept humans from understanding their embeddedness with other animals in an evolutionary community (2008: 22). The hierarchies and dogmas that built up around this projection was that which he saw as crushing what we might call the planetary wonder at the base of our deep relationality. Projects of human meaning, rationality, and consciousness writ large become a container into which all other life must fit. In other words, the monotheistic and transcendent basis for humanity played a role in reifying the world around us and thus in distorting the beauty and wonder that emerge from the rest of the natural world. Though Haeckel was a product of his own socio-historical location and would read that space back into the natural world as 'nature,' he at least began to question the idea that human thought can exhaust the possibilities of the world.

An immanent beauty and wonder, he thought, would give us a meaning-full understanding of our place in the world that would transform our worlds for the better. In this sense, we can say, that Haeckel's (mostly) non-teleological and non-foundational understanding of nature meant that there is genuine freedom for becoming in different ways together as a planetary community. For this re-imagining we need new aesthetics and meaning-making practices

that are wonder-filled, in other words that keep us focused on the everyday embodied becoming realities of the planetary community and how these ideas, practices, aesthetics and values effect the various embodiments of transformed sunlight that make up our lives.

In addition to his more controversial embryo studies that argued in pictorial form for his theory of recapitulation – i.e. that all organisms go through the entire history of evolution and thus human embryos and the embryos of a dog are at certain stages, the same – another way he re-placed humans within the natural world was by sketching the evolution of the face. In figure 4.3, you can see both the embryonic development of a human, a ram, a bat, and a cat, but also the sketches of the final form of the faces of these animals. As Marsha Morton points out, the choice by Haeckel to use a Greek God's face, was a deliberate attempt to transplant the origin of humans – and all things human – from that of a transcendent realm to that of an immanent, natural world along with all other life (2009: 64). Again, he seeks to strike a balance between various life forms (the individual animal faces) and the patterns that hold them all together (found also in the face, but more so in the embryonic similarities of the various species). Such an immanent frame for understanding history, culture, art, politics, and all things human meant that something like Kant's transcendental philosophy, Hegelian idealism, and/or the dogmatic theology of the catholic church – which all suggest that there is more than the emerging, changing natural world – were, in fact, distortions of truth, goodness, and beauty. In the end, for Haeckel, his monistic religion and political program would replace such false transcendent philosophies, theologies, and politics, with a new form of what we might call today, emergent religious naturalism.

Political Implications of Haeckel's Natural Aesthetics

As the reader is well aware, Haeckel's monism, the shift toward an evolutionary framework, and German Romanticism were put toward negative ends with the rise of National Socialism and the Third Reich in Germany, and in eugenics programs in the United States and Europe in general. The negative possibilities of such a 'nature-based' aesthetic, philosophy and ethics should never be forgotten. However, it seems that such a negative side is more due to the idea of a form of transcendental unity creeping back in to an otherwise emergent understanding of nature than anything else: whether that be nationalism, ethnocentrism, racism, etc. In other words, if we can counter the tendency in human thinking to aesthetically and politically rank everything according to some transcendent norm (e.g. the normative or ideal human), then an immanent

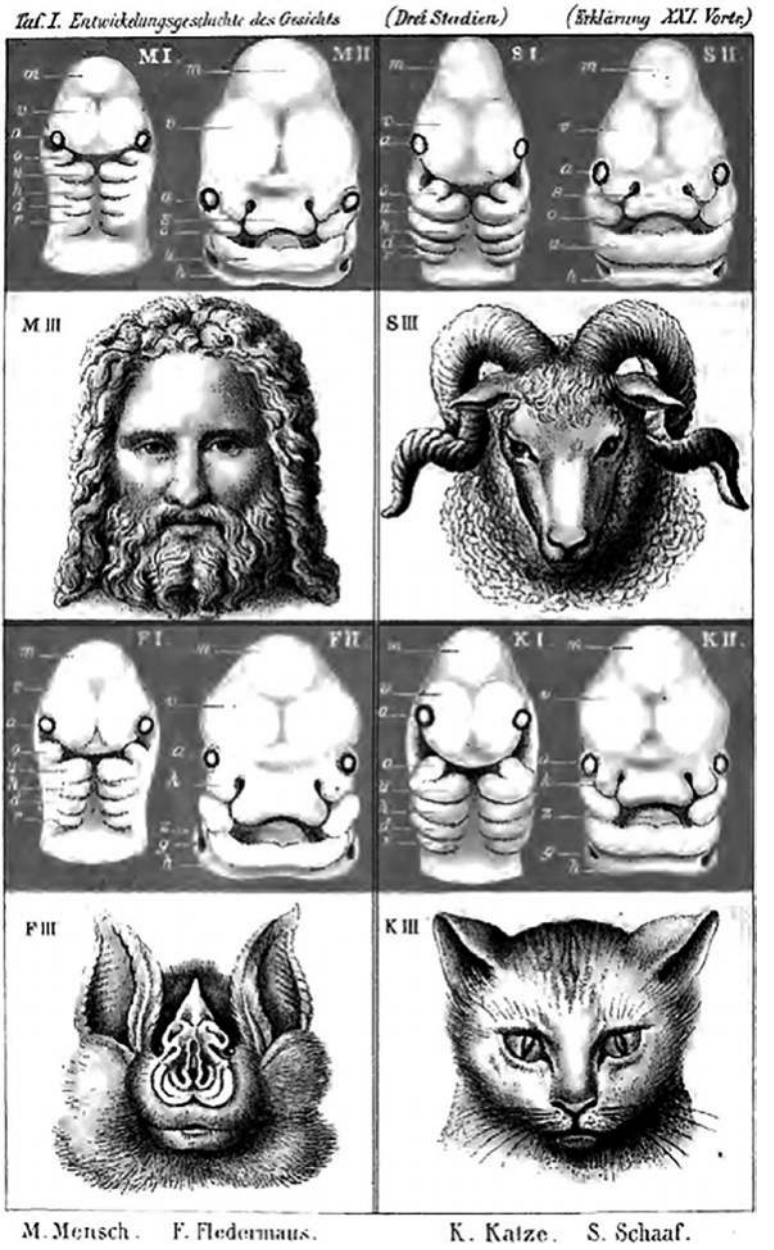

FIGURE 4.3 *Tafel I: "Entwickelungsgeschichte des Gesichts," Ernst Haeckel.* FROM *ANTHROPOGENIE ODER ENTWICKELUNGSGESCHECHTE DES MENSCHEN* (1874).

framework for understanding the evolutionary process of life opens us up toward many more possibilities for becoming that embrace more and more difference as part of the process of nature-naturing.

Baird Callicott suggests in his *Thinking Like a Planet* that one way to prevent the negative side of a naturalistic worldview, such as found in the connection between Deep Ecology and Nazism, is to extend the boundaries of our thinking beyond nation, beyond race, beyond species, beyond religion to a planetary understanding (2014: 225–226). In other words, nationalism or other identity politics plus something like placing ourselves into an evolutionary and ecological understanding of the world, leads to hierarchical ranking and otherness that might be avoided were we to think our ourselves in planetary terms, which is something I think we can now do.

Many philosophers and religious studies scholars have begun to imagine what a transition toward a planetary understanding of the world might look like.[9] Mary Evelyn Tucker puts it this way in *Worldly Wonder:*

> Indeed, the environmental crisis calls the religions of the world to respond by finding their voice within the larger Earth community. In so doing, the religions are now entering their ecological phase and finding their planetary expression (2003: 9).

Haeckel, among others such as Humboldt and Goethe, was indeed in the process of thinking through a naturalistic worldview based upon the natural sciences and for him this included history, language, religion, and thought. We might look to these earlier thinkers, as articulating what Bruno Latour has called a "geo-story" based upon the best sensory data of their era (2013: 73). In other words, they were articulating a planetary story (geo-story) into which histories (human stories) might fit. This is, then, a meaning making project: a re-ligare/re-legare, binding together of information from many different sources into a meaningful whole. This thought had, for Haeckel, some ethical implications as well: the first of which had to do with humans being embedded in a living process, as part of the earth. His articulation of a monistic worldview insisted on the *poiesis* and plasticity of living and non-living organisms together: which was again, neither found in the reduction to the material, nor to the ideal, but the opening of a 'third' space of interplay between these two. This third space can also be seen in the turns to the present and to embodiment in the twentieth century: reality is neither located in the past nor fully in the future, but in the emergent present where time comes together in the

9 Including myself in *Religion and Ecology: Developing a Planetary Ethic* (2014).

interaction of bodies (and in which the relationship between organisms and their environments push the world into different ways of becoming). In art, particularly music/painting/sculpture, this third way is implied in understanding how ideas and materials come together in the emergent 'production' of a given object, and how these objects continue to live as various peoples consume and interpret these objects of art. In literature, the third way manifests in the form of understanding texts as living, where the reader becomes a located interpreter bringing the text into a living present and breaking open orthodoxy to the polydoxy of multiple interpretations.

I'm not suggesting that Haeckel was intentionally arguing for all of this, but the turn to the focus on immanent contexts and interpretations thereof that one finds in discussions of postmodernity and pluralism depends upon an understanding of histories as part of and coming from the evolving natural world. Such diversity, which Haeckel saw in his extensive travels and cataloging of peoples and the rest of the natural world, was for him much better attended to by a naturalistic sort of worldview and the scientific method than were what he perceived to be parochial religious ideas. The problem for Haeckel, and for other scientists and philosophers of his time, which began to glimpse this more 'planetary' understanding of humans within an evolving community of organisms, was the mistake of projecting their own historical and cultural location as 'natural.' From where we stand now, we know the perils of limiting a naturalistic worldview to a specific culture, time, or ideal. We can re-imagine Haeckel's emergent monism as a source for a religious naturalism that is no longer closed off by human thinking, but rather opens us on to multiple possibilities for planetary becoming.

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CHAPTER 5

Art without an Object but with Impact

George Steinmann

Abstract

This artist's talk reflects on *Art without an Object but with Impact*, a project realized by the Swiss artist George Steinmann together with Bauart Architects Ltd Bern for the ARA Region Bern Ltd. The transdisciplinary process for the new headquarters of Switzerland's leading wastewater treatment facility (each day 90 million liters of wastewater is cleaned by the wastewater treatment system before it is returned to the river Aare) began in July 2008 and ended in December 2011. The artistic project was based on two interventions. In Intervention A, water from three curative mineral springs of the Engadin valley in Eastern Switzerland has been added to all water-based material and elements used for the construction of the building. Although the effect of this step remains immaterial and invisible, the mineral water itself and its energy are in the building as 'information', which penetrates the material and creates a resonating space. In Intervention B, a Water Advisory Board (Wasserbeirat) has been convened to discuss the various problems pertaining to water in a roundtable. Resulting from the roundtables, a "Forum for Water" (Wasserforum) was established in the new building. The close cooperation of all participants, including the construction workers, as part of the artist's strategy, neutralized the traditionally decorative role of the artist and leads to a critical examination of the artist's role in building-site art projects in general. By combining sociopolitical, aesthetic, natural scientific, and communicative elements, Steinmann presents a transdisciplinary contribution to the field of art as research.

Keywords

transdisciplinarity – George Steinmann – water – art as research

Ladies and gentlemen, dear friends, it is a great privilege and distinct honor for me to address you today and to share with you one of the most significant artworks that I have made during my entire artistic career.[1] In the following,

1 Adapted from an artist's talk given at the Ernst Haeckel House, Friedrich Schiller University Jena, April 11, 2014. The talk and this chapter are part of the artistic work itself. As such,

I will discuss a transdisciplinary artwork dedicated to the issues of water and wastewater entitled *Art without an Object but with Impact* (*Kunst ohne Werk aber mit Wirkung*), a sculpture encompassing aesthetic, social, and sustainable dimensions.

My Work Process

I am educated as a visual artist and musician. In the *Laudatio* issued by the University of Bern when I was awarded an honorary degree, I am described as a critic who takes a stand for ethical questions and defines sustainability as an active principle of responsibility.

For me, an artwork has never been an exclusively aesthetic object. In principle, my work aims to deny pure formalistic perception; my visual expression is not limited just to the formal elements of the artwork. My works confront the viewer with images that conceptualize meaning. I create art that makes its mark on reality. Art stimulates a genuine cognitive faculty operating on the plane of transdisciplinary networking – not only interdisciplinary in terms of cooperation with scientists, architects or designers – but trans-disciplinary, transcending the academic disciplines by including local people, communities, NGOs, etc., as sources of equally valid knowledge that crosses social and cultural boundaries.

I believe that everything is related, that nothing exists by itself. An awareness of the mutual dependency of things is important in the work process. The focus is on connectedness, context, and the complex relationship between the whole and its parts; in the widest sense, the focus is on the relationship among various paradigms. In other words, it is the 'and' and not the 'either/or' which is the guiding force behind my work.

In my opinion, the real task of art lies not only in imparting knowledge, but also in producing knowledge. Art is the fourth dimension of knowledge in addition to natural science, social science, and the humanities. This is important because debates on the future viability of our society must move beyond a narrow emphasis on scientific, economic, and political structures. I am committed to the notion that artists can engage our society through creative insight and visions. Art in this context is oriented towards long-term results.

In this light, all of my works offer basic research. Typically, they involve synthesis, pointing towards ways of thinking and ways of acting that do not

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this chapter firmly expresses the artist's personal voice and vision and keeps the situational context alive.

operate according to the categories of division and polarization, but seek systemic connections instead. Disciplinary boundaries are crossed. This holistic view is based on the understanding that all phenomena – physical, biological, sociological, and cultural – are interconnected and dependent on each other.

Allusions in my work to transdisciplinarity, including science and philosophy, are especially important. I believe that the high degree of specialization, to which every discipline strives, precludes a mutual dialogue and exchange. It is therefore my aim to counter this restrictive approach by presenting an expanded vista of the different fields in order to overcome specialization and explore the mutually enriching potential of combined insights and findings. The desire to unite art and other forms of knowledge is based on a simple formula: we have to distinguish between knowledge and wisdom. Art is a form of knowledge, science is a form of knowledge, philosophy is a form of knowledge, craftsmanship is a form of knowledge. But then there is, above all, a meta-level to all these activities and that is wisdom. This really is the major task.

Last but not least, I have a great interest for places. In all my projects, it is important to visit the site beforehand. This isn't just a question of determining formal criteria or spatial dimensions; it is also about the history, the hidden, subtle layers and – most often – about the inhabitants of a place. The work has to fit the place, as it were. Only then do I make any decisions about the kind of artistic intervention I am going to do. This is especially relevant for *Art without an Object but with Impact,* an art project which was completed in Bern between 2008 and 2011.

Art without an Object but with Impact

Art without an Object but with Impact is the title of a commissioned work for one of the biggest wastewater treatment plants in Switzerland. It was created for ARA Region Bern Ltd., a facility that cleans about 90 million cubic meters of wastewater annually.

A new headquarters was being built for the company, including offices, laboratories, and facilities for the employees. The art project was developed in close cooperation with the renowned Swiss firm Bauart Architects and started in 2008 in the earliest possible stage of the project, the first architectural design sketches. This procedure is a contrast to most public art projects, making it absolutely exceptional.

My project transcends the pure formal-aesthetic expectations for an artwork and aims to create concrete resonance. The point of departure for my artistic intervention was water and the project was manifested in two parts, "Intervention A" and "Intervention B."

FIGURE 5.1 Art without Object but with Impact. *Wastewater treatment plant ARA Region Bern Ltd. New administrative and laboratory building.*
PHOTOGRAPH BY PERMISSION OF THE AUTHOR. COPYRIGHT STEINMANN / PRO LITTERIS, SWITZERLAND 2016.

"Intervention A" emerged during the planning and construction phase of the building. The intervention was based on water from three curative mineral springs of the Engadin Valley in the Swiss Alps, known for centuries for their curing potential. The healing springs were in use in the early medieval ages, and perhaps also in Roman times. Their medical capacity was observed by Paracelsus who shared this belief with a larger European public.

During the entire building process of *Art without an Object but with Impact*, which lasted from July 2010 until December 2011, I added mineral water to all water-based materials such as concrete, paint, facade plaster, and joint cement, both in interior and exterior elements used for the construction of the building.

From an aesthetic point of view, the artwork is part of a nonvisible structure. It is pure energetic information creating a resonating space. This not only refers to subtle levels of perception but is also a reference to the findings of quantum physics, indicating that energy goes beyond matter, being in complex multi-layered ways 'information' or 'potentiality.' The new building of ARA Region Bern Ltd, and a body of resonance at the same time.

FIGURE 5.2 Indicator. *Engadin Valley, Switzerland. Region of the mineralwater sources Bonifazius, Carola and Lischana.*
PHOTOGRAPH BY PERMISSION OF THE AUTHOR. COPYRIGHT STEINMANN / PRO LITTERIS, SWITZERLAND 2016.

The sculpture was interpreted in a number of ways. Some people have said that my gesture to include curative mineral water in the construction materials was a performance. Indeed, I spent a long time on the construction site. For months I cooperated with the architects, the owners, and especially the building craftsmen. Others saw the nonvisible intervention as a spiritual gesture, a mind sculpture, or regarded the work process as a development project.

For me it was all of that, and even more. It was an artistic intervention aiming to be both ethically responsible and valid as a work of art. "Art is realistic when it attempts to express an ethical ideal," said the great Russian filmmaker Andrej Tarkovsky, who gave the notion of realism a surprisingly new meaning, referring not only to the rough surface of reality, but also to subtle energies (2000: 29).

Art is also *in* the building. It is 'content,' not 'self-proliferation' by an artist in a public space. This also questions the role of an artist in the context of public art. If an artist works with 'participatory aesthetics,' which indicates that he gives up the image of a creator working alone, he is aware that all phenomena – physical, biological, sociological, and cultural – are inter-connected and dependent on each other.

FIGURE 5.3 Intervention A. *Work in progress. Adding mineralwater to all waterbased materials used for the construction of the building.*
PHOTOGRAPH BY PERMISSION OF THE AUTHOR. COPYRIGHT STEINMANN / PRO LITTERIS, SWITZERLAND 2016.

FIGURE 5.4 Intervention A. *Work in progress.*
PHOTOGRAPH BY PERMISSION OF THE AUTHOR. COPYRIGHT STEINMANN / PRO LITTERIS, SWITZERLAND 2016.

FIGURE 5.5 Intervention A. *Work in progress.*
PHOTOGRAPH BY PERMISSION OF THE AUTHOR. COPYRIGHT STEINMANN / PRO LITTERIS, SWITZERLAND 2016.

FIGURE 5.6 Intervention A. *Work in progress. George Steinmann with craftsmen on the construction site.*
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Communication was another very important aspect in the working process. It started with the architects and the building owners, and later included the craftsmen and all the companies involved in the construction process. Communication ultimately reached the media and public awareness. At all levels the project succeeded in a positive way. Why did this radical enterprise work? Because it was based on a culture of respect. Every day, at all times and with each person involved. It was an empathic encounter rather than an intellectual concept. The process was based on dialogue.

Now to "Intervention B," which is related to the ground floor of the new ARA Region Bern Ltd. building. It is conceived as a "Forum for Water Issues."

For the first part of this intervention, I implemented a water advisory council. The team brought together seven water experts from different professional fields, including personnel from science, politics, and philosophy. The team functioned as a focal point and met during the entire construction process for debates on water, focusing on such issues as "water hygiene," "the aesthetics of water," "gender and water," "the water footprint of Switzerland," and "sustainable use of water."

The need for sustainable development is one of the greatest challenges of our time. But this refers not only to scientific, economic, and sociological

FIGURE 5.7 Intervention B. *Work in progress. Water Advisory council discussing global water issues.*
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FIGURE 5.8 Intervention B. *Forum for water issues.*
PHOTOGRAPH BY PERMISSION OF THE AUTHOR. COPYRIGHT STEINMANN / PRO LITTERIS, SWITZERLAND 2016.

challenges, it also includes a cultural-aesthetic dimension. In this particular context, sustainable development means being able to integrate art. In fact sustainable development is an aesthetic imperative. Even if the connection of sustainability and art seems to be absurd, it certainly is a connection with future. I believe that it is time to discuss seriously what role the arts can play in defining our sustainable future.

This discussion was and still is the essential point in the project *Art without an Object but with Impact*. The artwork is entirely invisible, yet it has great impact to this very day. I am most interested in the sustainable resonance of my effort: that is to say, the effect it has on the employees and visitors in the building.

What Change Can Art and Culture Achieve?

Due to the enormous complexity of our globalized world, we are confronted with a fundamental shift of perception. We are standing on the threshold of a

total change in our conception of the world. Not only from a scientific, social, or economic point of view, but also from an aesthetic point of view. We are faced with a new picture of the world and will be forced to change in multilayered ways. Many adaptation and mitigation options can help us address change, but no single option is sufficient by itself. Effective implementation depends on policies and cooperation on all levels, which will be enhanced through integrated responses that link adaptation and mitigation with other societal objectives.

So what change can art and culture achieve? Arts and culture matter. Even in conflict situations, they are anything but a luxury. The promotion of arts and culture holds great potential for conflict prevention and transformation, as well as for post-conflict reconstruction. Guided by the conviction that arts and culture can change individual lives, strengthen social cohesion, bring about transformation, and build bridges between communities, art is a characteristic and an indicator of change. I believe that our society, together with state agencies, should include arts in the debate on future viability. In order to understand the complexity of our present situation, we have to see our world in a holistic way.

Our approach should be based on transnational cooperation and participatory practices. Dialogue is the only appropriate alternative to segregation, fragmentation, and inflexibility. In fact, I believe, dialogue is the essence of the twenty-first century. This principle is more important than ever. Not least of all because social reality has become far too complex for us to indulge in the luxury of reduction to discrete individual disciplines. We live in a globalized world, we are completely interconnected, and we have access to infinite information: big data. But this will count for nothing unless we find our way to a culture of mutual respect. Only mutual understanding of different views and perspectives will allow us to resolve our current problems. I therefore believe that art which adequately meets the challenges of our time will have to overcome its self-imposed isolation in the modern age. I not only want to respond with my art, but to enable and foster relational networks.

But let me make one thing very clear: there is no time left for pessimism. We have to find ways to overcome the climate of cynical resignation. Let us work today for the world of tomorrow. If we care about our legacy for future generations, now is the time to take decisive global action. We must galvanize political and personal will across and beyond all borders. To be successful, we ought to create a 'symbiosis of responsibility.' This also means questioning our daily routines and practicing mitigation, credibility, frugality, and humility.

Within this context I would like to highlight two significant publications. In 1988, Pope John Paul II appealed for an increased awareness on ecological

issues. He wrote: "We have removed ourselves from the essential meaning of life and the means to sustain life, while destroying ourselves spiritually, morally, emotionally, and economically, as we have separated ourselves from the natural world in which we live." And he specified, "Artists in particular, are called upon to collectively use their power to inspire others in this work" (Quoted in Lorbiecki).

In 2009, a group of fifty-six Nobel laureates from all disciplines gathered in London to discuss the ecological and economic future of our planet. At the end of the meeting they published the St. James Palace Memorandum calling for an equitable low carbon future and an agenda to protect global natural resources. Their keynote statement was "We must recognize the fierce urgency of now" (St. James Palace Nobel Laureate Symposium).

It is within this perspective that I am asking myself and you, what is the role of art in our time? What makes the scale and urgency of the human, ecological, and economic challenges facing the world today? I see three essentials:

(1) *The principle of dialogue.* Art is no longer the product of a body of hermetic loners. It is much more based on context. Art is interested in interdependency. In the foreground are criteria which make us empathic, compassionate, and ready for cooperation. It is my deep conviction that personal responsibility is a substantial dimension in the vocabulary of an artist.
(2) *Art is a socially relevant practice.* Artistic creativity detached from social conditions and context is undesirable in the twenty-first century. I prefer an engagement between the field of art and other disciplines, other lifestyles. Such art promotes valuable discussions, shakes the power structure of politics, and questions the dominance of the western Cartesian logic.
(3) *The most essential feature of the arts is solidarity.* We need symbiotic systems. Symbioses in nature are highly effective systems with existential effect. Lichens, for example, indicate that the evolution of nature is not only shaped by competition but also by social behavior. This is highly relevant. Instead of competition – the usual approach – we also have the option of mindfulness. The established approach of plundering the other must be replaced by an ethos of protection.

Transferred to art this indicates that a lastingly viable society cannot be achieved without the knowledge inherent in and imparted by art in all its aesthetic and cultural dimensions. I want to say more: artists have at their heart the task of transformation. We must work to resolve conflicts in a spirit of

reconciliation. Doing so involves a sense of compassion and caring. We have to reconcile ourselves with our world. The answer lies within ourselves.

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CHAPTER 6

Between Science and Art: An Anthropological Odyssey

Tim Ingold

Abstract

Over a forty-year career in environmental anthropology, I have found myself drifting inexorably from an engagement with science to an engagement with art. This was also a period during which science increasingly lost its ecological bearings, while the arts increasingly gained them. In this paper I trace this journey in my own teaching and research, showing how the literary reference points changed, from foundational texts in human and animal ecology, now largely forgotten, through attempts to marry the social and the ecological inspired by the Marxian revival, to contemporary writing on post-humanism and the conditions of the Anthropocene. For me this has been an Odyssey – a journey home – to the kind of science imbibed in childhood, as the son of a prominent mycologist. This was a science grounded in tacit wonder at the exquisite beauty of the natural world, and in silent gratitude for what we owe to this world for our existence. Today's science, however, has turned wonder and gratitude into commodities. They no longer guide its practices, but are rather invoked to advertise its results. The goals of science are modelling, prediction and control. Is that why, more and more, we turn to art to rediscover the humility that science has lost?

Keywords

anthropology – ecology and art – inquiry

Precisely forty years have passed since I began my career as a professional anthropologist. The achievement of this milestone has prompted me to reflect on what has happened to me and to anthropology over those four decades, from when I received my doctoral degree and took up my first teaching position, to today, now that I am taking my first steps towards retirement. What strikes me overall about these decades is that while I began with an anthropological orientation that was strongly inclined towards the natural sciences, I now

find myself most closely aligned with the disciplines of art, architecture, and design. And while my position has of course shifted over the years, it seems to me that the shift has been just as much on the sides of both the arts and the sciences. On the one hand, natural science is not where it was forty years ago – and here I am referring particularly to the fields of ecology and evolutionary biology with which I have been most closely associated in my work. But neither, on the other hand, are the arts where they were. Interpreted broadly to include architecture and design, it appears that the arts have shifted laterally to take up much of the field, and the position, from which science has abdicated. Or to put it in a nutshell, the people who are doing what I understood – forty years ago – to be science are now artists. What in the meantime has happened to science is an issue to which I will return.

It is commonly supposed that anthropology is a centrifugal discipline that discharges its practitioners into fields as remote and far away as possible, in order that they may experience ways of life as different from their own as they could hope or expect to find. Many anthropologists would agree, flaunting their encounter with 'radical alterity' as a badge of honor. But for me, it has always felt the other way around. Ever since I embarked on my studies of the subject, anthropology has been about finding my way home. I had no settled point of origin from which to start. It was not as though, even before setting out, I already knew all there was to know about myself and what I was going to be. Like most apprentice anthropologists, I did go to a relatively distant place to undertake fieldwork, and in my case this involved a prolonged stay among Skolt Saami people in the far northeast of Finland. At the time, however, I had almost no idea of who I was or where I came from, let alone of where I was going. I had a name and address, a passport, and next of kin to be contacted in case of emergency; I even had a degree from a respected university and a scholarship to support my work. But the voice with which I spoke, the hand with which I wrote, even the mind with which I thought – these were not yet me. They were but habits I had borrowed or styles that I had, at one time or another, sought or been trained to emulate.

In that sojourn in Lapland, however, and through the moral education it gave me, I took my first, tentative steps homeward. The road has been long and tortuous. I have not arrived yet and probably never will. But I am now more confident that it is indeed my voice that speaks, my hand that writes, and my mind that thinks. With voice, hand, and mind I now declare: *This is who I am*. And who is this person who I am slowly discovering myself to be? It seems to be a child. Raised in a happy household, where his mother indulged his passion for model railways while his father pursued scientific research into the mechanisms of spore dispersal of aquatic fungi, this child would spend long

hours immersed in the pages of D'Arcy Wentworth Thompson's monumental masterpiece *On Growth and Form*, of which his father possessed a copy of the original 1917 edition, or investigating the mathematics of soap bubbles and the traces of spinning tops. He would go for walks in the countryside, paying absolutely no attention as his father would identify and reel off the Latin names of every plant and fungus we would come across – he knew them all! At school, guided by inspirational teachers, he sat at the edge of his seat in wonder at the mysteries of the universe as they were being unraveled by science. He experimented with cloud chambers and grew crystals in solution. It was obvious that he was going to be a mathematician and a scientist.

What happened? A year of studying natural sciences at the University of Cambridge put paid to my illusions. After the excitement of school science, lectures at Cambridge were an intense disappointment. I found much of what was taught intellectually claustrophobic, dedicated to the regimented and narrow-minded pursuit of objectives that seemed remote from experience. Unlike many of my fellow students, outraged by science's renunciation of its democratic principles and its surrender to the megamachines of industrial and military power – this was, after all, a time when the war in Vietnam was at its height – I never became radically hostile to the scientific project. But I could see no future in it for myself. I wanted to study something in which there was room to grow, where I could discover the world and myself at the same time. And that was what led to anthropology. It appealed to me (rather as D'Arcy Thompson's biology had done before) as a kind of pure mathematics of real life, where experience and imagination could come together as one. And so began my odyssey, my journey home. Proceeding on my way, far from drifting ever further from the truths I had absorbed in childhood, I found myself ever returning to them, and furthermore defending them, with all the force that I could muster, against the onslaught of adult disciplinary oppression. I have fought this campaign over the territories of biological and cultural evolution, human and animal environments, the realms of thinking and making, and the competing claims of art and science.

The Mycelial Person

My father, as I mentioned, was a mycologist. His was a homely science, involving walks along river banks where he would collect the scum that often accumulates in brackish pools, bringing it home in glass phials to be investigated under a microscope set up on our dining room table. He had improvised an elaborate contraption involving a pile of volumes of the *Encyclopedia*

Britannica, a glass plate, and an early version of the anglepoise lamp, which allowed him to project the forms of the fungi revealed under the microscope so that they could be accurately drawn. This he did with the utmost care, using a mapping pen, India ink, and high quality Bristol board. Though he would never admit to it, this was his way of honoring the forms of nature, of not just contemplating their beauty but knowing them from the inside; and the results were true works of art. He loved his fungi. But perhaps what I did not realize at the time was that as a field of the botanical sciences, mycology is a deeply subversive discipline. Fungi, you see, just don't behave as organisms should. We typically describe the organism as a blob-like entity with an inside and an outside, bounded by the skin, and interacting with the surrounding environment across the boundary. But fungi are not like that. They leak, they ooze, their boundaries are indefinable; they fill the air with their spores and infiltrate the ground with their meandering, ever-branching and ever-extending fibers. What we see above ground are merely fruiting bodies, like street lamps which cast their aerial illumination only thanks to hidden, subterranean circuitry.

The mycologist Alan Rayner once remarked to me, in passing, that the whole of biology would be different had the mycelium – rather than, say, a mouse or a sea urchin – been taken as a prototypical exemplar of the organism.[1] Many years later, this thought would come back to haunt me, as I was developing a notion of what I called the 'mycelial person' (Ingold 2003). [2] What if we were to think of the person, like the fungal mycelium, not as a blob but as a bundle of lines, or relations, along which life is lived? What if our ecology was of lines rather than of blobs? What then can we mean by 'environment'? People, after all, don't live inside their bodies, as social theorists sometimes like to claim in their clichéd appeals to the notion of embodiment. Their trails are laid out in the ground, in footprints, paths and tracks, and their breaths mingle in the air (Ingold 2015). They stay alive only as long as there is a continual interchange of materials across ever-growing and ever-shedding layers of skin. Thus, just as mycology subverts deeply held intuitions in the biological sciences, so – it now seems to

1 Our conversation took place shortly before Rayner's book *Degrees of Freedom: Living in Dynamic Boundaries* (1977) was published. The extraordinary difficulties he experienced in finding a publisher for this volume says much about entrenched attitudes in biological science.

2 I first presented this idea at the 96th Annual Meeting of the American Anthropological Association, Washington DC, November 1997, and in the following month at a conference on 'Nature Knowledge' hosted by the Istituto Veneto di Scienze, Lettere ed Arti, Venice. More recently, the fields of mycology and anthropology have come together in the work of Anna Tsing, *The Mushroom at the End of the World* (2015).

me – anthropology does the same for the social sciences. Anthropologists, mycologists of the social, are the awkward squad, the jesters, the fools, who sidle up to power and chip away at its pretensions. And perhaps their awkwardness lies in precisely this: that they see a world of intricately enmeshed relations rather than one already divided into discrete and autonomous entities.

We anthropologists are predisposed, therefore, to what could be called a relational rather than a populational way of thinking, to a view of the world more topological than statistical. And if anything, this has set us ever further apart from mainstream social science. Once again, this has its exact counterpart in bioscience. In the latter years of his life, my father used to rail against the way, in his view, biological science had lost touch with the reality of living organisms. He found much of the literature incomprehensible. It was produced by modelers who had never observed or handled anything that lived or grew upon this earth, and who spent their time in laboratories or in front of computers, analyzing massive datasets spewed out by machines from the stuff fed into them. In the spectacular and lavishly funded rise of e-social science we have seen much of the same. Fuelled by the digital revolution, it has become an immense data-processing exercise from which the people have effectively disappeared. In the social as in the biosciences, qualitative field-based inquiries with living people or living organisms are increasingly regarded as naïve or amateurish. It is as though science had turned its back on the living, avoiding sentient involvement of any kind. In this brave new world, life is disposable, and its forms – whether human or non-human – are mere grist to the mill of data-analytics, the purpose of which is to produce results or 'outputs' whose value is to be judged by measures of impact or utility rather than by any appeal to truth.

A datum is, by definition, that which is given. But what today's scientists count as data have not been bestowed as any kind of gift or offering. To collect data, in science, is not to receive what is given but to extract what is not. Whether mined, washed up, deposited, or precipitated, what is extracted comes in bits, already broken off from the currents of life, from their ebbs and flows, and from their mutual entailments. For the scientist even to admit to a relationship of give and take with the things in the world with which he deals would be enough to disqualify the inquiry and any insights arising from it. Ideally he should leave it all to his recording equipment and exit the scene, only to return to register the outcomes once the job is done and to transfer them to a databank or storage facility for safe keeping. That this is impossible in practice – especially in the field sciences for which the laboratory is nothing less than the world we live in, and from which there is no escape – is often considered a shortcoming, a weak point in the methodological armory that could

compromise the objectivity of the results. For what is the role of methodology, if not to confer immunity to any infection stemming from direct sensory contact with materials? Casting ways of working within a procedural logic that is indifferent to human experience and sensibility, methodology treats the investigator's own presence not as an essential prerequisite for learning *from* what the world has to offer us, but as a source of observer bias to be reduced at all cost. Any science that fails in this regard is considered to be methodologically 'soft,' and anthropology by that measure – and mycology too, as my father used to practice it – is positively squishy.

An Art of Inquiry

Let us compare a hard object – say a ball – with a squishy one. The first, when it comes up against other things in the world, can have an impact. It can hit them, or even break them. In the hard sciences, every hit is a datum; if you accumulate enough data, you may achieve a breakthrough. The surface of the world has yielded under the impact of your incessant blows, and having done so, yields up some of its secrets. The squishy ball, by contrast, bends and deforms when it encounters other things, taking into itself some of their characteristics while they, in turn, bend to its pressure in accordance with their own inclinations and dispositions. The ball responds to things as they respond to it. Or in a word, it enters with things into a relation of *correspondence*. In their practices of participant observation – of joining with the people among whom they work and learning from them – anthropologists become correspondents. They take into themselves something of their hosts' ways of moving, feeling, and thinking, their practical skills and modes of attention. So too, my father corresponded with the fungi as he drew their forms under the microscope. His hand, along with the pen it held, was drawn into their formative processes, and as he drew the forms re-emerged on the surface of the board. Correspondence, whether with people or with other things, is a labor of love, of giving back what we owe to the human and non-human beings with which and with whom we share our world, for our own existence and formation.

Two centuries ago, in Germany, Johan Wolfgang von Goethe proposed a method of science which demanded of practitioners that they should spend time with the objects of their attention, observe closely and with all their senses, draw what they observed, and endeavor to reach a level of mutual involvement or coupling, in perception and action, such that observer and observed become all but indistinguishable. It is from this crucible of mutual involvement, Goethe argued, that all knowledge grows (see Holdrege 2005 for

an excellent summary). The parallels with the much more recent injunctions of participant observation in anthropology are striking: what we are exhorted to do with the people with whom we work – to spend time with them, join in their activities of daily life, observe closely, and record – Goethe was already urging scientists to do with animals and plants, back in the eighteenth century. Yet contemporary attitudes to what is nowadays called 'Goethean science,' in the technoscientific mainstream, are telling. It is commonly regarded with a degree of indifference bordering on contempt; its practitioners are ridiculed and its submissions for publication systematically rejected. It has not always been thus, however. Indeed I have a strong suspicion that the virulent repudiation of what we could call the 'science of correspondence' coincides, in a way that is not accidental, with the colossal expansion over the last four decades of globalization and the political economy of neoliberalism. These, of course, were the decades of my career as a professional anthropologist. What I have witnessed, over these decades, is the surrender of science to the forces of neoliberalism. And to find a counter-movement in the contemporary world, we have to turn not to science but to art.

What might pejoratively be regarded as squishy science could, I think, be better and more positively described as the "art of inquiry" (Ingold 2013b: 6–8). In this art, every work is an experiment: not in the natural scientific sense of testing a preconceived hypothesis or of engineering a confrontation between ideas 'in the head' and facts 'on the ground,' but in the sense of prising an opening and following where it leads. You try things out and see what happens. Thus the art of inquiry moves forward in real time along with the lives of those who are touched by it, and with the world to which both it and they belong. Far from matching up to their plans and predictions, it joins with them in their hopes and dreams. This is the very opposite of methodology. It is not to wrap method up into an impregnable shield, protecting the investigator from having to share in the suffering of those subjected to his hard-ball tactics, but rather to compare method to a way of working, akin to a craft, which opens up the world to our perception, to what is going on there, so that we in turn can answer to it. We could call it the 'method of hope':[3] the hope that by paying attention to the beings and things with which we deal, they in turn will attend to us and respond to our overtures. Anthropology, I believe, can be an art of inquiry in this sense. We need it not to accumulate more and more data *about* the world, but to better correspond *with* it.

This, then, is where anthropology can join forces with art. But it is also to think of anthropology in a particular way that, I have to admit, is not the way in

3 I have borrowed this expression from Miyasaki's *The Method of Hope* (2004).

which most practicing anthropologists currently think about their discipline. The majority of my colleagues would insist that the primary task of the anthropologist is *ethnographic*: that is, to give a richly detailed, accurate, and nuanced account of life as it is lived for particular peoples in particular times and places.[4] There is absolutely nothing wrong with this, of course, just as there is nothing wrong with a history of art that looks back on how artworks have been made and received, again in specific times and places. For ethnography as for the history of art, understanding is about putting things in context. Yet for all its manifest scholarly virtues, to put things in context is also to lay them to rest, to silence them, or neutralize their power, so that the things themselves cease to engage our attention as active and ongoing forces in the world. They are, so to speak, accounted for, ticked off, put in their place. But people don't act, nor do artists work, in order that their deeds and works may be accounted for by future historians. They act and work in order to make a difference in the world. Thus to create a work of art is to give birth to a new being, a being that will have its own life, alongside the lives of those who touch and are touched by it. The thing springs up and, like a rebellious child, refuses the efforts of its elders to put it to bed.

I too, as I mentioned earlier, have become a child. And speaking as a child, I do wonder whether, as with art, anthropology should be in the business of understanding at all, at least in the sense of establishing a ground of certain knowledge upon which persons and things can be situated, and their activities interpreted. The child who cries out resists being understood in this sense: she does not want to be put in her place. She wants to *be*, and to have the truth of her being acknowledged. She demands to be observed and listened to. Should we not attend? Or do we tell her – as the ethnographer tells the people or the historian tells the work of art – to get back into her proper context and be understood? Could it be that understanding actually blinds us to the truth of what is there? Anthropology, for me, is not so much about understanding as it is about what we could call 'undercommoning,'[5] where to 'common' means not to revert to a baseline of what we all share to begin with but to reach out towards an imaginative horizon where it is possible to join with others in recognition and acknowledgement of their ever-emergent differences. Undercommoning

4 On the distinction between anthropology and ethnography, see my own *Being Alive* (2011: 229–243); *Making* (2013b: 2–4); and 'That's enough about ethnography!' (2014).

5 I have borrowed the notion of 'undercommons' from the inspiring work of Harney and Moten (2013), for whom it is a domain of radical uncertainty and of heightened mutual attentiveness in becoming, where nothing is what it was nor yet what it will be. See also Manning (2016).

is, in the first place, about attending to presence, about noticing, and responding in kind. It means acknowledging that persons and other things are *there*, that they have their own being and their own lives to lead, and that it behooves us, for our own good, to pay attention to their existence and to what they are telling us. Only then can we learn.

Now the same, I think, might be said for art. It too is an opening on the world rather than an attempt at closure – an opening that exposes the practitioner to its trials and to its gifts. That is why art combines well with anthropology but not with ethnography. For what art and anthropology open up, ethnography – like art history – seeks to contain. But what, then, has happened to science?

Environment and Economy

To answer this question we need to take a step back, and pick up the thread of my own anthropological travails from where I left off, having recently completed my doctoral fieldwork in Lapland. The year is 1974 and I have just spent twelve months at the University of Helsinki, in Finland, while writing up my field material. With my dissertation almost finished, I have recently landed my first proper job as a lecturer in social anthropology at the University of Manchester, where I am tasked with teaching a course that my predecessor Basil Sansom, whose position I had filled, introduced a couple of years previously. The course was called *Environment and Technology*, and it was basically an introduction to the sub-field of cultural ecology, at that time almost unknown in the corridors of British social anthropology. For me, at least to begin with, it was a heavily science-based course. I wanted to show that any anthropology worthy of the name would have to be at least consistent with what we know from the biological sciences about the evolution and ecology of the human species. That meant exploring such topics as genetic and cultural variation, adaptation and selection, and population-resource balances. My departmental colleagues, however, were suspicious. These, after all, were the days of the great sociobiology wars, and even to mention topics such as these was to risk accusations of genetic determinism or worse. The course was always considered to lie on the edge of the known continent of anthropology. Not for nothing was *Environment and Technology* abbreviated to *ET*, drawing mocking comparisons with Steven Spielberg's celebrated film *E.T.: The Extra-Terrestrial*.

However in 1975, in only the second year of my appointment at Manchester, the anthropologist Marshall Sahlins came to visit from Chicago. He was completing the book that eventually became *Culture and Practical Reason*. The book was an explicit critique of the so-called neofunctionalism that had taken

hold in ecological anthropology. The issue turned on whether natural systems have an intrinsic drive towards equilibrium or homeostasis, to which culture contributes as an adaptive mechanism, or whether the conditions of adaptation are themselves laid down by culture, understood as an autonomous system of symbolic representations that is constituted quite independently of natural conditions. The neofunctionalists, adhering to the former view, were determined to show how every conceivable practice or institution serves to maintain not just the society or culture of which it is a part, but the entire ecosystem. Sahlins, however, took the latter view. With no compromise in sight, anthropology was apparently condemned to oscillate between culture and practical reason – as Sahlins famously put it – like a prisoner between the walls of his cell. In the early 1980s, however, a possible solution arrived from another quarter. By that time, due to the departure of a colleague, I had come to assume responsibility for teaching economic as well as ecological anthropology, and the course titled *ET* had morphed into *EE*: *Environment and Economy*. Suddenly, and for what turned out to be only a few years, French neo-Marxism became *à la mode*. Led by Maurice Godelier, the neo-Marxists launched an all-out assault on what they snootily called the 'vulgar materialism' of so much work in cultural ecology.

I too was swept up in the tide and it became an important part of my teaching in *EE*. The question of the relation between economy and environment was mapped onto the classic Marxian problem of the interplay between social relations and technical forces of production. And for me – following Godelier (1978) – it became an inquiry into the dialectical interplay between two systems of relations, respectively social and ecological, the one dominant in so far as it drove people's productive activities, the other determinant in that it set limits on what the environment could sustain which, once exceeded, would trigger a transformation on the level of social relations of production, ushering in a new historical formation. Models from evolutionary ecology and the study of animal behavior, I thought, might serve well enough to account for how human beings, *qua* organisms, interact with other organisms in nature, and even with one another insofar as they can use each other's bodies, like acrobats, as mutually supportive elements to achieve results greater than what each could achieve individually. But on their own, I argued, these models are insufficient to comprehend the transformations of human history, which require some acknowledgement of the apparently unique power of human beings, *qua* persons, to shape their own destiny, to determine their productive purposes, and to bring about changes not only in their relations with their environment but also in those relations among themselves constitutive of society. Yet I was increasingly troubled by this splitting of the human into personal and organic

components, partitioned respectively into the separate domains of society and nature, and in 1988 it all collapsed – a moment I vividly recall as a watershed when everything I had argued until then seemed irredeemably wrong.

Looking through old files I came across my introductory lecture for the course on *Environment and Economy* delivered on October 4, 1988. In it, I explained at great length about how we might describe relations on the one hand as social, between subject-persons, and on the other as ecological, between object-individuals, and how this underpinned both the difference and the complementarity between economic and ecological anthropology. The whole lecture was written out, in longhand, until page 16. Then I came across the following words:

> Ultimately, of course, the aim should be to transcend such dichotomies as economic versus ecological, social versus natural, person versus individual. Because human beings aren't really made up of two semi-independent parts, as the *Homo duplex* model has it. That's just a first approximation….

And with those words the manuscript came to an abrupt end, followed by a blank. For by that time I already knew deep down that my introduction was going nowhere, and that there would be nothing for it but to start all over again. Everything would have to be rethought. For it had finally dawned on me that the model of the human being as one-part organism and one-part person was not even an approximation to the truth. It was simply untenable. Person and organism, I realized, were one and the same; the organism-in-its-environment *is* a being-in-the-world. And to follow this through would require a completely different kind of thinking, one that starts not from populations of individuals but from fields of relations.

Relational Thinking

In social anthropology, as I noted earlier, this kind of relational thinking was already well established. Yet it was increasingly out of kilter with mainstream biology, which remained – and indeed still remains – firmly wedded to the population model. If I was to prove that person and organism are the same, I knew I would have to extend relational thinking to the biological domain as well, and that this would mean going against the grain of what biologists call the 'modern synthesis' in their discipline, a synthesis forged from the combination of Darwin's theory of variation under natural selection with the mathematical theory of population genetics. In 1989, in a lecture presented to the

Royal Anthropological Institute entitled "An anthropologist looks at biology," I offered my first attempt along these lines. My aim was to restore the person to the continuum of organic life, not in the reductionist fashion of sociobiology, by putting it all down to genes, but by repositioning the organism as a locus of growth within a continuous field, and by thinking of evolution not statistically but topologically, as the unfolding of that field. Life, I insisted, is not *in* organisms; rather organisms are *in* life. Or in other words, living things are both generated and held in place within the ever-unfolding matrix of relations to which they contribute in their activity. This meant giving a central place to growth and development in the constitution of life forms, and here my inspiration came from the work of D'Arcy Thompson, *On Growth and Form*, that had so inspired me as a child.[6] I was, at last, coming full circle.

Over the next decade of the 1990s, I devoted myself to working out this way of thinking and exploring its implications. By that stage, my teaching for *Environment and Economy* had reached an impasse, and 1990–91 was the last year in which the course was taught, never to be revived again. In its place I developed two other courses, which I taught in alternate years. They were *Culture, Perception, and Cognition*, and *Anthropology of Art and Technology*. In the first, I set my sights against the view, supported by an alliance between cognitive science and neo-Darwinian evolutionary biology – more recently popularized under the brand-name of evolutionary psychology – that culture is a kind of add-on, a supplementary program acquired by a being that is biologically programmed from the start, and that as such, culture undergoes its own evolution in parallel with the evolution of the species. According to this view, to every human individual is transmitted one package of traits at the point of conception, coded in the genes, and another package on growing up, packaged in analogous particles of culture. Once again, it was the child in me that rebelled against what I saw as an adultocentric vision that casts the child as a creature of lesser worth by comparison to the more encultured adult, much as in an earlier era of anthropology, the primitive was ranked below the civilized. It is to view children in their 'early years,' like the 'early man' of textbooks in human evolution, as more biological in proportion, as closer to their origins in nature, than the people of 'later' times who, in turn, have more of culture. And it is to put scientists, who can allegedly 'see through' culture to the reality of human nature, at the top.

This cannot be right. The child is an organism through and through, no more, no less. But at no point, from cradle to grave, does this child either begin

6 Originally published in 1917, there is a 1961 abridged edition of this work, with an introduction by John Tyler Bonner.

or cease to thread its life together with other lives, from which those patterns we call 'culture' are continually woven. And if this is true of particular lives, it must be true of human history as well. Just as there is no breakthrough from biology to culture in the life of the child, so there can be no breakthrough in the life of the species from evolution to history. We are all, and have always been, organism-persons (Ingold 2006). Why then did I find myself writing about these organism-persons not as bounded entities but as sites of binding, formed of knotted trails whose loose ends spread in all directions, tangling with other trails in other knots to form an ever-extending meshwork? It was, of course, because of what I had absorbed, as a child, from my father's researches in mycology. As I have already shown, this description of the organism-person would serve just as well for the fungal mycelium. And for this reason I have come to question what we mean by 'the environment,' and eventually to see it not as what surrounds – what is 'out there' rather than 'in here' – but as a zone of interpenetration in which our own and others' lives are comprehensively entangled (Ingold 2006). This puts paid, once and for all, to the idea, still earnestly promulgated by many biologists and psychologists, that the child is a product of 'nature' and 'nurture,' or of the interaction of genes and environment, in varying and often contested proportions. For children are not products, period. They are the producers of their lives with others, including grown-ups.

And that, too, is why, in my course on *Anthropology of Art and Technology*, I sought to erase the dichotomy between the two terms by appealing to classical notions of *ars* (from Latin) and *tekhnē* (from Greek), both of which carried the primary connotation of *skill*. All knowledge, I argued, is founded in skill, in the improvisatory exploration of ways of doing things, under the watchful eye of more experienced hands. This is how children learn: not through having knowledge first socially transmitted to them and then enacting in practice what they each have individually acquired, but by growing in knowledge, as they do in strength and stature, by following the same paths as their predecessors and under their direction. It is a process, if you will, of guided rediscovery, in which every generation stands to find out for itself much of what its forbears already knew, and possibly much else besides. Learning, as children know very well but as their teachers so often do not, is a creative process in which knowledge is not so much passed on as perpetually grown and regrown (Ingold 2007). And if people differ in what or how they know, it is not because they have inherited different 'packages' of transmitted representations, but because their lives have been entangled in environments, and in communities of practice, that differ in what they afford, in the kinds of attention they demand, and the responses that these demands call forth. Skill, in essence, inheres in the coordination of perception and action, attention and response. What we

are used to calling cultural variation, then, consists in the first place in variations of skill. And to account for this variation we have to attend not to the content of inherited tradition but to the dynamics of ontogenetic development.

Knowing from the Inside

All that rethinking, with which I had been preoccupied throughout the 1990s, culminated in a volume of essays entitled *The Perception of the Environment*. Throughout these essays I tried to develop a new synthesis, alternative to the mainstream alliance of cognitive science and neo-Darwinism, which would draw together insights from developmental biology, ecological psychology, and phenomenology, starting from the premise that the organism-person is not a bounded, self-contained entity, set over against the world, but a knot that is perpetually raveling and unraveling within an unbounded matrix of relations. I was still adding finishing touches to the volume in the autumn of 1999 when, after twenty-five years at the University of Manchester, I left to take up a new position at the University of Aberdeen, where I have remained ever since. And it was here that my pendulum finally swung to the pole of art. In fact the swing had already begin before I left Manchester, when I and a few others founded a seminar to explore the relations between art, architecture, and anthropology. It was a rather remarkable seminar, distinguished by our practice of grounding discussions in practical activity, ranging from making string to repairing a dry-stone wall, and on moving to Aberdeen I was determined to follow it up. One way in which I did this was through teaching a new course on *Anthropology, Archaeology, Art, and Architecture*, known for short as 'the 4As.' I taught the course intermittently from 2004 to 2011, and finally converted it into a book, entitled *Making*.

Once again, in this book, I found myself returning to childhood, this time in arguing against the notion of material culture and against the idea that it is in what they do with objects that human beings make meaning for themselves. For me, there are no objects. Child as I am, I see a world in the making, not a world already made. Making things is not an imposition of form on matter, as though the end were already settled before the task began. For how can form precede the processes that give rise to it? How can a known and determined future precede the present and the past? In my childish eyes, not knowing what the future holds, making is a never-ending task of world-weaving, a correspondence of material movement and ambient vision. The model railway I built when I was young was never finished; it was always work in progress, just as real railways are, right up to the time when it was abandoned and other things

in life took over. Only occasionally, and not without hazard, did trains run on my line. The greatest pleasure came not from that but from placing my eye at the level of the layout and allowing my vision to enter into the little world I had created, to roam around the station buildings and on through the trees and meadows beside the tracks. The ground of my landscape was *papier mâché* laid on chicken wire, the grass was cotton floss, and the trees were lichens I had collected from the woods. No objects here! Just an assemblage of materials whose pathways are as diverse as those we weave in in our quotidian lives as we read our newspapers, sew our clothes, feed the hens, and wander in the forest.

While writing the first chapter of *Making* in the spring of 2012, I was also preparing an application for what was to become a major project. The chapter and the project both had the same title, "Knowing From the Inside."[7] Fortunately my application was successful, so here I am now, once more trying to understand what it means to pursue an art of inquiry from within the very world we seek to know, and in doing so, to draw anthropology into conversation with the disciplines of art, architecture, and design.[8] This is not, I should stress, to embark on an anthropological study *of* these disciplines or their practitioners. We have had quite enough of that! It is to study *with* them, or even *by means* of them. It is to think of the practice of art as a way of doing anthropology, a speculative exploration that would open up to possibilities of being and knowing that might otherwise go unheeded (Sansi *Art* 2015). It is to think of architecture as an anthropological exploration of the creative processes wherein people shape environments, and environments people. Its questions concern the generation of form, the energetics of force and flow, the properties of materials, the weave of surfaces, the atmospheres of volumes, and the dynamics of activity and of rest (See Pallasmaa 1996; Spuybroek 2011; and Bille and Sorensen 2016). And in the emerging field of 'design anthropology,' it is to think of design as an aspect of a process of life whose primary characteristic is not that it is heading to a predetermined target but that it *carries on.* An anthropology by means of design is precisely this: about how anthropology, through experimental design practice, can help pave the way for sustainable futures (Gunn and Donovan 2012; Gunn, Otto, and Smith 2013).

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7 I am extremely grateful to the European Research Council for funding the project *Knowing From the Inside: Anthropology, Art, Architecture, and Design* (project number 323622-KFI) for the five years 2013–18. Funding for the project has supported the writing of this chapter.

8 Much of the inspiration for this approach comes from science studies scholar Karen Barad. "We do not obtain knowledge by standing outside of the world," Barad writes; "we know because 'we' are *of* the world. We are part of the world in its differential becoming" (2003: 185).

In all this I seem to have come a long way from exploring the issues of human ecology and social relations with which I began. But looking back, I'm not sure that I have shifted my position that much. After all, it was only because I failed in my attempts to hive off the social from the ecological, to place it beyond the bounds of nature, that I ended up returning knowing to where it belongs, on the inside of being, and returning being itself to the world (Ingold 1997). The pioneers of ecology whose work we read in the early days of my course on *Environment and Technology* would have considered it self-evident that we human beings are part of the 'household of nature' from which the field of ecology takes its name. They would be appalled – as my father latterly was – by the narrowly gene-centric perspective of contemporary bioscience, by its disregard for organic life, and by its obsession with data at the expense of a more holistic understanding of environmental relations and processes. And they would probably find themselves much in sympathy with contemporary environmental artists, architects, and designers who are struggling to break down the boundaries between the human and the non-human, to foreground lived experience, and to highlight the sheer richness and complexity of a world which human beings have irrevocably altered through their activities and yet in which they are puny by comparison to the forces they have unleashed. Welcome to the Anthropocene![9] Revisiting science and art: which is more ecological now? Why is art leading the way in promoting radical ecological awareness? The goals of today's mainstream science are modeling, prediction, and control. Is that why we turn to art to rediscover the humility that science has lost?

The Unison of Imagination and Experience

I remember the science of my childhood, grounded in tacit wonder at the exquisite beauty of the natural world, in care, attentiveness, and in silent gratitude for what we owe the world for our existence. Much of today's science, however, has turned wonder and gratitude into commodities. They no longer guide its practices but are rather invoked to advertise its results. Science has even enlisted art to promote its hard sell, to offer images that beautify its results, soften its impact, and mask its collusion with corporations whose only interest in research is that it should 'drive innovation.' For in the neoliberal

9 Much has been written on this controversial concept and the roll call of artists, architects, and designers who are addressing its challenges would be far too long to list here. But to get a flavor of it, see the selection in Klingan et al. 2015.

economy of knowledge, only what is new sells. True, much scientific research, in what is nowadays known as 'academia,' lacks immediate application. It is said to be curiosity-driven, or 'blue sky.' Scientists have been vociferous in defending their right to undertake blue-sky research. But in the land of academia, curiosity has been divorced from care, freedom from responsibility. Academia's income comes from its exports of knowledge, but it is left to those who buy the knowledge to determine how it should be applied, whether to build bombs, cure disease, or rig markets. Why should scientists care? This attitude reveals the lofty appeal to blue skies to be little more than a self-serving defense of special interests increasingly concentrated in the hands of a global scientific elite which, in collusion with the corporations they serve, treats the rest of the world – including the vast majority of its increasingly impoverished and apparently disposable human population – as a standing reserve of data to feed the insatiable appetite of the knowledge economy.

We should care, of course, because *truth matters*. And the responsible search for truth demands that care and curiosity go together. They are really two sides of the same coin. We are curious about the well-being of people we know and love, and never miss an opportunity to ask them how they are doing. That is because we care about them. Should it not be the same for the world around us? Is not curiosity a way of caring? Not, it must be said, according to the protocols of normal science, which require, in the name of objectivity, that we sever all personal relations with the things we study and remain unmoved and unperturbed by their condition. We owe them nothing, according to these protocols, and they offer us nothing in return. It is a great mistake, however, to equate the pursuit of objectivity with the pursuit of truth. For if the former prescribes that we cut all ties with the world, the latter demands our full and unqualified participation. I may be being childish or naïve, but in my innocence I still believe in science as the pursuit of truth. And by truth I do not mean fact rather than fantasy, but the unison of experience and imagination in a world to which we are alive and that is alive to us. This is to insist that science itself has the potential to be an art of inquiry, and that art, by the same token, can be a practice of science. There can be no science, after all, that does not depend on observation, and no observation that does not entail an intimate coupling, in perception and action, of the observer with those aspects of the world that are the focus of attention. To highlight these observational commitments – to attend to the practices of science rather than its protocols – means recovering those very experiential and performative engagements which methodology goes to such lengths to cover up.

In practice, scientists too are inhabitants of the undercommons, ever attentive and responsive to the rustlings and whisperings of their surroundings.

It is not as though they come upon a world already made, merely awaiting discovery and colonization. Corresponding with things in the processes of their formation, rather than merely being informed by what has already precipitated out, practicing scientists do not just collect but *accept* what the world has to offer them. Like it or not, they too are beholden to the world they seek to know. And it is in this more humble profession, rather than in arrogating to itself the exclusive authority to represent a given reality, that scientific inquiry can converge with artistic sensibility as a way of knowing-in-being (Ingold 2013a: 747). As my father showed me, science, like art, can be a labor of love. The scientist's hands and mind, like those of any artist or craftsperson, absorb into their ways of working – into their method – a perceptual acuity attuned to the materials that have captured their attention, and as these materials vary, so does the experience that comes from working with them. Surely in practice, scientists are differentiated – as much as are artists and anthropologists, and indeed people everywhere – by the specificities of their experience and the skills arising from them, not by the territorial demarcation of fields of study. Science, when it becomes art, is personal; its wisdom is born of imagination and experience, and its manifold voices belong to each and every one who practices it, not to some transcendent authority for which they serve indifferently as spokespersons. And where scientific method joins with the art of inquiry, as I have found in the practice of anthropology, to grow in knowledge of the world is at the same time to grow in the knowledge of one's own self. Thus, as my personal pendulum has swung from science to art and back again, have I eventually found my own way home.

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PART 3

Connecting

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CHAPTER 7

The Black Wood: Relations, Empathy and a Feeling of Oneness in Caledonian Pine Forests

Reiko Goto and Tim Collins

Abstract

How do ideas and aesthetic experience affect our understandings, imaginations and future visions of a forest environment and culture? This article focuses on two years of artist-led research and an art exhibition about an ancient Caledonian pine woodland, located on the south shore of Loch Rannoch in the southern Highlands of Scotland. The artists were interested in the relationship between cultural value and biodiversity and how they might contribute to the well-being of the forest, and promote a range of meanings amongst its communities of interest. Securing funding from Creative Scotland and the Landscape Research Group, the artists organized three residencies: beginning with the community and working within the forest itself; then another at the regional art and natural history museum in Perth; the final one was at Forest Research outside Edinburgh. Art-led methods included walking and talking in the forest, consideration of the extant history and forestry commission management records and various interdisciplinary and multi-community discussion groups; the artists sought to uncover social and cultural relationships to a forest that had been managed for biodiversity and conservation value for fifty years. The chapter begins with initial work from David Hume's idea of `relations' to explore integrated conceptual and experiential forms of aesthetic perception. A relational approach between people and trees is navigated by Edith Stein's theory of empathy.

Keywords

environmental art – Scottish Highlands – relation – empathy – David Hume – Edith Stein

In this chapter we reflect on ideas and practices that have shaped an artistic inquiry with a specific focus on the experience and perception of being in and

working with material from the Black Wood of Rannoch.[1] After a brief review of previous work, we describe recent experiences that shaped questions about biodiversity and cultural value, and the potential for art to contribute to forests and people. We begin with initial experiences and impressions of the forest, followed with a description of an evolving discursive practice. We work from David Hume's idea of 'relations' to understand complex issues such as historical and political incidents that influence the shape of the trees and forest, and question how does Hume's ideas of impression and understanding work to look at the broader context of the place? We then consider Edith Stein's theory of empathy before reflecting on the relationship between Gaelic place names and the broader landscape context. Lastly, we reflect on the artwork produced and return to our initial questions.

Background

We are researchers and environmental artists. Working as research fellows at Carnegie Mellon University, we have focused on the aesthetics of ecological recovery and a community dialogue about post-industrial places in western Pennsylvania. Our work has been influenced by the theory and practice of environmental restoration. After completing two projects[2] in Pittsburgh, we moved to the U.K. in 2005, and then to Scotland in 2010, where we started to focus on trees and the environment. We began to understand the forests are again on the move, enabled by human policies and actions. Scotland has the newest national parks in the world; 2006 forest policies target rapid expansion to 25 percent forest cover by mid-century; and 2003 laws provide the most significant public rights to access land and water in Europe. In 2010 we visited the Trossachs National Park with the Native Woodlands Discussion Group. Sheep had been removed from the area since the place was claimed as a national park in 2002. Thousands of small birch trees were growing in a bracken area. During our visit, Ruth Anderson, a member of the group, pushed aside the bracken with her hands to reveal the base of a tree trunk. It was thick and looked like an old bonsai tree. She told us these birch trees had started growing long before the sheep were gone. They were small because sheep had eaten the saplings over and over again. It was almost a miracle that they could re-grow. If people

1 The Black Wood is owned and managed by Forestry Commission Scotland.

2 We were research fellows in the STUDIO for Creative Inquiry at Carnegie Mellon University, Pittsburgh, Pennsylvania, between 1996 and 2005; we worked on two research projects: Nine Mile Run and 3 Rivers 2nd Nature.

wanted to learn about forest ecology in Scotland, seeing these millions of small birch trees might be an important step to feel the potential changes that might occur between the land and trees.

We visited significant remnants of ancient Caledonian Forest:[3] Mar Lodge, Abernethy, Glen Affric, Dundreggan, Loch Maree, Glen Tanar, and the Black Wood of Rannoch; we have also looked at more sporadic forests such as Glen Falloch and Coille Coire Chuilc near Tyndrum. With funding from Creative Scotland, we were able to work for two years on a project called "Caledonia: The Forest is Moving." It was about the Black Wood of Rannoch, an ancient semi-natural pinewood and the most significant Caledonian pinewood in the Southern Highlands of Scotland. The forest 'on the move' was a reference to Shakespeare and the Birnam Wood. Here it was used as a metaphor for natural regeneration and future forests that would be enabled by public interest. Our research questions were: (1) Do the semi-ancient forests of Scotland provide a higher level of cultural value due to their biodiversity and iconic status? (2) Is it possible to make a small contribution to the well-being and prosperity of human and non-human forest communities of Rannoch? Our practice and process involved on-site experience, walking, talking, and recording. Our enquiry began with experiences in the forest and on the hills above it.

Impressions of the Black Wood

Our first visit to the Black Wood of Rannoch was in the early spring of 2011. There was still some snow on the ground. After a two-and-a-half-hour drive from Glasgow to Loch Rannoch in Perthshire, we found ourselves lost. There was only one sign along the loch; it took a few passes before we noticed it, as it is parallel to the road. It said, "Forestry Commission Scotland, Black Wood of Rannoch, Caledonian Forest Reserve." There was no map or any indication of a formal trail into the forest. We did not know where the trail would lead us or how long it would take. First, the trail went uphill toward the south, taking us away from the loch. The forest consisted of a mixture of pine (*Pinus sylvestris*), birches (*Betula pendula* and *Betula pubescens*), and some rowan (*Sorbus aucuparia*). Moving toward the center of the forest, large old pine trees appeared

3 "[The Caledonian forest] once covered a large part of the Scottish Highlands and takes its name from the Romans, who called Scotland 'Caledonia,' meaning 'wooded heights.' The native pinewoods, which formed the westernmost outpost of the boreal forest in Europe, are estimated to have once covered 1.5 million hectares as a vast primeval wilderness of Scots pine, birch, rowan, aspen, juniper, and other trees" ("The Caledonia Forest").

one after another. The size, the texture, and the form took our breath away. We also found a couple of fenced areas. They were not far apart from each other, but the vegetation looked very different. One area was filled with many young rowan trees and the other area was full of evenly spaced mature pine trees with little understory. Both seemed to be scientific experiments, but there was no indication what was going on. Near the highest point there was an old pine with a plaque. The tree was called "Gunnar's tree" and commemorated Gunnar Godwin, a Forestry Commission Conservator who worked with conservation interests to see the forest designated as a nature reserve in 1975. When we reached the highest area, the trail gradually shifted towards the northeast. Looking north towards the loch, there was an open area with a vigorous rowan tree in the middle. We noticed a small stream that trickled down through a woodland floor covered by bright green mosses. The loch was seen in the background far below. We then came to a fork in the trail and noticed two distinctively different pine forest areas. On one side, the trees were unevenly spaced and of different ages, and the ground was rough with old stumps and hillocks; the understory seemed to be well developed with a mix of species. On the other side of the trail, the forest was filled with tall straight young pines. It 'read' like a dark plantation and the ground was flat, the understory uniform and grassy. We were surprised to see a few large old pine trees on the edge of the young forest. We would learn that this place was called the "Potato Patch." It was cleared at the turn of the century and not regenerated until the 1950s. Gradually the trail declined and finally reached the paved road. The whole walk along a triangular trail took less than an hour. The Black Wood consisted of different types of woodland areas with many old pine trees. We would return again later that year and walk deeper into that forest.

"Caledonia: The Forest is Moving"

One year from the first visit, we came back to the Black Wood with arts funding from Creative Scotland to work on a project[4] with local community members.

4 The project was primarily funded by the Imagining Natural Scotland program of Creative Scotland in 2012. It was one of fourteen nationally-funded projects that sought to "encourage cross-sectoral engagement and knowledge exchange amongst environmental historians, scientists, ecologists, artists, creative producers, and curators." It was intended to promote a critical interest and dialogue about the artistic and cultural representations of Natural Scotland in academia, the cultural sector, and amongst the wider community. The project proposal was to consider remnant pine forests that lie between the south shore of Loch Rannoch and

We were surprised how familiar the old trees seemed to be, although we had only been there briefly before. When we described this to community members, they said they had similar experiences with those trees. They also told us they were known as 'granny trees.' As this project settled in, we learned there was tension between the local community and the Forestry Commission about their policy of 'open access,' which generally meant no physical constraints (gates or fences) would block anyone who found their way to the Black Wood; although any changes to public awareness and understanding of the forest was constrained. There were two signboards deep in the Black Wood that illustrated historical canals built in the 1800s, explaining that the canals would have been used to remove timbers from the forest. Despite the policy of open access, some residents had never been in the forest because they thought the forest was protected. The forestry commission had no intention of making people more aware or to promote access, such as putting maps and new signs, or offering parking, toilets, and an information service. This followed the policies and practices set out in the 2009–19 Black Wood management plan that limited any additional "formal recreational development" within the forest (FCS 2009: 10 and 15). After listening to the claims from the community members, it became clear that the artists might be able to help open a dialogue about a broader social and cultural relationship with the forest, which was being managed for its biodiversity, 'the ecosystem taking precedence over public awareness, interest, and access' (Collins, Goto and Edwards 2015: 10). Interested in the forest as a 'cultural ecosystem,' research began at the Perth Museum and Art Gallery to find any information, documents, records, or specimens on the subjects of art, photography, natural history, and archaeology. The entomology collection had specimens of a rare Welsh Clearwing (*Synanthedon scoliaeformis*), a moth that mimicked a wasp's form. This species only bore holes into 40- to 50-year-old mature birch trees to lay its eggs. The larvae stage of the moth could live two to three years in a tree. We found only a few botanical specimens that would represent the Black Wood, one of the largest, most biodiverse forests in Scotland; with its long history of social conflict, it had little presence in the museum or the art collection.

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the north shore of Loch Tay. The Caledonian pine forests have significant cultural and ecological value. As the research developed, the collaborators did some work in Glen Lyon; then, following the interests of the project partners, focused on specific issues and opportunities in the Black Wood of Rannoch. The research examined ideas about a 'cultural ecosystem' and the services and values lost as social and cultural relationships with the Black Wood waxed and waned over three centuries.

During the summer, we camped in the Black Wood, spending time walking and talking with others in the forest and observing the forest with cameras. By late summer, we began to understand the issues and plan how we might realize a future forest dialogue. We worked with the local community to organize a two-day workshop in Kinloch Rannoch, with a wide range of participants from the arts, humanities, ecology and forestry, local communities, and other public agencies. The following year, the project was extended as we took up a residency at Forest Research, working at the Northern Research Station in Roslin, with Dave Edwards, a social scientist. We began the research, discussion, and documentation of images and ideas that would lead to the publication of *Future Forest: the Black Wood, Rannoch, Scotland.* This report to the community focused on the historic challenges in the forest and the contemporary issues of public awareness and open access. The report closed with developmental ideas that came out of the workshop: (1) an interdisciplinary deep mapping effort; (2) a planning process with local citizens and the Forestry Commission; (3) an artist/scientist in residency program; and (4) a landscape partnership idea.

"Caledonia: The Forest is Moving" was artist-led research that sought new cultural understanding of the forest through an interdisciplinary approach. Our process was documented including ongoing conversations with local communities and experts. The evolving conversations were analysed and documented in the final report, "Future Forest: the Black Wood, Rannoch, Scotland." After completion of the report, we were ready to settle in with ideas and images to develop artworks for the exhibition *Sylva Caledonia* that would synthesize our experiences, observations, different forms of investigation, and analysis.

The Impression of the Black Wood and Hume's Idea of Relations

When the two of us go into a forest we notice there are extraordinary living things that stop us in our tracks and capture our aesthetic attention. We have been asking each other what makes us stop, what the components of aesthetic attention are, and how we define the extraordinary.[5] This is the impression of the forest. The idea of impression is recognized in the foundations of Hume's ethics:

5 This method was developed and explained in the narrative of the video *A Tree is a Living Thing: The Piper Shelling Experiments* (2015a).

> Vice and virtue are not discoverable merely by reason, or the comparison of ideas, it must be by means of some impression or sentiment they occasion, that we are able to mark the difference betwixt them. Our decision concerning moral rectitude and depravity are evidently perceptions; and as all perceptions are either impressions or ideas, the exclusion of the one is a convincing argument for the other. Morality, therefore, is more properly felt than judged (1985: 522).

Hume talks about how a personal belief and morality can be based on deep understanding. And it begins with a striking experience and the impression, such as the granny pine trees. Impression is driven by two kinds of perceptions. One is called outer perception; that is our senses: seeing, hearing, smelling, tasting, and touching. It connects to inner perception that is 'ideas about feeling' about sensations, such as the light is bright or dim, a sound is loud or soft, a taste is bitter or sour, and your touch is warm or cold. Vallega-Neu said, "We also feel hunger, pleasure, discomfort, pain, kinesthetical movement of space, resistance in muscles, tendons, and joints" (2005: 47). When we are looking at an extraordinary tree, the size, height, and volume are stored in our memories. Outer perception and inner perception function together as an 'act of perceiving' that is recognized in aesthetic experience and empathic experience. In one case, I smell the fragrance of honeysuckle and describe the experience as beautiful. The fragrance may be part of the experience of the flower for its own reasons, such as attracting insects to exchange pollen and enable reproduction. But the reproductive intention is not my concern when I am immersed in beauty and the pleasure received through aesthetic experience. In another case, when I look at a person's face I may feel that I perceive sadness in the face. "The sad countenance is actually not a theme that leads over to another one at all, but it is at one with sadness" (Stein 2002b: 71–72). The empathic experience always relies on the other.

Sensation and reflection can be connected by memory and imagination. Memories are not utterly sensations but attached to perceptions and feelings. Imaginations are not utterly reflection but rooted with knowledge and intellectual mental activities. We talk about some trees that evoke feeling of vitality in the section 'degree.' Hume suggests that the impression can add (transfer) vital force from the thing perceived to the idea (1985: 147–166). Memory can enforce inner perception. I will talk more about this in the section on "a feeling of oneness." Hume's philosophical "relations" consist of seven ideas: resemblance, contrariety, space and time, quantity and numbers, identity, degree, cause, and effects. We reflect on these ideas to look at the trees in the Caledonian Forests.

Resemblance

> Resemblance is a relation, without which no philosophical relation can exist, since no objects will admit of comparison, but what have some degree of resemblance.
>
> HUME 1985: 61

Regeneration of pine trees in the Potato Patch (Figure 7.1), described above in 'The first impression of the Black Wood', all share the same degree of resemblance. They all look to be of the same species, size, form, and age; they have the 'look' of a plantation forest, although there are no obvious planting rows. In other places such as Beinn Eighe (Figure 7.2) we find two trees that resemble each other like a mirror image twin. The impression of twin trees is that they have grown together and become balanced and harmonised. Their forms are different from tall, straight, and skinny forms that have been developed competing with each other in the shared environment. They seem to grow together closely and create symmetric forms through inter-relationship. In both of these cases, trees show some degree of resemblance but the qualities are different; one seems to seek harmony and the other seeks competition.

FIGURE 7.1 *The Potato Patch in the Black Wood.*

FIGURE 7.2 *Twin pine trees in Beinn Eighe.*

Trees cannot move around once they are placed in the ground. We have seen a young pine that grows too close to an old pine (Figure 7.3), where the younger tree trunk cuts into the older tree's lower branch. Deep in the Black Wood there is a pine and birch tree that have grown together and into one another (Figures 7.4 and 7.5). Two different species of trees have found a harmonious interrelationship, a visual reminder of the fundamental relationship (as described in the National Vegetation Classification for woodlands in the U.K.) between pine and birch in the Caledonian forests of Scotland.

Contrariety

> The relation of contrariety may at first sign be regarded as an exception to the rule that no relation of any kind can subsist without some degree of resemblance.
>
> HUME 1985: 62

Contrariety is recognized in the two 'classic' forms of pine trees. One is a straight and tall tree – the arborist's ideal – and the other is the broad-branched

FIGURE 7.3 *Two pine trees against each other in the Black Wood.*

granny pine (Figure 7.6). Grannies are individual, large, and curvilinear; they have thick trunks with widely spread horizontal branches. Both are the same species of *Pinus sylvestris.* Arborists seek trees that are straighter and taller because of the simplicity of harvest and log/commodity values. In plantations, trees are planted closely together, so they compete for the light by growing vertically. Granny trees have less timber value, however they contribute to the biodiversity of a forest, by letting more light into the understory. They also have social value that can be talked about as visual, aesthetic, cultural, ecological, and spiritual, although some of these qualities can be found in a forester's plantings as well.

Space and Time

> Space and time which are the sources of an infinite number of comparisons, such as distant, contiguous, above, below, before, after, etc.
>
> HUME 1985: 62

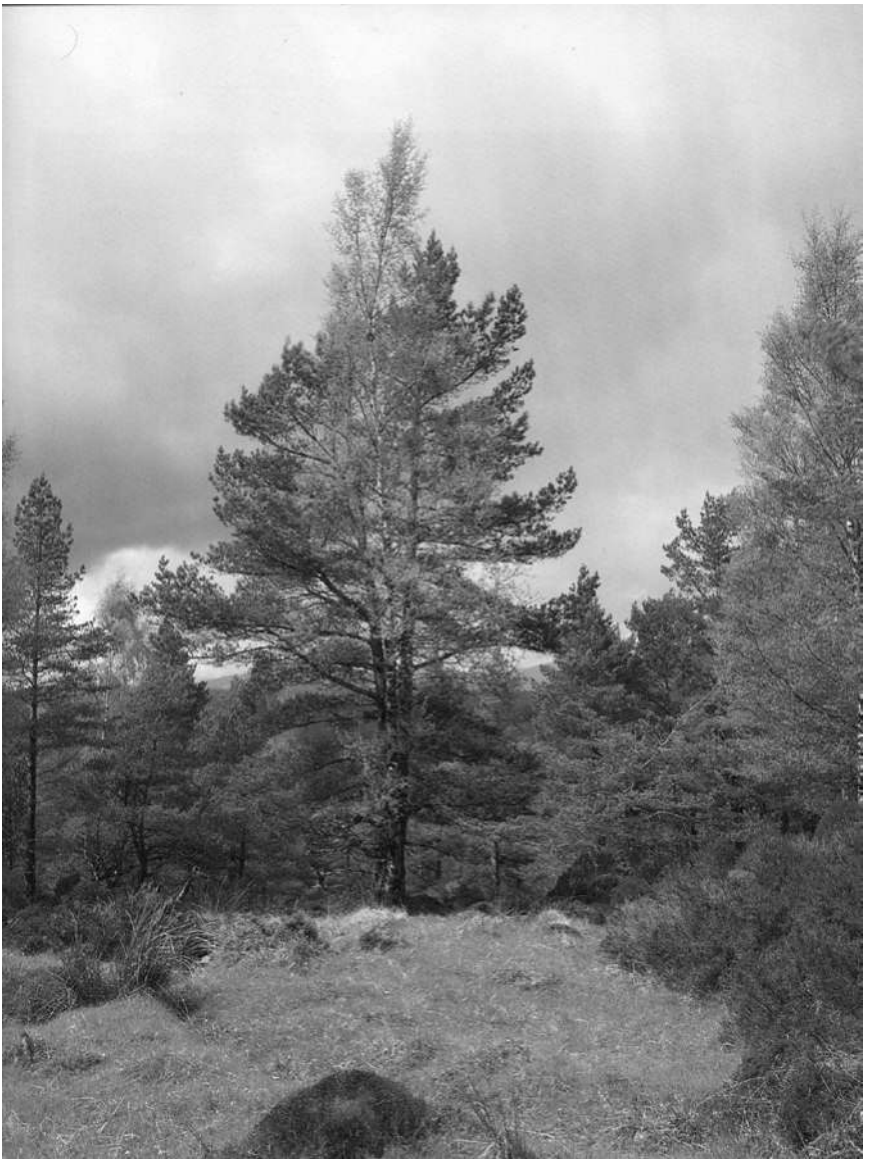

FIGURE 7.4 *A birch and a pine are growing into each other in the Black Wood.* PHOTO COURTESY OF P. STEEL.

FIGURE 7.5 *Detail of Figure 7.4, P.*
PHOTO COURTESY OF P. STEEL.

V.M. Thom, an officer of the Countryside Commission, describes general views of a mature pine forest: "Anyone entering a pinewood finds that the trees, spacing, and light in a pine forest is satisfying to the eye" (1975: 101). There are many patches of mature pine in the Black Wood. As described above, we have experienced continuous pine forest not only in the Black Wood, but also in

FIGURE 7.6 *Granny pine in the young regenerated pine trees in the Black Wood.*

FIGURE 7.7 *Evenly spaced pine trees in Ballochbuie.*

forests such as Ballochbuie (Figure 7.7) and Abernethy. The 100- to 150-year-old pine trees are often straight and also do not have the large lower branches that granny trees have. Grannies are probably 250 to 300 years old and are spatially dispersed (Figure 7.8). The space between trees is related to what were often demanding times, periods of social and political unrest as well as economic

FIGURE 7.8 *Clumped pine trees in Glen Falloch.*

struggles; the trees embody some of these conflicts. In order to develop the lower branches, the tree must be getting full sunlight when they are very young; often this would mean that the understory was under significant grazing pressure from goats, sheep, cattle, or deer; later that pressure was removed. Or it can mean that trees were selectively harvested, the tall straight trees cut, leaving the twisted horizontally branched granny pines behind. We have wondered about the relationship between the evenly-aged young pines in the Potato Patch and a small group of older pine trees on the edge of that patch. We begin to imagine an open field that was replanted or possibly naturally regenerated by the seed thrown from a few granny trees.

The shape of a pine is related to space and time. The space between trees is related to demanding times, periods of social and political unrest as well as economic struggles; the trees embody some of these conflicts. The next section is about the historical events that influence not only space and time but also the quantity and number of trees. Those human activities help us imagine how the Black Wood has been formed.

Quantity and Number

> All those objects, which admit of quantity or number, may be compared in the particular, which is another very fertile source of relation.
>
> HUME 1985: 62

The history of the Black Wood of Rannoch includes a narrative specific to timber and its quantities. In 1439 the estate was given to the Robertsons of Struan for apprehending the murderers of King James I. Between 1689 and 1745 the estate was forfeited three times[6] and 960 trees were cut per year. In 1745 the forest was much threatened by local people as a haunt for 'broken men,' outlaws from the failed Jacobite rebellion. A garrison was established and Jacobites' homes were burned. In 1750, despite the fact that the forest was judged to be in a poor condition, the forfeited estates initiated the felling of twelve hundred trees per year. In 1781 the forest was completely enclosed to protect it from damage by domestic animals. In the late eighteenth century, swine were kept in the forest to break up soil for regeneration. Between 1803 and 1805 the Napoleonic Wars were underway and significant tree felling occurred again. Canals were built for floating the timbers to market. In the mid-nineteenth century, the Highland Clearances and the Industrial Revolution began. The numbers of sheep were drastically increased, while the human population of Rannoch was reduced to less than half. Between 1889 and 1894, one thousand trees were felled to construct the West Highland Railway. Between 1939 and 1945, eight thousand trees were cut (during World War II). In 1975 Gunnar Godwin, as a Forestry Commission Conservator, designated the place as a forest nature reserve, and two years later deer protection began. Between 1957 and 1967, the Forestry Commission cut five thousand trees. In 1974 the Black Wood became a forest nature reserve and later it was designated as a site of specific scientific interest. (Collins, Goto, and Edwards 2015: 8). To the best of our knowledge, it is no smaller at this writing than it was then, although the future expansion of the forest with potential links to the Caledonian forest in Glen Lyon to the south is not yet clear. Number and quantity are also related to the biodiversity count of the various species of lichens, invertebrates, reptiles, birds, mammals, and higher and lower plants that make up the spectacular ecological conditions that define the Black Wood.

6 The estate was forfeited in 1869, 1715, and 1745.

Identity

> This relation I here consider as applied in its strictest sense to constant and unchangeable objects; without examining the nature and foundation of personal identity, which shall find its place afterwards. Of all relations the most universal is that of identity, being common to every being, whose existence has any duration.
>
> HUME 1985: 62

For over 250 years the identity of the Black Wood was tied to the value of its timber resource. Today when we talk about the identity of the Black Wood, people often use the term 'wild.' During the Future Forest workshop, a local conservationist said, "It is important that the Black Wood expands. It [must remain] in a wild/semi natural state that is significant when compared to others" (Collins, Goto and Edwards 2015: 4). 'Wild' suggests nature removed from human influence. The ecological authenticity of the ancient forest has been protected by scientific interest in biodiversity for fifty years; but is the Black Wood wild? In our report we define wild (in Scotland) as "being of ancient natural lineage with a history of sustained propagation; an ecology which has structural complexity, native biodiversity and a significant if not expanding footprint, an ecosystem that is understood to be autogenous, sustaining, and regenerating with little or no human interference" (17). The conditions in the Black Wood have changed throughout human history. In the eighteenth century it was said to be the home of outlaws from the Jacobite rebellion; does this social and cultural history shape the identity – the meaning and form – of the Black Wood? Are the granny pines a living memorial to three hundred years of conflict over land use and ownership? One of the foremost ecologists in Scotland has suggested that if left to regenerate on its own, the Black Wood canopy will begin to close, the granny trees will dissipate, and with less light getting into the understory, biodiversity will start to diminish (Peterken and Stace 43). What is wild in the Black Wood of Rannoch? Is it the aesthetic perception of a large old forest with a range of forms and age groups, the robust understory, and the knowledge that the list of species in that forest runs on for nine pages? (Does the social and cultural history play into the identity of an autonomous living thing?) Is it the fact that according to some expert opinions it is the largest patch of functioning – generating and regenerating, and biodiverse – semi-natural pine forest in Scotland? If the granny trees were lost as the forest regenerated on its own and the biodiversity left to diminish 'naturally' would the Black Wood still be wild and semi-natural? Or would it be more wild and natural? If the Welsh Clearwings first found in Rannoch in 1867 were lost, would this indicate progress or failure?

The Caledonian forest was formed about 5000 B.C., after the Scottish climate became wetter and windier. A forest eco-system is dynamic rather than static, and it changes in size and quality in time. Through our imagination the 'wild' identity of the Black Wood seems to be informed by experiences, ideas, and practices, and diverse but essential interconnections between culture, ecosystem, and the environment.

Degree

> When any two objects possess the same quality in common, the degree in which they possess (that quality in common) creates a fifth species of relation.
>
> HUME 1985: 62

Hume's idea of 'degree' is recognized in the extraordinary granny pine trees. The differences between a young pine and a two or three-hundred-year old granny pine is not only age but also the degree of size, form, texture, colors, intensity, and interrelationship with other things in context. Descriptions of degrees are not only attached to impressions and aesthetic qualities (of the tree) but can also describe the strength or vitality of the tree. Another example is a rowan tree (Figure 7.9) found in the Black Wood. Numerous branches spread out from the tree; the form is vigorous and robust. Viewers can easily perceive and empathize with the tree's wellbeing and energy. In the same manner, Annie Benson of the Rannoch community has identified her favorite tree next to a small bridge. It is an old pine (Figure 7.10) that has a deep crevice on the trunk. The tree bark is crooked at a gaping wound, then it becomes straight again. The form of the pine makes us imagine a tragic accident and subsequent recovery. An intensity is embodied in the tenacity of that tree and its response to distortion then recovering to grow straight towards the light. In the Black Wood we discover this idea of degree as a sense of the life force.

Cause and Effect

> All other objects, such as fire and water, heat and cold, are only found to be contrary from experience, and from the contrariety of their causes or effects. (This is a philosophical relation as well as a natural one.)
>
> HUME 1985: 62

We have reflected on the Black Wood forest, its individual trees, and the condition of the understory. We have considered the different ways that specific types of trees cause us to think about why they are different from other pine trees

FIGURE 7.9 *A vigorous rowan tree in the Black Wood.*

that we have experienced. Hume's "cause and effect" is related to the forms of pine trees and the overall aesthetic perception of the 'condition' of the forest. We have explained these relationships in the sections on resemblance, contrariety, space and time, quality and numbers, identity, and degree. The question about biodiversity and the aesthetic/cultural appreciation of forests is introduced in the sections on contrariety and quantity and numbers, then directly discussed in the section on identity. If the aesthetic identity of the Black Wood is tied to its granny tree form and open canopy relationship, and its biodiversity form is tied to the same structural conditions then there are a set of questions that need to be examined regarding future forest plans for natural regeneration which would reduce both values. Within the three hundred years of a normal life cycle of the pine trees, human ideas about land, people, and nature have changed radically. There has been a cycle of decisions about goats, cows, sheep, and deer in the forest, and ongoing land management practices that have influenced the form of the Caledonian pine trees we see today and will see in the future. We have discussed the contemporary identity of the forest as 'wild' but also provide insight on the conflicted nature of that identity at least as the idea of 'wild' is understood in Rannoch. A tree form can be influenced by accidents caused by either humans or nature. We can imagine or

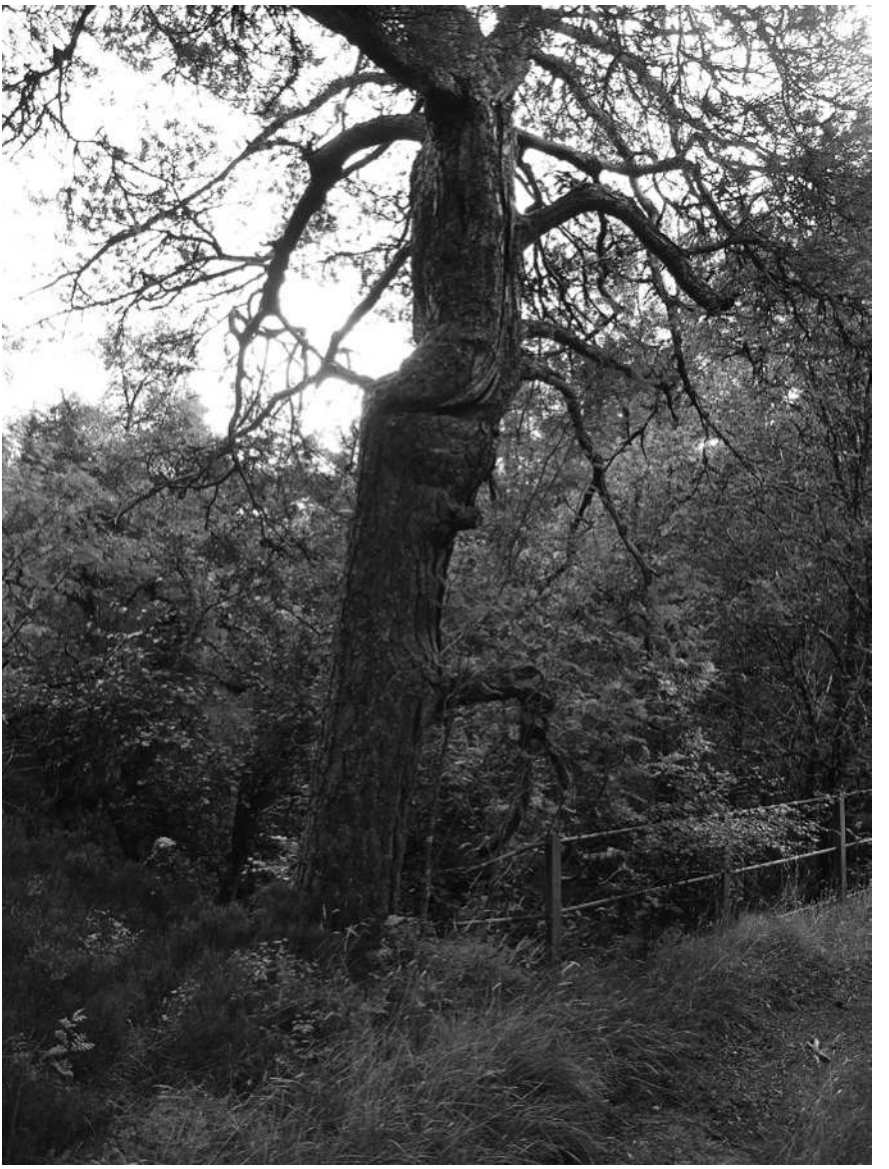

FIGURE 7.10 *An old crooked pine in the Black Wood.*

empathise with the causes of the tree's form. The idea of 'degree' can express the life force of the tree and qualities such as 'vigorous' and 'robust.'

Using Hume's idea of relations we have examined how our impressions can lead us to a deeper understanding – from experience – within the Black Wood. A follow-up question is how this kind of understanding can go beyond

individuals and be communicated socially. In the next sections we introduce a phenomenological idea that involves empathy and memories.

The Feeling of Oneness

The feeling of oneness is a sense of shared experience. Stein says, "The feeling of oneness and the enrichment of our own experience become possible through empathy" (2002b: 18). For example, watching fireworks makes many people say "Wow!" The moment the fireworks go off, people express their perception and excitement. One enjoys not only the fireworks but also experiencing and sharing other people's excitement. In the case of fireworks, individual joy and other people's joy seem to be inseparable. This kind of shared experience is called a feeling of oneness. Stein also says, "The feeling of oneness and the enrichment of our own experience become possible through empathy" (2002b: 18). Every time a firework is set off the excitement continues. Our inner perception seems to go back and forth between the present and past. Each excitement is stored as memory and is recalled with every burst of fireworks:

> What became, was lived, and is finished, sinks back into the stream of the past. We leave it behind us when we step into new experience; it loses its primordiality, although it remains the "same experience"…. Just as solidifying wax is first liquid and then hard but still wax, so the same material body remains.
>
> STEIN 2002b: 69

Each empathic experience can be ephemeral and changeable. However it can be built up as a memory (or memories) that enforce a certain inner perception. This accumulation of inner experience can be connected to intellectual mental activities. With repeated visits and walks in the Black Wood with the community members, we started to describe this complex ecosystem as a living entity that 'returned our gaze.' We have argued that the forest has sufficient complexity: it can't be seen in a day and indeed evolves in one's eye and mind as it is visited over seasons and years. For example, when we hear the call of stags for the first time in the wood, it may be odd or scary. The sound seems to come from nearby, the creatures seem to know where you are, but the calls continue. If somebody explains the reason why stags roar and grunt during the rut, you will understand what is going on. Walking through the place with community members, foresters, and naturalists who have spent a lot of time in the wood, not only provides knowledge but also focuses and enforces our

experience. With each visit the idea of what it is gains depth and meaning (Collins, Goto and Edwards 2015: 24). This is an idea that is generally shared by those who seek out the Black Wood repeatedly. After many experiences, will it still surprise us? It may depend on the person's curiosity, but the loud, unnerved voice in the forest never loses its strong foreign quality. In the back of our mind is the imagination – the belief – that we are starting to experience the forest (as it knows itself) over a period of time that we can never fully resolve or comprehend.

Aesthetic experience and empathic experience can be shared as the feeling of oneness. If a feeling of oneness can be found in the shared experience, how about shared place?

Gaelic Names in the Landscape

In human conversation people rely not only on language but also on eye contact, facial expression, the tone of voice, and body gestures. Stein's phenomenological idea of a "symbol" is like a person's facial expression that reveals his/her mental state. A 'symbol' is related to a unity of body and mind that is understood within the lived body. On the other hand a 'sign' is related to intellect and cognitive mental activity. It has a code relationship such as how smoke can indicate a fire. The meaning of 'magnificent pine' is more universal than the meaning of the phrases 'granny pine,' 'a vigorous rowan,' and 'a resilient wounded old tree,' ideas that resonate with our past experiences. In this context words are not only symbols and signs, they can also be codes that describe experience and impression.

The Black Wood translated into Scottish Gaelic language is *Coille Dubh*. *Coille* means forest and *dubh* means black or dark. Alistair Scott has said, "The wood was black because the trees were dark pines in contrast to light oaks and that the pines preferred these colder, north-facing slopes while the oaks relished the sun?" (Steel and MacDonald 2004: 6). In Scotland, Ordnance Survey (OS) maps are filled with non-English names; only a few are translated. There are three major languages in the region: English, Scots, and Gaelic. Scots has its origins in Northumbrian English (Murray 2014: 4). Gaelic takes its roots from Celtic languages and is culturally related to the Highlands. Scots has a connection with the Lowlands. Doric is a dialect of Scots that has a strong connection to the northeast of Scotland. Gaelic declined rapidly over three generations in the twentieth century. There were several historical events that had an impact on the language, including the Act of Union with England in 1707 and the Highland Clearances in the nineteenth century (see visitscotland.com). When we

were researching the Black Wood, we visited the Beat Ranger with the Tay Forest District. Looking at the map and our initial Gaelic to English translations, he told us about his childhood memories of growing up in the area. In the 1950s if a student spoke Gaelic in school, the teacher could punish the student. The local understanding of Gaelic place names has been significantly affected by this kind of cultural suppression.

A Map of Breadalbane

We started developing a map (Figure 7.11) with translation of Scots Gaelic place names. Encouraged by a historian at Forest Enterprise we decided to represent the historic area of Breadalbane. This represented the upper catchment basins of the Tay River. This area of three valleys (Loch Rannoch, Glen Lyon, and the Tay Valley) was the larger landscape context for the Black Wood. Located between the two national parks, it is a landscape of geological import, with pockets of recognized biodiversity and ecological importance; it was also a place of significant social and cultural history. As we began our work, we found that over 1300 names were listed on a Forest Research computer map file. A Gaelic language expert translated the Gaelic place names for us. Working on a computer graphic file, we checked the location of each Gaelic name and pasted

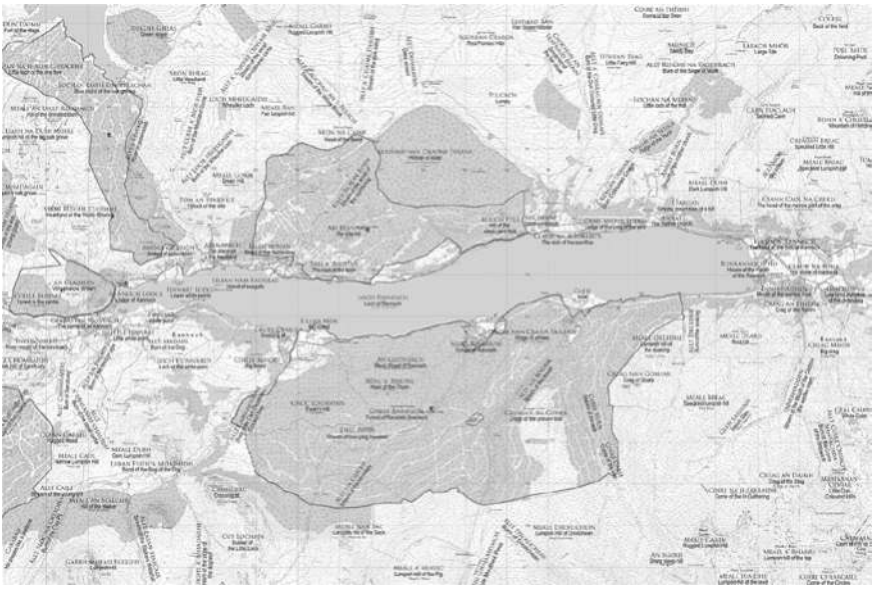

FIGURE 7.11 *Detail of the map of Black Wood with Gaelic place names.*

the translation on the GIS map. If the name on the OS map was incorrect, we pasted the translator's suggested name underneath. Sometimes it was hard to find the locations because multiple names overlapped in some areas of the map. Sometimes it took more than a half hour to find a name. In the worst case, we could not find the location of a name. Because of the limited screen size, we could not see how much the editing job progressed daily. These difficulties were solved when we decided to use an actual paper map. Sara Ocklind, a young Swedish artist, joined the production and spent eight months working with us to produce the large map. We assembled many sections of the OS maps in order to make an eleven square foot map of the Breadalbane area. (Later this was presented in the exhibition *Sylva Caledonia*.) The names were printed on translucent velum. The procedure became simpler. We began to realise that the list of thirteen hundred names was still not a complete record of the Gaelic place names. We had first envisioned the map as a final artwork, however it became a process that would require input from different experts and communities of land and language over a period of what could be years.

Many of the names were related to natural elements such as water, landforms, trees, and forests, and some names describe the built environment. The landforms consisted of headlands, knolls, hills, peaks, mountains, caves, quarries, corries, slopes, and crags. The hydrological forms consisted of streams, streamlets, rivers, burns, brooks, glens, and lochs. The built environment consisted of farms, crofts, churches, huts, weirs, and cairns. The word 'cairn' comes from the Scottish Gaelic *càrn* (plural *càirn*), and it means a manmade pile of stones. There were thirty-five names that contain the word *dubh*, meaning black or dark. The name *meall dubh* (dark lumpish hill) was found in six different places. Distinct colors were: *liath* (blue/gray), *glas* (gray/green), *bhuidhe* (yellow), *odhar* (dun), and *ruadh* (reddish brown). During the Future Forest workshop, art historian Murdo MacDonald said, "The Scottish Gaelic language [has] descriptive qualities, ideas about color, and a relationship to an 'ecology of mind' and contemporary Scottish art practice" (Collins, Goto and Edwards 2015: 15). The Gaelic place names were cultural products and reflections of the natural environment.

When we exhibited the map, the translation of the place names drew a lot of attention from experts, hill walkers, and the general public. There were questions easily answered like the name of Craiganour Lodge: why was its meaning different than Creaganh Odhar (dun colored crags) just north of the lodge? The answer was found even further north where (despite bare hills) the place was known on OS maps as the Forest of the Craig of the Yew. Our translator believed Coille Creag an Lubhair, was phonetically similar to Craigenour but a much larger landscape feature would befit such a house. Many with a sharp eye

caught Leacann Nan Giomach meaning the "broad slope of the lobsters." Why was the name of a seawater creature in landlocked Rannoch? Most assumed the translator meant fresh water crayfish. However, there has never been a native crayfish recorded in Scottish streams; where they occur today, they are imported from Europe. The early Gaelic speakers would not experience either lobster or crayfish in Rannoch. Was it a misinterpretation? Next time we would climb to an overlook, to see if the shape of lobster tail – which could be understood from the topographic lines – would be visible to a hill walker.

Four weeks into the exhibition, we assembled a group of experts in Gaelic language with interests in language, literature, and culture in the region: a poet,[7] a landscape architect,[8] scholars of Celtic literature,[9] and a Gaelic landscape researcher,[10] all who were experts in Scottish place names. They came to talk about the map, place names, regional literature, and the initial translations. Much of the discussion focused on literary traditions and the contributions made by the eighteenth century Scottish poet, Duncan Ban MacIntyre (*Donnchadh Bàn Mac an t-Saoir*). His poems were developed and shared in spoken Gaelic; later they were transcribed by Donald MacNicol, Minister of Lismore. The discussion was about two poems that engage large hills in the southwest of Breadalbane. One was "In Praise of Beinn Dorain" (*Moladh Beinn Dòbhrain*), a mountain with an elevation of 1076 meters; it means "hill of the small stream." MacIntyre praised nature and described the beauty and the wild deer that belonged to the area. Our discussion also touched on *Coire a' Cheathaich* – The Song of the Misty Corrie – and its descriptions of the landscape and the tension between the ideal and spoilt landscapes:

> Your kindly slope, with bilberries and blaeberries, studded with cloudberries that are round-headed and red; wild-garlic clusters in the corners of the rock terraces, and abounding tufted crags; the dandelion and pennyroyal, and the soft white bog-cotton and sweet-grass there on every

7 Alec Finlay is an artist and poet whose work reflects on human interaction with nature and considers how we as a culture, or cultures, relate to landscape and ecology.

8 John Stuart Murray is a landscape architect and the author of "Reading the Gaelic Landscape." He is currently developing a Gaelic place-names application for Loch Lomond and Trossachs.

9 Anja Gunderloch is a lecturer in Celtic literature; her main research interests lie in Scottish Gaelicpoetry, mostly covering the period from the sixteenth century to the end of the First World War.

10 Jake King works for Ainmean-Àite na h-Alba, a national advisory partnership focused on appropriate Gaelic forms of place-names. His research includes the Gaelic Scholar Charles M. Robertson.

> part of it, from the lowest level to where the peaks are at the topmost edge.
>
> MACLEOD 1952: 166–168

The group brought our attention to small landscape features such as Sithean Beag (small faery dwelling) and Sithean Mhor (large faery dwelling), which had remained untranslated on our map. They also talked about place names like Druim Nan Cran Saighde (the ridge of arrows) perceived by many to be a site of conflict with some relationship to Glen Sassunn (The Saxon Glen), which is understood by some to be the valley the British would have used to march into Rannoch at one point.

In the area of Breadalbane there are numerous hills and small hill features such as knolls, corries, and crags. The word 'crag' comes from the Scottish Gaelic *creag;* it means a steep rugged mass of rock projecting upward or outward. A corrie (or cirque) is a natural amphitheater created by snow and ice during the glacial period. The translations of these names seem to delineate a character – or an identity – of the landscape. These place names are important for people who know the place or try to communicate about it with others, and they must be evolved through shared experience of the place. There are many hill names: Meall na Leitreach (a lumpish hill of the broad slope), Meall Glas Bheag (a little green/grey lumpish hill), Meall Clachach (a stony lumpish hill), Meall nan Oighreag (a lumpish hill of the cloudberries – *Rubus chamaemorus*). *Meall* (a lumpish hill) is described as the shape, the color, the material, the texture, or the vegetation. The names consist of simple descriptions based on people's observations, experiences, and interests through their day-to-day conversation. Next to the Black Wood there is a hill called Meall Dubh (dark lumpish hill). At one time we camped to take video overlooking the Black Wood of Rannoch. We thought a hill in the southeast would be a good place. We needed to stay overnight somewhere on the hill in order to get the morning light. The hill looked like it was covered by grass, but actually there were many deep bogs. We were walking on deer trails with heavy backpacks. In summer the weather was good and the hill was green, but many wetlands and midges made our walk slower. Tim found a quarry on the side of the hill as a place to set our tent. In the middle of the night we woke up to some noise and went outside with a flashlight. We almost jumped because many deer were surrounding the tent. Early the next morning, we walked to the top of the hill to see the view of the loch and the Black Wood. The area was flat and rocky. Swallows were flying about to catch the insects. Many small streams of low ground fog were moving from the Black Wood forest rising up and merging into the clouds. Later on we found the top of the hill was called Leagag (the falling). The area where

we camped is the Coire Buidhe (yellow quarry). After experiencing the places and knowing the names we are more familiar with the place. Is this a shared experience with the anonymous people who named the top of the hill and the quarry? On the other hand, we still do not know why the hill – Meall Dubh – is called 'dark.'

An Exhibition: *Sylva Caledonia*

In the spring of 2015 we presented the map, sculptures, and video works that focused on the Black Wood of Rannoch in the group exhibition *Sylva Caledonia*[11] at Summerhall in Edinburgh. Our idea was to present a body of work that would develop a correspondent relationship, forging links between the artwork in Edinburgh and the forest in Rannoch. The large map was titled *Comh-Chomhairle Bràghad Albainn* – The Breadalbane Deliberation (Figure 7.12). *Coille Dubh Rainich* – The Black Wood of Rannoch (Figures 7.13 and 7.14) was a sculpture made of felt. The Gaelic name represents planters to hold soil and native plants commonly seen in the Black Wood such as saplings of pine, birch, fern, cowberry, blueberry, heather, and mosses. Each planter was about 150 cm × 200 cm × 9 cm (tall). It was a challenge to create an empathic experience of the Black Wood in a gallery over one hundred miles away. Goto thought native plants could remind one of a sense or a memory of the place. If the plants were presented as an artwork, would they 'create' an empathic relationship in the gallery? Would it be possible to enhance the relationship, nurture it, visualize it, and produce the conditions for deepening it? The intent was to fill the gap between Summerhall and Rannoch by reconstructing specific elements of experience and memory. The intention was to create a setting where an empathic relationship with living plants could emerge. This would build on everyday observation and everyone's experience of plants and gardens. The piece included an offer to transfer the work to anyone in Edinburgh that had the land, vision, and care to develop a Caledonian forest that would take three hundred years to come into fruition. We also presented small sculptures: *Caora* – Sheep (Figure 7.15) and *Fiadh* – Deer (Figure 7.16). *Caora* was made of a handmade felt from fleece. The sheep population was declining in that landscape. The artwork is supposed to be a small model for a larger work that would celebrate

11 *Sylva Caledonia* was a group exhibition with collaborative work by Gerry Loose and Morvern Gregor, who focused on the Sunart Oakwood at Ardnamurchan, and the ecoartscotland library by Chris Fremantle. Chris also organised three public dialogues with artists, curators, and forestry experts.

FIGURE 7.12 Comh-Chomhairle Bràghad Albainn (*The Breadalbane Deliberation*).

the return of the forest with the name for sheep (in the last fleece) produced on that land. *Fiadh* was a model of a deer 'exclosure' made of metal screen and wooden poles. This is a proposal for a work that would occupy a restoration site in the first years after a clear cut. Deer were described as a sacred animal in MacIntyre's poem "Beinn Dorain." Today deer are essential to the economics of Highland estates. Their presence has a significant impact on forest regeneration, native plants, and ecosystem. Deer fences would be the most common way to protect nature reserves and public forest from deer. Beside *Caora* and *Fiadh* many Gaelic vocabulary words were found that describe relationships to sheep and deer. Both animals were deeply embedded in the culture and natural environment in Scotland, but the meaning and their role in the social and economic life of people was constantly changing.

Two video pieces were presented. *Tha a' Choille a' Gluasad* – The Forest is Moving (Figure 7.17) has been shown at the Perth Museum (2013). This twelve-minute video shows the Black Wood passing in two directions with Gaelic

FIGURE 7.13 Coille Dubh Rainich – *The Black Wood of Rannoch.*

FIGURE 7.14 *Detail of* Coille Dubh Rainic – *The Black Wood of Rannoch.*

place names fading in and out of the image. A text on the screen describes the opportunities and constraints within the Black Wood. The other video piece is *Am Beàrn Eadar Na Craobhan…* – The Space Between the Trees… (Figure 7.18) that provokes an ethical and aesthetic consideration of two types of forest regeneration: one was showing a patch of trees that are tall and straight

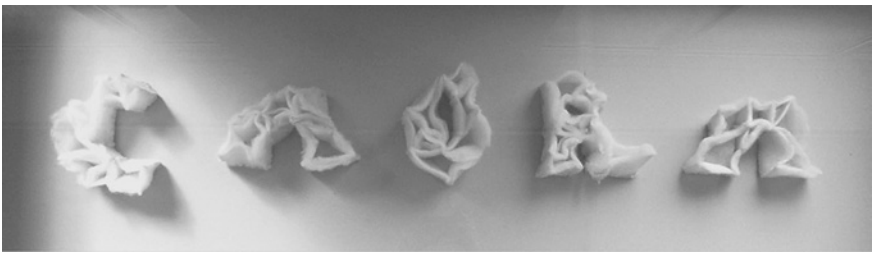

FIGURE 7.15 Caora/*Sheep.*

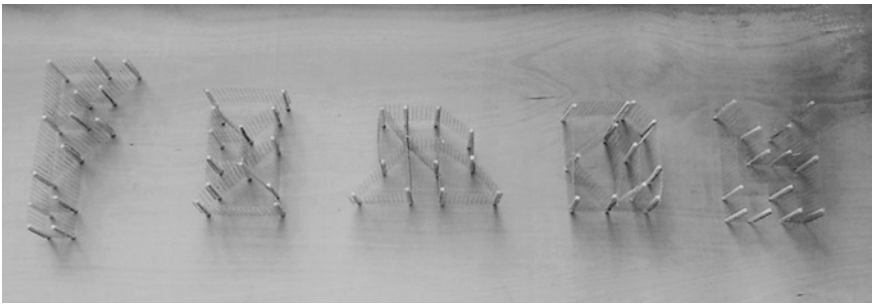

FIGURE 7.16 Fiadh/*Deer.*

FIGURE 7.17 Tha a' Choille a' Gluasad – *The Forest is Moving.*

FIGURE 7.18 Am Beàrn Eadar Na Craobhan... – *The Space Between the Trees...*

(the Potato Patch described earlier), a single generation with a grassy understory. The other image showed a forest that was more aged and form-diverse with a rich understory of vegetation more typical of the Black Wood.

Conclusions

We began with a question: does the biodiversity of the ancient semi-natural Black Wood forest have a meaningful relationship to cultural value? Following Hume's impressions and ideas of 'relations' we understood that aesthetic understanding was driven by our perceptions, which consist of outer perception and inner perception. Our perceptions are mental activities and understood as an 'act of perceiving' that is recognized in both aesthetic experience and empathic experience. In our case, empathy is a relationship between humans and more than humans.

We analyzed our experience of the Black Wood where co-relations were established between forms of the pine and historical and political incidents. While the number and quantity of trees harvested have been essential to understanding the role and identity of the forest between 1700 and 1970, biodiversity policies have driven the contemporary management of the forest for almost fifty years. We have described the contemporary identity of the forest as 'wild' but also provide insight on the conflicted nature of that identity at least as the idea of 'wild' is understood in Rannoch. Reflecting on each element of Hume's relations we understood the aesthetics of natural beauty was not separated from human culture.

The second question: is it possible to make a small contribution to the well-being and prosperity of human and non-human forest communities of

Rannoch? This question has been partially addressed by revealing a range of historic and contemporary human and nature relationships in the landscape. We are interested in Gaelic place names and began to understand that the meaning and definition of place is artificially stabilized in the OS maps Coille Creag an Lughair (the Forest of the Craig of the Yew) is a good example, it no longer has significant forest, nor is there a notable yew tree still present; but as the name of a great estate, its presence in the community is contemporary although its primary meaning has changed. We argue that the Future Forest workshop – and the developmental ideas that came out of it – has had an ongoing impact with potential to restore the cultural ecology, the link between society, and forest in Rannoch. The artworks that followed include video installations, the large maps, and sculptural artworks. Working with scientists and in communities we have developed a series of artworks that raise questions about the record of the forest – past, present, and future – to be answered through dialogue with others.

We have argued (following Hume) that understanding composed of both impressions and ideas are a basis for morality, but they also can form the foundation for a creative act. We have previously described this as an ethical aesthetic 'impulse,' that leads to creative action. (Goto and Collins 2012: 121–134). When we think about an understanding of the Black Wood and its context, there must be an equation between the actual wood and the memory inside of us. The reflection undertaken here intends to develop a specific type of imagination that relies on memories, past impressions, and thoughts. An artwork can contribute to a new social understanding of place by solidifying the relationship between our intellectual understanding and the experiential, embodied understanding of a place through a feeling of oneness. If this can be done socially, it brings the ecologies of culture and nature together again in important ways.

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CHAPTER 8

Cultivated and Governed or Free and Wild? On Assessing Gardens and Parks Aesthetically

Arto Haapala

Abstract

Environmental aesthetics has been traditionally divided into two areas – natural environment and built environment. A paradigmatic case of the former is architecture, of the latter an area of wilderness. But there are interesting cases which fall somewhere in-between human design and nature – gardens and parks are prime examples. In this chapter the author studies aesthetic problems of managed nature. There are two sets of principles that can be applied when appreciating gardens and yards aesthetically: those drawn from nature, and those drawn from built environment. Unlike many contemporary aestheticians, the author argues that there is no uniform concept of the 'aesthetic'. This can be shown by looking at the ways in which our aesthetic judgments of nature differ from those of artifacts, including works of art and architecture. He argues against those theorists who claim that the aesthetic appreciation of nature is somehow conditioned and ruled by concepts and categories from natural sciences. Instead he focuses on 'functional aesthetics' in assessing parks and gardens. There are four aspects of this aesthetic: immediate sensory pleasures, historically and theoretically informed satisfaction, enjoying the functionality of an object, and the unnoticed smoothness and rhythms of our daily existence. All four have a role to play when assessing urban nature aesthetically. These considerations are brought to bear on the example of Observatory Hill Park in Helsinki.

Keywords

environmental aesthetics – functional aesthetics – urban nature – Observatory Hill Park (Helsinki)

There is a controversy and confusion at the very heart of the discipline of aesthetics – is there something, a specific quality that can be called 'the aesthetic,' and if so, how to define it? There are a number of classic approaches and

solutions to this issue, referring, for example, to the notions of taste, aesthetic attitude, aesthetic experience, aesthetic qualities, and aesthetic concepts. The scope of what has sometimes been called the 'aesthetic culture' (Golaszewska 1995) is vast, encompassing just about all possible artifacts, works of art being prime examples, as well as natural objects and scenes. Keeping this in mind, one could *prima facie* think that it is unlikely to find a property or a factor covering all the occurrences within the aesthetic culture. This intuition gains further corroboration from the developments in the philosophy of art in the past decades – attempts to define art have been largely abandoned as futile. How could it be that the broader category of the aesthetic could be defined if the narrower one of the arts cannot?

The inclination to look for the aesthetic is, however, still strong among aestheticians. In this chapter,[1] I will first give a broad outline of the scope of the aesthetic and also discuss briefly the notion of aesthetics. These considerations will give us some tools in understanding the differences between the aesthetics of nature and the aesthetics of works of art and other artifacts. Semi-natural environs such as parks, gardens, and other more or less managed pieces of nature have an interesting position somewhere in between naturalness and artificiality. The expression 'urban nature' is quite telling in this respect – there seems to be some kind of tension in it. What is urban is not nature, and vice versa. This position of being in-between constitutes problems for the aesthetic appreciation of semi-natural environments – whether to appreciate them as pieces of nature or as artifacts.

I will argue that urban nature makes it possible to experience the whole variety of the aesthetic. In parks there are aspects that raise immediate sensory pleasures and others that require historical and theoretical knowledge, sometimes even intellectual pondering until the aesthetic is captured. Also 'functional aesthetics'[2] is relevant in assessing parks and gardens. Even an everyday leisurely walk in a park provides aesthetic pleasure. These four are all aspects of the aesthetic: immediate sensory pleasures, historically and theoretically informed satisfaction, enjoying the functionality of an object, and the unnoticed smoothness and rhythms of our daily existence. All four have a role to play

1 I want to thank La Fundación Séneca in Murcia, Spain for their support of this project.

2 The tradition of philosophical aesthetics has excluded functional considerations. This has been one of the reasons to regard architecture as an applied rather than a pure art – buildings and other architectural structures such as bridges have a function to fulfill. On the problem of the relationship of function and the aesthetic, see Glenn Parsons and Allen Carlson's *Functional Beauty* and Jane Forsey's *The Aesthetics of Design*.

when assessing urban nature aesthetically. I will discuss the first three in more detail and leave the problems of everyday aesthetics for another occasion.[3]

The Aesthetic and Aesthetics

Lars-Olof Åhlberg writes about the confusion around the concepts of the 'aesthetic' and 'aesthetics' rather bluntly:

> Aesthetics can be, and often is, almost anything. The terms 'aesthetic' and 'aesthetics' are extremely polysemic; during their career from the mid-eighteenth century a host of different, often conflicting, notions have been associated with them. Today there are such things as aesthetic philosophy, aesthetic studies, aesthetic education, aesthetic engineering as well as aesthetic industry, and philosophers have theorized about the aesthetic attitude, about aesthetic experience, aesthetic concepts, aesthetic objects, and so on (2014: 55).

There hardly is any disagreement about this, and in the 1980s Francis Sparshott gave an interesting explanation:

> The root of the trouble with the word 'aesthetic' is that it is a semitechnical term. Everyday terms arise in the marketplace, and their use is kept in line by their users' sense of familiarity. Technical terms are introduced by definition, and their use is controlled by their restriction to a technical context in which the meaning of the definition is fixed. But a semitechnical term like 'aesthetic' is controlled in neither way. It is a jargon word used by theorists, but not controlled by any effective stipulation. Rather, it is subject to pulls in two directions (1963: 128).

Whether semitechnical or not, depending on the language, 'aesthetic' and 'aesthetics' have a variety of usages in everyday discourse, referring, e.g., to cosmetic surgeries and other ways of human beautification. As a 'Professor of Aesthetics,' I have received rather strange inquiries – from the point of view of what I am really doing at work – having nothing to do with academic aesthetics. But academic aestheticians clearly cannot control the varieties of usages

3 Everyday aesthetics is a growing subfield of philosophical aesthetics; see, for example, Light and Smith's *The Aesthetics of Everyday Life*, Yuriko Saito's *Everyday Aesthetics,* Thomas Leddy's *The Extraordinary in the Ordinary: The Aesthetics of Everyday Life.*

of 'aesthetic' and 'aesthetics,' nor should they. And it seems to be the case that even in academic contexts the varieties of the aesthetic are too numerous to be captured by a single definition.

Why is it that some aestheticians still believe in the existence of something called the aesthetic and want to capture it by a single definition? Roger Scruton offers the following: without "a single thing called aesthetic interest.... That would be effectively to abandon the idea of aesthetics, as a distinct branch of philosophy" (2007: 245–246). This is a peculiar claim: why should aesthetics as a branch of philosophy be defined by a single issue? I would rather say that the opposite is true: the broader the scope of aesthetics, the more important aesthetics is, as a branch of philosophy. Sparshott offered already in the 1960s a commonsensical characterization which is worth quoting: "Aesthetics I shall take to be that part of philosophy which deals with the problems arising mainly out of the existence of beautiful things, and men's response to their beauty; out of artistic activities, and men's response to them; and out of the intellectual activities connected therewith" (1963: 3). When we understand 'beauty' and 'beautiful' as generic notions covering all aesthetic properties, this is what aesthetics as an academic discipline is still doing, at least most of the time, and it certainly is a distinct branch of philosophy.

But let us have a look at Scruton's Kant-inspired Wittgensteinian view which does define a slice, but only a slice, of the aesthetic. For Scruton, the key is a disinterested appreciation of the appearance of an object. This is, in fact, very much in line with what I see as crucial in the aesthetics of nature; but for Scruton, this should apply to works of art and everyday objects as well. His example of the aesthetic character of an everyday object is borrowed from Wittgenstein:

> Suppose you are fitting a door in a wall and marking out the place for the frame. You will step back from time to time and ask yourself: does that look right? This is a real question, but it is not a question that can be answered in functional or utilitarian terms. The door-frame may be just what is needed for the traffic to pass through, it may comply with all requirements of health and safety, but it may simply not look right: too high, too low, too wide, wrong shape, and so on.
>
> SCRUTON 2007: 239–240

This is a puzzling example in a number of ways. To start with, the claims of "too high, too low, too wide, wrong shape" are (in these kinds of cases) certainly not purely aesthetic qualities in Scruton's sense of the 'aesthetic,' but have a functional or utilitarian basis. Could there be an aesthetically great door or door-frame, which would be completely nonfunctional – for example too low or too

narrow for anybody to enter into a room? I cannot see how this would be possible. When we are dealing with objects that are primarily functional, made to fulfill a purpose, the aesthetic is closely connected with the functional. Surely, there can be variation in the sense that for the desired aesthetic effect, there might be compromises in the functionality. Just think about the massive and very high doors when we see the Russian president entering a room in a television news broadcast. My point is that functionality always sets the limits – if the doors were so heavy and high that not even the two guards could open them, the aesthetic effect would be lost, too.

'Functional beauty' is a term often connected with the aesthetic character of everyday tools and other objects of use. Glenn Parsons and Allen Carlson characterize it as follows: "The basic idea of Functional Beauty is that of a thing's function being integral to its aesthetic character. Expressed slightly differently, the idea is that of a thing's aesthetic qualities emerging from its function or something closely related to its function, such as its purpose, use, of end" (2008: 2). This is exactly the case in Scruton's and Wittgenstein's examples: too low or too narrow a doorframe would not look aesthetically good because we see the non-functionality of such a frame. Or to mention Wittgenstein's favorite example: a well-tailored suit looks right because it is not too large or too small. Too small a suit does not look right because it looks uncomfortable, or in the worst cases, unwearable. Or consider one of the favorite objects of industrial designers, a chair. If a chair does not look inviting to sit on, if we can see that it is hard as rock, does not give support to the back, is too low for our legs, and so on, it is not aesthetically pleasing either (Forsey 2013: 182). To use Parsons' and Carlson's language inspired by Kendall Walton's classic article (1970) on the categories of art: in the category of the utensils of chairs, it does not look right.

Imagination and the Aesthetic

Scruton's ideas are not, however, completely mistaken; rather, they are misguided and one-sided. There are cases in which one 'can simply enjoy the look for what it is' and the enjoyment is aesthetic. Paradigmatic cases of this kind on enjoyment are natural objects and scenes. Without going into details of the Kantian distinction between free and dependent beauty, these are cases of the former. Sparshott underlies the importance of the distinction when writing as follows:

> In so far as we differentiate between natural and artistic beauties, we do so by regarding the latter as supposedly meaningful, or at least supposedly

> worthy of attention, whereas natural beauties are simply enjoyed. … We do not scrutinize a sunset, but rather relax in the enjoyment of its color and peace – we bask in it, as we say. When contemplating scenery we do not bend our intellectual energies upon it, but gaze, as we again say, 'entranced.' Leaning over a gate and looking at the view is a well-known way of being *lazy*. But when we look at a painting we examine it closely: our aim is not so much to enjoy it as to grasp it. … Similarly, one listens to surf or bird-song without full attention; but to listen to half an hour of polyphonic music is, to me at least, exhausting (1963: 99–100).

Let me consider a bit more closely the 'simply enjoyment' of natural beauties. One might argue that Sparshott's example of "leaning over a gate and looking at the view" is a case of Kantian agreeable (*das Angenehm*) rather than real aesthetic pleasure (Kant 1952: 44–45). But "being *lazy*" does not mean being inattentive. As I understand it, it means not doing anything which would be particularly physically strenuous, like "leaning over a gate and looking at the view." And when looking at the view *attentively*, there are many things going on. It is very much in the Kantian tradition to bring the notion of imagination into play when analyzing the nature of our aesthetic enjoyment. Here I am going to refer to much later source – Edward S. Casey's phenomenological study on imagination. I think it gives a very good foundation for understanding this important and complex human capacity and activity based on this capacity, and, by the same token, deepens our understanding of the notions of the aesthetic. What is it to imagine. This is what Casey has to say:

> The attitude in question is, rather, to be conceived as *sheer supposition*: a supposing that is free from either overt or covert connection with what is actual. Therefore, to posit something as purely possible in imagination is to consider it as sheerly supposable, that is, as worthy of our momentary attention on its own account. In this respect, imagining may be regarded as a special form of *self-entertainment* in which the imaginer amuses himself with what he conjures and contemplates by and for himself alone. To amuse oneself in this way is not necessarily to experience anything that is 'amusing' in the sense of comical or laughable. Instead, it is to enter into a *musing* state of mind in which everything that is imagined is a pure possibility and is enjoyed as such. *Imagining is entertaining oneself with what is purely possible* (2000: 118–119).

There are several expressions and wordings which not only resemble but clearly indicate the connections of imagining and the aesthetic: something is

"worthy of our momentary attention on its own account," "the imaginer amuses himself with what he conjures and contemplates by and for himself alone," "to amuse oneself … it is to enter into a *musing* state of mind," and something "is enjoyed as such." One of the traditional accounts – again the Kantian one – of aesthetic appreciation is that one adopts a contemplative, disinterested attitude and experiences and enjoys the qualities of the object for their own sake. The faculty and activity of imagination has also often been linked with this – imagination allows us contemplate freely the qualities of the object without taking a stance or making a judgment. As a matter of fact, Casey defines "pure possibility" exactly in this way: "By 'pure possibility' is meant a kind of possibility that is posited and contemplated *for its own sake* and not for the sake of anything external to it, or more ultimate than, itself" (2000: 118–119).

This kind of imagining is, indeed, crucial in many forms of art, especially fictional narratives: we posit and contemplate the fate of fictional heroes just for their own sakes (Feagin 1998: 472), and gain pleasure from this activity. But our imaginative powers extend beyond propositional imagining. A fairly standard common sense distinction is that between propositional, objectual, and experiential imagining (Feagin 1998: 471). Without going into the details of the different types of imaginings, I just want to point out the relevance of experiential imagining in musical experiences. The emotional reactions to tempos, different instruments, repetition, expectation, etc. are crucial in musical experiences, and besides being sensitive to musical qualities, imagination is needed to produce these feelings and emotions in the listener.

But even more important for the purposes of this chapter is the role of imagination in perception. We can bathe in the sunset, or "just enjoy" the shades of greenery of the spring forest – and be lazy – but the role of imagination is vital in enriching the experience and often also connecting the different sense modalities into a unified experience. We can entertain ourselves with the colors and shapes of a forest, with the twilight of a sunset, with the skyline of a city, with the fury of a stormy sea, etc. In the aesthetic experience, there is a continuum from a fairly passive reception of impressions to the active "musing state of mind" in which our imaginative capacities are fully at work.

When talking about imagination and perception, we encounter typical cases of Kantian free beauty. In Kant's words: "Flowers are free beauties of nature.... Many birds (the parrot, the hummingbird, the bird of paradise), and a number of crustaceans, are self-subsisting beauties which are not appurtenant to any object defined with respect to its end, but please freely and on their own account" (1952: 72). I do not deny that we can appreciate artifacts in the same manner – enjoy a painting or a piece of music freely without concepts, just for their own sake. Indeed people, including myself, do this often – we

gain immediate impressionistic pleasure from many kinds of artifacts. But the problem is that this kind of aesthetic enjoyment is often based on false premises, and even though the enjoyment is real from the first person perspective, it is unfounded because of a lack of knowledge of the object in question. This is the widely accepted idea that artifacts, and works of art in particular, belong to certain categories, and should be seen and appreciated according to the standards of these categories. To criticize a cubist painting because of the lack of accurate resemblance to the object depicted is incorrect – this is a "standard feature," to use Kendall Walton's terms (1970), in cubism.

Difficult Beauty

Before turning to semi-natural objects, I will briefly describe dependent beauty, the aesthetic of artifacts. As I pointed out above, different kinds of conditions have a role to play here. To get an aesthetic experience might be an achievement in the sense that it requires an effort. Especially in the arts we often encounter "difficult beauty" (Jacquette 1984: 79–87) and to acquire an aesthetic experience requires work – concentrating, thinking, making connections, taking into account the history of the genre in question, etc. Works of art, being cultural artifacts, have "intentional properties"[4] which are constituents of their aesthetic worth, and seeing, hearing, or understanding these properties requires interpretation.

Examples are numerous. Consider reading a complex novel which involves a lot of thinking, pondering over what is going on, how the characters and events described hang together, and so on. There are many ways for a novelist or any storyteller to keep the readers' or listeners' interests alive, and when this is being done, it certainly is satisfying and pleasurable enough for the recipient to characterize the experience as an aesthetic one. Or to come back to Sparshott's musical example: listening to polyphonic music often requires concentration and effort and one can be mentally exhausted after the experience, but

4 Here I borrow Joseph Margolis' term without, however, entering into a discussion of the complexities of his robust relativisim or fluxism. Margolis writes: "*Intentionality* = *interpretability*" (1995: 197). And further: "*Intentionality* signifies – paradigmatically – the constative ascribability of any of a family of predicables of an intrinsically interpretative sort: viz. those regarding linguistic or 'lingual' meaning, significance, signification, intesions, signs, symbols, reference, representations, expressions, rhetorical functions, semiotic import, rule-like regularities, purposes, propositional attitudes, intentions, and the like." (213).

nevertheless, the experience can be a satisfying one, and the person himself may well call it 'aesthetic.'

Åhlberg makes a relevant point about the differences in aesthetic experiences: they "can be anything from a mildly pleasurable experience of a sunset to a shattering and overwhelming experience of a work of art" (2014: 67). I would add that this goes the other way, too: aesthetic experience can be a mildly pleasurable experience of a work of art – you read a poem: 'interesting'; you see a painting in an exhibition: 'nice' – to a powerful experience of nature involving all your senses, you are totally immerged in the environment. So, besides the qualitative differences in aesthetic experiences, there are also differences in the magnitude of the experiences; there is a scale from mild enjoyment to a life-changing experience.

The Aesthetics of Urban Nature

Let me now, finally, come to semi-natural environments. Gardens and parks are prime examples, familiar to everyone. There clearly is a scale from the pristine to highly managed nature. We can talk about the degrees of naturalness (Ross 2006). It might well be the case that pure wilderness is an idealization that does not exist any longer – human influence, whether intentional or unintentional, is all over our planet. But it is equally obvious that some natural areas show less human influence than others. There are, for example, national parks in which there are regulations regarding the degree of management. In some cases, there are also restrictions regarding where visitors are allowed to go. In public parks heavy management is most often required: plants are being planted, natural growth is being cut down or torn down altogether, grass is being cut by lawn mowers, etc.

I will take an example from the city in which I live, Helsinki. There are quite a few parks in the city center or very close to the center. One of them is the Observatory Hill Park. Located right in the city center with views to the harbor, it is a very popular place for strolling and picnics. As the name indicates, there is also an old observatory completed in 1834, designed by C.L. Engel, perhaps best known as the architect who designed the very center of Helsinki, including Helsinki Cathedral and the University Main Building.

Originally, the park site was a rocky hill with little vegetation (see figure 8.1). In its present state it is a lush park, not very big in size, but certainly pleasant to spend time in, with old trees (most of which are not typically Finnish), grass, and flowerbeds (see figure 8.2). It was only decades later after the completion of the observatory, in the 1890s, that plans were made and later executed to

construct a park around the observatory. The city architect at the time was Svante Olsson, and he was responsible for the basic plan of the park. Huge amounts of dirt had to be brought to the site, a great variety of trees and other plants – many of which were unique at the time in Finland – were planted. One of the leading ideas was to ensure views towards the city and the sea. From the beginning the park was regarded as a success and was mentioned in numerous tourist guides.

Here I do not need to go into the details of the fascinating history of the hill (Häyrynen 1998); instead I want to quote a passage from a fairly recent management and development plan for the area drafted by the City of Helsinki. Here are some estimates by current landscape architects of the values of this particular piece of land today:

> The observatory hill has been and still is one of the most significant green areas in the southern districts of Helsinki, and in its vegetation it is by far the richest. When estimating the values of parks in the city center it has been classified as the one which has kept its original features the best. And unlike many other parks, it has been estimated to fulfill also

FIGURE 8.1 *Observatory Hill before the construction of the park, 1893.*
PHOTO: A.E. ROSENBRÖIJER. COLLECTIONS OF THE HELSINKI CITY MUSEUM, PRINTED ON PERMISSION OF THE HELSINKI CITY MUSEUM

FIGURE 8.2 *Observatory Hill Park in the autumn 2016. The Observatory is behind the trees.* PHOTO: ARTO HAAPALA.

> the other criteria used in this report: rareness as well value in terms of history, the variety of vegetation, cityscape, architecture, city structure, and landscape architecture. … The once gorgeous sea view is now blocked in daytime by the ever bigger cruise ships. The other views have disappeared behind leaf trees which in themselves are impressive. Many of these now gone values can be restored.
>
> *Tähtitornin vuori ja Ullanpuistikko* 2011

What is relevant for my argument is the list of values and the view that the values could – and should – be restored by management, for example, by cutting trees. As to the cruise ships mentioned in the quote above, as far as I can see, opinions about their aesthetic value vary greatly. There are many who climb to the hill to see the ferries – there is certain majesty in them. But surely they can be an eyesore too, blocking the view and being very dominant in their presence. These considerations reflect a common sense view of the nature of parks such as the Observatory Hill Park – even though most of the bits and pieces in the park are natural, the park as a whole is an artifact and should be treated as such. It should be looked at, appreciated, and estimated in the category of certain kinds of parks, where historical, structural, architectural, and other considerations have a significant role to play (see figures 8.3 and 8.4).

FIGURE 8.3 *View from the Park towards the City Center.*
PHOTO: ARTO HAAPALA.

FIGURE 8.4 *Cruise ships seen from the Park.*
PHOTO: ARTO HAAPALA.

I do not deny that one can 'bathe in the sun' and enjoy the park in this way. I can just admire the colors of the flowerbeds, and most often they are intended for exactly this kind of admiration and pleasure. And to come back to one of my original examples: I myself often walk in this park in the spring and enjoy the variety of greenness of the trees and grass. I simply admire them as natural objects without any considerations of the history of the park or its role in the development of the Helsinki cityscape. But when I appreciate the park as a whole, I regard it as an artifactual construction with a history and structure, as a part of the landscape architecture tradition.

This is what makes the expression 'urban nature' sound paradoxical and what makes the aesthetic appreciation of parks sometimes confusing – two kinds of criteria can be applied, those of artifacts and those of natural objects. Most often, however, this apparent paradox is easily solvable. We just need to be more precise in the object of our appreciation. The difference can be clarified with the notion of style. Let me quote Sparshott once more:

> In art, but not in natural beauty, all is subdued to one consistent mode of vision. Nature, we feel like saying, has no *style*; and it is in style that many have located what is most characteristic of art. … We may think of style as a *system* of creating, modifying, selecting, arranging, and interpreting forms. Nature, we may then say, presents us with no style but with the untreated forms that may serve as part of its raw material. … A style is a way of doing things; but what we have in nature is just the way things happen (1963: 98–99).

When I watch a large tree, say a maple, in the park, and aesthetically enjoy its shape and colors, I appreciate it as a natural object, and accordingly I do not see it as a link in a historical style or anything similar. But when I appreciate the same maple as a constituent of the whole park, different considerations come into play. In the Observatory Hill Park, the original plan by Olsson was to plant the trees on the lower ground so that they would not block the view to the sea and the city. The maple is a part of a design, 'raw material' in the hands of the city architect. The park as a whole has a definitive style. Olsson himself described the logic of plantations as follows: "Before one has bored of one kind of nature you already encounter another kind. A group of trees gives suddenly way to smiling grass fields or to flower arrangements which please the eye. Paths lead to these sights so that one cannot foresee them beforehand" (Häyrynen 1998: 86). Maunu Häyrynen has studied the history of the Observatory Hill Park and he describes the stylistic features as follows:

> The style used (in the Observatory Hill Park, AH) resembles very much the "hill parks" in Stockholm in the 1880s, and the planning principles were the same that were used in central European city parks since Hausmann introduced his program for the construction of parks in Paris. The closest stylistic model was, however, Germany, in particular Gustav Meyer who was the city gardener in Berlin and written a widely read planning guide *Lehrbuch der schönen Gartenkunst* (1. ed. 1860). The German "Lenné-Meyerscher Schule" style was a central source of inspiration also for the Swedish city parks in the end of the 19th century (1998: 86).

The park as a whole is an artifactual construction, to the extent that it has features similar to artworks: it has a style, it is part of a tradition, and most importantly, there is human agency and human intentions behind the creation. Stephanie Ross writes that the garden should be understood as "virtual world, as the world of a work of art" (1998: 181). Natural objects are materials in the hands of landscape architects and gardeners. And in order to keep this artifact in shape or in order, to keep it close to its original condition, considerable maintenance is needed. But as I said, it is possible to appreciate parts of this artifact as natural objects – the greenness of the trees and grass is not artificial. So is the sunlight that I see through the leaves and the wind that keeps the leaves in motion and plays with the light. I can bathe in this scene without knowledge of the complicated history of this park.

The more natural the whole area is, the more one can enjoy the larger areas aesthetically, and the historical and cultural considerations play a lesser role. This is the aesthetic paradox of urban nature: depending on the scale and point of view, different aesthetic criteria apply. This is why it is important to be clear about the object of the appreciation: whether it is the natural object and its specific properties, or an artifactual construct in which bits and pieces of nature are being used as materials.

The Wittgensteinian analysis Scruton develops does not capture the complexities of the aesthetics of urban nature. If we look at the Observatory Hill Park through inadequate categories, not taking into account the historical, cultural, and stylistic features, it might not look right. In the eyes of, say, an ecologist it might well look completely wrong, non-ecological, violating the principles of biodiversity. Even someone not professionally trained in ecology might find some features of the park aesthetically displeasing: not enough flowerbeds, for example.

Unlike in wilderness areas, functional beauty plays a significant role in parks and urban forests – they have to be fairly easily accessible by roads, paths,

and stairways. Besides being in accordance with the relevant style, they have to function in their roles properly. A very bumpy pathway might look nice – just right – but if it offers major obstacles for people to walk and wander around, it is not beautiful as a road. When thinking about an historical park such as the Observatory Hill Park, it is easy to find examples from stylistically incorrect restorations: the stairways cannot be made out of plastic, the pavements have to be made out of sand rather than asphalt.

The Varieties of the Aesthetic

Now we are starting to get a full account of the varieties of the aesthetic in urban environments and in urban nature in particular. I am not claiming that the analysis I have given so far is the complete picture; as a matter of fact, I think that the analysis of everydayness would bring yet another aspect to the aesthetics of urbanity. I have argued elsewhere that there is a relevant aesthetic aspect also in the very everydayness itself. Aesthetics is not just about the extraordinary and noteworthy, but also is about the ordinary, about objects that get our "daily inattention" (Highmore 2011: 58). If one walks routinely through a park, as I used to walk through the Observatory Hill Park on my way to work, the aesthetic features tend to fall into the background and the park becomes a route, a way through. But the very fact that it is part of my daily routines is significant even though I would not pay attention to the colors of the trees or to the history of the park. It gets my daily inattention, and by this very fact, constitutes the rhythms of my life, and by the same token, is aesthetically valuable. For the purposes of this paper, these considerations would, however, lead too far.

I hope I have done enough to show and demonstrate the multiplicity of the aesthetic and the hopelessness of those enterprises which try to operate with just one notion of the aesthetic. I can hardly think of anything more interesting and fruitful for the future of philosophical aesthetics than this fact. And semi-natural environments are prime examples to challenge the idea of a unified aesthetic. In order to be able to appreciate a park or a garden aesthetically, we need to operate both with free and dependent beauty, and cannot ignore functional beauty either. I can bathe in the sun and enjoy the greenness of the park, I can explore its history and appreciate its style, I can admire the beautiful functionality of the paths revealing the secrets of the park bit by bit.

It is fair to say that urban nature, rather than pure nature or pure artifacts, exemplify the varieties of the aesthetic, and in this sense require different

kinds of attitudes and different points of view. There are parks which can be regarded as works of art – as Mara Miller has argued in *The Garden as an Art* – even though I would not classify my example, the Observatory Hill Park, into this category, despite its many human-made aesthetic merits. And there are parks or gardens which clearly are of more natural type, like the Central Park in Helsinki which – unlike its famous namesake in New York – is mainly a fairly large forested area with cycling roads running through.

Let me conclude with a quote from Stephanie Ross. Although her notion of the aesthetic is a narrow one by the standards I have introduced here, she describes nicely the complexities of gardens and the requirements they put on their appreciators:

> Gardens also answer our aesthetic needs. Above all they provide visual delights … These include vast vistas as well as the more concentrated beauty of a particular bloom or bed. … Garden delights aren't limited to the sense of sight. Fragrances mingle with the splash of a fountain, the buzz of a bee, the warmth of the sun, the cooling touch of a breeze. Finally, gardens provide general kinesthetic pleasures of moving in and through a space.
>
> In addition to these sensory pleasures, gardens also evoke complex trains of thought and feeling. For example, in Western culture, gardens inevitably suggest paradise, the bounty and bliss of the Garden of Eden. …
>
> Beyond this sensory and intellectual bounty, gardens provide arenas for activity – places to play or stroll or converse. (1998: 3–4)

Sensual, intellectual, practical everyday – these are all varieties of the aesthetic. Gardens and parks exemplify these varieties extremely well. The fact that parks are not pure nature nor purely artificial gives them the potential of having great aesthetic value.

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CHAPTER 9

Where Embodiment Meets Environment: A Meditation on the Work of Hans Breder and Ana Mendieta with an Accompanying Interview with Hans Breder

J. Sage Elwell

Abstract

This chapter offers a two-part meditation on the work of Ana Mendieta and Hans Breder followed by an interview with Breder on the subject of art, body, and nature in his mirror-body works and her Silueta works. The first section presents a brief biographical sketch of Breder and Mendieta followed by an exploration of their independent and collaborative work together, attending in particular to the place of the body and/in nature in Mendieta's Silueta series and Breder's body-mirror series. The second section interrogates their work in order to understand the dialectical aesth/ethics of the sacred/profane liminality where embodiment meets environment. This section explores the relationship between Breder and Mendieta's differing, but parallel, aesthetic sensibilities and the concomitant ethical commitments they imply. Specifically, this section attends to how their work instantiates a place between the sacred and the profane where the body meets nature.

Keywords

Ana Mendieta – *Silueta Series* – Hans Breder – the feminine – Earth and body

Between 1970 and 1978 Hans Breder and Ana Mendieta worked side-by-side as teacher-student, fellow artists, friends, and lovers. The result was two remarkable series of works that can be read as an intimate aesthetic dialogue in performance, sculpture, and documentation. In 1968 German-born artist Hans Breder established the first Intermedia Arts program in the United States at the University of Iowa. The program's mission was to "expose the participants

to technical and aesthetic considerations of various arts, to provoke creative work and experimentation and to stimulate speculative work on a scholarly, theoretical and aesthetic level" (2005a: 216). Ana Mendieta came to the University of Iowa in 1966 and entered the Intermedia Arts Program in 1969, where she began a near decade-long artistic and romantic relationship with Breder. Between 1970 and 1978 Breder and Mendieta, independently and collaboratively, created an inspiring and important collection of performance-based art that explored the liminal space where embodiment meets environment. I suggest that, viewed together, Breder's mirror-body series and Mendieta's *Silueta* series disclose a complementary aesth/ethic that advances a vision of the space where body and nature meet as a liminal dialectic between Eliadian profane and sacred space.

The following is a two-part meditation on the work of Hans Breder and Ana Mendieta followed by an interview with Breder on the subject of art, body, and nature in his mirror-body works and her *Silueta* works. The first section presents a brief biographical sketch of Breder and Mendieta followed by an exploration of their independent and collaborative work together, attending in particular to the place of the body and/in nature in Mendieta's *Silueta* series and Breder's body-mirror series. The second section interrogates their work in order to understand the dialectical aesth/ethics of the sacred/profane liminality where embodiment meets environment. This section explores the relationship between Breder and Mendieta's differing, but parallel, aesthetic sensibilities and the concomitant ethical commitments they imply. Specifically, this section attends to how their work instantiates a place between the sacred and the profane where the body meets nature.

Mendieta's work has been examined within the context of 1970s earth and performance art, feminism, and more recently, postmodern and critical theory (e.g., Blocker 1999). Meanwhile Breder's work has been examined within the context of body and performance art, conceptual art, intermedia experimentation, 1970s video art, and art and technology generally. But their work from this period has never been explored in connection with one another relative to the dialogue that birthed it. Specifically, Mendieta's *Silueta* series has never been considered in connection with Breder's body-mirror work and vice-versa. This is despite the fact that both series were executed at roughly the same time during a period when Breder and Mendieta were romantically involved and in full conversation with one another about their work.

Both series address the place of the body in nature. Mendieta was the model for many of Breder's pieces and Breder was the documentarian for many of Mendieta's pieces. In short, their respective series are biographically,

chronologically, thematically, and aesthetically parallel. And examining them in tandem discloses a complementary aesth/ethic of the body and nature.

Before proceeding, one point of clarification is necessary. The focus of this chapter is only on Mendieta's *Silueta* series and Breder's body-mirror series. Thus, much of both artists' work, even work completed at the time of their respective series, will not be examined. This is important, as both artists completed significant works during this period; Mendieta produced her rape tableaus, her blood and body work; and Breder began his video and performance work. The purpose of this chapter is to set Mendieta's *Silueta* impressions alongside Breder's body-mirror reflections and to see what, if anything, we might glean from the aesth/ethical arc that leaps between them.

Biography

Apprenticed as a painter in Hamburg, Germany, Hans Breder came to New York City in 1964. In New York his minimalist sculptural works such as *Cubes on a Stripped Surface* (1964) received critical praise, and in 1966 the University of Iowa asked him to join the faculty in the School of Art and Art History. Two years later he founded the Intermedia Program. In interviews, Breder has suggested that the university only approved of the program because, due to his thick German accent, they believed he was proposing an "intermediate" drawing and painting course (2005c: 204).

Fourteen years younger than Breder, Ana Mendieta was born in Havana, Cuba in 1948. At age 12, she and her 14 year-old sister came to the United States to avoid the Cuban Revolution and were placed in a series of foster homes in Iowa. In 1967 she began at the University of Iowa where, in addition to her studies in studio art, she also studied the art and archeology of 'primitive' and indigenous cultures, studies that would come to inform her art. Mendieta graduated in 1969 with a Bachelor of Arts degree and that same year she began graduate studies in painting. She would go on to earn an M.A. in painting in 1972 as well as an M.F.A. from the Intermedia Program in 1977. It was during her time in the Intermedia Program that she created her *Silueta* series.

Breder and Mendieta first met at a Halloween party in 1969. And as art historian Olga M. Viso points out, "As exiles – he a self-imposed one, she a forced one – they shared much in common" (2008: 36). Indeed, over the ensuing years Mendieta would become Breder's student, lover, and collaborator.

Breder started the Intermedia Program in 1968 as a place for experimental cross-disciplinary and multimedia experimentation. The fledgling program took flight when Breder and his colleague Ted Perry from the Department of Communications applied for and received a $5 million dollar grant from the

Rockefeller Foundation to fund a five-year cross-disciplinary performance art program. The Center for New Performing Art (CNPA) began in 1970 and over the course of the next decade allowed Breder to bring some of the most talented and cutting edge artists and performers to the University of Iowa.[1]

In the fall of 1970 Breder and the CNPA brought performance artist Robert Wilson to the university, where he would develop and direct the performance pieces *Handbill* and *Deafman Glance*. Mendieta participated in body awareness and movement workshops led by Wilson and performed in both productions. Julia Herzberg observes that "Mendieta's concentration, grace, and self-possession, as well as her stamina – all characteristics evident in her later performance pieces – owe a good deal to the specialized training she received during these months of performance for Wilson's two productions" (Herzberg 1998: 110). The body, presence, absence, movement, stillness, and place would all blossom into central themes in her *Silueta* series.

In the fall of 1972 Mendieta enrolled in Breder's Multimedia II class. That spring she would graduate with an M.A. in drawing and painting, but she had already begun to move away from painting. That same year Mendieta began work on a Master's degree in Breder's still-young Intermedia Program. In a statement she explained her turn from painting to earth-body art during this period:

> When I realized that my paintings were not real enough for what I wanted the imagery to convey – and by real I mean I wanted my images to have power, to be magic. I decided that for the images to have the magic qualities I had to work directly with nature. I had to go to the source, to mother earth.
>
> MENDIETA 1988: 70

For the remainder of her too-brief life Mendieta would try to bring the magic of mother earth to her art.

This artistic journey began in 1972 with *Grass on Woman,* for which she lay nude, face down on the grass and had friends glue cut grass on her body while Breder photographed the performance. The work was significant as a "proto-earth-body piece that began to merge her body with nature – even if only tentatively" (Herzberg 2004: 147). One year later she would create her first *Silueta* while in Mexico with Breder's Mulimedia II class, and again, Breder would act as documentarian.

While Mendieta was beginning to find her *métier* in earth-body works, Breder also began to experiment with body works in nature. In New York City,

1 Visiting artists included Robert Wilson, Marjorie Strider, Dick Higgins, Karen Finley, Vito Acconci, Scott Burton, and Allan Kaprow.

Breder had garnered critical praise for his minimalist influenced work using polished chrome cubes, black-and-white stripped surfaces, and mirrors. In 1969 in Iowa City, Breder brought his mirror experiments to the female form to create his first body-mirror pieces. Originally performed in his studio, the body-mirror series features nude women in various poses – sometimes alone, sometime entwined – holding mirrors over their bodies creating the illusion of simultaneously bisected and contiguous human figures. Beginning in 1970 he began to stage and document these pieces in nature. And where Breder commonly served as documentarian for Mendieta's work, Mendieta frequently acted as model/performer for Breder's work.

Thus, beginning in the early 1970s and running through to 1978 when Mendieta left Iowa for New York, Breder and Mendieta carried on a dialogue in performance, sculpture, and documentation about the body and nature. Mendieta's *Siluetas* impressed the body into the earth where Breder's mirror work reflected the body on the earth. However, it is important to note that, viewed together, their work elides the patriarchal paradigm of 'male gaze/female body,' as Mendieta's silhouette impressions materialize Breder's mirror reflections but only as fleeting earth works, destined to be washed away, overgrown, and ultimately undone and reclaimed by nature. Thus the impulse to reflective conceptual abstraction – the gaze that owns – is simultaneously realized and thwarted in an act of Irigarayian "strategic essentialism" whereby the essentialism of female/body/nature is used to "create a space which displaces familiar dichotomies" (Ortega 2004: 35). The result is a study in contrast and complementarity expressed in a dialectical aesth/ethic that reveals that the space where embodiment meets environment is a liminal space where the profane becomes sacred and the sacred, profane.

Body-Mirror/Body-Earth

When considering Breder's body-mirror pieces and Mendieta's *Silueta* series, it is important to clarify what precisely constitutes the works in question. Is it the concept, the performance, the sculptural artifact, or the documentation of the performance and/or resulting sculptural artifact?[2] Long an issue when considering more conceptually driven art, I accept the conventional view that embraces all of these elements as collectively constitutive of the work,

2 Although Mendieta's *Silueta* series includes several films, the following is limited to the photographs. Because Breder's body-mirror pieces exist only as photographs, this otherwise seemingly arbitrary limitation allows for more precise comparison of the two artists' works.

with the final document being the most obvious and accessible 'work of art.' In addition to being the accepted stance of the overwhelming majority of art historians since Duchamp offered the art world his *Fountain*, this view also corresponds to Breder's own description of the artistic process and product. As Breder explains:

> First there is the concept – which is nothing until it goes through the second step, which is the process. And finally you end up with deeds – and that is of course the documentation. My way of thinking is to reinvent something with documentation that recreates an experience of what happened before. So I'm not just taking a slide of something – the documentation itself becomes the work.
>
> Qtd. in ELWELL 2006: 35

Thus, in what follows I explore the performance/sculptural artifact both via *and as* its documentation.

For his mirror-body works, Breder posed and photographed nude women holding large mirrors at different angles across their bodies to create surreal fractured forms of seemingly dismembered arms, legs, and torsos. These works feature either a single woman, lying on her side or back, or two women woven together in a reflective knot. In both instances, the body appears at once broken and endless with the real dissolving into the looking-glass reflection. Most, though not all, of these pieces were executed outside in nature; on beaches, in ocean waves, in rivers and on riverbanks, and in fields – always the body reflecting on and in its environment (see Figures 9.1–9.3).

Mendieta accompanied Breder when he performed many of his mirror-body pieces, and as noted, she often served as a model for these works. In the summer of 1973 the two were together in Mexico when Mendieta had an idea for a piece that would become the first in her *Silueta* series. For *Imagen de Yagul* (Image from Yagul) Mendieta bought flowers from a local market and went with Breder to an open grave in Yagul. The grave was most likely of pre-Hispanic Zapotec origin. Breder recalls, "She lays in [the tomb], nude, and asks me to arrange the flowers around her body, instructing me that the flowers should seem to grow from her body" (Breder 2005a: 249). With this piece, Mendieta fused the symbolism of female fecundity – flowers growing from the naked female body – and death, as she lay prone in an open grave. And Breder took the photograph that would mark the beginning of Mendieta's *Silueta* series.

The series consists of imprints, impressions, of a body on, in, and of the earth using materials ranging from fire to blood. For the early pieces in the

series Mendieta used her own body as the silhouette, but she would eventually remove any actual body, leaving only an impression. Over the years she would document, in photographs and film, hundreds of *Siluetas*; in grass, feathers, sand, stone, sticks, flowers, and more; sometimes with arms raised at the elbow in what has been described as a 'goddess pose' and sometimes with arms down at the side like a mummy.

Adrian Heathfield opens his essay in the exhibition catalog *Ana Mendieta: Traces* by pointing out that, "So much has been said on the work, life, and death of Ana Mendieta that to add a single phrase may seem both excessive and redundant" (2013: 21). And this is true. Her impressive and important body of work and the intrigue surrounding her tragic death have made her and her work the subject of a great deal of critical attention.[3] As such, the amount of

FIGURE 9.1 *Hans Breder, from the series "Body Sculpture", untitled. 1973. 16 × 20 inches.*
VINTAGE GELATIN SILVER PRINT.

3 Mendieta died in 1985 when she fell from her thirty-fourth floor apartment in Greenwich Village. At the time, she was living with her husband of eight months, minimalist sculptor Carl Andre. Prior to her fall, neighbors reportedly heard the couple arguing violently. After a three-year trial, Andre was acquitted and Mendieta's death was ruled an accident or suicide.

FIGURE 9.2 *Hans Breder, from the series "Body Sculpture", untitled. 1973. 16 × 20 inches.*
VINTAGE GELATIN SILVER PRINT. ANA MENDIETA IS THE MODEL FEATURED IN THIS PIECE.

FIGURE 9.3 *Hans Breder, from the series "Body Sculpture", untitled. 1971. 16 × 20 inches.*
VINTAGE GELATIN SILVER PRINT.

literature about Mendieta and her work significantly outweighs that about Breder and thus requires a brief accounting of the critical discourse surrounding her work in order to frame the present analysis of her work alongside that of Breder's.

The dominant interpretations of Mendieta's work orbit about six interrelated themes: feminism, the female body and its image; goddess imagery; mother earth imagery; her Cuban background and her fascination with Afro-Cuban folklore and Santaría in particular; and her identity and position as 'exiled.' Regarding the entangled first four, Susan Best notes that:

> Mendieta has been criticized for embracing a conventional alignment of the female body and nature, thereby presenting an ahistorical, essentialist conception of woman…[that] can be characterized as a reliance upon an ahistorical idea, mother earth, to generate the Silueta Series… More precisely, Mendieta subscribes to an idea of feminized nature (2007: 57).

Importantly, Best does not consider this 'essentialism' fundamentally problematic. Rather, she claims that Mendieta uses the essentialist linkage of female/mother earth/goddess to claim an alternative to "patriarchal culture in the name of the feminine" that elides the masculinities of colonialism and 'territory' in favor of an "ecological sensibility that emphasizes the reciprocity between body and land" (58). Mendieta explicitly – too explicitly for some – wed the female to mother-earth to create a wholly immanent goddess of nature as feminized space. And in so doing she undermined the masculinity of colonialization that separated her from her land.

Regarding how Mendieta's sense of being exiled from her Cuban homeland is manifest in her work, Mendieta herself explained:

> My exploration through my art of the relationship between myself and nature has been a clear result of my having been torn from my homeland during my adolescence. The making of my Silueta in nature keeps (makes) the transition between my homeland and my new home. It is a way of reclaiming my roots and becoming one with nature. Although the culture in which I live is part of me, my roots and cultural identity are a result of my Cuban heritage.
>
> Qtd. in MOURE 1996: 108

Mendieta's use of Afro-Cuban iconography and her appeal to earth-mother themes prominent in Santaría were expressions of that Cuban heritage.

However, this should not be overstated. While it is true that Mendieta and her sister were exposed to both Afro-Cuban folklore and Santaría as children, Mendieta's *Silueta* series is more influenced by her knowledge and appreciation of the art and rituals of indigenous cultures from Africa, Cuba, Mexico, and Native America.

In her dissertation on Mendieta's early work, Julia Herzberg notes that many authors have overestimated the extent to which Mendieta was influenced by specific Afro-Cuban images and rituals. Herzberg observes, "None of the writers knew of Mendieta's study of African art and thus could not take that study into account when discussing her sources.... The result has been an overarching attempt to interpret Mendieta's early to mid-1970s work in light of Afro-Cuban religious practices" (Herzberg 2008: 247–248). There is no doubt that Mendieta drew on the imagery and rituals of her homeland. However, the so-called 'primitivist' influences on her work were significantly more varied and reflect what she considered a pan-indigenous, pan-mythic connection between woman and nature that entailed an environmental ethic of reciprocity whereby the earth is an agential being that takes care of us insomuch as we take care of her. In this, Mendieta ritualized the body as a place of both distinction and union with the environment. Her performances enact a recognition of the earth as embodiment's original source and final destiny and our resultant responsibility to it during this temporary period of differentiation before its eventual reclamation of its own.

Examining Mendieta's *Siluetas* alongside Breder's mirror-body pieces discloses a complementary aesth/ethics of the liminal space where embodiment meets environment and where the sacred meets the profane. Breder's mirrors are reflections. Mendieta's *Siluetas* are impressions. Breder's bodies are fractured but present. Mendieta's bodies are whole but absent. Breder's body-mirror pieces are surreal and cerebral. Mendieta's *Siluetas* are earthy and visceral. Breder juxtaposes body and nature. Mendieta fuses body and nature. Breder's works are sculpturally calculative. Mendieta's works are sculpturally fluid. Breder's body-mirror works have a crisp, carved-in-marble, tactility that lends them a feeling of permanence and universality. Mendieta's *Siluetas* have the organic quality of entropy and passing away that lend them a feeling impermanence and particularity. Examining them side-by-side reveals a complimentary aesthetic of interdependent mutuality and a correlative ethic of responsibility. This ethic of responsibility inheres in the call to exist between the sacred and the profane as the liminal space where the profane body meets the sacred environment and in this meeting is itself sanctified while simultaneously transforming that sacred space into profane and constructed human territory with all the claims to ownership that term implies.

These two series, created concurrently by teacher and student, friend and lover, and frequently involving the other in their creation, disclose a complementary aesth/ethic that can be read as advancing a vision of the space where body and nature meet as the liminal point between Eliadian profane and sacred space. In his book *The Sacred and the Profane*, Eliade famously distinguishes between sacred and profane space. Of sacred space, he writes, "It must be said at once that the religious experience of the nonhomogeneity of space is a primordial experience, homologizable to a founding of the world. It is not a matter of theoretical speculation, but of a primary religious experience that precedes all reflection on the world" (1987: 20–21).

Sacred space, as Eliade presents it, is space that is set apart from normal, everyday space. It designates geography that is set off, where the divine has been expressed in a hierophanic encounter. Conversely, profane space "is homogenous and neutral; no break qualitatively differentiates the various parts of its mass" (1987: 22). Profane space has no center, no fixed point by which existential (or aesthetic) orientation might be achieved. It is nebulous and without purpose.

The complimentary aesth/ethic that arises in the space between Breder and Mendieta's projects occupies the liminal space between the sacred and the profane. As Forrest Clingerman has elsewhere argued, this liminality signals a point of convergence that asks, "What brings to being the imperceptible meaning of the perceived creation – the meaning of that materiality that we touch, taste, smell, and see as art and environment? This can only be satisfactorily answered in terms of the sacred, transcendent dimension of creativity" (2013: 95). It is the space where an aesth/ethic emerges from the union of sacred natural place and profane artificial interruption that is also the sacred body in profane nature, each participating in the other and giving rise to the 'transcendent dimension of creativity' that is uniquely human yet wholly derived from nature as its primordial source.

The work of Breder and Mendieta – their body-mirror and *Silueta* series – perform this threshold, this limen, between sacred and profane space. By showing impressions that erase any clear boundary between body and land, Mendieta performs a threshold between the sacred and profane, a threshold that is reflective of and reflected in Breder's mirror-body work. Their work neither transforms nor overcomes this threshold. Rather it creates and sustains it.

Mendieta's absent figures leave the impressions into which Breder's fractured figures are reflected, thereby becoming figure and ground simultaneously. Likewise, Breder's mirrors reflect the absence of Mendieta's *siluetas* by dislodging presuppositions about the integrity and continuity of the human form; disclosing absence where we expect presence and presence where we

expect absence. Body and nature reflected in and impressed into the other, being both itself and the other; both sacred and profane.

The sacred space of the mirror, a mystical looking-glass onto another world, a world that is other and yet *really real*, reflects half-figures that are made whole in impressions, *siluetas*, of complete figures that are themselves sacred, but only for a time, as they are impermanent and destined, determined, to erode back into the profane. But here the profane always already contains the sacred. The profane is the earth, the ground of the sacred, its source and resource. Nature, the environment, is the 'from whence' of the sacred. And the universality captured in the precision of the mirror's reflection is expressed and completed in the beautiful particularity of featureless figures of mud, grass, snow, and fire. The impression receives the reflection's emanation. And the body that Breder breaks is recreated, reborn through Mendieta's impressions in and as an immanent goddess, as earth-mother.

Viewed together, Mendieta and Breder disclose an aesth/ethic of liminality where embodiment meets and becomes environment and the differentiation between the two becomes blurred such that one becomes the other. The aesthetics of reflection and impression disclose an ethic of mutual responsibility whereby the environment is infused with the same agential capacity entailed in embodiment and each becomes responsible for the other.

This is the sacred/profane space where the reality of our profane brokenness is reflected in and through the sacred looking glass and reborn whole as a particular expression/impression in and as the sacred earth, and yet destined to decay back into the homogeneity of the profane space of the everyday. But only for a time: until environment, nature, once again realize the beauty of making whole the brokenness of too-human embodiment, only to fall back into decay again.

The year that Mendieta left Iowa and Breder to move to New York City, she fashioned an iron brand in the shape of her own right hand and burned her handprint onto the cover of Eliade's book *Rites and Symbols of Initiation.* Art historian Jane Blocker sees this as Mendieta's challenge to Eliade's "presumed authority" and her attempt "to redesign [Eliade's] construction of the primitive" (199: 35). Blocker concludes that, "Mendieta's work exposes the binaries that Eliade erects between traditional man and modern man, between prehistory and history, between essence and inessence" (35). Reflecting on Mendieta's *and* Breder's work in the years prior to 1978, I suggest it is in the dialectic between their works that we find this corruption of binaries most fully expressed. Here we witness a unique complementarity wherein Breder's disturbingly surreal, clean, linear broken body reflections in nature are reborn in Mendieta's earthy, visceral, whole but absent silhouetted impressions in

and as nature. Together their series disclose a truth about our being in nature. We live in the liminal space between the sacred and the profane. The extent to which we transcend our natural element, we reach for the divine. And yet there is a brokenness that always accompanies the hubris of such a reach. This is the entwined mutuality entailed in the reciprocity of an aesth/ethic that is contingent upon the environment it endeavors to transcend. Our reflection, the introspection and intellect we suppose to be the source of our elevation, mirrors the truth that our natural element is the first and final source of any presumption to transcendence and will ultimately reclaim us as we are reborn as impressions in the earth. In the meantime, our task is to dwell in this space between.

Interview with Hans Breder April 3, 2016

At the time of his death in June 2017, Hans Breder was Professor Emeritus at the University of Iowa and continued to produce and exhibit new Intermedia work in New York City and around the world. In April 2016 – over forty years since he and Ana Mendieta worked together at the University of Iowa – he agreed to discuss their time together during those formative and creatively exciting years in the early 1970s.

Sage Elwell (SE)
Hans Breder (HB)

SE: First, thank you for taking the time to chat, I genuinely appreciate it. To begin with, how did you meet Ana?
HB: I first met Ana in 1969 at a Halloween party. We gradually got to know each other better and around 1970 she began taking my classes. During her student years we became very close and the spirit of her work flourished. By 1980 her work had really changed. She began doing more pieces inside galleries and the like. But it was during this period, the 1970s, that we worked together most closely; artistically.
SE: When did you first start working with mirrors?
HB: Oh, that would be in 1964. I was working with George Rickey as an assistant from time to time, and one day he said, "Oh Hans, why don't you do some of your own work." So I borrowed one his mirrors; a big, square steel mirror. I put it in a pond, and that was it. That's when I first began dealing with real and virtual space.

At this time, I was deeply influenced by Louise Bourgeois and her thinking about space and reflection, so the influence for using mirrors came from

Bourgeois. The next step was using mirrors to create cubes and putting them on striped surfaces. And in all of these, it was important to me that nature was present in the work.

SE: Can you elaborate on that? What do you mean when you say it was important that nature was present in the work?

HB: Well, the mirror reflects life and the environment. Even if at first it was just a mirror, I put it in water, in the creek and I call it something like *Space/Time*. And so the first thought was that nature had to be present. The other thought was, "What is the relation of the spectator to the work?" The participation of the viewer was very important. So when I put these mirrored cubes on the striped surfaces, the spectator could move the object and make their own composition and right away, everything is out the window. No more composition – at least not as dictated by the artist. Space is structured by the people who inhabit it and the environment is nothing other than structured space. It's a direct relationship with, between viewer – who becomes participant – and the work. That's where it really started.

SE: And did this translate into you and Ana's work out in nature?

HB: Yes, but it was different. It was a different way of connecting with nature. For example, I might sit in nature and do nothing. Or I might record the sound. And that becomes the source for a musical composition. But then, back in the studio, I might go inside the sound.

SE: What do you mean by "go inside the sound"?

HB: Well, I might slow it down – really slow it down. And if it's an image, I might focus deeply on one particular part of the image. Or I might find that the image I want isn't an image at all, but instead it's the space between images and that liminal space becomes a new space – a space between spaces; a place to inhabit. And that is where we find *Dasein* as Heidegger might say – the "there being."

And even with this house [Mr. Breder's home of more than twenty years recently burned down]. Now I have no space. And in losing it, I'm losing my body. When it burned, I literally lost part of my body by losing the art. The house represented a certain moment in time and that I can never get back and can never replicate. So I just go on with life. I do new work – always moving forward. Recycling and opening up new spaces.

SE: Yes, I'm so sorry to hear about your home and the fire. Do you want to talk about it? Did you lose a lot of work? [The home was struck by lightening in October 2015 and was destroyed by fire and water damage.]

HB: Oh, well, yes. There was work in the attic in storage, where the fire started. But most of the damage came from the water; from the firemen putting out the fire. So the water destroyed a lot. [Pause] But that's enough of that. That's not what we're here to talk about and I have to move forward.

SE: Okay, I understand. So let me ask you, when talking about your mirror-body pieces, you talk about the place of the viewer, of the spectator, and how the mirror reflects the body of the viewer as participant. How does this correspond to Ana's work and the place of the body in her silhouette, or impression, pieces?

HB: Well, in Ana's work it's always her body that's being transferred to the ground, to the earth. She started doing the silhouettes around 1973 and that was the first year we went to Oaxaca, Mexico. While there, she did much of this early work in a very collaborative way. For example, there was a tomb at Yagul and she wanted to lay inside it with flowers around her. So she bought the flowers and laid down in the tomb. I arranged them around her and took the photos.

But you can't forget about the group either. There was a whole dynamic of the student-group and the influence that the students had on one another. For instance, there was another student, Richard Bloes, who made a silhouette out of sticks and Ana said, "Well, can I borrow your idea?" and she started making her *siluetas.* But the *siluetas,* of course, are a reflection of herself – of her body. So you have the mirror that I worked with and you have the *silueta* that Ana worked with, which could be a shadow. But in this case it was engraved in whatever the surface might be – a reflected shadow engraving. It's all interrelated.

SE: And do you recall when or why you started using the human form in your pieces?

HB: Yes, it had to do with the fact that I was unhappy with the idea of work as commodity. I was successful with some of my early work, and more and more I felt like I was producing work that was being consumed as a commodity. To get away from this, I started using the body and I was using the photograph as a way to document the body *as sculpture*. So if someone wanted to buy the piece, they could buy a photograph of the body sculpture but they couldn't have the body sculpture itself.

SE: Both you and Ana use the female body. Could you speak to the selection of the female form in either your work or in Ana's work?

HB: I started using the female body in 1969 because I wanted the images to be androgynous. I felt that the male penis would interfere with the formal purity of the work. I did not want the obviousness of sexuality to be an issue. This is because I use the body as an abstract form. Obviously the sensuality of the body is important, but I was primarily concerned with its formal properties. And so, you might say, I use the female body because it is more general in a way.

In this sense, it's more completely abstract and this comes straight out of the Constructivists' ideas and in particular it connects with George Rickey's book on Constructivism. In that book he says, "I remove the barrier between

the real and the looking-glass world." He was very influential on my work and I think then on Ana's work as well.

SE: That's interesting. Because as I look at Ana's work, I see a much closer tie to the earth itself and less concern with the purity of abstraction and form.

HB: Absolutely, that is true. But I was talking about my work, and for me, it is ultimately about consciousness. About moving from one state of consciousness to another state of awareness. It is the in-between states that interested me. For example, I live in-between languages and I live in-between cultures. Most people think of this in-betweeness as a membrane, but for me it is literally a space where I can exist. If I didn't have that, I wouldn't know what to do. I wouldn't have any ground. So the ground for me is this liminal state. It is what is real.

SE: Earlier you mentioned the collaborative element of Ana's early work. You documented many of her early silhouette pieces and she modeled for many of your mirror pieces. Could you speak for a moment about this collaborative dimension of your work during this period?

HB: Well, this was very natural, but it was probably not thought of as collaboration. I mean when one of my models didn't work out, well then, Ana became one of the models – we were just helping each other.

The first body works were all done outside at Old Man's Creek and Ana and I were often working side by side on our own projects – literally working next to each other. So I might say, "Hey can you just model for me?" Or on the other hand, she would be working on a piece and would need someone to take pictures, so I would be the photographer. It was very ephemeral and fluid.

But you have to understand she was the student and I was the teacher. It was very intimate, yes, but we helped each other. Though of course, since I was the teacher, my opinion was one that she had to consider. Naturally, as I would photograph her work, I had to decide where to put the camera and how something would be best framed. So I made a lot of decisions independent of the person who had the idea for something.

In this respect, it gets quite complex. Naturally, I had a lot of input and that can get a little confusing at times, but we always did our own work. It was just natural that we would help each other, and the same would be true for the other student; the other students were always a part of each other's work – we were all in it together.

Sometimes this would bother Ana. For example, at Yagul other students might begin photographing the piece she was working on and she would say, "You cannot do that. It is my work." And occasionally she would get really quite mad about it. She only wanted me to photograph the work. I was always really

relaxed about it and never took any credit for it, photographing the work, but now I see her work and I think maybe it should indicate who took the photograph.

Also, in her work, there is a lot of African influence and other sources that didn't interest me particularly at the time. I was coming at everything from a conceptual, abstract position. That's just how I see everything.

SE: Did you or Ana explicitly set out to create series – her silhouette series and your mirror series?

HB: No, I think it just happened. In Ana's case she continued to do the same thing over and over, so there was a series. She had this idea that you have to do the same thing and she would be angry when I would change in my own work and move on to something else. I work on a problem, then, I have a solution. For example, I really finished the body-work in 1973 because I felt like I found a solution to something. When I'm working on a problem like that, I wouldn't even call it a series, it's more like one work. It's like science – when you are working on a problem, you try a number of different solutions and they build on each other.

So when Ana was doing her earth-body work, she was doing multiples and she was really growing into the work. For example, she moved from black and white to color and we discussed that. So she was changing, but she was doing much of the same thing.

SE: Did Ana ever talk about Santería or Catholicism?

HB: Never, this came later after she moved to New York. When these questions came up, she would say, "oh yes." So she really constructed her own history. I don't think she ever used the word Santería in the early days, but when she got to New York she did. She gave herself the nickname 'Tropicana.'

For us, Mexico and Iowa City were the same thing. She changed when she went to New York, which was good. It was good to move and to change. So it was good change with the environment.

SE: Were either you or Ana self-consciously thinking about the environment and the place of the human body within the environment when you were creating your respective mirror and silhouette works?

HB: Oh, sure. We would go to certain locations and they would inform what we created. For instance, the monastery in Mexico and the columns that I used in my work – that choice was very deliberate. They were broken columns and they became part of the sculpture, supporting bodies and mirrors like a pedestal. It's the same thing with a landscape. These are all specific places and that's part of what I was trying to capture. But it was always in the realm of sculpture, and that was always really important.

SE: Did Ana talk about how she understood the connection between the earth and the feminine?

HB: Well Ana's work was also always sculptural. She called it earth-body work, so it was reflecting the earth-work of the 1960s and the concern for the body. Both. She combined them. And no, I don't really recall her specifically talking about the feminine and its connection to the earth, but she was concerned about other cultures as she was from another culture.
SE: Speaking of that, did Ana ever talk about her studies of ancient cultures – the mythological place of the feminine in those cultures or the imagery those cultures used to represent the feminine or female form?
HB: One thing I can tell you, Ana was not a feminist. In the 1970s she wrote in her letters to me that she was tired of feminism. This is something that is attributed to her now, but she graduated in 1977 and moved to New York. So from 1978 on she continued working on her own. And that was when she began to make outlines on the earth, flat on the floor. Here you start to see the influence of Carl Andre.

But it was in Iowa that her real important and original work was done. It's between '73–'77 that she was doing some of her most impressive work. In this respect, it is the other way around from normal, because it's her student work that is mostly talked about and most exhibited.
SE: Did either of you ever self-consciously consider the parallels, and what might be considered the complementarity, between your work from this period?
HB: Well, she was mirroring her body and I would draw an outline of her body. So there's a mirror of herself, and she took it. Her way of seeing what she was doing was very unique and it was totally different than mine.

And remember, there was an amazing program going on at this time – the Intermedia Program at the University of Iowa. She was surrounded by all these people, and they were all drawing on each other and influencing one another – so there were many more sources. And this is to say nothing of all the visiting artists. There were just so many influences and the students were generally very well informed on what was happening internationally. They were really encountering all of this stuff.
SE: Again, thank you for your time, and I have just one final, more general, question. How do you think the arts might facilitate our interpretation of the meaning of environments?
HB: That's a good question. Well, for some earth artists like Michael Heizer or Richard Long, the English artist that would mark the earth by taking walks, they have a direct relationship to the environment. But in my case and in Ana's case there is also a connection to the environment, but it's more concerned with the body and the experience of the body as an intermediary both between the environment and experience, and between the body itself and consciousness itself.

There are a few pieces where there are more explicit interpretations of nature and the environments, and more of these were completed in Mexico than in Iowa City. But I have always been more concerned with the body and specifically with the mind as coming from the inside – as emerging from the body.

Along these lines, there is another aspect important to my work, and which I think is also present in Ana's work, and that is the idea of the spiritual. But spiritual not meaning religion, but rather, of the mind – asking questions like "What is mind? When is mind? Where is mind?" and thereby ultimately coming to consciousness – consciousness as the base of everything; consciousness as a space that opens up spiritual possibility.

So in a creative act, you have the question of what happens? For me, space and time collapse and thinking ceases to exist. So non-thinking is really where I have to be in a creative situation. So as long as there is that self-awareness, there is a problem. If you are too conscious of your self, you can't go anywhere. But there is a transcendental moment. That is not something that we can force.

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CHAPTER 10

Conclusion: The Aesthetic Roots of Environmental Amnesia

The Work of Art and the Imagination of Place

Forrest Clingerman

Abstract

In the context of hypermodernity – a world found between the secular, sacred, global, local, economic, scientific, and technological sphere of human existence – should we dwell on the meaning of our surroundings? On one hand, the human understanding of environments requires the connection between who we are and where we exist. On the other hand, there also exists a tension between an immediacy of environmental experience and our mediating interpretation of environments, which creates a "crisis of meaning." We have lost a sense of "the space that I am," and thus we have become unable to find an adequate sense of how to dwell in places, landscapes, and environments. This chapter suggests that this crisis of meaning has aesthetic roots, and in turn, how the arts might serve as critique and antidote. The argument proceeds in four parts. First, part of the current crisis is the result of environmental amnesia, or the lack of understanding the temporal and spatial thickness of our surroundings. This amnesia is not merely a forgetfulness of how to encounter environments in general; it is equally a loss of home and place. Second, environmental amnesia is partially rooted in the breakdown of our aesth/ethics of place. There are aesthetic roots to our environmental amnesia, especially when we understand aesthetics as related to perceptual interactions. A local ethics is needed. Lest this ethics becomes mired too deeply in the past, so too imagination is a tool for understanding a place-focused ethics. Third, our experience of the arts – as perceptually penetrating our relationship with space and time – becomes an imaginative practice. Finally, visual artworks are shown to serve as an antidote to environmental amnesia, using examples by contemporary artists George Steinmann, Tim Collins and Reiko Goto, and Gregory Euclide.

Keywords

environmental aesthetics – place – George Steinmann – Tim Collins and Reiko Goto – Gregory Euclide

In the context of contemporary hypermodernity – a world that is characterized by the confusing, fuzzy borders between such things as the secular, sacred, global, local, economic, scientific, and technological spheres of human existence – is it still relevant to dwell on how to interpret the meaning of our surroundings, our place? Has the rush to create an overhumanized world, which will be interpreted through the concept of the Anthropocene, eradicated the possibility of uncovering the depth of how nature transcends us? These questions are focused on the inevitably hermeneutical status of our relationship with environments.

But this interpretive relationship, in turn, suggests a tension. On one hand, the human understanding of environments (including both built and natural spaces) points toward the ethical and ontological alignment between who we are and where we exist, as Sigurd Bergmann reflects on elsewhere in this book. In this way our immediate perceptions of the world allow us to more deeply think about our sense of being a self and being in place. On the other hand, the differences between the basic immediacy of environmental experience and a second-order, mediating interpretation of environments have created a 'crisis of meaning.' That is to say, we see the need for a multivalent relationship with our environments in all their richness, but often fall prey to a view that is utilitarian, flattened, and distorted. We have lost a sense of 'the space that I am,' as Bergmann writes, and thus we have become unable to find an adequate sense of how to dwell in places, landscapes, and environments.

What are we to do? One possibility is to attempt to learn better ways of imagining our place in the world – something at which artwork excels. Bergmann writes elsewhere in this volume, "Art offers…a deeply critical practice – or should we say a 'critical place' – as it radically challenges the foundations of our self-understanding and the understanding of the world." Artwork (the working of art, including in cases, like the one George Steinmann shows in this book, when the impact done in and through art is without a material work) suggests an alternative to our current malaise. In the present chapter, I reflect how our current environmental crisis of meaning has deep aesthetic roots, and I show precisely how the arts serve as critique and antidote. My reflection takes the following path: first, I argue that at least part of the current environmental crisis is related to a lack of meaning, which is the result of our environmental amnesia. Environmental amnesia, as I define it, is a lack of understanding the temporal and spatial thickness of our surroundings. Furthermore, this amnesia is not merely a forgetfulness of how to encounter environments in general, but also a loss of home and place, which affects our sense of self. Second, I reflect on how environmental amnesia is rooted in

the breakdown of our aesth/ethics of place. There are aesthetic roots to our environmental amnesia, especially when we understand aesthetics as related to perceptual interactions. A local ethics is needed. But lest ethics becomes mired too deeply in the past, we discover that imagination is a needed tool for understanding a place-focused ethics. I thirdly suggest how our experience of the arts – as perceptually penetrating our relationship with space and time – becomes an imaginative practice. In this and the following section I concentrate on the visual arts, but this argument also applies to other forms of artistic cultural expression. Finally, I show of how visual artworks serve as an antidote to environmental amnesia, using examples by contemporary artists George Steinmann, Tim Collins and Reiko Goto, and Gregory Euclide.

Environmental Amnesia as a Crisis of Environmental Meaning

Interpreting Environments

Sensing our place is always a bit more than what appears.

Near my home there is a strawberry farm, which I've bicycled past dozens of times in all sorts of weather and during every season. It is framed on two sides by Riley Creek and a small woodland. Nearby is a nineteenth-century farmstead that was originally built by Mennonite homesteaders, and which has recently been restored as a museum by families of Swiss Mennonite descent. My familiarity with this field admittedly comes from a limited vantage point: I don't regularly leave footprints in the soil, I roll by it on a bicycle. Someone else walks the rows to safeguard the strawberries from invading plants and insects, and others pick the fruit in season. I don't own the land or live in the Mennonite homestead on the banks of the Riley. And I haven't heard its sounds at midnight, seen it blanketed with snow in the frigid cold of winter, or watched the foggy mist that is common in fall at daybreak. On the other hand, I still have an opportunity to see, smell, and hear its surroundings in ways that go unnoticed when driving, encased in the swift sterility of a car. Thus I've come to know this field, in my own admittedly idiosyncratic manner. For instance, in the early spring, before the plants break from the ground, the fragrance of the damp soil permeates the air. Red-winged blackbirds – a certain signal that winter's grasp is weakening – sound an alarm nearby, wary of four-footed (or in my case, two-wheeled) interlopers. In later months the field is mulched, its color deepens, and the heavy smell of overturned earth is replaced with compost and straw. By April small bursts of green emerge from dormancy to once more bear fruit.

Even though watching the ceaseless transformations of a landscape has its own satisfaction, something exceptional happens in June. It creeps up: the day

before was not marked with anything special, but on this day, long before I can see the field, a breeze of summer carries the overpowering, luscious smell of ripe strawberries. This is not the sickly odor of over-ripened fruit, but a delicate, salivating sweetness. When the field is finally near, the bright red berries clearly punctuate the green stripes on the brown canvas of the field. Stopping to smell, see, and surreptitiously taste the strawberries brings out more than momentary pleasure. Each summer, this experience revives and reinforces the beautiful simplicity of summertime. Strawberries are not mere fruit; for the families nearby, they are *symbolic* and *meaningful*, connected with a wide array of sensations, memories, and associations. The minutes it takes to ride by the field bring more than brute sensory pleasure – it also offers a wave of meanings and associations. Strawberries are the honeyed smell of shimmering warmth, the taste that comes when the small hands of childhood greedily stuff red fruit into open mouths, the shape of my grandmother's shortcake recipe. They are the sticky mess of canning hot jam and the unique seasonal treat of mixing strawberries with the tartness of rhubarb.

Just as a strawberry's ripeness creeps up on us, it is gone. Summer continues, the last of the summer fruits dry and wither, and fall begins – bringing its own waves of associations and values in the form of falling leaves and migrating waterfowl. With autumn, the field begins to settle into its dormancy, until the first flurries of winter spread across the field. Under a blanket of snow and ice, this field now is indistinguishable from the surrounding expanse of farmland, and our sense of the landscape cannot avoid the desolation and solitude of winter.

Lingering on this example shows how complex and multivalent our interpretations of place can be. Meandering past the strawberries – indeed, in nearly all of our encounters with environments and landscapes – the human experience of place is heavily infused with the weight of values, perspectives, and structures of interpretation. This is not a merely intellectual affair: our interpretations are partly due to the sheer *sensual materiality,* the organically meditative animality of our locatedness. For instance, the redness of berries or the smell of damp earth are discovered from the interactive vantage point – my bike – in certain ways, but seen from a fundamentally different vantage point when encased in a car or bent over, hands brushing past the toothed leaves of the plants. A possible definition of a landscape or place is the total yet localized involvement of mind, body, and spirit (place is a nature's manifestation of *Gesamtkunstwerk*, even?). This suggests a provocative way to describe human culture itself: as David E. Klemm and William Schweiker note, "[t]o be human is to be engaged constantly in the task of world-making, culture creation" (2008: 13). That is to say, culture is not a thing – rather, culture is a process of intersubjective relationality, a tracing of the border between the human and

more-than-human, the domesticated and wild, the familiar and strange, the is and is-not, the self as other and the Other as other than self. Ultimately, in the reflexive self-limitation of being-in-the-world that is made manifest in even the beginnings of culture – that is in agriculture such as growing strawberries – culture transforms itself into its own otherness, insofar as we naturally create culture whilst nature is always already defined by its cultural absence.

Practically speaking, how do we make a world and cultivate it? Like the biblical creator – but unlike classical Christian doctrine – we do not create our world *ex nihilo,* but out of something primordial and deeper than mere appearance (Keller 2003). Humans create through interpretation, especially through the interpretation of place. Indeed, *finding one's place is an inevitably mediating process*, wherein we – as individuals and communities – attempt to align general conceptions of embodiment, space, and time to a lived, particular thrown-ness in the world. Finding one's place requires but speaking and listening, sensing and being sensed, perceiving and interpreting. As I've suggested elsewhere, we are truly emplaced creatures.

Thus*, to understand our creation of the world is to interpret the ways we create our material embeddedness in a world of understanding.* This is the task of environmental hermeneutics, concerned with deciphering landscapes, places, and environments. By attempting to 'read' nature, Martin Drenthen writes, environmental hermeneutics "does not start with a reflection and articulation of abstract values that people should adhere to. Rather, it starts out from the assumption that the world we live in has significance because it is always already infused with meanings. Moreover, hermeneuticists also stress that in order to grasp the full meaning of a particular place, one has to get involved in a process of interpretation" (2011: 15). Thus, environmental hermeneutics is an extension of the principles of interpretation to environments, to actual places and landscapes, with a recognition of the inevitably that we mediate the space around us in light of what Gadamer called 'hermeneutical consciousness' (Utsler et al. 2014: 3–4). Focusing on the meaning that is intersubjectively fused to particular places, we uncover how and why place matters. Much of what occurs in our engagement with place begins with our awareness and perceptions of its particular qualities: things that are irreducibly partial, materially embedded, and beholden to our embodied senses. Such awareness becomes the groundwork for sensing the ways platial (a term used by philosopher Bruce Janz [2009]) interpretation matters to us. In turn, by acknowledging why place matters, we are also better able to see why it is inevitable that conflicts of interpretations arise from competing perspectives, value systems, and attempts at understanding.

Reflecting on the interpretation of the places around us forms a position to critically display how *the conflicts over the localized materialization of meaning and values* (and not superficial disagreements such as the applicability of the precautionary principle or the need to maximize happiness) are the root cause of the current 'environmental crisis.' That is to say, we cannot fully appreciate the crisis at hand solely through critical analysis, logical argumentation, and carefully delineated terms, because this neglects a deeper dynamic at hand: as human beings, our sense of 'nature' and 'environment' is beholden to the particular, embodied emplacement that frames our understanding. In other words, the physical manifestations of this crisis is not sensed or conceived in the abstract. It is understood in the way we read and correspond with environments and in the way intersubjective conflicts of materialized interpretations challenge the many different visions of human flourishing and ultimate concern.

But this also means that our environmental hermeneutics is inevitably informed by an aesthetics of place, and vice versa. *The interpretation of dwelling resides in our ability to perceive and sense the material createdness of the world, and our sensory engagement is made meaningful through a mediating interpretation of our emplacement.* An aesthetics of place is a particular instantiation of the 'interdiscipline' of environmental aesthetics, which Yrjö Sepänmaa elegantly calls "the aesthetics of the real world" (1993: 15). What defines an aesthetic engagement of place? For starters, it attempts to understand aesthetics as a discipline focused on sensing or perceiving the materiality of the world, rather than concentrating on so-called aesthetic qualities such as the beautiful or the sublime. Emily Brady remarks that "all experience of the world begins in perception, but perception lies at the center of the aesthetic response.... The aesthetic response is typically contrasted with perception as a means to knowing the object, or an intellectual type of attention to it. Instead, our response is grounded in an immediate perceptual response rather than one that is mediated through knowledge or factual considerations" (2003: 9). Such a view of aesthetics runs against the Kantian notion of disinterestedness. Instead, environmental aesthetics seeks an 'aesthetics of engagement' (Berleant 1992: 12ff), an 'integrated aesthetics' (Brady 2003: 120), or a 'participatory aesthetics' (Rolston 2002: 127–141). An aesthetics of engagement increases our involvement with place, as Berleant explains: "When we appreciate environment, we do not leave the perceptual realm but engage with it in ways that intensify and enlarge our awareness" (1992: 14; see also Rolston 2002). This alerts us to another difference between the aesthetics of place and other forms of aesthetics: environmental aesthetics becomes a necessity in life, for to limit our

aesthetic involvement in our environment is to be lost – *to find ourselves out of place*. Once again, environmental aesthetics differentiates itself from other discussions of aesthetics because it reflexively *places* the *self* into *embodied reflection* – it continually engages the self with others, inhabitants with locale, and finally the finite perspective of the interpreter with what is interpreted as a spatial whole.

Such a broadened view uses concepts from philosophical aesthetics in ways that challenge our sense of nature and the environment. Berleant writes, "Applying concepts such as beauty, appreciation and sublimity to environment forces us to rethink our basic assumptions about what constitutes appreciation, a work of art, creation and, indeed, human experience in general.... On the other hand, approaching environment from a philosophical, especially an aesthetic standpoint, requires us to revise our ideas about what environment is" (2). Such challenges are necessary, Berleant maintains, because aesthetics is important for a full understanding of nature: "Both paths, then, nature and environment, lead to the same place, where they have expanded to become all-inclusive, an interrelated whole. Moreover, this act of perception, this process of integrated experience, because it is perceived, has an aesthetic dimension.... To the extent that everything, every place, every event is experience by an aware body with sensory directness and immediate significance, it has an aesthetic element. For the fully engaged participant, an aesthetic factor is always present" (10). Responsibility to environments (built or natural), then, arises from aesthetic participation within them.

Our interpretive aesthetics – or, differently stated, our aesthetic interpretation – concretizes the meaning of the particular places we inhabit. Already we have sensed that these interpretations materialize in places and landscapes. However, to fully unearth where we find ourselves, we now must acknowledge that we perceive place not only through our spatial experience, but equally through temporality. In the case of the strawberry field, much of the poignancy of meaning comes from the fleeting nature of its abundance and the requisite memories that remind us of when it is otherwise. The ripening of strawberries is a profoundly fecund manifestation of the temporality of place: it defines the place in fall, winter, and spring, insofar as we recollect the flesh and seeds of strawberries outside their harvest and across growth and decay. Memory provides a temporal thickness, in other words, that allows us to hold space in time. Such "platial" memories are intersubjective, involving all of the participants of place in an ongoing task of *holding a unique space in time, and a uniquely shared time in space*.

Nowhere is the temporality of space seen more clearly than in our sense of home, and the somewhat related concept of dwelling. Our home is bound

with an intimacy of familial memory, a fullness of dwelling in the present comfort of reminiscence. As explored by phenomenologists such as Gaston Bachelard and Otto Bollnow, one's home is paradigmatic in understanding place. Our home emerges from a sense of stability amidst change, as inhabitants are able to differentiate a space not only through the other physical materialities that are embedded in space, but equally through the thickness of the past and present of a place. Our home exists through memory: it is often *memory* that allows us to dwell fully in a place, just as a loss of memory (as John Rodwell eloquently suggests) affects our sense of belonging and home.[1] The memory of place exists as a possibility of bringing of the past to presence, thereby exposing the complex intersubjectivity that exists among dwellers of a place. Dwelling, then, is as much a temporal as a spatial phenomenon, and the temporality of place is particularized and instantiated though memory.

Forgetting Environments

In the previous section, I argued that place locates many things: it is where we are who we are, a spatial and temporal category of our materiality, as well as a sensual and interpretive engagement with environments. By asserting how closely this is related to a sense of environmental crisis, we saw that there is an ethical implication to the inevitable hermeneutics of place we are always already engaged in.

How does ethics first appear in the environmental hermeneutics I have outlined? Simply put, not all interpretations of the environment allow for human and non-human flourishing. This is evident in hypermodern 'non-places,' as well as in the Western consumeristic and technified worldview. *It is easy to forget where we are, to no longer sense our place*: we are often victims of the 'dis-ease' of environmental amnesia. Environmental amnesia is unavoidably related to our temporal and perceptual embeddedness, and especially what we might consider the proper or 'right' memory of a place. If we have an ability to *feel at home sometimes and somewhere*, this means environmental amnesia is radical homelessness, a harmful forgetting of space, time, sense, and meaning, which exposes the underside of our memory of place. Due to the intersubjectivity of place, environmental amnesia is a 'dis-ease' characterized as the lack of awareness of where we are as inhabitants and who we are in place. In other words, it is the troubled forgetting of "the space that I am," which neglects the ways we make ourselves at home in ways that transform our place and our neighbor, to echo Bergmann's reflection on the poem by Noel Arnaud.

1 On this point, it is worth exploring Rodwell's "Remembering the Future" (2015) especially the second section, which is on the topic of memory, place, and home.

As a 'dis-ease' of our contemporary cultural perspective, the causes of environmental amnesia are embedded within the ways that we act toward our environments, both natural and built. Indeed, Bergmann has reflected on ways that cities can embody either a good, "natural oblivion" or a problematic amnesia of place (2014: 49–70). Three causes in particular are worth noting. The first, and perhaps most recognized, cause of environmental amnesia is the loss of extended, everyday material contact with the wide array of environments through which 'nature' appears. In post-industrial societies, many lack any aesthetic interaction with the wildness that exceeds the limits of the human domain, and thereby we humans suffer the loss of continued *hermeneutical* contact with the 'fragments' of nature that exist in our midst. As the human population of the world continues to migrate toward urban areas and rural areas come under the domain of human control and manipulation, the self-conscious experience of 'nature' (for those of us in the wealthy Western countries, at least) has become increasingly confined to the domain of leisure activities and opportunities for passive appreciation of landscapes. In turn, the accessibility of 'nature' is determined by the boundaries of parks, zoos, and other clearly delimited areas where we determine nature to be. *Such limits to our interaction with nature become the precondition for defining, understanding, and even identifying the possibility of seeing the naturalness in our midst*. Outside the bounds of so-called natural areas, then, 'nature' disappears from our view, even when it is in front of us. One of the most damaging effects of living in Western post-industrial societies is a lack of frequent or ongoing engagement with the possibility of encountering the thickness of our environment in a mundane but pervasive way. This aesthetic and hermeneutical distortion has wide-ranging results: not only does it lead to what Richard Louv called "nature deficit disorder" (2006) it equally impacts our place attachment and distorts our conceptions of what constitutes a healthy natural environment (evidenced by the phenomenon of shifting ecological baselines).

A second, related cause of environmental amnesia has more devastating results: the abstraction of nature. We have reoriented our encounter with the world in terms of utility, enjoyment, and desire – through the logics of standing-reserve and consumption. In turn, thinking in technological, consumerist frames unwittingly creates an excessive abstraction of 'nature,' 'space,' and our world in general. While the loss of contact with the wide varieties of environments is a forgetting of nature, our consumerist 'technification' of nature creates a forgetting of the *particularity* of what we interpret nature to be. Kahn and Friedman have discussed this in terms of Kahn's conceptualization of "generational environmental amnesia" (1995: 1403–1417). After all, the meaning of place is not an essence of some abstract Nature, a Platonic Form of Wilderness

that is untouched by human hands, feet, and minds. Nor is nature something known only in terms of its interchangeable utility: board feet, mineral content, energy output. The meaning of nature happens when limbs and arms, rock and bone, leaves and blood all intertwine in a dialogue between *somewhere being* and *being somewhere*. Meaning, in other words, grows from the sensual traces of memory of particular places, where unique individuals and communities dwell. But meaning requires particularity, and therefore the loss of particularity allows amnesia to strike when our intellectually mediated concepts of Nature are left bereft of aesthetic concreteness: *that* walking path; *that* cool, spring-fed lake in fall; *that* deep-green frog at the base of an ancient tree. In the extreme, our environmental amnesia is a sense of homelessness, due to the fact that our home requires a unique familiarity, an embeddedness, a rediscovery of the fact that places are born, grow, and perhaps die.

A third cause of environmental amnesia is the influence of our emphasis on individualism, which translates to a lack of communal participation in the world. This is the problem of homelessness, manifested in an extreme autonomy, and the subsequent lack of communal participation in the world. The 'modern self,' as it is frequently understood, is constituted through the separation of human beings from the world as unique, solitary individuals. We exist apart from one another and in the midst of a passive, inert natural world that serves us instrumentally. Yet this is problematic, insofar as place and environment are irreducibly interrelational. In other words, environmental amnesia is a forgetfulness of the fundamental relationality that exists in human being – a relationality that is modelled by the human emplacement in the world through an aesthetic and organic intersubjectivity. Environments on a whole, and the inhabitants within them, are defined in what amounts to an ecological variation of the hermeneutical circle*: the whole is understood only through the locatedness that washes over inhabitants, and inhabitants only through the sedimented materiality of place*. To divorce the individual from the whole severs the self from platial meaning. In other words, without a recognition of a shared communal participation in the world, we lose touch with the shared stores of communal memory that define the very locations of individual and social existence, a memory that extends for generations: "[Places] have a meaning which is established by their natural inhabitants who lived and live in them.... In order to build a place, or to rebuild it, millions of years might be needed" (Rehmann-Sutter 1998: 72).

The communal nature of memory is a safeguard against environmental amnesia because it allows us to collectively create space for a healthier existence. As Kim Dovey writes, "Healthy places connect us with the past through their role as a repository for meanings and memories. They lend our lives a sense of

continuity, order, and stability.... The forms of healthy places are often a collage of the individual and collective efforts of those who care about, rely on, and are a part of them" (2001: 96). Janna Thompson notes that meaningful places exist through what we might call an "intergenerational social contract": "The fact that people of the past cared about the old tree, made an effort to preserve it, and regarded it as an important community landmark, gives their successors a reason to value and preserve it." (2000: 250). While such a contract is not absolute, it does place important limits on our autonomy to value only what the individual sees as valuable – we are tied to the past, and to the value of the community, past and present (241–258). In other words, one of the most unrecognized implications of our loss of a sense of home is that we also have forgotten the place of the neighbor. And without a sense of shared and ongoing lived place, we are left unable to comprehend the possibilities of narrating the meaning of the places around us.

Together, these three aspects of contemporary life – and, no doubt, others – cause in us a communal and individual forgetting of how we fit into place. In sum, environmental amnesia is a peculiarly hypermodern, anti-spatial, and inappropriate forgetting: a forgetting of the temporal fullness of nature, which results in the inability to see the legibility of the landscape that frames and defines our very existence. It is "a present that does not include the presence of the pastness of nature" (Clingerman 2013a: 34).

Aesthetics and Environmental Amnesia

In an earlier essay, I argued that environmental amnesia is a hermeneutical and an ethical problem, which requires the formation of a "local ethics of memory" (2011). Certainly this is true: environmental ethics focuses on how we not only fail to remember the fullness of the environment but also how we often fail to remember *rightly*. It is an ethics that is *located and localized,* and thus seeks the truth of how we dwell in space and time.

While I still believe a localized ethics is the necessary response to environmental amnesia, seeing this solely or exclusively within the ethical frame is incomplete. This is because environmental amnesia is not just an ethical and a hermeneutical problem, but also an aesthetic one. At first this might seem to be an odd claim, at least when aesthetics is identified as a narrowly defined "theory of art appreciation" or the judgment of cultural taste on the beautiful. In contrast, we should take seriously the arguments of Arto Haapala in this volume: aesthetics includes a broader constellation of aspects than traditional definitions of the field sometimes allow. In keeping with this, we can adopt

the definition of environmental aesthetics as being concerned with how we experience and interpret perceptions of place and environments. This is suggested by Bergmann's claim that "'aesthetics' is [not] a theory of beauty in the narrow philosophical sense, but [is understood] as a discursive and artistic production and reflection of practices and discourses on synaesthetic perception, creation, and reception" (2006: 335). In their chapters in the present book, Haapala and Bergmann have shown the value of such a robust and multivalent sense of environmental aesthetics. With this broader definition, we are not confined to an appreciation of explicitly cultural objects, such as art or historical landscapes; rather, this acknowledges how natural places border culture and vice versa. Environmental aesthetics shows how we participate in the ways we "sense the world," as seen in the Haapala's case of the "urban nature" of a park in Helsinki.

Environmental aesthetics, furthermore, is not exclusively limited to our perceptions of wild nature – it is connected with how we see our emplacement, broadly construed. With that in mind, it is clear that aesthetic attention to art is one possible form of sensual, embodied engagement with the world, just as aesthetic attention to place is another. Environmental aesthetics, then, is a form of work that interrogates and completes an environmental hermeneutics of place, framing a more visceral, immediate encounter with built and natural environments in a way that seeks meaning, value, and ethical responsibility.

While sharing much with other forms of aesthetic inquiry, environmental aesthetics is also unique in some ways. To start, what differentiates environmental aesthetics from other areas of aesthetic reflection is the depth of our interactive *involvement* in place. Unlike cultural works, such as a novel or an artwork, human beings are always already embedded – inextricably intertwined – with their environments. Thus, in the case of built and natural environments, we participate in the ongoing event that *is* the object we are perceiving. Furthermore, environmental aesthetics has a deep sense of *intersubjectivity* to ground this sense of involvement – our aesthetic encounters with natural and built environments rest on our ability to interact with others. But who are these others? Unlike other areas of aesthetic reflection, the environment tests the limits of the meaning of 'intersubjectivity,' insofar as our aesthetic reflection emerges from our relations with the organic and inorganic inhabitants of shared place, including things that most would not philosophically define as 'subjects.'[2]

2 H. Peter Steeves (2011) has written a poetic and phenomenological meditation along these lines.

Thus our aesthetic encounters of environments are not defined through a simple, one-directional involvement from the perceiver to the perceived. Instead, our aesthetic engagement with place is a messy, complicated affair – it is a *reflexive web made out of the porousness of shared incarnation*, of seeing and being seen, hearing and being heard, touching and being touched. For example, in the case of the landscape around the strawberry field on the banks of Riley Creek, the engagement includes not only one's attunement to the sights, smells, and other sensations that surround us, but equally how our presence impacts the place, whether by picking and tasting the fruit, walking on its earth, or (collectively) defining land boundaries and constructing roads beside it. Our judgments are directed towards more-than-human others as *they* are likewise negotiating the intertwined materiality of the particular locations of existence. Whether the more-than-human world has an *aesthetic* attention through such perceptual encounters is an interesting question that I won't handle here, but at the very least we can say that such an encounter results in a strange possibility: in the midst of our reflection, the place interrogates *us*. Our aesthetic reflections are predicated on the fact that we are directly involved not only as the responsive subject, but also as a part of the object of aesthetic reflection. To engage in aesthetic contemplation of place is to engage in a *wholly embodied, and thereby wholly reflexive, self-reflection* – a trait that arguably has moral, existential, and spiritual significance.

Just as many proponents of philosophical aesthetics wish to suggest about the fine arts, we need to appreciate nature 'on its own terms.' This is more than simply appreciating the decorative or associationist elements of nature, according to Yuriko Saito; we must also include the cultural, moral, and scientific appreciation of the natural world (1998: 135). But what happens when we have forgotten how to do this? To respond, and especially in light of the ethical demand to 'remember place rightly,' we must first acknowledge that the platial forgetfulness of environmental amnesia has aesthetic roots. *We no longer have everyday sensual experience with nature, we have ceased to interpret the particularity of our embeddedness, and we have forgotten the elemental, sensual nature of our intersubjectivity.*

The aesthetic roots of environmental amnesia, of course, only reaffirm the ethical dimensions of this dis-ease with place. As Drenthen remarks, "In our daily lives, we usually do not find ourselves in mere abstract space, but rather in meaningful places. Our moral involvement with our surroundings is part of our being-in-the-world that roots in a conception of the world as an ethos, that is, a morally structured, significant place for us as morally sensitive beings to live in" (2011: 123). Therefore, environmental amnesia is rooted in a corruption of what Bergmann has coined an "aesth/ethics" of the environment. To interpret environments correctly is to encounter the materiality of place in ways that move

beyond the cold tools of calculative reason, toward a poetic embrace of who and where we are: "To develop a stronger relation to nature, we now have to generate procreative models for human culture and civilization – our future depends on it. Reason alone cannot improve our quality of life" (Grande 1994: 7–8).

Imagination as Remembering the Future

If environmental amnesia has ethical and aesthetic roots, the resolution of this "dis-ease" involves both ethics (through a localized ethics) and aesthetics (as an aesthetics of place). This interconnection can be explained simply: in a remembering of place that somehow reopens the past in order to embrace the future. That is to say, what is necessary is a balance between the capacity to *critique the present* by uncovering what has been inappropriately forgotten and the ability to *construct the future* by openly and creatively envisioning alternatives to present situations and worldviews. Having previously reflected on the possibility of a localized ethics, the present chapter has the task of seeing how an environmentally-focused ethics of memory is related to aesthetics through the work of imagination, which serves as *the experience of constructing the possible futures of our place*(*s*) *in time's presence*.

As I am using the term, the imagination is constructive, productive, mediating, potentially shared, and future-oriented.[3] To explain, we can start with Sara Ebenreck's description of the imagination:

> The imagination is that power which allows us to (a) creatively envision a reality different from the one in which we are immersed, and thus to formulate purposes, goals, or ideals; (b) participate in another's perspective by constructing a sense of what that perspective is; (c) creatively envision an action that embodies the compassion or respect called for by ethical principle; (d) both construct examples for ideas and articulate paradigm cases that we allow to illuminate our thought; (e) grasp or articulate in an image relationship which embody paradoxical qualities that are difficult to express in linear logic; and (f) approach the description of reality through the creative 'naming' of a metaphor or story. The work of imagination may be embodied in metaphor, in image and symbol, in story, in envisioning an action or situation, or may be at work in the mode of awareness that gives rise to those embodied results (1996: 12).

3 The following description of imagination is extensively revised and adapted from Forrest Clingerman, "Memory, Imagination, and the Hermeneutics of Place."

In this description, the imagination is defined in terms of our individual and communal ability to think metaphorically and uncover new possibilities and variations.

Imagining is closely tied to our understanding of the world; in particular, it shows how we might look at the world in fundamentally new ways. Thus Paul Ricoeur writes, "imagination is indeed just what we all mean by the word: the free play of possibilities in the state of noninvolvement with respect to the world of perception or of action" (1991: 174). In other words, imagination overturns the actuality of the world in order to describe 'what might be.' It is seeing the world as 'otherwise.' Moving beyond mere memory or description, the 'productive imagination' (Taylor 2006: 93–104) is useful for ethics, as well: it suggests different ways of acting in the world, based on the imagined narrative of the world that has been created. The imagination serves as a 'play space,' where we can try new responsibilities, moral reactions, and duties. "It is imagination that provides the milieu, the luminous clearing, in which we can compare and evaluate motives as diverse as desires and ethical obligations, themselves as disparate as professional rules, social customs, or intensely personal values" (Taylor 2006: 177). For both Ebenreck and Ricoeur, then, the imagination is 'seeing otherwise' in a way that allows us to that has a close connection with our sense of the possible future.

There is a clear place for both individual and social imagination in environmental thinking. Certainly we imagine and dream of the future as individuals: the 'I' engages in many 'what if' scenarios across time and space. But our productive imagination is not limited to individual, personal experiences of the possible future. Instead, the individual imagination is complemented with the social imagination or imaginary, which includes many communally-envisioned, possible futures, some of which are articulated while others are more visceral and unarticulated. As Anne Marie Dalton and Henry Simmons write, "The social imaginary is how we imagine our lives together and how that imagination gives rise to the practices of our lives. The social imaginary is the interplay of understandings and practices that have broadly shared moral legitimacy. And the social imaginary is malleable" (2010: xi). Just as individuals 'try on' possible futures through the productive imagination, so too can communities use the work of imagination to envision the future.

Furthermore, both the individual and social aspects of imagination open a renewed sense of the world in dialogue with our individual and social memory of a place. The fact that the imagination does not exist in an isolation of unending possibility of the future, but intertwined with the sedimented sense of memory of the past – imagination, we might say, is a memory of the future. That is to say, imagination allows us to form a bridge between tradition, the present, and possibility. Through the innovation of imagination, we discover

new ways of understanding, envision new ways of acting, and uncover better possible futures, but always in the context of the reified finitude of the past. But the imperfect past structures of society are shown unmasked through our imagination, and a passionate hopefulness extends through such productive musing into the future.

In light of this description, it should be clear that the imagination has implications on how we interpret the meaning of the world, how we ready the will to seek certain changes over others, and how we precondition ourselves in the present by using what was learned in the past in order to act upon our environments in the future. The productive imagination is not idle fantasy, but a *outworking of alternative frameworks for life and world*. Such frameworks can become manifested in the world through our reinterpretations and redescriptions of who and where we are – thus the envisioned future becomes actually present in the imagination. At the same time, such frameworks depend on a continuity – an anchoring – with the past, meaning the imagined future recalls the past, proposing similarities and differences between the hoped-for and the remembered. Imagination, to some degree, is a remembering of the future.

An example of this is found in the discourse around sustainability. Sustainability is based on the relationship between present and future, in light of the relationship of past and present. While it is a pervasive topic in contemporary discussions of urban and campus planning, economics, and human ecology, sustainability is a notoriously vague term, variously defined and understood. *The Dictionary of Environment and Conservation* gives us a fairly typical definition: "A concept that is used to describe community and economic development in terms of meeting the needs of the present without compromising the ability of future generations to meet their needs." To build upon this basic definition, environmental ethicists have identified a 'strong' and a 'weak' version of sustainability. "Strong sustainability builds on two assumptions: that nature is (more or less) vulnerable and that society is dependent on nature in terms of basic life support services. As a result, it holds that man-made and natural capital cannot be infinitely substituted. Weak sustainability assumes that they can, and it is therefore essentially an economic concept that has no separate normative concept" (Alroe 2003: 60).

The differences in definitions of sustainability do point to an important presumption: sustainability is a hermeneutical issue – it requires interpretation.[4] As a hermeneutical experience, a core but unstated dimension of sustainability

4 Philosophers Bart Gremmen and Josette Jacobs (1997) have written about conflicts that arise due to differing conceptions of what constitutes sustainability in specific economic circumstances. Based on their case studies, Gremmen and Jacobs offer a "hermeneutics of sustainability" that uses Gadamer as its foundation. Even if we do not subscribe to a specifically

is the question of temporality, material recollection, and the expectation of the future. Indeed, Christian U. Becker notes that sustainability is defined in terms of continuance, orientation, and relationality, all of which connect the present and the future in particular ways (2012: 9–15). That is to say, sustainability begins with the enactment of memory and productive imagination in particular times and places. Initially descriptions of 'sustainability' do not seem to be oriented to memory; at most we can see that such definitions are oriented toward the future rather than the past. However, when we reflect on what it might mean to 'sustain' – whether that sustaining is oriented to culture, resource, ecosystem, or environment – we realize that it entails placing the spatial and material in time and history.[5] More concretely, just as the past has offered the possibility of the present, so also our memories of such a past lead to a responsibility for the future. The process of sustainability undertakes spatial practices in ways that live in time: we desire to recollect the present in the future, such that the present can carry on into future existence. This desire observes particular places and times, not just abstract ideas like 'natural resources.' If sustainability has such a temporal dimension that arises from our knowledge of place, then we can offer another definition: *sustainability is the task of seeing nature otherwise, of holding memory in tension with imagining possibilities in order to offer new expectations for the future*. This definition envisions sustainability as a form of imagination that is manifested in material, embodied ways. If this is what it means to be sustainable, then such things as old growth forest, prairie remnants, mineral deposits, and endangered species are *forms of memory that we imaginatively seek to pass onward to future generations*.

The Possibility of Imaginative Remembering: Springs, Forests, and Microcosms

The imagination allows us to remember the future, to envision hopefully a world otherwise. Because of this, it creates the possibility of healing the disease of environmental amnesia: through individual and collective imagination,

Gadamerian approach, we can see the benefits of examining how we interpret economics and ecosystems when defining the meaning of sustainability.

5 In this regard, there are interesting correlations between Augustine's description of memory as "past present/present present/future present" and sustainability. Questioning sustainability always occurs in the present, but in such a way that the past and the future are rendered present themselves. In other words, sustainability seeks to understand how to appropriately intervene in the present in such a way that the future present flourishes, just as the past present has offered the present an opportunity to flourish.

we have a process through which to rediscover the spatial and temporal thickness of our lived particularity with the environments that surround us. Therefore, *in response to our forgetfulness of place, and in contrast to our inability to remember rightly who and where we are, we are charged with the task of sustainably imagining our place through a depth of integrity.* But in a society heavily embedded in the haze of environmental amnesia, *we have not only forgotten place, but also how to remember place*. How then might we relearn the aesth/ethic task of sustained and sustainable imagination?

This is where the interconnection between place and the arts belongs: we can look to the arts as an exemplar of a renewed memory of the future, as a mode of making ourselves "at home in the future" as John Rodwell and Peter Scott entitled their 2015 edited volume. Bergmann notes in his chapter of this book that "The use of land and the imagining and artistic rending of it are both elementary in the negotiation of what a landscape is." If our forgetfulness of our place has aesth/ethical roots, therefore, then we must seek an aesth/ethic way to remember and imagine. Interestingly, it is here where the close connection between culture and nature becomes restorative, because while societies and individuals might have forgotten how to aesth/ethically engage the environment in the everyday, artists continue to show us how to bridge the chasm characterized by the poles of nature and culture, self and place, past and future, 'this' and 'otherwise.' The work of art, then, can open us (individually and collectively) through creative reimagining to the deep meaning of place. Simply put: *environmental amnesia is rooted in forgetfulness and concealment of place, while an artwork can offer an imaginative and poetic aesth/ethic of the world*.

One way in which artworks allow us to imaginatively see the world is when artworks reframe our interpretations of everyday locations and places. This is the case with George Steinmann's *Art without an Object but with Impact* (*Kunst ohne Werk aber mit Wirkung*). As described in his chapter in this volume, this work consists of two artistic interventions that occurred at the new headquarter building of ARA Region Bern Ltd. The artist worked in conjunction with the designer of the facility, Bauart Architects, to incorporate the purity and curative nature of water itself, thereby infusing the depth of the structure with the very ideal for what business occurs within the building's walls – that is, to restore water, an elemental aspect of life itself. In the first intervention, Steinmann added waters from three springs of the Engadin Valley in Switzerland to all water-based building materials. In this way the building was bestowed with the historical, material, and ethical resonance of these mineral springs. A second intervention offers a reflective engagement with water: an interdisciplinary 'water forum' was created to engage with the issues of water and sustainability.

Steinmann's work, by artistically gracing the building, is an example of how to use the imagination to remember the future of the place as 'something otherwise.' Working with the materiality of the building itself, the artwork does not consist of an object 'apart' from the everyday built environment. Instead, it is the spirit of water paradoxically without a fixed location and yet infused within the whole of the architecture of the building. Steinmann's work process takes seriously the need for spiritual wholeness, not merely ecological purity. Thus we might perhaps see his work as an inverse of a traditional sacrament: rather than being a "visible sign of invisible grace" (as theologians from Augustine onward have defined sacraments), the work is an invisible sign of the visible grace that wells up from primordial springs, which intertwine with other elements to form the human body. In sum, Steinmann's work invites us to imagine how water forms and cures us as living creatures.

A second example of how art challenges us to imagine the fecundity and possibility of place is seen in the Black Wood of Rannoch project of Reiko Goto and Tim Collins (also described in chapter seven of this book).Collins and Goto's deep, interdisciplinary engagement with the Caledonian forest is more than an identification of the aesthetic beauty of the landscape; it extends beyond the cultural and historical impact of the forest as well. Ultimately, Collins and Goto's ongoing artistic research into this place is founded on the intention of restoring the temporal and spatial depth of the culture that relates forest and its biotic inhabitants. In the video *A Tree is a LIVING Thing*, Collins and Goto's reflect that, "Extraordinary living things can stop us in our tracks and demand our attention. Other living things become familiar through intimate and attention over time. If science is defined by useful general truths, is it the role of aesthetics to help us to see specific truths?" Thus through video installations, sculptural works, writings, and other materials, Collins and Goto are involved in creating a new empathic understanding of the relational possibilities with the wood – that is, our sense of aesth/ethics engagement with particular trees, groves, and landscapes.

Like Steinmann, Collins and Goto are convinced that the work of art creates a new way of knowing our place. Not only does art imagine the otherwise of the material world around us, but also the possibility of the self and our spiritual depth. Indeed, the Black Wood project involves uncovering the myriad dimensions of our embeddedness, our emplacement, in environments. Also like Steinmann, the work of art proposes a moral and ontological re-reading of the world. By creating new forms of knowing, artworks like *Art without an Object but with Impact* and the Black Woods projects dissolve our forgetfulness and

create new, alternative aesth/ethics of imagining anew the places and landscapes around us.

The works by Steinman and Collins and Goto grasp the task of imagination through engagement with actual, lived locations, which are faced with human manipulation and reductionism. But the real power of artworks for aesth/ethics is seen in the ability for artworks to create new worlds, which radically critique our understanding of our present sense of 'knowing one's place.' The utterly unreality of the world created through the artwork becomes a place we can occupy with new senses, thoughts, and feelings. Such invented worlds invite us in, allow us to inhabit the imagination, and finally challenge us to return to our actual locatedness with a knowledge that extends beyond the limits of the spatial present. In other words, in some instances, the artwork vaccinates us from our environmental forgetfulness by gifting us with an entirely new world of platial possibility.

An example of this is seen in the little worlds of American artist Gregory Euclide. Euclide creates works that blur the lines between landscape painting, dioramas, found art, and sculptural installation. One example of this is the work *held within what hung open and made to lie without escape* (see figure 10.1), which combines landscape painting with elements on the gallery floor. A painting of an imaginary river defines the theme of the work, forming what seems the spatial starting point. Yet the water overflows from the frame and onto the floor. The river, shown in the painting as fully formed, becomes miniaturized when it cascades out of the frame and into the gallery. Water undulates through a landscape within the gallery itself. The surroundings of this miniature river consist of natural and artificial objects, placed together to further extend the landscape not only physically, but also within the imagination. According to Barbara MacAdam, this work is "a standout for complexity – a landscape that spills from the art container into the gallery. It doesn't simply create a parallel reality; it links art and nature, the real and the imagined, and the produced and reproduced, showing that there is no single reality" (2011: 106). Indeed, beside ferns, twigs, and other 'natural' objects, we find Styrofoam, cups, and paper molded into a miniature neighborhood. With each house in its own cup, this small group of dwellings is more uniform and less colorful than the more organic landscape beside it. Yet the penetration of cutout trees and human materials throughout the work means there is a blurred boundary between human culture and the natural world.

Similarly, Euclide's *Capture #9* (see figure 10.2) creates the space to critique how we interpret landscapes and places. On the one hand, the work appears to be a spilled paint can. On the other hand, the now-dried paint serves as

FIGURE 10.1 Held within what hung open and made to lie without escape*, Gregory Euclide, 2011.*
PHOTO COURTESY OF THE ARTIST.

a stream; the can is a wellspring, and the trail of blue paint travels through trees and meadows created from buckthorn, cedar needles, foam, sponge, and other materials. As with *held within what hung open and made to lie without escape, Capture #9* emerges as a talisman, which spurs the productive imagination to see places in new ways. Euclide's little worlds distill and heighten our perceptual acuity for interpreting our sense of place by exposing how the novel qualities of the imagined landscape are also inherent in our lived, material experience of environments. In other words, Euclide's microcosms are tools for practicing platial imagination; this imaginative work suggests new ways to perceive the lived world that surrounds us.

As viewers, reflections on Euclide's 'unreal' places become entry points for using an productive aesth/ethic imagination of place without traveling to pristine wilderness or exotic locations – indeed, without leaving the confines of the gallery. At the same time, by making new worlds, Euclide discloses a radical otherness to the actuality of the world as we know it to be. Careful attention to the aesthetic dimensions of the work does more than provide us with sensory enjoyment – it allows us to interrogate our intertwined and complicated relationship with nature, especially when more-than-human wildness is all but lost in everyday encounters. In an interview, Euclide commented that we often have difficulty with just how complex this relationship is, insofar as we neglect

FIGURE 10.2 Capture #9, *Gregory Euclide, 2011.*
PHOTO COURTESY OF THE ARTIST.

to see how deeply human artifacts have penetrated the non-human world. In constructing such works, he says,

> I wanted to create a similar confusion or complexity in my work between the created image, the rendered image and the actual thing. So, I started to place real organic matter in the scenes that I was painting. I was initially intrigued by questions like, "If the frame defines this work as a painting or a window to the world, then what does it mean if in that world there are both representational painting and the natural material that the painting is referencing?" Then I started to complicate the issue by using things commonly found in the natural environment that were man-made such as foam or plastic.
>
> "An Interview with GREGORY EUCLIDE" 2013

The microcosm created from out of the work, therefore, is a template for reflection on the integrity of place, setting foot in the place where I am by entering a place I am not.

Nowhere is this more fully exemplified than in Euclide's installation, *Take It With You – Toledo* (see figure 10.3), a site-specific installation for the Small Worlds exhibit at the Toledo Museum of Art in 2012.[6] The large installation was constructed around a walkway and a set of quarter-turn stairs that are opposite each other. The artwork formed both an arch over the walkway and intertwined with the stairway to the floor below. Euclide built the structure in conversation with the local Toledo environment and used materials found on the museum grounds or from the surrounding urban area. The skeleton of the structure was made with packing crates, which allowed Euclide to create landscapes on, beside, and within the installation. These miniature landscapes included cutouts and three dimensional models. In one area of the installation, a model of the nearby neighborhood was made; immediately above this were what appeared to be roots emerging from the packing crate. Throughout were dioramas, accessible for viewing only through small holes and crevices in the overarching structure. What is significant about this work is that it is a construction of the unreality of place, yet it is in the service of renewing our sense of the environment that surrounds the museum. That it is to say, it can only be understood in the context of its physical location. It is an interpretation of Toledo, Ohio, yet it is not a representation of that place. By embracing its location without merely representing it, entering the space of *Take It With You – Toledo* highlights a creative encounter with place, in order to more fully consider the aesthetic and ethical connections we make with the world around us.

These works by Steinmann, Collins and Goto, and Euclide show that art can become an exemplar of when the imagination acts as an antidote for environmental amnesia and forgetfulness of one's place. In different ways, these artists also suggest why the place imagined by the work of art is, at its heart, also fundamentally spiritual (something that at least some, if not all, of these artists would acknowledge). Thus I conclude with a brief suggestion that a theological convergence of art and place is experienced when artworks become the starting point in our treatment of the crisis of environmental amnesia (2013b: 93–97). It is possible to envision twin theological convergences related to aesthetics and ethics, art and place. On one hand, theological thinking is manifested when art and place both hold finite creation and placeless creativity in such a way that can be grasped and celebrated. In such cases, we experience place deeply and with an "integrity of life," as David E. Klemm

6 For a video of this installation, see http://www.youtube.com/watch?v=U_GTB-MZAyE.

FIGURE 10.3 Take It With You – Toledo, *Gregory Euclide, 2011, installation.* PHOTO COURTESY OF THE ARTIST.

and William Schweiker write. For Klemm and Schweiker, the integrity of life requires "the integration of distinct levels of goods into some livable form, always threatened and always vulnerable" (2008: 13). Material life is one level of goods, just as the possibility of self-understanding that develops through the arts is another level. The integration of these levels includes respecting and enhancing this integration for others with a focus on flourishing and the enhancement of the lives of others. But on the other hand, theological thinking is exhibited when art and place challenge us to see responsibility and liberation as essential to our lived existence. Klemm and Schweiker see the integrity of life as occurring "before God," culminating in a spiritual integrity of "wholeness and steadfastness that is the proper aim of human existence with all of its vulnerability and fallibility" (13). That is to say, there is an imperative of responsibility: "in all actions and relations respect and enhance the integrity of life before God" (55). The artworks of Steinmann, Collins and Goto, and Euclide discussed in this chapter ultimately function as the creative embodiment of theological reflection, insofar as they expose the imaginative possibilities of nature and art, ultimately in ways that advance our responsibility and spiritual wholeness. These artists, then, show a form of theological thinking by offering a manifestation of seeing otherwise from the position of an aesth/ethics of place.

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