

Introduction

Antarctica, Art and Archive looks to the past of heroic Antarctic exploration through the archive of the explorer Edward Wilson (1872–1912) and the observational watercolor landscape painting that he produced during, and between, his two expeditions to Antarctica. With close attention to the material condition, production, conservation and interpretation of these colorful landscape paintings, and their refraction through other disciplines, I present here an ecological argument for the relation between the human and the environment.

This book traces the historical precedents for our current understanding of the human and the environment through cross-readings of the archive of Antarctic exploration, nineteenth-century knowledge practices of global exploration and mapping, watercolor landscape painting, anthropology, and observations of the weather and climate. The art practice of observing landscape is paired and compared with the practices that put the human under observation in anthropology.

This book may appear to have the biography of an “Age of Empire” figure at its center, but in fact, by a process of decentering and refiguring the “human” of rational Enlightenment, the argument proceeds towards a post-human, new materialist, ecological and feminist figuration of the human *and* the environment. New materialism is a category of theories that include innovative materialist critiques in which the human is decentered. It is new in the sense of a reorientation towards a post-anthropocentric materialism that involves a post-human critique of subjectivity by thinking about matter and processes of materialization.¹ The polar journey in the “Heroic Era of Antarctic Exploration” seems to be the epitome of the story of man against nature. The critiques of the often Eurocentric, imperialist, and masculinist ambitions in these stories of exploration have been undertaken by many, and my work here has been informed by geographical historians such as Felix Driver and his writing on the visual cultures of exploration, and by the writing of cultural geographer Denis Cosgrove.² Stephen Pyne’s *The Ice: a Journey to Antarctica* from 1986 explores Antarctica in literary, aesthetic and scientific terms with a strong sensibility for the agency of ice that also displaces the human from the role of central actor.³ My understanding of the role of sexual difference in our reading of Antarctica has been informed by feminist interpretations such as Lisa Bloom’s 1993 *Gender on Ice: American*

Ideologies of Polar Expeditions and Elena Glasberg's more recent *Antarctica as Cultural Critique: The Gendered Politics of Scientific Exploration and Climate Change* (2012) that brings in new materialist and post-human thinking in relation to climate change.⁴ Kathryn Yusoff's work on the Polar Regions and the political aesthetics of climate change has been of interest and has included many examples of artists and scientists engaging with the relation between field and the archive and the way in which archives produce and inform our understanding of climate change.⁵

A number of centenaries over the last two decades have commemorated and celebrated the Heroic Era of Antarctic Exploration—a period of history that still draws much popular enthusiasm. This has also coincided with the International Polar Year 2007–2008, which highlighted scientific research in the Polar Regions, and the fiftieth anniversary of the 1959 signing of the Antarctic Treaty. The Antarctic Treaty was initially ratified by twelve nations in the midst of the Cold War as an arms limitation treaty that agreed that the continent be used for peaceful and scientific purposes only. It now has fifty-four signatory nations. It continues to be an exceptional example of international cooperation, in which scientific research for the global good is held up as its purpose, although some critics assert that the treaty has achieved no more than the deferral to a later time of the national claims that vie for dominance in the region.

The capacity to tackle the global challenge facing us in maintaining a sustainable and humanly habitable environment calls, once again, for another exceptional and extraordinary global cooperation, similar in spirit to that of the Antarctic Treaty of 1959. Antarctica plays a key role in this contemporary global crisis, as there is much research contributing to evidence in support of climate change that has come from scientific observations made on that continent. Peter Wadhams has written the evocatively titled *Farewell to Ice: Report from the Arctic* (2016) giving an account of the scientific evidence for climate change along with his fifty years of witness as a polar scientist.⁶ Yet it is not enough to *see* the evidence; there has to be political and ethical will to acknowledge it, and to act. Despite the fact that there is overwhelming evidence based upon observational practices in science to support the view that climate change is occurring and that its causes are anthropogenic, it is clear that the capacity to act accordingly does not rely upon this knowledge alone. I argue, therefore, that this is why a book such as this is valuable—as a contribution to changing our epistemologies of vision. It is how we *see* the environment and how we *say* what we see that needs to evolve.

Antarctica through Art and the Archive

To facilitate this change in the epistemologies of our vision I consider art and the archive as necessary sites of intervention. *Antarctica, Art and Archive* as an historical endeavor seeks out these visual artworks as my primary encounter. But it is not exclusively the documents and artworks of

archival conservation, but also the housing of the archive as the closed and private repository, and how it overlaps with the housing of the museum as the more public site of display, that are the focus of my attention. What both have in common are the arrangement of artefacts into a meaningful curation, and their architectures of conservation and display. So, in the context of this book, architecture entails the bricks and mortar and the plaster, the canes and the canvas and the wood, the glass and steel of structures that present housings for the explorers, and the curation and articulation of artefacts. But in this writing architecture will also signify the architectonics—that is, the system of a structure for what Michel Foucault explores as “architectonic unities” in *The Archaeology of Knowledge* and his critique of history.⁷

For Foucault, the archaeological method undoes the history of thought as continuous development, and allows for an understanding of an event as a kind of layering of levels that constitute it. Foucault claims:

Archaeology is much more willing than the history of ideas to speak of discontinuities, ruptures, gaps, entirely new forms of positivity, and of sudden redistributions.⁸

And it is with the work of Michel Foucault and *The Archaeology of Knowledge* that we can find a mode for examining the architectures of those knowledge structures that “house” these nineteenth-century knowledge practices. Archive is, for Foucault, neither the building, a gathering of documents and artefacts, nor an institution. For Foucault it is architectonic in that it pertains to the structuring of epistemology. Archive is a technical term when Foucault uses it; it is rather the instituting power of the archive’s discursive effect, or as Foucault terms it “The law of what can be said”, and does not refer to the physical space of the archive’s housing, or the accumulation of documents and artefacts that might constitute any specific archive. So, in this book as I pursue the archive according to Foucault, it is in order to identify the architectures of knowledge that shelter certain practices of observation—to be found in the artist observing the landscape, the anthropologist observing the human, and the scientist observing the weather. These sheltering architectures are entangled with our observations—they limit and facilitate them.

The initiators of the Antarctic Treaty knew this instituting power of the archive, and that is why the last Article of that treaty stipulated that it should be “deposited in the archives of the Government of the United States of America”.⁹ Visual representations of landscape also play their part in constructing and relaying how we see the world around us. I have taken Wilson’s impossible practice of “en plein air” painting in the extreme sub-zero conditions of the polar environment as a fruitful example through which to explore the entanglements of image-making with what is observed. This first example is an instance of man observing the environment. The second example is an instance of man observing man: I have refracted landscape painting through other disciplines and practices, most extensively through anthropology. In anthropology the target of observation is the human. I interrogate

the observational practices of each in order to demonstrate the relation between man and environment as an ecologically implicated one.

In this book white is considered both as a color (or the absence of color), and as a racial category (too often mistakenly figured as the absence of race). I have found in my archival encounters with Wilson's watercolors that the place referred to as the "White Continent" has so often been other than white. Wilson's works are, for the most part, remarkably colorful representations of the rock, snow, sky and ice landscapes of Antarctica. Color is something that is difficult to locate or attribute, and that is especially dependent on context; it exists somehow *between* the object and the subject's perception of it. The fugitive nature of color in both its materiality and its meaning across these practices is a recurring theme. Observations of color in the field as encountered in landscape painting and as a racial marker in anthropological fieldwork are both explored, along with art's and anthropology's related efforts towards the standardization of color.

The encounters through art and the archive that I present here are made up of historic observations of Antarctica in the field along with contemporary observations through the archive. This book takes up a critical position concerning the role of observation in the practices of understanding the weather, ethnographic data collection and open-air landscape painting, in science, anthropology and art. I engage with feminist new materialism, or "how matter comes to matter",¹⁰ in the light of thinking on ecological and post-human subjectivity to make arguments here regarding the material technologies of our observational practices and their associated discursive meanings.

The Edward Wilson archive includes written documents of all sorts, but it also contains objects rather than documents—drawings and paintings, artefacts and artworks—so that the archive might more properly be termed a collection. I have conflated the archive and the collection here, due only in part to the contents of the archive under question. The other motive is to do with principle: my approach throughout has been to think through material-discursive entanglements, to treat documents in their material specificity and to treat artefacts in their discursive meaningfulness, and this is why I conflate archive and collection.

The museum and archive have in common similar practices of collecting, conserving and organizing. What often distinguishes the archival practice of a solitary researcher from that of a museological one is the latter's engagement with display. In museum display these collections are arranged and encountered by a public audience. And it is through the *arrangement* of artefacts in museum display that arguments can be put forward either overtly or implicitly. The contrasting visions for museum displays of anthropologists Pitt-Rivers and Franz Boas are explored here, too, as well as other examples of museum building, design and display.

Recent work in museology, such as *Climate Change and Museum Futures*,¹¹ and *Curating the Future: Museums, Communities and Climate Change*,¹² has contributed to addressing how museum practice through material culture might intervene with audiences with regard to climate change. The latter

publication, which was hosted by the American Museum of Natural History, refers in the foreword to its ties to the history of modern anthropology in the person of Franz Boas and in its celebration of diverse cultures. Museums are turning their attention from their function as custodians and keepers of the past to investing in efforts to imagine themselves as shapers of the future. Robert Janes, in his book *Museums in a Troubled World*, critiques how museums, spurred on by the necessity to change, have sometimes chosen the market-driven model, thereby becoming glorified sites of consumption. Janes discusses how celebrity architecture has played a part. This so-called “Bilbao Effect”, as named after the Guggenheim Museum Bilbao designed by Frank Gehry, in fact relies upon international tourism, which itself relies upon air, car or train travel, with its high environmental costs.¹³ Janes asserts that this building of celebrity flagship museums “diverts attention away from a consideration of purpose, values, and the requirements for long-term sustainability”.¹⁴

Nonetheless, Janes also holds out hope for the museum’s potential as a site of social action and change, a place that is effective in transforming the ways in which we think about ourselves and our world. Museums such as the Pitt Rivers have proposed the new practice of the relational museum.

Ethnographic museums used to be seen as “us” studying “them”. A more productive approach is to view museums as trans-cultural artefacts composed of relations between the museum and its source communities. This project charted the history and nature of the relations composing the Pitt Rivers Museum through analysing the history of its collections.¹⁵

This new museum practice has taken on the relational approach, prompted by discussion of relational aesthetics in the art world during the 1990s,¹⁶ which itself has roots in the conceptual art of the 1960s and 1970s.¹⁷ The “care” that belongs to the meaning of curation can be extended beyond the quality of how collections are cared for or conserved, to be usefully expanded to include custodianship of our diverse cultures, and care of our futures, by understanding curation as a practice that can facilitate an ecological set of relations between material artefacts and the communities of their production and reception. It is in this spirit that one newly proposed museum seems to have been developed; the proposal for the Climate Museum in New York has been put forward on the premise of a future-oriented social and educational intervention rather than on the basis of an existing collection.¹⁸ In fact, it may well be hard to visualize a museum of climate within a conventional museum paradigm that is derived from a collection of material artefacts: how might something like climate, so ineffable and time-based, be gathered in a collection of material culture? This book explores that question to some extent by interpreting and making manifest the climates and atmospheres implicit in the material practices and material artefacts under discussion.

Artists have been effective collaborators in pursuit of the “relational museum” and those practices that are ecological, and continue to break down the genre differences between museums of natural history, science and anthropology, and those of art. The kind of interventions in museum typology

and institutional critique that produced many engagements between museums and artists in the 1980s and 1990s (since 1987 the Pitt Rivers has had a program of opportunities for artist to exhibit in the space of the museum) have been followed by these current art projects that are not so much inward-looking to the histories of museum collections and displays, which many museum practitioners have already integrated into their own institutional practices, but outward-looking towards an ecological museology that is thinking of the future, and of art's particular function in it.¹⁹

While conscious of these ecological and relational practices, I am rather more interested in art that is engaged with making as a material practice.²⁰ My secondary observation of Antarctica occurs at one remove, and I proceed by copying the artefacts in the archive. This method of copying is based upon observation, and although the term copy implies sameness, the results are refracted once again through my own interpretations. I do not want to run the risk of dematerializing the artwork, and the museum with it. I choose to argue here that artists, through practice and its engagement with materiality, can have a particular sensitivity as to how matter and meaning are entangled. And it is this entanglement that is ecological. A guiding mode of this enquiry has been my practical research undertaken through making artworks by copying from the archive. In this approach there is an affirmation that practice and making can bring insights that are particularly suited to a new materialist approach.

Art practice, then, is considered with and next to the contemporary study of material culture and the anthropology of material practices. The anthropologist and cross-cultural explorer of knowledge practices Tim Ingold, with his writing on making or knowing through doing and the environment, is informative in this regard.²¹ Ingold is, he says, "against a false separation between ways and means of knowing".²² He writes about an anthropology of making that rebalances making in favor of the agency of materials and decenters the individual's expression. Ingold, quoting Karen Barad, the philosopher of science, is clear on the point that our observations are not detached from their source, and that our knowledge is based upon being in the world.²³ Ingold, Barad and other thinker-practitioners of situated knowledge, such as Donna Haraway, inform my argument here.

As well as an interest in the agency of materials or what Jane Bennett has conceived as "vibrant matter" and how this pertains to art, I have also been enthusiastic to explore the copy and original in art-making and the resonances between modernist art and geographic exploration. The avant-garde in military endeavor is the advance group, the pioneers. In art it speaks of being out in front, a move elsewhere, beyond the already known, of progress into the future. The exploration of new territory undertaken by Wilson and practices of avant-garde art are similar in their teleology to the typological notion of historical progress put forward by Pitt-Rivers and social evolutionism. The story of avant-garde art engages in this unilinear story of progress. The retracing of lines of thought already taken is not the aim in the progress of the avant-garde; rather the aim is to overreach prior limits. The problem with this is that the future is no longer open, but becomes predetermined. It is as if the end of art history coincided with the end of the possibility of extending into global space.

Under the prospect of the loss of new territory to be discovered, the artist and the explorer alike are faced with retracing others' steps rather than discovering new terrain. Within the frame of avant-gardism, an artist's hope of making new artwork, in the face of everything having already been done, presents them with the anxiety of how to proceed. Any contemporary artist might feel a mingling of nostalgia and utopianism as they face the empty page before them. Avant-gardism as a push into new territory is not a possible contemporary strategy.

But artists do not make new works from nothing, and never have; rather they make artworks in a landscape of imbrication, indebtedness and association. As Paul Carter states:

Everyone who draws or writes knows that they retrace lines of thought that have already been taken, that their lines if good are wiser than the wit that produced them.²⁴

The eponymous blank canvas is, in fact, not so empty. For a start, it is specifically a canvas, rather than a piece of Bockingford paper, or a cigarette packet. It is not another specific support to a medium; it carries all its history under the gesso-primed white surface like the hidden contours of a continent under a blanket of snow. Any new work, whether feigning innocence or in labored knowingness, exists in the broader field of already existing works.

The art that I have produced is about archival encounter with a landscape that is pictured in drawings and watercolors but remains elsewhere. What I am attending to here is to do with observation of art and of landscapes, of copies and of originals, observed both, as it were, in the field and in the archive. The art produced from this archival encounter is not itself archival, in that it does not seek to reproduce an aesthetic of the archive as a practice of collecting, documenting and display. It does not share what Hal Foster has termed the "archival impulse" in contemporary art.²⁵ Neither am I claiming that some original and authentic touchstone can be found in the archive material—far from it. My practical inquiry is rather more concerned with sensitivity to generative differences between media and practices of observation with regard to historical and geographic displacements. It is about "being there" and "not being there".

As much as I do not take the archive as an authentic or original referent, neither do I propose the environment itself as such. There has been a trend for artists to go to polar destinations, taking being there *en plein air* as a mark of authenticity. The project known as Cape Farewell that began with expeditions of artists to the polar region has now become a broader project of ecologically inclined art projects that do not necessarily entail field trips.²⁶ I find that there is ambivalence involved in the practice of travelling artists who produce carbon emissions in the pursuit of making works that are critical of the production of, and warning of the consequences of, those same carbon emissions. One argument in favor of ecotourism cites the consciousness-raising that may result and the positive consequences for changes in behavior, but an equation of cost-benefit must be applied here. There is a larger-scale issue of people's desire to travel, while in denial or ignorance of the damage they are

producing in the process. Yet I also acknowledge that one does not need to travel in order to leave a footprint. My own art practice has entailed leaving a carbon footprint in the glassmaker's studio. Aspects of my resulting artworks manifest the same ambiguity and ambivalence as can be found in many engagements with climate change elsewhere.

Atmosphere through Architecture

Although Antarctica is a remote and largely inaccessible territory to most people, the changes that occur there, such as ice loss, have consequences for climate elsewhere, and intimately so, in terms of the very atmospheres that we breathe. The argument of this writing explores the understanding of atmosphere as an aesthetic ambience, as the climate and as the air. I present atmosphere as the medium of our existence on different scales, from the intimacy of breath to the planetary scale of atmosphere. I understand architecture as the practice and theory of how we inhabit our environment: this book seeks to present an ecological assessment of architecture and situates itself with current debates that think of architecture not just as discrete built elements, but as the entanglement of interconnected relations between humans and non-humans, the natural and built environments. How and if we are able to build our architectures with an awareness of the implications for atmosphere will be determined in part by how we think about what it is to be human and how we imagine the future.

In this book the built environment is encountered in multiple examples of buildings, housings, shelters and architectures: the Scott Polar Research Institute and its archive, the expedition tent of Scott's South Pole party, and Scott's expedition huts at Hut Point and at Cape Evans; the geodesic dome by Buckminster Fuller at the South Pole; the ship *Discovery* that provided shelter while it was frozen in the natural harbor at McMurdo Sound. There also feature here what I refer to as architectures of display, such as the contemporary reproduction of Mawson's Huts on the Hobart Harbor; the unrealized 1960s design by Nervi for the Pitt Rivers Museum and Proposed Centre for the Study of Anthropology and Environment, in Oxford; Lubetkin's Penguin Pool at London Zoo; and the building that housed the Great Exhibition, the 1850s Crystal Palace.

I approach architecture as the mode of human making that mediates between anthropos and atmosphere. Once the distinction between indoor and outdoor climate ceases to exist, the foundations of our architectures are shaken too. My stand is that for anthropos in the time of the Anthropocene we need an architecture of atmospheres that recognizes the human *and* the environment as an entangled unity.

I have found it useful to explore atmosphere in the thinking of Gernot Böhme and his formulation of atmosphere as an aesthetic term that tries to formulate a similar indeterminacy. For Böhme atmosphere is also the in between quality of object and subject in combination. Atmosphere, like

color, is an indeterminate quality that is hard to either situate or attribute. I find this aesthetic, phenomenological articulation of atmospheres very useful as far as it supports an understanding of the “in between” and the entanglement of subject and object.

Contemporary architects are taking on the challenges of this ecological entanglement of architecture and atmospheres. This sensibility is clearly demonstrated in the practice of those architects who write and are thought of as working with atmosphere, but in the sense of mood and ambience, such as Peter Zumthor and Juhani Pallasmaa.²⁷ They aim to dethrone the dominance of the visual perspectival with its emphasis on the visualization of architectural impressions, in favor of valuing a multi-sensory embodied and place-specific attention to experience of architecture and to bring this to the fore in the design process.

Philippe Rahm, on the other hand, seems to engage with atmosphere in what I might call, if it is not too preposterous, a more concrete manner, in that he builds with it.²⁸ Philippe Rahm in his Manifesto 24 writes:

Global warming is renewing our perception of the climate, but also of architecture. What we recognized before as the natural climate is no longer natural. Human activity and CO₂ consumption is changing the atmosphere of the planet. The old architectural dichotomy of indoor climate, which is artificial, and outdoor climate, which was natural, ceases to exist.²⁹

Rahm's adage is “Form and function follow Climate”. “What we are working toward”, Rahm writes, “is a reversal of the traditional approach to design in order to achieve a new spatial organization in which function and form can emerge spontaneously in response to climate.”³⁰ Rahm adds to this exploration the very welcome and innovative design approach of working with atmosphere as a building material, to go far beyond the artificially imposed limits of what is more often included under “sustainability” in architecture, and is successful in approaching a more properly ecological architecture. In what he terms “architecture météorologique” he proposes that “the materiality of the atmosphere is able to inform architecture”.³¹ Or I might say that materiality of atmosphere is able to *form* architecture, not just inform in the sense of add some meaning but contribute to its formation. Concrete is no more concrete than air—or glass, or steel, or stone, or wood, or any other more conventional building material.

As far as atmosphere as ambience—that is, as an aesthetic term—can help us to better understand the experience and quality of architecture as a sensual and perceptual encounter, it is a useful reference here, although I find Zumthor and Pallasmaa to be somewhat limited by their phenomenological approach. It is left to others to theorize and address this shortfall.³² I assert that the phenomenological approach can risk disappearing the sexuate, racial, political and locational differences in subjectivity. It is this that I believe to be a necessary aspect to rethinking subjectivity and thus refiguring anthropos for our current times. This book therefore has more in sympathy with the work of Peg Rawes and her

collected authors in *Relational Architectural Ecologies: Architecture, Nature and Subjectivity*.³³ The thinking of Félix Guattari's *The Three Ecologies*,³⁴ and his ecosophical ethics in collaboration with Gilles Deleuze, derived from the philosopher Baruch Spinoza's monism, forms the basis of this approach.

It is then with the same kind of philosophical frame that Rawes brings to her approach and the kind of material attention to atmospheres in Rahm that I approach the Edward Wilson archive. I aim to keep the focus upon a relational and ecological understanding of human and atmosphere. Architecture has the mediating role in this as the shelter that stands between us and the open sky. I make my particular contribution to architectural discussion, not on the level of design programs, but on the level of how to act upon the architectural histories and the future imaginings of architecture. Architecture is a cross-disciplinary area of practice, theory and imagination. The composite of terms— atmosphere-anthropology-architecture—that I have linked together should ignore the tyranny of the line in writing that puts them in a certain sequence. In actuality, the structure of their interrelation should be imagined as a complex mesh—that is, ecological—and for that to be achieved the human subject needs to be refigured.

Anthropos through Nomadic Subjects

In this book the archive of Wilson's watercolors and the historic Antarctic explorer's biography are read through contemporary debates in anthropology about the human, along with the early work of anthropologist Franz Boas (1858–1942) on the color of water, and his later anthropological writing on the fugitive quality of color as race. During the Heroic Era of Antarctic Exploration, the White Continent carried a racialized association as the domain of white European self-realization. I take this opportunity to use this refractive method to read the non-white and ethnic others to European dominance that are latent within the archive. Anthropos is the human decentered in contemporary post-human debates.

I want to take some paragraphs here to nail my own colors to the mast, by aligning my project with the work of the new materialist, feminist theorist and philosopher, Rosi Braidotti.

Feminism as a critical philosophy rests on the assumption that what we used to call “the universal subject of knowledge” is a falsely generalized standpoint. The discourses of science, religion, the law, as well as the general assumptions that govern the production of knowledge, tacitly imply a subject that is male (and also white, middle-class, and heterosexual).³⁵

It is her theory of the nomadic subject, and her reading of the legacies of her teachers refigured in her own work, that I have aimed to apply here. Braidotti's *Nomadic Subjects: Embodiment and Sexual*

Difference, first published in 1994, with a second edition in 2011, is a book that engages with her teachers—Michel Foucault, Luce Irigaray and Gilles Deleuze. In this book Braidotti puts forward her take on the “nomadic subject”. It is with Braidotti’s analysis of subjectivity that the anthropos of anthropology and the human of humanism is explored and refigured. This refiguring is enacted through the figure of her “nomadic subject”. Braidotti, following Foucault and her other teachers, is a critic of the humanist philosophical tradition that puts the human at the center of all knowledge and ethics.

Braidotti credits Foucault’s work on subjectivity as having informed her opinion. Braidotti and Foucault critique the notion of the “subject” defined in terms of sameness and working with binary oppositions in which difference is presented as lack within a value system of the pejoration of the other. Braidotti forcefully describes it as follows:

The subject thus is a heap of fragmented parts held together by the symbolic glue that is the attachment to, or identification with, the phallogocentric symbolic. A heap of rubble, calling itself the center of creation; a knot of desiring and trembling flesh, projecting itself to the height of an imperial consciousness. I am struck by the violence of the gesture that binds a fractured self to the performative illusion of unity, mastery, self-transparency. I am amazed by the terrifying stupidity of that illusion of unity, and by its incomprehensible force³⁶

Contra the kind of subject that she describes above, Braidotti develops her idea of the “nomadic subject” by citing Deleuze and his critique of the western subject. Deleuze, according to Braidotti, works towards a notion of difference that is a multiplicity of positive differences.³⁷

The rejection of the principle of equation to and identification with a phallogocentric image of thought lies at the heart of the nomadic vision of subjectivity that Deleuze proposes as the new, postmetaphysical figuration of the subject.³⁸

Braidotti takes up this Deleuzian approach, which she duly credits, but she also modifies it significantly with her emphasis on situated and embodied politics of location.

With reference to and drawing upon Deleuze’s formulation of the rhizomatic, Braidotti writes:

The key terms in this exercise are: the feminist politics of locations, the importance of processes as opposed to identities and the need for a materialist approach that combines issues of embodiment with the analysis of power.³⁹

Deleuze, Braidotti asserts, is limited by his sex and his situation.

In other words, it seems to me that Deleuze’s theory of becoming is obviously determined by his location as an embodied male subject for whom the dissolution of identities based on the phallus

results in bypassing gender altogether, toward a multiple sexuality. This, however, may not be the option best suited to female embodied subjects. How can Deleuze fail to see that this neutralization of sexual differences can only damage the process of reclaiming a political subjectivity for women?⁴⁰

Braidotti has also said that she found Foucault to be “misogynistic”⁴¹ and laments his failure to address gender and women. This is where Irigaray, with her insistence on sexuate embodiment and her critique of Deleuzian becoming, is an important influence on Braidotti. It is this fundamental necessity to think through sexual difference with which Braidotti holds.

Braidotti outlines the consequences of paying attention to gender rather than sexual difference. In an interview with Judith Butler, Braidotti puts forward her stance that to speak in terms of gender risks assuming an equality or a symmetry of difference.

The focus on gender rather than sexual difference presumes that men and women are constituted in symmetrical ways. But this misses the feminist point about masculine dominance. In such a system, the masculine and the feminine are in a structurally dissymmetrical position: men, as the empirical referent of the masculine, cannot be said to have a gender; rather, they are expected to carry the Phallus—which is something different. They are expected to exemplify abstract virility, which is hardly an easy task. Simone de Beauvoir observed fifty years ago that the price men pay for representing the universal is a loss of embodiment; the price women pay, on the other hand, is at once a loss of subjectivity and a confinement to the body. Men become disembodied and, through this process, gain entitlement to transcendence and subjectivity; women become over-embodied and thereby consigned to immanence. This results in two dissymmetrical positions and to opposing kinds of problems.⁴²

According to Braidotti, Foucault’s analysis is coming from a male perspective. She writes: “Foucault elaborates a critique that remains within the confines of sexual sameness”⁴³ In contrast, Braidotti celebrates Irigaray as a prophetic and productive visionary.⁴⁴

Luce Irigaray stresses the need to recognize as a factual and historical reality that there is no symmetry between the sexes and that this asymmetry has been organized hierarchically by the phallogocentric regime. Recognizing that difference has been turned into a mark of pejection, the feminist project attempts to redefine it in terms of positivity.⁴⁵

So, in line with Braidotti and Irigaray, I pursue the belief that refiguring of the subject for an ecological anthropos requires that we pay attention to sexual difference and that there is no symmetry between the sexes. This book explores parallels in its structure, in which sections are paired and read through each other as refractive interpretations, but not posed as mirrored opposites. Questions of symmetry are explored with regard to the history of exploration, in which there was an anticipated symmetry

between the northern and southern hemispheres. In a similar critical vein, the function of analogy, often visual analogy, within various systems of thought is examined with sexual difference in mind, thereby giving up reflection as a dominant mode of comparison in favor of what I term refraction.

Braidotti proposes this “intersection between new feminist thought and contemporary poststructuralist thought”⁴⁶ in her figuration of the nomadic subject. This nomad she disassociates from end causes: “The nomad enacts transitions without a teleological purpose.”⁴⁷ And for Braidotti, this nomadic feminist mode is at play in the way in which she makes philosophy.

One of the points of intersection between poststructuralist philosophies and feminist theory is the desire to leave behind the linear mode of intellectual thinking, the teleologically ordained style of argumentation that most of us have been trained to respect and emulate.⁴⁸

The teleological is presented and critiqued in this book: examples of nineteenth-century teleological thought in social Darwinistic interpretations of evolution considered against Darwin’s own non-teleological understanding of evolution; the philosophy of history that looks for signs of progress; Pitt-Rivers’s view from a western Eurocentric perspective, classifying other cultures on a ladder of development, contra the work of Franz Boas that demonstrated the relativism in cultural differences and historical particularism; artistic modernisms that celebrate the avant-garde myth of originality and progress against a postmodern or post-medium condition that, according to Rosalind Krauss, brings horizontal relations of difference to thinking about art. And then there is the narrative of the near mythic quality of the polar journey itself, with its ultimate destiny and destination of the pole and death, yet another potent teleological story that pulls towards extinction. I want to refract these narratives so that they allow for other possible futures. The conceptual argumentation of the text, then, is also proposing an otherwise and elsewhere to a narrative that reads like a teleological preordained necessity.

“The nomad”, Braidotti writes, “is my own figuration of a situated, postmodern, culturally differentiated understanding of the subject in general and of the feminist subject in particular.”⁴⁹ Braidotti’s nomadic subjects are a figuration, and although, Braidotti says, “inspired by the experience and cultures that are literally nomadic”, Braidotti’s nomad is rather a

critical consciousness that resists settling into socially coded modes of thought and behavior. Not all nomads are world travellers; some of the greatest trips can take place without physically moving from one’s habitat. Consciousness raising and the subversion of a set of conventions define the nomadic state, not the literal act of traveling.⁵⁰

So, it is clear that the explorer, though travelling far, may not, in fact, move very far at all in terms of the subversion of the conventions of the subject. This is why I take up the figuration of the nomad to

refigure the archive of Antarctic heroism; taking the nomadic approach to the archive of the Antarctic heroism is a strategy for undoing and subverting a subjectivity—male, white, European—that is all too comfortably at home there, at the center of things.

Biography through Zoography

Edward Wilson was a well-known Antarctic explorer of whom numerous biographies have been written, the earliest being by George Seaver in the 1930s and the most recent by Isobel Williams and Wilson's great-nephew, David Wilson, a Polar scholar, who has also published books on Wilson's painting.⁵¹ They follow his biography as an Antarctic explorer, as a naturalist or an artist, or any combination of these, but they have not treated Wilson and his watercolors in the manner in which I have addressed them here. These treatments of Wilson and his archive, though having merit, have been conventional, in the sense that they map a trajectory of events, often with a sense of the linear time of the subject's life story, often with a discussion of his character and his motivation, which may include some psychological interpretation.

In common with conventional biography, I do aspire to accuracy regarding the facts, so what I have not done is transpose what might be taken as the facts of Wilson's life into fiction; rather I have shifted the orientation and, therefore, taken a different route through what may be considered a kind of topography of Wilson's life and work. Wilson found fame as a polar explorer, but he was trained as a doctor and practiced in London hospitals before his first expedition, as well as taking the role of expedition doctor. As a child he was talented at drawing and painting, the practice of which was always intimately related to his enthusiasm for natural history and landscape. Though he was a self-taught artist, his skill was such that he was engaged as the expedition artist and given the role of documenting the expedition. As an amateur naturalist he was also a keen observer of natural specimens, dead or alive. On the second expedition he took on the role of Chief of Science and was responsible for meteorological, magnetic and other scientific observations.

In my version of the biographical work of writing I have taken Wilson's life as a source for what Louis van den Hengel calls "zoography [...] a radically post-anthropocentric approach to life narrative."⁵² Van den Hengel, drawing upon the work of Braidotti, moves away from the identity of "bio" in biography as a self-contained entity, towards a description of "zoe", a life traversed by forces. In Braidotti's writing the shift from bio to zoe decenters the rational subject of humanism in the post-human turn towards a project for an affirmative ethics of life. Braidotti writes:

Zoe refers to the endless vitality of life as continuous becoming. [...] This mode of diffuse yet grounded subject-position achieves a double aim: firstly it critiques individualism and secondly it

supports a notion of subjectivity in the sense of qualitative, transversal and group-orientated agency.⁵³

Braidotti terms this kind of subjectivity an “ecological entity” with an associated ethics, which she describes like this:

An affirmative ethics for a non-unitary subject proposes an enlarged sense of inter-connection between self and others, including the non-human or “earth” others.⁵⁴

With reference to Braidotti, Van den Hengel describes “zoography” as an approach to life-writing that is “not specific to human lifeworlds but cuts across humans, animals, technologies, and things”.⁵⁵

I speculate that this approach would have held some appeal for Wilson himself, and his spiritual philosophy, since he wrote the following regarding his beliefs on what he refers to as “life”:

Surely when a number of atoms of hydrogen combine with a number of atoms of oxygen to form a certain fixed and definite number of molecules of water, surely they are all carrying on their duties in a truly *organic* manner of life, though on so very limited a scale. [...] Is it not obvious that the *life* all through is the same right up to the infinite complexities of the life of Man? [...] call it what you like, so long as you make no distinction between the simplest and most primitive forms of it among gases and fluids, and the latest and most complex forms of it amongst ourselves.⁵⁶

The sentiment in the above paragraph refuses any radical divide between the human and non-human. Wilson was very motivated by his Christian religious beliefs and also by his education in scientific materialism, which might be judged to have produced some inner conflict for him. He was a good doctor, empirical scientist and natural historian, keen on Darwin’s evolutionary theory.

While Wilson invokes the connection between hydrogen and oxygen in water and “the complexities of Man” to suggest they are both “*life*”, only at different scales, the post-human new materialist understanding thinks of life forms, including the human, as temporary concretions in flows of becoming. Manuel De Landa puts it thus:

Our organic bodies are [...] nothing but temporary coagulations in these flows: we capture in our bodies a certain portion of the flow at birth, then release it again when we die and micro-organisms transform us into a new batch of raw materials.⁵⁷

Just as life-writing is reconfigured as zoography under this new materialist post-human understanding, so too is history reconfigured. De Landa takes this life scale through to the scale of history. Noting the nineteenth-century “new awareness of historical process” in the sciences,⁵⁸ he points out that “classical versions of these” incorporated “a rather weak notion of history”,⁵⁹ such that “thermodynamics and Darwinism admitted only one possible historical outcome”.⁶⁰ De Landa develops a nonlinear history,

referring to the physicist Arthur Iberall, who first offered phase transition as a way to consider earlier historical transitions in human culture:

much as a given chemical compound (water, for example) may exist in several distinct states (solid, liquid, gas) and may switch from stable state to stable state at critical points in the intensity of temperature (called phase transitions), so a human society may be seen as a “material” capable of undergoing these changes of state.⁶¹

According to De Landa’s application of “phase transition” to history, unilinear progression through stages is mistaken:

if different “stages” of human history were indeed brought about by phase transitions, then they are not “stages” at all—that is, progressive development steps, each better than the previous one, and indeed leaving the previous one behind.⁶²

Rather, according to De Landa, new phases that occur after previous phases should be thought of as concurrent, and “coexisting and interacting” with prior phases “without leaving them in the past”.⁶³

Moreover, much as a given material may solidify in alternative ways (as ice or snowflake, as crystal or glass), so humanity liquefied and later solidified into different forms.⁶⁴

In nonlinear history and the post-human worldview, the classical Cartesian subject of humanism is decentered. With the aid of Braidotti’s thinking on nomadic theory, transposition and the post-human, this book proceeds with a series of “decenterings” to refract the “other” subjectivities implicated in this zoography to mark shifts between mediums, as well as the shifts between phases in a nonlinear history. So, there are three modes of refraction here: through other subjectivities, through media, and through the phases of nonlinear history.

In this book the unitary rational subject as discrete individual is configured into an embodied materialist subjectivity traversed by affects and forces. This parallels the shift from the notion of the human *in* the environment to the understanding of the human *and* environment. It must be remembered that this is not a new approach in one sense: cultural geographers were engaged in a turn to spatial theory in the late 1980s and 1990s, as found in the work of Edward Soja⁶⁵ and Henri Lefebvre,⁶⁶ as well as early ecological thinking regarding the environment from the 1960s with the work advocating a holistic view of nature and our relation to it of people such as Gregory Bateson (1904–80) and James Lovelock (1919), who proposed the Gaia theory of the earth system.

Neither is new materialism entirely new. Franz Boas came from a philosophical background in German natural history, in which humanity is considered in the wider inquiry into the variety of species and German historical particularism. There are also alternative histories of Naturphilosophie within a German context that were vitalist, and may have been conveniently forgotten in historical

accounts that tidy up the past to privilege the lines of descent of those theories that have survived best. Boas's German context included Herder's *Letters for the Advancement of Humanity* (1793–7), Wilhelm von Humboldt (1767–1835) and the cosmographic approach of Alexander von Humboldt (1769–1859) followed by opponents of race theory such as Adolf Bastian (1826–1905) and Rudolf Vichow (1821–1902).

But, as Dolphijn and van der Tuin write, the “new” in new materialism refers not to something different from before in a genealogical progression but rather to a reorientation of metaphysics.⁶⁷ Braidotti calls it a “geo-centred turn” away from the classical humanist anthropocentric view towards a planetary-centered perspective, in which “the milieu” or environment takes center place. Braidotti asks: “What would a geo-centred subject look like?”⁶⁸ Braidotti points out that theories of human-caused climate change “force us to bring together categories of thought which were until now kept apart not only by disciplinary boundaries—between earth sciences and literature and history, for instance—but also by the anthropocentric bias that has sustained the Humanities.”⁶⁹ It is necessary to complicate by boundary-crossing, and crossing genres, whether in museum display between collections of art or anthropology, or in modernist art that seeks to distinguish between painting and other media, or between literature and painting. It is the boundary-crossing through one medium to another that I have taken up in this book as the optical metaphor of refraction.

Transposition through Refraction

Transposition relates to the nomadic subject in that it is the structuring formation of that identity. For Braidotti, the nomadic subject is made up of transpositions.

This figuration expresses the desire for an identity made of transitions, successive shifts, and coordinated changes, without and against an essential unity.⁷⁰

I argue for my application of Braidotti's transposition to what I will term throughout this writing my method of refraction. The case study of watercolor painting in the extreme environment of Antarctica offers one example of material embodiments and mediation of the surrounding atmospheres and their interpretation. I employ a refractive methodology, informed by Braidotti's “transposition,”⁷¹ that gives the accent to the distorting and displacing effects of medium.

This combination brings attention to medium. It is refractive in that it is attentive to the passages and changes that occur in a shift between media. It is also attentive to moving through disciplinary boundaries. This method of refraction is a combined method: it combines the philosophical method of Braidotti's transposition, the psychoanalytical method of an aspect of Freudian dream interpretation *Entstellung*, and the art historical method of writing the artwork in *ekphrasis*.

In my view, Braidotti's definition of transposition misses a key aspect, that of the psychic understanding of subjectivity and affect, which includes repression. Thus this book aims to supplement her idea of transposition with Sigmund Freud's understanding of *Entstellung*. The reason for this is twofold: in order to try to make manifest the latent in the archive; and also to appreciate *Entstellung* as the movement that is in force in the act of denial, which displaces to elsewhere or to another time that which the subject does not wish to see or know. This, I propose, brings an understanding of what I will call a refracted subjectivity that is missing from Braidotti's account of a decentered subjectivity, and is useful for rethinking the problem of the denial of observational evidence with regard to climate change. Refraction can also entail strange transpositions of difference, enacted as repudiations of the crisis of climate change that, as Benjamin Morris and Bradon Smith write, "localise the problem, but localise it 'elsewhere'".⁷²

I propose that we think of refraction as the optical correlate of the Freudian term *Entstellung*. The following example offers some insights into their compatibility. As applied to dream interpretation, the method of *Entstellung* attends to the interpretation of the distorted-displaced dream images. Freud mentions the telescope and microscope as similes for the dream process.⁷³ He then extends the analogy by paying attention to the glass lenses of these instruments; he says:

the censorship that occurs between two systems would correspond to the refraction that accompanies passage into another medium.⁷⁴

Freud makes a clear analogy between refraction and the passage from the unconscious to the conscious. Psychoanalysis can address the denial of difference. I explore the relation between *Entstellung*, transposition and *ekphrasis* in the third chapter, then apply this psychoanalytical approach in the fourth and fifth chapters as part of my method for making manifest the latent, repressed racialized and gendered subjectivities in the archive of Antarctic heroism.

This book is actively engaged with the relations and transpositions, the *ekphrasis* and refractions of, through and between art and language. In another sense, as Braidotti explains:

This "Neo-materialism" emerges as a method, a conceptual frame and a political stand, which refuses the linguistic paradigm, stressing instead the concrete yet complex materiality of bodies immersed in social relations of power.⁷⁵

I wish to make comparisons between *ekphrasis*, the distorted displacement of *Entstellung*, and Braidotti's transpositions, not to equate them but to read through their differences to see what insights this might generate. My purpose is to develop from this a description of a refractive interpretation that is proposed in this book. Refraction occurs at the crossing of boundaries between mediums. Braidotti's transposition provides a post-structural analysis of the absences and distortions created through pejoration of race, gender and animal-natural others. *Ekphrasis* attends to the relation between art

objects and their writing. *Entstellung* attends to the displacements and distortions between unconscious and conscious, and provides a method for interpreting the latent within the manifest.

Psychoanalysis is a method for encountering what cannot be faced. It can be applied to discovering what is disavowed in the archival encounter with heroic polar exploration. The archive can then offer up other possibilities for interpretation, whose meanings are to be found elsewhere, somewhere other than where the manifest content appears to be, and this can be enacted by a further process of interpretation which, in its turn, is also an action of distortion and displacement, a shift elsewhere, *Entstellung*.

I am also bringing anamorphism into relation with Braidotti's theory of transposition, not to argue that they are the same thing, but to bring a visual analogy into play. The connecting link between them is the transposition of coordinates from A to A'. But, in addition to that, both anamorphism and transposition displace the Cartesian subject. If asked what transposition looks like, I would suggest that anamorphic images could be explored for answers.

Braidotti has developed transposition as a theory that she credits with a capacity for combining the objective and the subjective. I see this as similar to the conflation of object and subject found in anamorphic perspective. Making reference to both music and genetics, Braidotti's transposition works against corporate identity, the unitary subject, in favor of what she terms the nomadic subject.

Resting on the assumption of a fundamental and necessary unity between subject and object, the theory of transpositions offers a contemplative and creative stance that respects the visible and hidden complexities of the very phenomena it attempts to study.⁷⁶

It takes into account the implicated role of the viewer in the production of those observations, and the role of the viewer in making differences. Braidotti imagines a dynamic spatial arrangement of connection and reconfigurations, often with reference to topologies of mapping and nomadic movement across those mappings. "Cartographies" is a word frequently used in new materialism to describe the setting out of relations between matter and discourse, and it is one that Braidotti takes up.⁷⁷ Van der Tuin and Dolphijn write that Braidotti makes it clear that "it is important to draw situated cartographies of (new) materialisms, and to traverse these maps at the same time in order to produce visionary alternatives, that is, creative alternatives to critique"⁷⁸

Although Braidotti's form of new materialism is certainly attentive to the material distinctions and crossovers between matter and meaning, this is more properly the topic of Braidotti's academic and theoretical interest. It does not become a question that she addresses specifically through her *writing* as a material practice, nor one that she approaches with an ekphrastic relation to those objects under discussion. To think transposition through *ekphrasis* brings attention to the relation between the visual object and writing. In order to engage with the visual, which is an aspect that is underplayed in Braidotti's transpositions, I want to remember the visual practice of map-making in the cartographies to which Braidotti refers.

Different forms of representation entail different modes of transposition, *ekphrasis* or *Entstellung*. In addition to this visual sensibility, my argument is that transposition also needs to be thought about together with *Entstellung*. *Entstellung* brings the psychoanalytical dimension to the practice of transposition. I make an application of Braidotti's thinking on transposition to my thinking about the archive. This is also a refractive reading of Braidotti's transpositions through *Entstellung*, through the visual practice of anamorphic image-making, and through the writing of art objects in *ekphrasis*. I am reading them through each other in a refractive reading.

Art and Antarctica through Writing

Refraction is also proposed here as a form of art writing, of writing about art interpreted as the boundary-crossing that occurs between the visual artefact and the verbal description. *Ekphrasis* commonly refers to the rhetorical technique of describing an artwork, usually visual work such as painting, through another medium, usually literary.⁷⁹ With this in mind I refer to border crossings in visual culture and art history such as those explored by Mieke Bal writing on "travelling concepts",⁸⁰ and Griselda Pollock's book *Conceptual Odysseys: Passages to Cultural Analysis*.⁸¹ I understand these displaced and distorted interpretations of the Antarctic environment found in the archive to be a kind of *ekphrasis*.

In the writing of this book, I have attempted to treat the text as a spatial and material practice—that is, to treat it as a medium with its own refractive index. The writing is structured as a literary chiasmus, in which readings cross over, and refract through each other. It is informed and influenced by work such as Jane Rendell's *Site-Writing*,⁸² in which she argues that art criticism "is *itself* a form of situated practice" that produces what she terms site-writing, "where the boundary between subjects and objects is more porous and arguments are made not only directly but indirectly through association and implication".⁸³ Art criticism, as explored by Rendell, is produced through attending to "sitedness", and its textual production. In addition, I note that Braidotti also advocates a writing style that does not exclusively respect the academic, preferring a mixing of speaking voices and the poetic with the theoretic.⁸⁴

Rendell's form of criticism consists of entanglements with its objects, and is worked through with psychoanalytical paradigms and a poetic sensibility. I interpret Rendell's *Site-Writing* as taking on the practice of *ekphrasis*, not as a mirroring of its objects, but as a refraction that engages with explorations of equivalence and interpretation.⁸⁵ In keeping with Rendell's approach in *Site-Writing*, which integrates spatio-theoretical ideas with psychoanalysis, the following pages explore a temporal and spatial model found in psychoanalytical theories and practices, specifically one of Freud's four processes of dream interpretation: *Entstellung*. "Through", Rendell writes, is characterized as a practice of writing site that "involves such a double movement to and fro between inside and outside".⁸⁶ In my

thesis, I have taken up Rendell's "site-writing" in performing the journey to the pole and back, again through the pattern of the literary chiasmus. Following Rendell's method of writing through different configurations, in which each chapter is a different "enactment of art criticism as a critical spatial practice",⁸⁷ I propose here my own version of a configuration that is built out of a paired episodes observed and refracted through climate, color and anthropology and following the literary pattern of the chiasmus.

My ecological argument is invested in the belief that transformation in the human relation to the environment, to one that is more properly ecological,⁸⁸ is also dependent upon emancipatory politics of gender and race, and this I have in common with many ecocritical thinkers.⁸⁹ Ecocriticism, like many other disciplines, is currently experiencing a material turn, so that it is extending its domain beyond the usual field of literature. The edited collection *Material Ecocriticism* uses the term "storied matter" to describe this matter and meaning combination, but I more often refer to this as material-discursive entanglements.⁹⁰ Another way in which I align myself in this book with new aspects of material ecocriticism is in the form of the writing that seeks to experiment with alternative critical modes that avoid replicating the problems of seeing nature as a thing "out there". This means appreciating that practices of critique are part of that nature, and forms of writing need to embody that situated and implicated mode as entanglements of material and discursive relationships.

Donna Haraway's method of diffraction has been a key influence in new materialism and material ecocriticism.⁹¹ It has been developed in Karen Barad's *Meeting the Universe Halfway*, but to argue for diffraction as the phenomenon in physics that supports the onto-epistemology that she terms "agential realism" as well as its figurative use as an alternative feminist mode of criticism. Diffraction as a method is a non-oppositional non-hierarchical mode of critique that produces patterns of interference so as to register difference and make a difference. It is a method that allows for dialogic interpretation of texts read through one another to create unexpected results. This approach is also about crossing the boundaries between disciplines to manifest how those "boundaries" are established and to what ends, and to show how they can be blurred or remade as more inclusive of difference. Diffraction works as a counter to reflection as a model for criticality. Haraway writes:

Reflexivity has been recommended as a critical practice, but my suspicion is that reflexivity, like reflection, only displaces the same elsewhere, setting up worries about copy and original and the search for the really real.⁹²

On diffraction as a figuration Haraway writes:

Diffraction can be a metaphor for another kind of critical consciousness at the end of this rather painful Christian millennium, one committed to making a difference and not repeating the Sacred Image of the Same.⁹³

As with Haraway's diffraction, in this book I make a critique of the reflective paradigm as an optical metaphor that underpins our epistemologies. And although I share all the aims of Haraway's and Barad's diffraction, I have chosen to think this through another optical figuration: refraction. My decision to take refraction as the optical metaphor is so that I highlight the attention upon the medium and the crossing of boundaries. I have chosen to work with the optical metaphor of refraction as a mode of operation for my writing. I have also sought out examples of the phenomenon of refraction in the appearance of the sky, in representations of those parhelia and paraselenae in the works by Wilson, in the behavior of watercolor as a medium, in geographic observations, and so on. The writing performs refraction as a form of *ekphrasis*; where one form is reworked in another form, for example the translation of a visual experience into a written one, or the presentation of a work of art in a vivid verbal description: in both of these there is a refractive shift between media. This refractive move can also be written as a transposition understood as a shift in coordinates. This I link to the chiasmic pattern of a literary construction that follows a repetition in the pattern of A, B, C, X, C', B', A'. As in this literary chiasmic repetition where the themes or motifs of a literary work are revisited and reworked, the writing here is structured as a series of encounters that on the return meet again with what was already encountered on the outward-bound phase.

These pairings are not reflections or mirrors of one another but refractions. Corresponding sections create an interplay, such that they can be read refractively through each other. A chiasmus turns around the conceptual pivot at the center. In the case of this book, the pivotal section is the section titled "X", the section that discusses the chiasmic turn; it is between the sections "The Southern Journey" and "The South Pole", the latter being the geographic point on the globe that was the ultimate goal of the polar expedition and the point at which the journey turned back. The chapters are written to follow this chiasmic structure: the prologue "Glass" is paired with the epilogue "Ice", the first chapter "Elsewhere" is paired with the last "Where Else", and the second "Watercolor" with the fourth and penultimate "The Color of Water", with the chiasmic turn occurring halfway through the third or middle chapter "Antarctica Through the Archive". Each chapter is constructed out of subtitled sections. Each section is paired with another on the pattern of the chiasmus, in a transposed, refracted version. For example, the section titled "Archive" is paired with the section in the epilogue titled "The Arkive". It is important for me to here reiterate that these pairings are not reflections. They are paired as transpositions, or refractions. The topic under consideration can be approached through different methodological approaches and voices and forms of writing. The object under observation is revealed differently as a consequence. The motive is to allow the language used in the descriptions to become apparent, but to do this through the shifts between one mode and another, so as to track it in the writing as one might follow the refractive shift between media. This approach is comparable to turning one's attention to the materiality of the lens in use in one's instruments of observation.

The Journey through the Writing

The “Prologue” begins in the glassmaking studio with the description of the fabrication of miniature icebergs from glass. Titled “Notes from the Field”, this section proposes the artist’s studio and the site of making as the field, even as the landscape referenced, Antarctica, remains elsewhere. “Glass” is the title of the second section that explores the intimate relation between glass and observation, noting the Crystal Palace as the great nineteenth-century glass architecture of display. The “Archive” section describes the refiguring of the archive by this refractive method that reads it through other disciplines, other times and places. The first chapter, “Elsewhere”, considers the historical context of Wilson’s life, and the rise in practices of fieldwork discernible in Victorian handbooks to aid observation in the field, such as the British Association for the Advancement of Science’s *Notes and Queries* to support ethnographic observation,⁹⁴ and the Royal Geographical Society’s *Hints to Travellers*.⁹⁵ The human and the environment are explored through the history of Antarctic exploration, geology and anthropology to produce temporal and spatial understandings of elsewhere.

The second chapter, “Watercolor”, considers watercolor’s material history as both practice and medium. The particular techniques applied by Wilson, along with Ruskin’s and Turner’s influence upon him, are considered, as well as the fugacity and permanence of pigments, the reflective and refractive qualities of the paint, and its development as a medium. The chapter, through developing an understanding of how watercolor as a pigment relies upon the medium’s vehicle and the medium’s surrounding atmosphere for its effects, extends this to interpret the significance of medium, in a wider context, as climate.

The writing turns around in and through the third chapter, “Antarctica through the Archive”. The relation of the grid to the globe is explored with regard to anamorphic perspective as a technique for painting on the concave interior of a dome, and the combined methods of in-the-field geographical survey with the theoretical models in geodesy. The South Pole as abstract destination of polar exploration is examined along with its becoming the site of the building of the iconic South Pole geodesic dome. The inseparability of observer and observed is explored using contemporary sources such as *The Antarctic Manual for Meteorological Observations* (1901). I look at the practice of writing down observations and the impediments to this. I consider Freud’s *Entstellung* as a shift elsewhere, to explore the gaps in observation caused by denial or disavowal of what is observed. The chiasmus in the pattern of the polar sledge journey is read through other chiasmi. I argue for the form of chiasmus that best suits my refractive method, which I define in terms of an axis of transposition that supports interpretive shifts across and between media: the ekphrastic move.

In the fourth chapter, “Watercolor” is refracted to “The Color of Water”. Here I look at anthropologist Franz Boas’s move from a more empirical physics-based investigation of the color of water, through his work on the anthropology of race to an understanding that questioned the fixity of color as racial

type. Wilson's diary of sledging to the South Pole is considered, and how he wrote over anthropological drawings and medical texts in the pages of a *Wellcome's Medical Diary and Visiting List* of 1910. Typologies of race in museum display and architecture are read refractively through Wilson's polar story. The architectural design for a museum display of ethnographic material that presents a certain version of the relation of human and environment is interpreted to reveal the denial of atmosphere.

In the final chapter transposition is explored as the shift performed in sexual difference and in becoming other. This chapter transposes "elsewhere" into "where else" by refracting new interpretations for the future out of the archive. The body of the penguin provides a trope for becoming other by interpreting the latent feminine in the archive of Antarctic exploration. The Lubetkin design for the Penguin Pool at London Zoo is considered as a form of display that is similar to museum practice but that features living creatures. Feminist criticism is applied to historical accounts of science fiction in the *South Polar Times*, to argue for the latency of the past and future within the present.

In the Epilogue, the Prologue "Archive" as a site of preservation of extinct specimens becomes "Arkive" as a place for generative making; an architecture and optics derived from "Glass" is transposed through a post-human shift to become a geo-centered, atmospheric architecture and optics derived from "Ice". The Epilogue ends with "Notes from the Field" taken in the glassmaker's studio becoming "Field Notes" made during a visit to the archive.

The South Pole, as the last "elsewhere" of the empty places on the map that figured as the prize to heroic explorers, is now a place that cannot be returned to in its undiscovered state—its traces are recorded in the archive, perhaps, but this is unstable and always open to refiguring. This feminist new materialist critical engagement with the race and gender normativity of Antarctic heroism argues that the archive of Antarctic watercolors can be interpreted to produce an ecological post-human ethics and optics founded on ice rather than glass.

I propose that this "elsewhere" of undiscovered territory located as a nowhere else of closed possibility can be turned again—transposed—to become a renewed ethical sensibility of elsewhere. I favor in this writing a temporally recursive pattern suggested in the pairings of sections that anticipate or recall one another, and a beginning and ending that are linked together as notes from the field made in the glassmaking studio and the archive. The structure of this book is patterned on the chiasmus that at the end brings the reader back to the beginning. There is implicit in this a bigger critique of the linear narrative and the misleading sense of necessity that the formal structure of the polar journey can imply.

Antarctica, Art and Archive argues that Antarctica is an elsewhere that is intimately implicated in our climate and the future human habitation of the planet. It aims to remake our apparatus of vision, with a shift from glass to ice. The archive can be refigured with a nomadic subjectivity and a method of transposition that is non-teleological. It aims to turn the archival elsewhere of melancholic loss into a where else of future possibility.

The stories of the attempts to be first to reach the South Pole are deeply embedded in a whole set of cultural values around the human in contrast to, if not against, the natural landscape, and most usually the man/male pursuit of dominance over that environment. My approach here has been to produce a critique of these values in order to refigure them for the era of a changing climate in which comprehending our entanglement with the environment, on multiple registers and multiple scales, is of crucial importance.