Enclosing Nature: A Photographic Enquiry into Human Categorizations of Nature

A project submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

Joachim Froese  

School of Art  
College of Design and Social Context  
RMIT University

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Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the project is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.

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What do I mean? I mean that inevitably we make a small world in the midst of a big one. For a small world is all that we know how to make.

Rose Tremain, The Colour
Abstract

This research project investigates the capacity of photography as a material and embodied practice to expound abstract processes involved in the categorization of nature. By adopting an ecocritical stance, I develop a more-than-representational approach towards photography to critique the abstract processes involved in anthropocentric interpretations of nature. To this end, my practice explores alternative modes of display such as the 'selfie' and smartphone technology, along with settings inside and outside traditional gallery settings.

The dissertation presents a number of correlating bodies of work completed in Brisbane and Berlin, the two cities I reside in and move between. Drawing on this migratory background and my tacit knowledge of both places, the project contributes to a re-evaluation of our co-existence with the nonhuman world, especially in the context of the urban and post-wild scenario of the Anthropocene.

The study includes an historical investigation of categorizations apparent in the iconography of the Hortus Conclusus, a short-lived but popular genre in 15th century European painting. I use these early modern conventions as a comparative model and inspiration in the interpretation of natural habitats within contemporary urban and post-wild contexts. This approach is theoretically informed by the early 20th century biologist Jakob von Uexküll’s concept of Umwelten (sentient worlds) and his theory of biosemiotics. Von Uexküll saw ecology as a web of interconnected sentient worlds that all species construct around themselves in order to communicate with members of their own, as well as other, species.

Human perceptions of the nonhuman world are inevitably anthropocentric, as sensory processing and human Umwelten are prescribed by human biology. These perceptions are also subject to shifting cultural interpretations, which at
the beginning of the 21\textsuperscript{st} century rely increasingly on the use of technology. This project examines how digital photography, and the practice of taking selfies in particular, is embedded into human modes of communication and the biosemiotic exchanges that shape human \textit{Umwelten}. My final exhibition aim is to visualize \textit{Umwelten}, in which the selfie becomes a channel for incorporating the viewpoints of others into my own work.

Rather than presenting a defined single result, the outcome of this research constitutes a range of photographic viewpoints, each representing an individual perspective derived from natural as well as cultural triggers, neither of which are mutually exclusive. Instead, these multiple views need to be understood as a complex kaleidoscope that ultimately refutes traditional dualist distinctions between nature and culture.
Introduction

At the beginning of the 21st century, clear evidence has emerged that the impact of our behaviour as a species has had a detrimental effect on even the remotest parts of our planet. Photography has played a vital role in providing this evidence. In the recent past, photographers such as Edward Burtynsky, Chris Jordan and Nadav Kander have produced confronting evidence of environmental degradation. On the other hand, photographers such as Sebastião Salgado, Peter Dombrovskis and Ansel Adams have upheld a long tradition of describing the intrinsic beauty of the natural environment. These photographers have shown an ongoing commitment to environmental concerns and their photographs are a powerful reminder of what might be irreversibly lost if humanity continues on the current path of environmental destruction. It is this school of photography that forms our cultural awareness of the nonhuman world out of which my own practice emerges and to which it wants to contribute new knowledge.

A realisation that a fundamental reconsideration of our approach to nature is required to redress this potentially catastrophic situation drives this project. To this end my research considers new environmental models that describe an entangled, interdependent relationship between multiple human and nonhuman worlds.

As this unprecedented environmental challenge continues to develop, there has also been an unprecedented acceleration in the use of photography that has fundamentally changed our engagement with the medium. The new dimension of our consumption of photography requires a fresh understanding of photography as a material practice within a digital age. As a technology integrated into mobile communication devices, cameras now produce billions of pictures every day globally. This research project acknowledges the vast range of differing views communicated through photography today and aims to investigate the environmentally responsive potential of this technology.
In this context, I propose that an analysis that concentrates exclusively on the representational aspect of photography is limited and that the non-representational impact of photographic practices on our environment has to be considered. In its current technological form, photography not only reflects humanity's outlook on the world(s) around us but also consumes resources and produces toxic waste. It thus shapes and forms the environment we are inextricably connected with. Consequently, my practice-led research aims to develop a more-than-representational approach towards an ecocritical understanding of photography that addresses this situation.

At its core, my research for this project aims to make a contribution towards a better understanding of how, and to what extent, humans are engaged with the nonhuman world. To this end, the research is focused in particular on an analysis of the processes of categorization which inform western interpretations of nature. This analysis includes a reconsideration of how photography as a practice contributes to the categorization of nature.

The project is defined by the following two research questions:

1. In what ways can photography expound the abstract processes involved in the categorization of nature?

2. How do visual legacies of the historical categorization of nature continue to prevail in contemporary culture?

This dissertation begins with two chapters analysing certain historical and theoretical processes germane to the categorization of nature. This theoretical basis prepares the ground for an exegesis of my practice-led research investigating photography as an embodied material practice contributing to the complex formation of human categorizations of nature.

Chapter one presents an introductory reflection on my artistic practice, which is based simultaneously in Brisbane and Berlin, the two urban centres in which I reside. A discussion of Martin Heidegger’s concept of human dwelling and the question whether it is possible to dwell in the spaces in-between these cities, or the interstices of a globalised world is a prelude to my
research which evolves around our being-in-the-world, the impact it has on our spatio-temporal surroundings, and the role photography might play in it.

At a first glance the itinerate position of a migrant artist within a seemingly borderless globalized world might stand in stark contrast to the motif of an enclosed garden. Yet it was precisely this contrast which sparked my initial interest in the demarcated space of the *Hortus Conclusus*, a short-lived but popular genre in 15th century European painting. Chapter one continues with an investigation into the iconography of the *Hortus Conclusus* as an example of historical interpretations of nature that shaped the slow transition from pre-modern concepts of the sacred in nature to the emergence of science in the early modern period. I then use these historical conventions as a comparative model and a visual inspiration to draw a trajectory towards an interpretation of natural habitats in a contemporary urban and post-wild context.

Despite important differences between pre-modern notions of the sacred and the modern secular worldview, these interpretations of nature are nonetheless related because they share the understanding that a singular, objective world exists. While it would be misleading to simply claim an unbroken trajectory of thinking from the pre-modern period to the present-day scenario, an analysis of the common ground between the two is useful in gaining a critical understanding of human modes of categorizing nature that have shaped the entire modern period.

Today new insights are emerging through complexity theory and biosemiotics that challenge the long-favoured idea of one objective world. Instead, they suggest a complex network of multiple non-hierarchical and perceiver-dependent sentient worlds. Chapter two explores some of these concepts. It is informed in particular by the early 20th century biologist Jakob von Uexküll’s concept of *Umwelten* and his theory of biosemiotics. Von Uexküll understood ecology as a web of interconnected sentient worlds that all species construct around themselves in order to communicate with members of their own, as well as other, species. The chapter continues with a critical discussion of Timothy Morton’s concept of “dark ecology” (Morton, 2007) that rejects any
attempts of “worlding” to put forward the concept of an infinite ecological mesh in which life forms coexist with non-living objects. The end of this chapter will segue into my practice in order to explain how photographic investigations conducted during the early stages of my research influenced my theoretical understandings and vice versa.

A detailed exegesis of my practice-led research then follows as the main body of this dissertation. It presents correlating bodies of my work executed in Brisbane and Berlin. Each project incorporates some of the findings discussed in the first two chapters and investigates the capacity of photography to visualize and communicate them.

Chapter three presents my first attempts to engage with nature in an urban context. It explores a ritual of daily photography in my subtropical garden in Brisbane as a tool to develop tacit knowledge about this demarcated environment. Over a period of two years, I combined my theoretical studies with interludes of photographing in the garden. Eventually the project resulted in a video that amalgamated images of various small, nonhuman worlds discovered in the garden, with crops taken out of The Little Garden of Paradise, a painting by an unknown master from the beginning of the 15th century that represents a significant example of the iconography of the Hortus Conclusus.

Chapter four describes how my practice-led research into the Gleisdreieck Park developed during two extended stays in Berlin. My photographs show a unique scenario of ruderal vegetation that once occupied an abandoned and disturbed urban environment but is now contained within a delimitated formal parkland. Over many months I photographed overlapping human and nonhuman worlds within the park responding to changing seasons. Unlike the macro photography of my Brisbane garden, in Berlin I concentrated on large panoramic views stitched together from multiple photographs in Photoshop software to explore this unique environment.

Chapter five investigates the studio as an instrument of classification and a portal between nature and culture. It explains how raising and photographing
plant seedling in studio set-ups in Brisbane and Berlin constituted a major project of my research. This project resulted in numerous exhibitions and outdoor displays in Australia and overseas. These public exhibitions became a crucial tool to explore and critique shifting human categories of nature through a series of related photographic projects.

Chapter six forms a key chapter, as it puts forward an ecocritical approach to photography and shows how it has informed my research in ways that make an innovative contribution to the field of practice in which I work. It further considers emerging theories of non-representational thinking to define photography as an embodied material practice in the digital age. This discussion prepares the ground for the last chapter of this dissertation, which presents the defining outcome of my research.

The last and major body of work discussed in chapter seven considers non-representational approaches to develop a new practice-led methodology that uses the selfie and smartphone technology to expound and communicate shifting categorizations of nature. Titled *What is nature?*, this body of work presents installations of large panoramic prints and selfies taken on smartphone screens to present different authors and multiple views of natural habitats in urban and nonurban settings.

The emerging epoch of the Anthropocene leads us into an unchartered new era for our entire planet where the stakes are infinitely higher than they have ever been before in human history. Looking at this frightening scenario, I contend that humanity will never be able to tackle any of the problems that arise out of the Anthropocene unless we come closer towards an understanding and acceptance of our interconnectedness with the nonhuman world with which we share this planet.
Chapter One

A Garden Locked: The Hortus Conclusus

Location

Apart from art history, an important departure point for my work as an artist is my personal life, in particular the fact that it is engaged in two very different countries. Both Australia and Germany form temporary and often opposing habitual locations with which I am nevertheless intimately connected. The tacit knowledge I have of these distinct environments has led to conflicting views that implicitly shape the way I visualize the world around me.

According to Martin Heidegger’s lecture Building Dwelling Thinking, a location (locale) comes into existence within the presence of buildings. Only buildings that have become locale allow for spaces to open up for the dwellings of mortals. In this sense a location reveals itself over time through thoughtful human dwelling that cares for its surroundings (1971a, 359–360). In other words, a location can only reveal itself to humans through their long and thoughtful dwelling in one place.

Heidegger’s lecture was presented in Darmstadt in August 1951 in the context of an acute housing shortage in West Germany caused by the destruction wrought by World War II and the subsequent arrival of millions of German refugees fleeing from lost territories in the East. It must be assumed that the lecture was conceived at least in part as a response to this situation. Heidegger presumably regarded the housing of vast numbers of displaced people in temporary accommodation as a threat to his heightened idea of dwelling that links buildings and locale. A refugee, or even a migrant, it must be assumed, cannot dwell in Heidegger’s sense. On the other hand, for refugees searching for a roof over their heads, dwelling in Heidegger’s enlightened sense was neither a priority nor an option. At the beginning of the 21st century these thoughts are pertinent again as the mass migration of
refugees from disenfranchised countries in Africa and Asia is gathering pace, with unforeseeable consequences for the future.

Continuing with Heidegger’s thoughts, *locale* does not reveal itself without dwelling that involves a sense of responsibility:

> Mortals dwell in that they save the earth […] To save properly means to set something free into its own essence. To save the earth is more than to exploit it or even wear it out. Saving the earth does not master the earth and does not subjugate it, which is merely one step from boundless spoliation. (Heidegger, 1971a, 352)

Applying these thoughts to the rampant consumerism of the rich industrial nations today, this lifestyle compromises Heidegger’s elevated notion of dwelling even further. Although his outlook is essentially conservative, *locale* in his sense is nonetheless defined by a sense of responsibility instead of the exploitation of place, and does not endorse material ownership as the ultimate goal. Heidegger’s sense of dwelling is idealistic rather than consumer-orientated. In contrast, the prevailing climate of late capitalism that currently shapes human existence is deeply rooted in a vicious cycle of consumption and exploitation of natural resources on a global scale. In this context, location is understood increasingly as real estate, and hence a commodity to be consumed not only in places of permanent residency but also when we roam the globe as tourists or as temporary residents. Even when we stay in one place we become increasingly dislocated within the virtual realm of the World Wide Web, which compresses our spatial sense of global orientation, and in relation to Heidegger’s sense of dwelling, potentially to the experience of spiritual disorientation. The active pursuit of *locating* ourselves through self-satisfaction within the parameters of a consumer-driven society seems to lead us further and further adrift from Heidegger’s sense of *locale*. Meanwhile, we are not taking responsibility for the earth as a whole.

My life reflects vital aspects of this conundrum of globalized capitalism. Currently I am a temporary resident in – or between – two big cities in
Australia and Germany: Brisbane and Berlin, although, unlike a refugee, I am a privileged voluntary migrant. But voluntary or non-voluntary, no emigrant ever leaves their place of origin completely, and no immigrant ever arrives fully at his/her destination. This is an experience I share with each and every migrant. But, unlike earlier times when the lack of modern modes of transport restricted global travel and migrants were bound much more comprehensively to their adopted country of residence, my movements today are far less restricted and I am now able to live in Australia and Germany simultaneously. Bridging the distance between these two locations becomes another consumerist act, which not only contributes significant amounts of carbon pollution to the environment but also extends the conundrum of being between even further, to the point where the question arises whether I am fully able to locate myself at all.

My migratory experience is directly reflected in my art; in fact, it has been the driving force underlying all my artistic expression. My life as an artist coincided with my migration from Germany to Australia when I began my undergraduate studies in art and photography shortly after my arrival in Australia. My first meaningful body of work as a student was called Terra Nullius and was a photo essay about my attempt to settle in Australia. The Australian critic and writer Timothy Morrell observes:

Then he [Froese] moved to Australia, where he was culturally German, legally Canadian and geographically Tasmanian. For a person like that, nothing can seem natural or normal. The migrant’s experience of dislocation heightens awareness of the specific, individual character of things and makes everything strange. (Morrell, 2009, 33)

A European perspective is offered by Andrea Domesle when she adds:

In this context it might appear as unusual that […] a photographer like Joachim Froese has been dedicaing his complete photographic work to the still life genre, but maybe only from a European perspective. From the perspective of the German emigrant artist it is not at all unusual. It is as though, with the increasing distance to the country he left behind, an increased sensibility for its culture is gradually taking shape. (Domesle, 2009, 39)
Both writers describe the “heightened awareness” and “increased sensibility” of migrant artists, that results in “strange” and “unusual” viewpoints. But what then is a ‘normal’, ‘usual’ or even a ‘natural’ viewpoint?

The question this suggests is: can the (voluntary or involuntary) migrant of the 21st century be part of locale, which is to ask whether he/she is able to dwell in the Heideggerian sense? Or can we dwell in the in-between, or the interstices of a globalised world and perhaps turn it into locale?

Heidegger himself might be offering a possible solution to this problem in his The Origin of the Work of Art (1971b) in which he also talked about space that is created. In this text, space is created through art, a “world is set up” through an artwork. An artwork, he assumes, is a thing with a higher artistic or symbolic nature produced by an artist, yet

it is the work that first lets the artist emerge as a master of his art. The artist is the origin of the work. The work is the origin of the artist. Neither is without the other. (Heidegger, 1971b, 143)

The artist creates artworks through forming matter, but the artwork then becomes something else not dissimilar to a locale: a space (or clearing) in which beings reveal themselves as a whole. Following this thinking, a third location (locale) opens up for the migrant artist: His/her work, his/her studio practice in the wider sense of art making, might become the “clearing” for the global artist. I might be able to reconcile my disparate temporary locations through my practice as an art photographer.

These introductory thoughts on location and migration form the fundamental undercurrent for all the research that follows. Not only are my artworks based in different places of residence, but my interest in the idea of diverging sentient worlds, as well as an acceptance of multiple viewpoints is shaped by the processes of migration, just as the urge to consolidate them towards the idea of an overarching ‘bigger picture’ is embedded in my migratory experience.
The *Hortus Conclusus*

While at a first glance my itinerate position as a migrant within a seemingly borderless world stands in stark contrast to the motif of an enclosed garden, it is exactly this contrast which sparked my initial interest in the demarcated space of the *Hortus Conclusus*.

![Fig. 1 Unknown Upper Rhenish Master, The Little Garden of Paradise, oil on panel, 33.4 x 26.3 cm, 1410–20](http://www.staedelmuseum.de/en/collection/little-garden-paradise-ca-1410-20)

The motif of the *Hortus Conclusus* has fascinated me since I first went to the *Städel* Museum in Frankfurt, where I came across a small panel titled *The Little Garden of Paradise*, painted by an unknown Upper Rhenish Master at the beginning of the 15th century (Fig. 1). Back then I was inspired not only by the sheer beauty of the work but also by the strange company, including a slain miniature dragon and a little devil that appeared like a monkey, that had gathered inside this garden.

Looking at the mysterious scene a number of years ago prompted me to think of how this peculiar picture related to my own view of nature, and what a strange relationship we as humans have to the world around us in which we often look for more in nature in ways that perhaps make us see less. As the
current research developed, I returned to the *Hortus Conclusus* as a major visual inspiration and an important means of reconsidering how nature continues to be subject to enclosure and categorization.

Humanity’s impact on our planet is now a defining contributor to what is widely accepted as the Anthropocene, or the age in which anthropogenic factors have become an independent geo-physical force (Hamilton, 2016; Brooke and Otter, 2016; Butzer, 2015; Ellis, 2011; Steffen et al., 2007). Extending such a model beyond a geological approach, Brooke and Otter describe the Anthropocene condition as an emerging historical process in which the early modern period played a crucial role. Pointing, for example, to the global implications of the Colombian exchange and a dramatic increase in extinction rates and deforestation that all start around 1500, they claim that

> [t]he early modern period is, then, the pivot around which the whole question of the Anthropocene revolves. It marks the critical [...] moment of transition to truly globalized human activity and ecological impact. (Brooke and Otter, 2016, 283)

Coeval with these events, European easel painting during the 15th century was marked by an emerging realism including increasingly naturalistic renditions of flora and fauna. This chapter will investigate the *Hortus Conclusus* as a critical agent that might provide visual evidence of a *longue durée* of human understandings of nature that influenced some of the thinking during the emerging Anthropocene as defined by Brooke and Otter and with it our present time.

As I will explain, the *Hortus Conclusus* as a genre in painting provides evidence of a complex interplay of conventions which project pre-existing values onto human observations of nature. My examination of these historical conventions will serve as a prelude and comparative model for further investigation into contemporary environmental discourses in chapter two.

This analysis of historical views of nature draws on the methodology of historical picture analysis developed by the German historian Rainer Wohlfeil in the mid 1980s. Wohlfeil based his approach on the art historical
methodology advanced by Erwin Panowsky with whom he had a strong critical engagement. While selected images depicting historical individuals, family-histories, events and architecture have always been included in historical research, Wohlfeil sought to expand the scope of iconography in art historical research. He claimed that all images, even if they do not present historical reality, are nevertheless a reflection of mentality prevalent at the time of their production and are therefore important primary sources for historical research (Wohlfeil, 1991).

Wohlfeil’s specific method of image analysis is reminiscent of an approach to historical research developed earlier through the *Annales* school, which also put forward a concept of *mentalité* to understand historical events as long-term processes (*longue durée*). According to *Annales* school historians such as Marc Bloch, Lucien Febvre and Emmanuel Le Roy Ladurie, these processes are embedded in the mentality (*mentalité*) of their time. It was a school that recommended a multi-disciplinary approach to history, encompassing sociological and psychological analyses as well as a consideration of geological and climatic conditions (Prentis, 2001) – an holistic approach that has informed my own research.

*Hortus Conclusus* images borrow much of their appearance from the architecture of medieval gardens, but must foremost be understood as a direct visual translation of the biblical Song of Solomon: the ancient Jewish love poem in which a female lover is described as an enclosed garden. The Song of Solomon is included in the Old Testament as one of the Books of Wisdom; however, patristic thinking initially struggled to come to terms with the barely disguised eroticism of the poem. Eventually commentators such as the Benedictine theologian Rupert von Deutz (ca. 1080–1129) established a connection between the female protagonist in the text and the Virgin Mary. Now the Song of Solomon became widely interpreted as an adoration of the Mother of God (Yoshikawa; Miwa, 2011; Meier, 2006).
In its visual form the *Hortus Conclusus* first appeared at the beginning of the 14th century in illuminated manuscripts, where it featured predominantly as a religious motif accompanying devotional texts and prayers. These images typically showed the Holy Virgin surrounded by other female saints in a stylized enclosed garden, often accompanied by verses from the Song of Solomon, which were embedded as banderols within the picture (Fig. 2). Less frequently, the garden appeared in a secular context wherein miniature illustrations or woodcuts of the enclosed garden accompanied troubadour tales of courtly love such as the French *Roman de la Rose*, written by Guillaume de Lorris. In these secular narratives, a rose garden in the form of a *Hortus Conclusus* regularly served as the background for the central part of the story, in which a courtier woos the female target of his desire (Fig. 3).
During the first half of 15th century the *Hortus Conclusus* finally developed into a distinct but short-lived genre in European easel painting, particularly along the river Rhine in Germany and the neighbouring Netherlands. As many contemporaneous illuminations in medieval manuscripts these paintings also featured the Virgin Mary. Again, she typically resides inside a garden, but now this garden is increasingly characterized by an array of detailed floral depictions. These realistic depictions of natural phenomena, developing during the transition from the pre-modern to the early modern period, are the focus of my research.

The enclosed garden can be found in the *oeuvre* of painters such as Jan van Eyck, the Master of Flémalle, and Martin Schongauer; however, it probably became most developed in the tradition of the ‘Cologne School of Painting’, where it featured foremost in works by Stefan Lochner. His *oeuvre* included important works such as *The Madonna of the Rose Garden* (Fig. 4), *Triptych with Madonna and Child in an Enclosed Garden*, and the *Altarpiece of the Patron Saints of Cologne* (Fig. 5).
From the middle of the 15th century *Hortus Conclusus* paintings became increasingly less distinct and the garden’s enclosure less defined, and the rose bush became a symbol representing not only the Virgin Mary but also Christ himself (Fig. 6). From the beginning of the 16th century onwards, the
Madonna with Child continued to remain a popular image, but by then one more often placed into an open landscape (Fig. 7).

Fig. 6 Martin Schongauer, *Madonna and Child in a Rose Arbour*, tempera on wood, 112 x 201 cm, 1473
[https://en.wikipedia.org/wiki/Martin_Schongauer](https://en.wikipedia.org/wiki/Martin_Schongauer)

Fig. 7 Workshop of Albrecht Dürer, *The Virgin and Child (The Madonna with the Iris)*, oil on lime, 117.2 x 149.2 cm, 1500–10
The most famous *Hortus Conclusus* image, however, is perhaps the one that first caught my attention: *The Little Garden of Paradise* (Fig. 1). It shows Mary reading a book, accompanied by an infant Jesus playing a zither, and surrounded by a number of figures, which are assumed to relate to holy characters and mythological creatures (Brinkmann and Kemperdick, 2002). In accord with the Song of Solomon, the garden setting includes a fountain as well as a range of flowers and fruit trees. A high wall is featured at the top and the left of the garden, possibly continuing outside the picture plane. The only visible element of the outside world is a tree directly behind the wall with a branch protruding into the space of the garden itself, and a number of birds flying in and out.

![Fig. 1 Unknown Upper Rhenish Master, The Little Garden of Paradise, oil on panel, 33.4 x 26.3 cm, 1410–20](http://www.staedelmuseum.de/en/collection/little-garden-paradise-ca-1410-20)

Unlike other *Hortus Conclusus* images, the title of the painting makes a direct reference to the Garden of Eden as paradise, which some art historians see as confirmation that this is what is represented in the picture itself. Ewald Vetter, for example, interpreted the two trees inside the garden as Eden’s trees of knowledge (Brinkmann and Kemperdick, 2002). The term ‘paradise’ is in fact used sparingly in Christian epigraphy (Delumeau, 1995), and it is
today applied mostly in conjunction with an idea of heaven that refers to a perceived after-world beyond our earthly existence. In the Judaeo-Christian tradition, however, it was primarily linked to the biblical Garden of Eden, which was believed to be a real place on earth, a view that had particularly strong currency in the late Middle Ages. Eden was seen as either a place of waiting in which the righteous Christian spent time before ascending to heaven and/or as a place that would become re-opened and accessible at the time of final judgement (Delumeau, 1995).

In reading the Hortus Conclusus in the context of paradise, the enclosure around the garden appears to be reflective not only of Mary’s sacred virginity (Miwa, 2011; Reinitzer, 1982) but also of a protected sacred location on earth. Paradise, described as the deepest archaeological layer of Western utopia (Manuel and Manuel, 1979), became a nostalgic point of reference, which, during the 16th and 17th centuries, developed into a symbol of longing for a mystical Golden Age (Giesecke and Jacobs, 2012; Delumeau, 1995). The cultured environment of actual gardens was perceived as a reflection on the utopian ideal of peaceful sanctuary.

From Creature to Nature

In the medieval and early modern eras the concept that God’s creatures had to be a reflection of his divine spirit shaped an understanding of the natural world. Nature was compared to a mirror or a book, which, complementing the book of scripture, guided an allegorical reading of natural phenomena that built a bridge from the verbal realm of scripture to the visible world. The spiritual interpretation of nature as Creation eventually combined with the gradual emergence of the Enlightenment in the 17th century to result in a new, more secular curiosity about nature and natural processes. Only then the eventual demise of allegorical reading would allow for the emergence of nature as an autonomous authority in its own right, detached from the word of the Bible (Harrison, 2006).
The *Hortus Conclusus* constitutes a visual manifestation of complex interrelated religious and medicinal categorization principles involved in the interpretation of nature already prevalent in medieval society. The minute rendition of a strawberry found for example in Lochner’s *Altarpiece of the Patron Saints of Cologne* (Fig. 8) can be read as a visual manifestation of Christian concepts: its three leaves point towards the Holy Trinity, its white petals towards Mary’s chastity, and the red fruit represents the blood shed by Christ. These divine properties, revealed through the strawberry’s shape and form, were equally represented through the medicinal properties it was understood to hold. Ulcers, anaemia, shingles, diarrhoea, liver ailments and stomatitis were all treated with applications of strawberry tea and tinctures prepared from the plant’s leaves, fruit and roots (Comes, 2013; Grieve and Leyel, 1976).

Fig. 8  Stefan Lochner, detail of the Altarpiece of the Patron Saints of Cologne, mixed technique on wood, 1440–45

https://goo.gl/fzXq1v

Lottlisa Behling also acknowledges the status of flora as allegorical signs of the sacred. In her seminal book on floral depictions in 15th century German panel painting she contends that the allegorical quality of the *Hortus Conclusus* represents a prolonged period of concurrent and overlapping
interpretations of nature. This leads her to argue that, at that particular time, flowers were no longer read exclusively as allegory. Instead they were understood simultaneously to constitute both a symbolic portrayal of Mary and/or other saintly figures and a description of natural phenomena.

Floral depictions in mediaeval art have a predominantly symbolic character. They stand for spiritual values; they epitomize the character of the person they accompany, in particular in Mariology. [...] In the first half of the 15th century, increasingly in the second, and in particular at the turn of the 16th century flora becomes a focus of representation primarily in its own right. (Behling, 1957, 12–13, transl. by the author)

In this context Andrew Cunningham’s discussion of the figure of St Francis as a perceived proto-ecologist is important. He rejects the idea that Francis or other medieval religious scholars could have had any ecological and/or scientific outlook on nature and puts forward an argument that makes a decisive distinction between the medieval concept of creature and contemporary concepts of nature. Focusing on the medieval concept of Creation, he points out:

(1) when one spoke of creatures, one was speaking of them as products of God’s creative acts; so in this sense, when one spoke of creatures one was speaking of Him who had made them: God. And (2) when one took creatures into one’s serious consideration in the thirteenth century, it was in order to think about God via them. So it is essential for us to remember that ‘creatures’ was not (as it is primarily today) just a neutral shorthand term to refer to all animals and insects, with no allusion express or implied to God or His creation. Rather, the very use of the term referred to God the creator and His creative acts.

(Cunningham, 2000, 624–625)

Philip Ball, on the other hand, observes a scientific interest emerging as early as the 12th century, and proposes that an idea of fundamental laws governing the universe and accessible to human reason began to take shape then. He points towards the cathedral school of Chartres, where, after 1120, an initially abstract interest in natural philosophy, based on the teachings of Plato, developed. With the growing influence of Aristotle’s writings during the 13th
century, this trust in reason encouraged the observation of natural phenomena and shaped the thinking of scholars such as Thomas Aquinas, Robert Grosseteste and Roger Bacon:

It was in the twelfth and thirteenth centuries that the Universe ceased to be a forest of symbols designed by God for humankind’s spiritual edification, and became instead a source of intrinsic intellectual value and fascination, governed by logic. One can see this even in the shifting religious imagery of the time, such as the transformation of sculpted flora on the Gothic churches from stylized forms to identifiable plant species. Art, theology, philosophy, social structures – all felt the influence of this altered perspective as we began to find our true place in the world. (Ball, 2008, 818)

The historical scenarios put forward by Ball and Cunningham both have bearing on my analysis of the Hortus Conclusus. Aristotle’s emphasis on observation as described by Ball is clearly palpable in the intricate detail (and knowledge) of the flora depicted in the Hortus Conclusus. Similarly, Cunningham’s conclusive breakdown of the relationship between creator, creation and creature and its bearing on a medieval mind has strong currency and must be regarded as a fundamental prerequisite for a comprehensive reading of its iconography. In addition, Martin Büchsel describes in detail why realistic depictions in medieval Europe do not automatically imply realistic connotations, but rather constitute a projection plane for symbolic attribution of divine qualities (Büchsel, 2005).

Wendy Wheeler points out, that despite important differences between a pre-modern sacred and a modern secular worldview, both interpretations of nature are related. Referring to Mircea Eliade’s argument that sacred experience provides humans orientation to understand the world around them as “objective reality” (Eliade, 1959, 28) she argues that a scientific understanding of the world equally relies on communally shared understandings perceived as objectively real. In this important sense scientific knowledge is thus contiguous with sacred knowledge (Wheeler, 2006).

Wheeler’s suggestion that the principle of one objective world underpins sacred and scientific reasoning might lead us to read human modes of
categorizing nature as a *longue durée* of cultural formations rather than a succession of dissonant principles. While it would be misleading to simply claim an unbroken trajectory of thinking from the pre-modern period to the present-day scenario, an analysis of the common ground between the two might help us to gain a critical understanding of models of nature that have shaped the entire modern period.

Wheeler suggests further that pre-modern sacred and modern scientific views of nature are not only inter-related, but that they also share an attempt to uphold a “human-nature, subject-object, distinction itself” (Wheeler, 2006, 91). These boundaries manifest themselves in a deep-rooted suspicion of the body and a distrust of embodied knowledge because

> [...] western metaphysics, including its expression in modern science, performs the same gesture in relation to purity and the body that religious ritual performs. It expels it [...] (Wheeler, 2006, 92)

Wheeler herself, however, puts a strong emphasis on tacit, embodied, knowledge as an important counter model to both modern and pre-modern ways of knowing and their common attempt to establish one objective reality. Her idea that important knowledge derives from an experiential tacit basis might also lead us towards an unexpected new reading of the *Hortus Conclusus*, in particular in the context of the Black Death, a pandemic of the bubonic plague, which arrived in Europe in 1347 – at about the same time when images of the *Hortus Conclusus* gained popularity.

As outlined earlier, during the 15th century the concept of a garden was commonly linked to the idea of a divine sanctuary. The idea that the *Hortus Conclusus* might offer glimpses of a mythical Eden (Meier, 2006) providing spiritual sanctuary from a hostile outside becomes important in particular in the context of the Black Death. Though estimates vary on the extent of fatalities due to the Black Death, it must be regarded as one of the worst ecological disasters in European history, and one which had a significant impact on every aspect of life. There was no known cure to battle the disease and the immediate reaction of the general populace was widespread panic.
When the plague arrived, daily life came to an almost complete standstill. In the cities merchants abandoned their businesses and fled town, and in the country peasants left their fields. The clergy deserted their parishes and the dead were disposed of in mass graves, often without the rites of last passage, which according to Christian belief were a prerequisite for the preparation of souls for the Last Judgement. The plague was perceived as a divine sentence, a catastrophe for life before and after death, and humanity seemed utterly defenceless (Gottfried, 1983; Herlihy, 1997).

Recent findings (Moseng, 2009; Callaway, 2011) point towards the theory that the disease was transmitted through the bacillus *Yersinia pestis*, which ‘jumped’ from wild rodents in Asia to humans, who developed the deadly disease. The fact that the disease gathered strength and virulence along established trade routes from Asia to Europe (Nash, 2014) is evidence to suggest that it constituted an ecological crisis at least partly induced by human behaviour.

In contrast to the related *Quattrocento* motif of the *Madonna della Misericordia, Hortus Conclusus* imagery, however, offers no direct references to the Black Death. Naoë Kukita Yoshikawa nevertheless draws a link between the enclosed garden and the disease to propose that it must also be understood as a protection against the epidemic raging at the time. She points towards the therapeutic role medieval gardens played in maintaining the health of body and soul and refers in particular to the medieval *regimen sanitatis*. This popular medical work saw physical and spiritual care as intrinsically connected, and promoted the healing qualities of air and smell (Yoshikawa, 2014). Arguing from a feminist point of view, writers such as Nancy Miwa (2011) and Yoshikawa suggest that the medicinal plants depicted inside the enclosed garden reflect experiential ‘lived’ female knowledge.

Female medieval healers, commonly referred to as wise-women, often possessed an in-depth knowledge of herbal remedies and their practical application. However, changes in the medical profession between the 13th and
16\textsuperscript{th} centuries saw women increasingly excluded from official practices. This meant they were confined to menial positions and the practical aspects of medical care, while others worked as unlicensed female healers with an increasing risk of being persecuted as witches (Minkowski, 1992; Whaley, 2011). Yoshikawa elaborates on this role of medieval women as healers in order to expand the traditional exclusive reading of the *Hortus Conclusus* in the context of the Song of Solomon. Pointing further towards widespread medieval interpretations of Christ and the Virgin as physician and nurse she brings forward an argument which suggests that

the Virgin is not merely the bride of the Song of Songs or an immaculate receptacle of the divine Child, but also, given the increasing awareness of therapeutic power of horticulture following the onset of plague (1347–50) in later medieval society, suggests that the Virgin in the garden also plays a therapeutic role in maintaining the health of the body and the soul.

(Yoshikawa, 2014, 13)

This argument is further supported by Liz Herbert McAvoy, who points to Hildegard von Bingen’s concept of *viriditas* (greenness), which she argues found its expression in fresh growth and fecundity and constituted her central principle of divinity (Herbert McAvoy, 2014). Von Bingen certainly personified a sophisticated knowledge in herbal remedies which must be assumed was widespread among women at the time. Such an assumption is strengthened when considering the generic German term *Kräuterhexe* (herb-witch), which indicates both the connections between women and herbal knowledge and the suppression of this embodied (female) knowledge, which found a brutal zenith between the 15\textsuperscript{th} and 17\textsuperscript{th} centuries in widespread witch-hunts. It lies beyond the scope of this dissertation to further develop a comprehensive art historical argument for this case, in particular in consideration of the fact that all the painters, their patrons and most of their clients were male, and the difficulty of ascertaining their intentions and perceptions. Nevertheless, the fact remains that the *Hortus Conclusus* manifests itself as a multifaceted, sometimes contradictory, and often surprising, carrier of meaning. Beyond the *longue-durée* of evolving categorizations of nature outlined above, embedded
within it we might read some unexpected aspects of embodied knowledge, indicative of (principally female) tacit knowledge.

Mariology eventually became a target during the Reformation, when Martin Luther implied that images of the Virgin Mary had become heretic idols (Dinzelbacher, 1996). Luther’s judgement was certainly in line with the general rejection of embodied knowledge in reductive thinking, a major modern legacy that still holds currency. However, as I will outline in the next chapter, this reductionist view is becoming increasingly challenged by a new school of scientific thinking, which relies on complexity science and biosemitoics to place a new emphasis on the body.
Chapter Two

Categorizations of the Nonhuman World

Kenneth Clark describes the *Hortus Conclusus* as “a world of delicate, sensuous perception” (Clark, 1976, 17). By using the term *world* he evokes two powerful imaginings: the shared experience of our spatio-temporal surroundings, as well as a strong sensual experience reliant on one’s *being-in-the-world*. Recently, the idea of a world that surrounds us, and the question of what it might constitute, has come under increasing scrutiny. This chapter focuses on some of the thinking about how all living beings experience and construct worlds around them, and I investigate what kind of role categorization might play in this process – for humans and nonhumans.

The principle driver of this doctoral project has been my practice as a photographer. Nevertheless, the nature of my two research questions put an emphasis on both an investigation of photography *and* the abstract processes it might be able to expound. As I will attempt to demonstrate, my research did not address theory and practice in isolation from each other; instead, both became interconnected paths to investigate human interpretations of nature, each complementing and challenging the other. In line with this approach, the end of this chapter will segue into my practice in order to explain how photographic investigations conducted during the early stages of my research influenced my theoretical understandings and vice versa.

However, before I continue, the term ‘categorization’ needs to be defined within the scope of this dissertation. Although Elin Jacobs points out that a plethora of definitions, theories and models exist across different disciplines of research, she describes categorization as a process that forms a cognitive aggregation of similar entities which is required so that it is possible to discover order in complex environments:

Consider a situation in which each separate entity – each tree, each flower, or each drop of rain – was distinct from all other entities and carried its own
unique set of defining characteristics. [...] The individual would not be able to handle the variety and complexity of her day-to-day interactions with the environment. [...] [C]ategorization serves as the fundamental cognitive mechanism that simplifies the individual experience of the environment. (Jacob, 2004, 518)

According to Jacob, categorization is a non-binding, flexible process that forms clusters of typical identities. These clusters can either be context-dependent or independent, and may or may not form a hierarchical structure. Understanding categorization as a fundamental cognitive mechanism without which no meaningful perception of the environment would be possible suggests that it is not an exclusively human mode of processing information, but rather a fundamental principle of all animal behaviour:

A category exists whenever two or more distinguishable objects or events are treated equivalently. This equivalent treatment may take any number of forms, such as labeling distinct objects or events with the same name, or performing the same action on different objects. Stimulus situations are unique, but organisms do not treat them uniquely; they respond on the basis of past learning and categorization. In this sense, categorization may be considered one of the most basic functions of living creatures. (Mervis and Rosch, 1981, 89)

This assumption is supported by recent investigations into how nonhuman animals learn about perceptual categories. Nigerian dwarf goats (Capra hircus), for example, have been shown not only to be able to form categories based on visual similarities of artificial symbols, but also to apply them to new symbols (Meyer et al., 2012). Furthermore, Monica Gagliano continues to produce evidence that plants, like other living organisms, actively acquire information from their surroundings to monitor and integrate environmental parameters (Gagliano, 2013; Gagliano et al., 2014).

The terms categorization and classification are often used indiscriminately. However, as defined by Jacob, they constitute related but nonetheless distinct approaches used to organize information. In contrast to categorization, classification is based on mutually exclusive, binding, and non-overlapping
boundaries that are reliant on predetermined theoretical guidelines or principles (Jacob, 2004). While a comprehensive discussion of both terms would go far beyond the scope of this dissertation, I will use Jacob as a guide to separate the two terms.

Categorization is an inclusive term that describes both the conscious and unconscious systems of organization underpinning all human and nonhuman attempts to perceive patterns in a complex environment.

The term classification, on the other hand, defines a particular kind of human categorization that is reliant on language to identify and communicate exclusive entities of abstract concepts. Classification systems form logical structures and conceptual categories which merge as increasingly complex cultural interpretations of natural and cultural phenomena. They are, at the same time, deeply embedded within the biosemiotic ecosystem that forms a semiosphere shared by all forms of life on this planet (Maran and Kull, 2014).

**Complexity Science**

Complexity science emerged at the beginning of the 20th century when the Austrian biologist Ludwig von Bertalanffy formulated his General Systems Theory, which observed regularities in biological and physical, but also sociological, structures. Many of von Bertalanffy’s theories were to become confirmed through findings in other fields, in particular Ilya Prigogine’s research into open, self-organizing systems, which indicated shortfalls in the reductionist thinking of the time (Greschik, 1998; Wheeler, 2006). Complexity theory is based on Prigogine’s description of open systems, and aims to build on the methodological power of reductionism in order to set it within a larger frame of understanding (Wheeler, 2006).

An open system, which, unlike a closed (linear) system, interacts with the environment around it through a constant exchange of energy, behaves highly unpredictably in such a scenario, and oscillates between orderly and chaotic states. The behaviour of this kind of system emerges self-organized as a nonlinear pattern and is determined through an infinite number of exchanges
between interdependent agents. This complex chain of relationships could be described as an ‘ensemble’ that exceeds the sum of its parts. The unpredictability of the formation and the duration of the ensemble is due to an extreme sensitivity to small changes in initial conditions (Bar-Yam, 2001; Greschik, 1998).

It can be difficult to distinguish an open from a closed system, but the two must not be confused, as they have different properties. A closed system always leans towards entropy, which cannot be reversed; without an input of energy it develops from an orderly to a disorderly, chaotic state. In contrast, an open system, fed by energy, is characterized by order that regularly emerges in self-organized patterns out of initially chaotic structures; instead of increasing entropy, these patterns develop towards increasing complexity.

Recent findings suggest that self-organization within complex, open systems might have played a crucial role in the emergence and development of life on earth, which until recently was attributed mainly to chance (Kauffman, 1995; Margulis, 1998), and complex structures are also believed to underpin important aspects of social and economic processes (Ambrose et al., 2014; Greschik, 1998).

**Cognition and Complexity**

Complex structures might also have a fundamental bearing on cognition and the way in which humans (and nonhumans) acquire knowledge. In the 1980s, Howard Margolis anticipated aspects of complexity science when he identified pattern making as the fundamental principle in all cognitive processes. He argued that outside cues prompt the brain to form patterns, which then themselves become cues to form more patterns, a model reminiscent of Charles Peirce’s concept of an infinite chain of signs (Atkin, 2013). These patterns are formed consciously or unconsciously. According to Margolis, our perception of the world around us is essentially formed through what he calls *cues-to-patterns sequences*. It relies heavily on affective learning and
intuition, from which abstract rule-following processes, including logic, emanate:

We do, after all, follow, and with even more difficulty create step-by-step sequences like computer programs, mathematical proofs, instructions for assembling bicycles, and so on. But within the argument developed here, that must be done in terms of cues-to-patterns sequences. Rule-following processes, including logic, must be reduced to pattern-recognition, not the reverse. The brain, on the account here, is not properly characterized as illogical or irrational. But it is certainly misleading to call it logical or rational. It is, rather, a-logical and a-rational. (Margolis, 1987, 4)

Although, by his own account, Margolis was unable to come up with a theory of how the brain operates to recognize patterns, his proposition, that affect and intuition have to play an important role in cues-to-pattern sequences, positioned him critically towards more traditional computational models of cognition that saw a disembodied mind in dualistic opposition with the human body. Recent advances in complexity science are further challenging traditional models of a brain that works independently of the body. Today, the neural system is widely understood as a complex open system of interconnected neurons that cannot be explained in reductionist terms alone (Koch and Laurent, 1999; Portugali, 2011; Saitta and Zucker, 2013).

The emerging concept of embodied cognition has become an umbrella term for a number of approaches that describe a fundamental interdependence of body and mind to form one integrated cognitive system. An agent’s body, and the way it operates in the wider environment around it, is now believed to play a significant role in cognitive processing (Saitta and Zucker, 2013; Wilson and Foglia, 2016). Body and mind together are part of a wider surrounding ecological environment, which adds to a complex chain of interdependent and interlinked processes.

In this context, a theory formulated by Varela, Thompson and Rosch – summarized by Lawrence Shapiro (2010) as “world building” – is of particular importance as it repositions traditional models of one objectively verifiable ‘real’ world. Coming from different disciplines the three scientists draw on
ideas from neuroscience, evolutionary theory, theories of categorization, and a phenomenological tradition within philosophy. They propose a perception–action loop in which the bodily movement of an organism determines its perception of the world. As it moves through the world its perceptions change and in turn influence future movement, which in its own turn determines new perceptions in another continuous chain (Shapiro, 2010).

This idea also relates to Peirce’s infinite chain of signs, but further acknowledges the model of subjective Umwelten developed by Jakob von Uexküll in the first half of the 20th century. Varela, Thomson and Rosch’s claim that cognition depends on sensorimotor capacities renders the world “perceiver-dependent” on bodily functions, and consequently challenges the concept of a pre-given objective world. Instead, it points towards the constant interplay between an existing environment and a subjective agent within it:

By using the term embodied we mean to highlight two points: first, that cognition depends upon the kinds of experience that come from having a body with various sensorimotor capacities, and second, that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological, and cultural context. By using the term action we mean to emphasize once again that sensory and motor processes, perception and action, are fundamentally inseparable in lived cognition. (Varela, Thompson & Rosch, quoted in Shapiro, 2010, 52)

As Shapiro points out, world building is one theory among numerous that have been formulated under the label of embodied cognition. Most of them are still in their infancy and under debate; all of them, however, rely on the important role the body plays in cognition and draw on aspects of complexity theory in order to challenge traditional, more computational, theories about how humans perceive the world.

Biosemiotics

The idea that a single ‘real’ world exists relies on the deterministic view that all physical phenomena are apparently underpinned by linear mechanistic
principles that can be observed and described objectively (Wheeler, 2006). This view remained largely unchallenged into the first half of the 20th century when Werner Heisenberg’s uncertainty principle pointed to the nonlinear behaviour of particles in quantum mechanics, a theory that began to challenge the notion of one objective world.

At about the same time, von Uexküll arrived at a similar position from a very different direction: the study of animal behaviour. Von Uexküll’s early theory of biosemiotics put the notion of one objective reality further into doubt as his alternative model of subjective Umwelten proposes that all species actively create unique biosemiotic Umwelten around themselves, according to their specific sensory perceptions (von Uexkull, 2010). This concept anticipates some of the models of cognition discussed above:

We must therefore imagine all the animals that animate Nature around us, be they beetles, butterflies, gnats, or dragonflies who populate a meadow, as having a soap bubble around them, closed on all sides, which closes off their visual space and in which everything visible for the subject is also enclosed. [...] Only when we can vividly imagine this fact will we recognize in our own world the bubble that encloses each and every one of us on all sides. Then, we will see each of our fellow human beings as being enclosed in bubbles that effortlessly overlap one another because they are made up of subjective perception signs. There is no space independent of subjects. (von Uexkull, 2010, 69–70)

Although von Uexküll does not refer directly to Charles Sanders Peirce’s theory of semiotics, his pragmatic idea of subjective Merkzeichen (perception signs) and Wirkzeichen (effect signs) that work in close cooperation can be regarded as semiotic in orientation (Sebeok, 1987) as it is consistent with Peirce’s theories (Sharov, 2001). Peirce defined signs as a triadic relationship of object, sign vehicle (signified), and interpretant, which are actively connected. The sign vehicle links object and interpretant in the perception of the interpreter. Signs can be based on physical connections (indexes), resemblance (icons) or conventions (symbols). Although a sign is determined
by an object it is inherently subjective because the object can never be experienced in itself but only in the form of the interpretant evoked in the perception of an interpreter through the sign vehicle. Such a theory of semiotics therefore dissolves the boundary between mind and matter (Atkin, 2013; De Jesu, 2016; Sharov, 2001).

The emerging field of biosemiotics incorporates both von Uexküll’s and Peirce’s theories and aspects of complexity science in order to define an organism’s *Umwelt* as a space of semiosis, “a unified, or integrated, field in which something previously understood as the preserve of humans alone (semiosis) was actually a feature of all living things” (Wheeler, 2006, 106). According to biosemiotic theory, all life forms are continuously engaged in fundamental semiotic exchange, not only as a way of communication between organisms (exosemiotics) but also as a principle at a biochemical level (endosemiotics) (Hoffmeyer, 2010). Regarding semiotic exchange as a fundamental function of life, biosemiotics rejects the binary opposition of nature and culture, and with it the divide between an intelligent, superior human subject and an inferior, nonhuman object. Human and nonhuman *Umwelten* are regarded as forming a complex, networked environment in which all forms of life must be regarded as equally important, active agents. These agents not only form their own subjective environments, but also influence each other through complex interdependent structures. To take any agent out of the system will have unpredictable consequences for the entire network, with potentially unpredictable consequences for all other interdependent agents, a model that in its consequences points towards the important role biodiversity might play in sustaining a crucial balance within a functioning ecosystem.

Timo Maran and Kalevi Kull further examine the role environmental perception and conceptual categorization play in the design, construction and transformation of environmental structures (Maran and Kull, 2014, 41). They claim that semiotic processes determine the matter surrounding living beings:
Semiotic construction makes (re-designs) the artefacts surrounding the organism. This means that sign processes not only permanently re-design our concepts but they also, and simultaneously, re-design our surrounding matter. (Maran and Kull, 2014, 42)

They continue to point out that these semiotic processes are not limited to categories based on the use of language. Instead lower level signs that are “either exclusively indexical (based on physical or causal connections) or iconic (based on similarity)” (Maran and Kull, 2014, 42) form the basis of biosemiotic exchange. Language and increasingly complex symbolic categories reliant upon it then emerge out of this non-conscious semiotic behaviour which underpins all life forms. These (cultural) symbolic categories – which in the context of my dissertation, I describe as systems of classification – are reliant upon, and can only be understood as, an expression of life that forms a non-cultural ecosystem of wider biosemiotic exchanges. This concept overcomes a divide between ‘nature’ and ‘culture’:

Culture is always part of an ecosystem and it never functions without non-linguistic sign systems, that is, without the non-cultural aspects of ecosystems and the semiosphere. Thus, first and foremost, the nature/culture dichotomy is a mistaken (illogical) dichotomy because even in the simplest model culture is only a form of relations within the sign relations that together create the semiosphere that can be legitimately opposed to the non-relational and non-living nature. (Maran and Kull, 2014, 46)

Human culture must be seen as an integral part of nature – not its opposite. This conclusion must also necessarily change our understanding of nonhuman life, as it gives rise to the concept of ‘animal culture’ as a closely related world in which nonhuman bodily feelings may coincide with similar human experiences:

Even at the insect level [...] resource-related signifying — bringing good news or relaying useless messages — may coincide with feelings of depression or elation. Indeed the bee returning with pollen and the message of its whereabouts may even enjoy the sort of intersubjective bliss reserved in human beings primarily for matinee idols and rock stars. (Sagan, 2010, 2–3)
In the tradition of Descartes’s mechanical biology, rationalist thinking by and large would reject outright any comparison of bees to rock stars as false anthropomorphism (Hoffmeyer, 2012). However, as Jesper Hoffmeyer argues, replacing anthropomorphism through an uncritical anthropocentrism runs the risk of placing humans outside of nature:

Like every other species in the world the human species is a product of evolution, and it is not reasonable to think that a world that has managed to create a human species would be deprived of all and every trace of human faculties. We therefore refuse to let the fear for anthropomorphisms deter us from considering the occurrence of natural intentionality. (Hoffmeyer, 2012, 99)

A biosemiotic approach such as the one taken by Hoffmeyer puts forward the scenario of a non-hierarchical interwoven network of semiotic relationships and worlds, in which our species no longer is able to claim a privileged position – despite the destructive capacities we are able to unleash on this highly complex system. If all life on this planet is related and interdependent, such a scenario must suggest that any damage we inflict on others must ultimately redound on ourselves.

**With or Without Worlds**

Since evidence is mounting that anthropogenic factors are contributing significantly to an ecological crisis that influences all aspects of life on our planet, a highly contested question has emerged: how we are to prevent further damage to our environment and the existence of other species while managing the dwindling natural resources available? To come to terms with these manifestations of the Anthropocene scenario, the ecocritical theorist Timothy Morton extends the debate around the existence of ‘worlds’. Revisiting aspects of von Uexküll’s idea of *Umwelten*, Morton regards the assumption of any kind of world as a misguided attempt of “worlding”:

On this view, life forms have worlds, and worlds have life forms: to destroy a life form, therefore, is to end ways of seeing and being in the world. There are,
however, serious questions about whether there is such a thing as “world”, and whether world making (“worlding”) provides a sufficient reason for respecting life forms. Is it ethically powerful and politically efficient to say that ideas about nature are instances of “worlding” – they construct worlds for living in, and so we should not tamper with them? There was a “world” of witch-ducking stools. Nazi ideas constituted a “world.” If the “worlding” argument is valid, we should have allowed the Nazis to have their world and not intervened in the Holocaust. (Morton, 2011, 168)

As an alternative to worlding he puts forward the idea of an open-ended and infinite ecological mesh without a centre or an edge, in which life forms coexist with non-living objects in such intimate proximity that it is impossible to even draw a life–nonlife distinction (Morton, 2011). This intimacy of objects now renders all relations random and proposes that causality itself is nothing more than an anthropocentric aesthetic:

People, plastic clothes pegs, piranhas and particles are all objects. And they share affinities. […] There is not much of a distinction between life and non-life (as there isn’t in contemporary life science). And there is not much of a distinction between intelligence and non-intelligence (as there is in contemporary artificial intelligence theory). Many of these distinctions are made by humans, for humans (anthropocentrism). […] If […] there is no functional difference between substance and accidents; if there is no difference between perceiving and doing; if there is no real difference between sentience and non-sentience—then causality itself is a strange, ultimately nonlocal aesthetic phenomenon. (Morton, 2013b, 222–223)

Summarizing his thoughts under the umbrella of “dark ecology”, he labels conventional ecological thinking as “ecomimesis”: an authenticating device that constructs an elaborate ideological mirage of nature through false aestheticization (Morton, 2007). Ecomimesis uses ambience as a means of poetics to suggest a surrounding world that does not exist beyond our human subjectiveness.
He proposes to think outside of human subjectivity, and describes global warming and nuclear radiation as examples of what he calls hyperobjects. Hyperobjects are all-encompassing events, which, although they have a massive impact on our existence, essentially lie beyond our corporeal experience and hence may only be measured through modern science and technology. He claims that “we find ourselves inside them, part of them yet not part of them” (Morton, 2013a, 39). To understand hyperobjects we not only have to leave behind our sentient world (the zone of things that surround our sentient being), but also accept the idea that there is no finite world as such, neither for us as a species, nor for any other form of existence.

These are powerful imaginings, which have caused an intense debate across current environmental thinking. Morton’s ideas have been criticized in regards to their usefulness to overcome the ecological crisis, which he himself describes (Nankin, 2014), questioned for their general ontological validity (Brown, 2013), challenged from an eco-feminist perspective for their neutralization of the body (Salleh, 2014), and labelled anti-human (Soper, 2016).

In the context of this dissertation I regard it as particularly important to consider Kate Soper’s criticism of what she describes as post-human theories. Concentrating on the intrinsic quality of non-animate nature she claims is counterproductive in a time when an ecological collapse caused by distinctive human behaviour needs to be dealt with:

But if we more seriously question whether we should continue to privilege human intellectual and emotional capacities in our dealings with other forms of being, then we shall surely also subvert the range of normative distinctions without which there would seem little point in moving the critique in the first place. […] To belittle what is distinctive to us in this way, is also to undermine the idea of the human person as enjoying any special claim to self-realisation. If Morton is right, why is he writing books? Or why should we find the idea of the clone morally problematic or think of cloning as destaining on our human species-being? (Soper, 2016, 162)
For Soper, Morton’s theory of an entangled mesh has reached a level of abstraction that has lost all capacity to guide human behaviour. Instead she calls for an ecological humanist approach that recognizes human kinship with other species, but also registers critical differences of human needs and behaviour to other animals. In her argument, an ecological crisis caused by human behaviour can only be resolved by addressing it from a human point of view (Soper, 2016).

Her position is reminiscent of the views William Grey put forward some 20 years earlier in response to aspects of Deep Ecology. Like Soper, Grey comes from an ecological position which is highly critical of unfettered human activity that ignores its environmental impact. Nevertheless, he proposes to reconsider the relevance of a (shallow) human scale of experience. In his view, a (deep) spatial and temporal perspective favoured by Deep Ecology might be counterproductive because it ultimately also belittles the impact of human behaviour:

> Once we eschew all human values, interests and preferences we are confronted with just too many alternatives, as we can see when we consider biological history over a billion year time scale. [...] We need to reject not anthropocentrism, but a particular short term and narrow conception of human interests and concerns. [...] What’s wrong with shallow views is not their concern about the well-being of humans, but that they do not really consider enough in what that well-being consists. (Grey, 1993, 473)

Morton’s mesh, as a non-causal, non-relational, ultimately non-sentient realm reduced to aesthetic experience, might constitute an intellectual tour de force, but in its essence it resembles a construction akin to religious belief. In their consequences, his theories are surprisingly reductive as – despite his excessive talk about objects and the ecological mesh – they place mind over matter, mental construction over lived experience. However, as outlined in this chapter, lived (human) experience and the body do play a crucial role in our understanding of the complex environment that surrounds us. Together, body and mind constitute a constant loop of exchange and stimulus out of which my sentient world emerges around me.
The Performance of Classification

My critical view of Morton’s theories developed over the duration of my doctoral research. To begin with, I was fascinated by his idea of an infinite ecological mesh and his radical rejection of worlds. However, doubts about these ideas were raised in particular when my photographic investigations consistently confirmed the existence of multiple worlds, which Morton had rejected. The first human and nonhuman worlds I encountered through my practice in 2014, when I took my camera with me on an extended camping trip to Girraween National Park in South-East Queensland.

Emma Marris describes national parks as carefully managed and protected pockets of nature, which we perceive as so-called wilderness (Marris, 2011). Following her argument, a national park could be regarded as a demarcated space that interprets a particular category of nature – in this case ‘wilderness’ – as worthy of protection.

This was indeed borne out when I entered Girraween, in the indications that I had crossed a spatial demarcation: signs and information sheets that prescribed a strict code of human behaviour that is designed to limit the possible impact of human visitors. Simultaneously, the environment around me had changed: pastoral land now had given way to a world of eucalypt forests and heathland. But worlding didn’t end at the borders of the park. Most of the protected nonhumans themselves seemed to be engaged in demarcating their own spaces. Numerous local animals had clearly defined nesting areas; currawongs and magpies fought fiercely over feeding territories around the picnic areas; and even the kangaroos were lounging around in defined social groupings. If worlds, as Morton states, do not exist, why were all those around me so engaged in worlding? There seemed to be an endless chain of worlds within worlds, with everybody and everything seemingly busy demarcating the space around them.

During an extended stay in the park I attempted to visualize some of these delimited worlds as I photographed lichen and ant nests, as well as human
tents. Human and nonhuman agents alike displayed similar acts of demarcation (Figs 9–13).

Fig. 9  Joachim Froese, *Strange Stranger (grey lichen)*, digital images, 2014

Fig. 10  Joachim Froese, *Strange Stranger (orange lichen)*, digital images, 2014

Fig. 11  Joachim Froese, *Strange Stranger (white lichen)*, digital images, 2014
In line with my first research question, the photographs I took during the stay in Girraween became my first attempts to translate Morton’s abstract concept of worlding into visual language. In the process, taking photographs became in itself an act of interpreting nature as I used visual language as a classification system (Jacob, 2004) to discover and apply order within the complex environment of the park. Claire Waterton (2003) expands on how we study nature, and describes it as “performative”. While attempts to classify the natural world around us frequently appear to be analytical and accurate, we are nonetheless simultaneously projecting our own values onto our observations, which in turn reinforce our ordering system (Waterton, 2003, 113–114). The performance of classification therefore constitutes an interplay of interwoven components such as “accurate replication” and “creative
improvisation”, both of which are enacted, to a large extent, in an implicit, hidden or masked manner (Waterton, 2003, 112).

My own practice of photographing worlds, and worlding, could be understood as a performance of classification, with consequent tensions between “accurate replication” and “creative improvisation” (Waterton, 2003). As an example, I was drawn to various spots of lichen, not only because I could rationally interpret them as demarcated spaces created by a symbiotic relationship between fungi and algae, but also because the abstract quality of their intriguing colour scheme attracted me. It could be argued that the application of my research criteria and my resulting interest in nonhuman modes of categorization and delimitation resembled the performance of accurate replication. Similarly, my artistic reception of the place constituted a performance of creative improvisation, which drew on a more tacit layer of knowledge acquired through years of artistic practice. This tacit knowledge led me to reconfigure my research questions into visual formations – and ultimately into works of art. The title for these photographs, *Strange Stranger*, derives from Morton’s object-oriented ontology, where he talks about *strange strangers* as fellow life forms in the mesh, in which all existing objects and life forms are intimately interconnected, yet remain strange to each other.

An opportunity to explore a different facet of South-East Queensland’s natural habitat arose in early 2015 through a collaboration with Dr Rod Fensham from the Department of Biological Sciences at the University of Queensland. At that time, I had begun to raise and photograph seedlings in my studio in Brisbane as a method of investigating human interpretations of nature (chapter five) and an exchange with Dr Fensham promised to provide vital botanical knowledge. Eventually I was invited to participate in a number of field trips into the Darling Downs.

Unlike Girraween National Park, the Darling Downs is an area of dense farmland heavily altered by human use. Nevertheless, this agrarian landscape includes pockets of grasslands that closely resemble a vegetation of native
flora that flourished before European settlement, and which botanists evaluate and monitor regularly (Fig. 14).

A high density of native grasses can still be found, in particular along former cattle routes, which leads to the strange situation that the most intact patches of local native grassland in the Darling Downs today are situated right next to the busy Warrego Highway between Toowoomba and Dalby (Fensham, 2010). In order to determine the numbers and diversity of local grass populations, scientists regularly visit selected and demarcated patches regarded as exemplary of the overall vegetation.
There was a second purpose of the excursions into the Darling Downs, however: to identify and photograph plants for a planned publication on the history and botany of the Darling Downs, which is currently being written by Dr Rod Fensham and Dr Jennifer Silcock. Until my arrival, both had mostly failed to produce satisfactory photographs for the book and they struggled in particular to isolate individual plants from the background. By this stage, I had developed my studio approach to photographing plant seedlings against a black background in the studio, and I suggested applying the same methodology in the field. We then started to ‘weed’ around and in front of the species in focus in order to isolate it visually from its immediate surroundings (Fig. 15). Here my advanced photographic skills made an important contribution to the envisaged publication, and in the process a close collaboration developed between the scientists and myself.

Beyond the problem of background, however, the depiction of the plants themselves presented a more complex challenge for me. While I focussed on a harmonious arrangement for each plant, their rendition in a scientific context meant I had to concentrate on taxonomic definitions of features such as leaf structures and flower displays, which are vital for the identification of each
species. Talking about these differences in approach led to a synthesis of artistic and scientific classification systems, resulting in aesthetically pleasing and scientifically useful images for the upcoming publication (Figs 16–17).

These early research projects played an important role in connecting my practical and theoretical investigations, a connection that set important parameters for the rest of this project. The following chapters will provide a cohesive exegesis of consecutive projects that became influenced by each other and the concepts I have discussed in this chapter.
Chapter Three

The Brisbane Garden: A Foray Into Other Sentient Worlds

In 2001, my partner and I moved into our house in South Brisbane, which was once a poor suburb but has now become one of the more affluent parts of the city. It offers the luxury of living on a typical Australian quarter-acre-style block with a house and garden only 20 minutes walk away from the CBD, located directly across the Brisbane River.

Due to the subtropical climate, much of our daily life is based outdoors. The back of the house opens up onto a veranda, which in turn forms a direct passage into the garden (Fig. 18). While at home I spend much of my time roaming the place. I check on the herbs, fight off small grasshoppers, water some thirsty plants when necessary, and I prune and I weed. At the same time, I watch. Lizards hunt insects, bees buzz around the lavender and birds whiz through the trees. When working at my desk, I take regular breaks to
potter around the garden, trying to consolidate a thought or to have a break from the computer. My life and work at home are thus deeply embedded in recurring and prolonged dwelling in the garden in a way that could be described as Heideggerian, not only because I have cared for the garden over a long time as an extension of the house we live in: a *locale*, but also because dwelling for Heidegger means building and thinking *together*:

But that thinking itself belongs to dwelling in the same sense as building, although in a different way, may perhaps be attested to by the course of thought here attempted.

Building and thinking are, each in its own way, inescapable for dwelling. The two, however, are also insufficient for dwelling so long as each busies itself with its own affairs in separation, instead of listening to the other. They are able to listen if both – building and thinking – belong to dwelling, if they remain within their limits and realize that the one as much as the other comes from the workshop of long experience and incessant practice. (Heidegger, 1971a, 362)

Proposing a similar line of argument, Wendy Wheeler suggests that an embodied, indwelling mind produces a form of tacit knowledge which I see as akin to Heidegger’s experience through incessant dwelling. This knowledge – differing from autonomous, logical thinking – must be considered as a vital contributor to our conceptual understanding of the world:

Experiential, phenomenological, knowledge – the not wholly self-present or self-conscious knowledge of a body in the company of a self-reflexive mind capable of nurturing it – clearly is knowledge upon which we can quite consciously draw. (Wheeler, 2006, 49)

With reference to Michael Polanyi, she puts forward a re-evaluation of this tacit knowledge as an important counterbalance and extension of a predominant positivistic attitude that has increasingly dominated Western scientific thinking from the 16th century onwards:

Our knowing, as it becomes skilful and tacit, introduces us, like streams running into a river, and a river running into its delta, to a sea of real skilful
knowledge about the world. This, of course, is the nature of all creativity, which springs from the bodily roots of our knowledge.

When we make a thing function as the proximal term of tacit knowing, we incorporate it in our body – or extend our body to include it – so that we dwell in it. And, of course, this indwelling in fact describes all our skilful being in the world. (Wheeler, 2006, 63)

When applied to my life at home, dwelling establishes our urban garden as an important source of tacit knowledge, and in my case a direct link to artistic creativity, which – in line with my first research question – led me to investigate this garden photographically. Unlike my other projects, where the time to take photographs was more or less defined and limited, I began to use *dwelling* as a new method of investigation to develop an ecocritical approach to photography, and I began taking photographs on a day-to-day basis. Photography in the garden became a daily ritual (Figs 19–21).

Fig. 19 Joachim Froese, *The Little Garden of Paradise*, still from video, 2014–2016
My appreciation of our Australian ‘home and garden’ must be understood against a background of European horticulture, the tradition of which is also embedded in Australia’s colonial past. Colonial gardens, however, reflect a highly ambiguous relation between early European settlers and an Australian environment perceived as alien and often threatening. Unfamiliar with a cycle of floods and drought that regularly destroyed urgently needed yields, settlers, against the odds, continued to establish European-style gardens and parks and fenced them off against a landscape perceived as alien (Tanner, 1979; Timms, 2006) (Fig. 22).
Attempts to anglicise the Australian wilderness also expressed a hegemonic interest in shoring up a colonial power base against the indigenous Australian population (Tanner, 1979). Original Yulgilbar Homestead (Fig. 23), a painting by Ellen Bundock from 1852, offers visual evidence of this process when we see a group of Aboriginal people locked out with the cattle from the colonial homestead. The European approach to push back an unfamiliar Australian environment through planted parks and gardens is reflected in many early visual records of European settlement; in fact, there is hardly a view of the fledgling Australian colony that does not include a fence somewhere.
As early as two years after the arrival of the first fleet, Governor Arthur Phillip suggested that houses in the newly established colony should be placed on blocks of land 60 feet wide by 150 feet deep. Despite the reality of largely uncontrolled development, the idea of owning a fenced-off ‘block of land’ became ingrained in the Australian psyche and also shaped urban settlements. From around 1800, most non-convict families in Sydney owned one of these blocks, even if their dwellings might have been modest, and by the middle of the 19th century gardens were a common sight in Australian towns (Timms, 2006).

Since then, the acquisition of a traditional quarter-acre block has remained an aspiration for a large part of the Australian population. Though the aim to own such land and houses has become less accessible, the system continues to define most Australian (and North American) cities, where it dominates the suburban sprawl that typically radiates from the central business centres at the core of the city. Today, the total land area of Australia’s urban centres covers more than 70,000 square kilometres, an area twice the size of Belgium (Timms, 2006). An unfettered urban sprawl of this kind has been consistently criticized for its negative impact, for example through the higher cost of public services (Carruthers and Ulfarsson, 2003), negative effects on social interaction (Putnam, 2000), and decreased biodiversity of species (Concepcion et al., 2016).

The majority of Australians today live in cities, which also means that most of our encounters with nature are taking place in this urban context. This has entailed a fundamental transformation in our engagement with nature, away from traditional romantic notions of pristine habitats, undisturbed by human engagement. Emma Marris (2011) acknowledges unfettered urbanization as one important factor of anthropogenic pressure on existing ecosystems and shrinking natural habitats. Yet she also argues for a shift in focus away from concentrating only on pristine concepts of wilderness and ecosystems beyond cities and calls for a “gestalt switch”: 
A protected-areas only, pristine-wilderness-only view of conservation sees a globe with a few shrinking islands of nature on it. Nature is the foreground, human-dominated lands the background. The new view, after the gestalt switch, sees impervious surfaces – pavement, houses, malls where nothing can grow – as the foreground and everything else as the background nature. (Marris, 2011, 135)

For Marris, this “gestalt switch” is necessary to implement a new extended model of conservation. This model uses strictly protected areas such as national parks as important anchors within a wider scenario of varying zones of protection and conservation goals that includes urban ecosystems. Extending our concept of nature beyond pristine wilderness will enable conservationists to

[... ] patch together different kinds of land to create connected-up nature: parks, public lands of other types, private lands with special legal arrangements in place, state lands, tribal lands and so on. (Marris, 2011, 138)

A “connected-up nature” arising within urban and industrial sites is becoming an important focus for this new ecological approach. Correctly managed, conventional urban parklands, but also areas until recently regarded as useless industrial wastelands, can offer shelter for a surprising number of threatened species (Ellis et al., 2012; Lundholm and Richardson, 2010; Lachmund, 2013).

Beyond parks and fallow industrial land, Marris also sees an important role for private gardens as important reserves for metapopulations of endangered species of fauna and flora (Marris, 2011). Metapopulation ecology assumes that a suitable habitat for many species occurs as a network of habitat patches, varying in area, degree of isolation and quality (Hanski, 1998). Gardens can provide links and corridors between these habitat patches to connect smaller clusters of spatially fragmented populations of one species, provided we change our attitude towards them:

Many state conservation agencies [...] have increasingly urged that people let nature into their garden by planting threatened species, tearing out lawns, greening roofs, making rain gardens, and most of all, changing their aesthetics to embrace the slightly messy, the brown in the summer, and inevitably the
buggy. The new look and feel is rambunctious, diverse and more like wild spaces. (Marris, 2011, 146)

Tim Low, on the other hand, looking explicitly at Australian cities, questions the conservation benefits of private gardens, in particular in large housing estates:

Wildlife gardening, for most people, is more about personal gratification and flight from guilt than true conservation. We should not pretend that good deeds done in gardens atone for crimes committed elsewhere. [...] Conservation does begin at home, but not so much in the garden. It’s that old refrain: consume fewer resources, create less waste. Too many people are taking too much, and nothing we do in the garden can atone for that. (Low, 2002, 286–287)

Instead of concentrating on designing eco-friendly gardens, Low argues, the emphasis must lie on eco-friendly public parks, which, due to their size can provide shelter for species beyond the ones already firmly established in an urban environment. But even he sees benefits in responsible gardening, which favours non-invasive plants (Low, 2002).
Our own garden reflects some of Marris’ ideas (Fig. 24). It is “slightly messy” and, due to the subtropical climate we live in, it definitely is “buggy” (Marris, 2011): ant tracks criss-cross the entire garden, grasshoppers of all sizes are out for a feed and golden orb spiders weave gigantic nets between the trees. Australia’s insects have always fascinated me, and when I first arrived in Australia I was perplexed by their variety and sheer size. Dead insects, which I found strewn around the house had in fact been the subject matter for Rhopography, a series of still-life photographs I took between 1999 and 2003. This time, however, I went out into the garden to explore the nonhuman world in the delimitated space of my backyard.

An important aspect of exploring this world developed through my use of close-up and macro photography, which requires a physical shift of perspective. On my hands and knees for much of the time, I was literally crawling up to my subject matter. This method was a deliberate move to break away from a more distanced human scale and perspective and it now manifested itself simultaneously as an immersion into the world of the garden and an intrusion. Just as it had done in Girraween National Park, my photography revealed an environment of multilayered interconnected Umwelten as described by von Uexküll. But now that my camera work moved in much closer than previously, my nonhuman cohabitants in the garden began to acknowledge my presence. Practicing close-up photography inside the garden began to effect the environment around me. Insects and spiders in particular react when the camera approaches beyond a distinct point marking their comfort zone. Previously hidden demarcated insect Umwelten revealed themselves around me as it became clear they were watching me as much as I was watching them. Borrowing a term coined by Marcus D. Watson in the context of Western aid in developing countries and applying it to interspecies relationships, my photographic approaches could be described as colonial gestures (Watson, 2013) onto the biosemiotic worlds of numerous nonhumans, a notion of intercorporeality that supposes an interconnectedness of bodily reactions when people – or, in this case, species – interact with each other. As much as I remained careful not to disrupt the
worlds I was photographing, once my camera had crossed a certain line their inhabitants perceived my presence as an intrusion.

Close-up photography results in a decisive shift in scale. At a magnified view, details emerge which are normally hidden to the eye. The miniature world that emerged in my photography was vastly different from my own Umwelt and introduced a reality outside my own sentient world to signify an ‘otherness’ to the human Umwelt that seemingly rules supreme in ‘my’ garden. The act of photographing in this manner was analogous to von Uexküll’s sense of a “foray into other sentient worlds” (2010). This method provided surprising new insights into the seemingly domesticated space of a garden with which I had thought I was familiar. It was teeming with wildlife, and I discovered an immense richness of nonhuman life beyond the more obvious fauna of birds and flora of decorative plants. A number of insects and ‘non-invited’ weeds also seemed to call this garden home, which ultimately challenged the idea of this space as my private property to expose it as a truly “rambunctious garden” (Marris, 2011) which many parties call home. From the scale and viewpoint of the nonhuman world, it seemed to be a rather public habitation, a meeting place where a number of life forms lived together in proximity, each of them busy staking out their own claims. I was faced with an entangled web of worlds within worlds, separated yet connected, connected yet separate. Section by section, I began to investigate the space of the garden with my camera (Figs 25–27).
Fig. 25–27. Joachim Froese, *The Little Garden of Paradise*, stills from video, 2014-2016
The ritualistic activity of photographing and later also filming the familiar space of the garden produced a confluence of my practical and theoretical research. Now, whenever I worked on my dissertation, my camera was always on my desk. When stuck or in need for a break, I would walk out into the garden to take some photos and then return with a new thought to continue with my written work. As my dissertation progressed, this project developed into a linchpin, and the ongoing ritual of photographing our garden and working at my desk began to influence my entire research. Apart from this, for the first time, it began to direct my attention to the fact that *photography as practice* had consequences beyond representation: not only did the *act* of taking photographs have an impact on the nonhuman world in my garden which reacted noticeably to my presence, but the *daily practice* of photography – without necessarily resulting in meaningful images – changed the way I approached my research. I will come back to this non-representational aspect of photography in much more detail in chapter six, but at this point, I want to return to *The Little Garden of Paradise* (Fig. 1) because the little panel became a crucial pivot around which my practical and theoretical research evolved.

![Fig. 1](http://www.staedelmuseum.de/en/collection/little-garden-paradise-ca-1410-20)
Like my own garden, *The Little Garden of Paradise* is brimming with nonhuman life. In sum it depicts 26 varieties of plants, 12 species of birds, two dragonflies, a butterfly, a common fly, and numerous fish.

Kenneth Cark describes the picture as the jewel and crown of all paradise gardens, which distills a world of delicate, sensuous perception, where flowers are there to please the senses of sight and smell [...]. Yet all these sensations still have some immaterial quality, for they are conceived as testimonies of heavenly joy and the picture is full of Christian symbols. (Clark, 1976, 17)

He regards the image as the most typical *Hortus Conclusus* picture, an appraisal, however, that became increasingly doubtful the more I began to investigate it.

The little painting, in fact, has a rather rambunctious nature, as it deviates decisively from the strict iconography of a *Hortus Conclusus*, combining aspects of religious and secular imagery which normally are strictly separated. Amidst an abundant flora and fauna it features six apparently saintly figures, arranged around the clearly identifiable Holy Virgin with child. However, for at least four of these six figures, there are differing theories about which saint exactly they are supposed to represent. The female figures in particular remain ambiguous and carry some erotic undertones, which were out of place in religious imagery at the time (Brinkmann and Kemperdick, 2002) but evident in contemporaneous secular *Hortus Conclusus* illuminations of troubadour tales. Further, a number of the featured animals also break with religious convention. In late medieval analogies, insects, clearly visible in the image, were largely associated with demonic spirits rather than devotional imagery, and some of the depicted birds are shown hunting, a kind of behaviour completely inappropriate inside the Garden of Eden. Birds fly in and out of the enclosure and a tree is depicted across the wall. This, together with the fact that the garden is open towards the viewer, contributes to subverting and questioning the absoluteness of enclosure (Brinkmann and Kemperdick, 2002; Conrad, 2006; Hartlaub, 1947). The entire image consistently
undermines its own religious message and challenges aspects of human categories of nature, otherwise typical of Hortus Conclusus imagery. This astounding number of idiosyncrasies leads Brinkmann and Kemperdick to the conclusion that a deliberate visual strategy underlies the painting, which raises a theme in order to immediately qualify and contradict it. They describe it as a deliberate deviation from prevailing doctrines used to depict a place of encounter between sacred and secular essentiality (2002) and conclude that the diverse and varied depictions of plants, birds and animals must be read beyond their individual Christian symbolism to point towards a different concept dating from antiquity: the Locus Amoenus, a mystical place of safety and comfort in which the gods mingled with humans.

Little is known about the master and the workshop that produced this panel and there are no sources that give any insights into its provenance. This contributes to the work as the object of multiple projections of meanings. To me, this image offers an experience only a few works of art can provide. It not only seems to surpass medieval thinking but also anticipates some of von Uexküll’s ideas as it proposes that the world we perceive around us might be more complex than commonly believed. An in-depth analysis of the picture formed the basis for a paper titled Trouble in Paradise, which I presented at Affective Habitus, the Environmental Humanities Conference held at the Australian National University in Canberra in June 2014.

The amalgamation of dwelling in the garden with my camera and my theoretical research into the Hortus Conclusus eventually formed the basis of a video work that combines images drawn from the painting with my own photographs. At the beginning of the video clip (see: https://youtu.be/QeE-_OqJ2Ig, 10 min, 51 sec; and storyboard, Fig. 28) the Little Garden of Paradise emerges silently out of a black void, to be replaced by photographs and moving images from inside our garden, fading in and out. This imagery is accompanied by urban sounds such as cars, lawn mowers, and commuter trains, as well as the organic sounds of cicadas, barking dogs and urban birds. At regular intervals, the projection fades back into silence and the painting. The video ends when all these alternating layers of painting,
photographs, moving images, and urban sounds are broken up through static interference to finally collapse into white noise.

Fig. 28  Joachim Froese, initial storyboard for *The Little Garden of Paradise*, 2015
The work describes the space of our garden as layers of worlds: human and nonhuman, natural and cultural, bygone and present. All of them present subjective impressions referencing each other, yet they remain discrete, mysterious and ephemeral. As a whole the video links pre-modern views of nature to contemporary imagery. Fading in and out and merging into each other, these layered views of a garden suggest a *longue durée* of interrelated yet shifting interpretations of nature. They appear as fading patches of order to eventually drift back again into white noise, the chaotic condition out which they emerged in the first place.

Choosing the form of video as a display format allowed me to intersperse a small amount of moving images as a moment of subtle surprise that breaks up the otherwise contemplative viewing pattern of images. In addition, the video presentation is a suitable format to accentuate the ephemeral quality of the work. Transient digital images, delivered from a USB stick or a bar code can appear everywhere and nowhere (Kelsey, 2013). In my video they fade into each other, stills become animated, and details of the painting merge with details from my garden to emphasize the idea of floating layers of categorization. The audio of urban sounds on occasion references the imagery it accompanies, but never relates immediately to it and thus adds to the ephemeral quality of the work. The sounds filter through as another layer of the urban context in which the natural environment is embedded, yet all these impressions, visual as well as sonic, have no material presence beyond the projection plane.

In this hyperreality, the three major areas of investigation for my research converge: the nonhuman world, urbanity and the early modern iconography of the *Hortus Conclusus*. But they remain impalpable and ultimately fade out into infinite white noise.
Chapter Four

Berlin’s Gleisdreieck Park: A Photographic Investigation

[T]he designed landscape [...] is a site – both physical and philosophical – of political, cultural, social and economic debates. Moreover, as a self-consciously public arena, the urban park, perhaps more than any other kind of landscape, is redolent of the aspirations of the time. (Taylor, 1995, 201)

After several months of taking photographs in my Brisbane garden, my ritual of taking pictures had to be paused when I left Australia to spend time in Berlin. There, I do not have a garden and I live in small apartment; as a consequence, I frequently visit urban parks to get out of the flat and enjoy nature. This is a much more public life than in Brisbane, where I spend more time in my secluded garden. In Berlin, I share urban nature with many other people. These differences went through my mind when I began to explore Berlin’s natural environment, and consider opportunities to continue my practical research. Eventually I decided to concentrate my photography on Gleisdreieck Park, only a short bike ride away from the place where I live.

In its current form, Gleisdreieck Park constitutes a large urban parkland at the centre of Berlin, not far from Potsdamer Platz. It has won numerous awards for its innovative landscape design, which incorporates distinctive pockets of ruderal vegetation, plant species that colonized an area destroyed during World War II. Due to the division of Berlin resulting from the Cold War, the Gleisdreieck (railway triangle) turned into a post-industrial wasteland of disused railway infrastructure on the fringes of former West Berlin. 25 years ago, before I moved from Berlin to Australia, I knew this area as a plot of urban wilderness where large numbers of invasive species found shelter, undisturbed by human intervention. I wanted to explore the parkland in its current state, as it seemed to promise new insights into overlapping human and nonhuman worlds. I also wanted to find out what was left of the once-
abundant urban wilderness, and see how it had changed when it became integrated into this delimitated parkland, designed and managed by humans. Finally, the *Gleisdreieck* reflected some of my own history in Berlin, and I had followed some of the controversy around its status whenever I stayed in the city. As such, the site connected my present and past, and I was curious to investigate it with my camera.

The idea to introduce public parklands into an urban setting took hold in the United Kingdom at the beginning of the 19th century. ‘People’s parks’ were believed to offer the working-class relief from overcrowding, squalor and ill-health in ways that could dampen revolutionary tendencies. Later these parklands began to include *arboreta* and botanical gardens, which were reflective of contemporaneous scientific classifications of the botanical world and aimed to educate an urban community in natural history (Taylor, 1995; Wickham, 2012; Lachmund, 2013).

Today, city parks continue to provide public spaces to encounter and enjoy nature. Within an urban fabric they continue to play a vital social role as recreational places that foster “integration in society, social stability and a vibrant public life” (Grosch and Petrow, 2016, 4). However, in the 21st century, landscaped parklands have gained additional importance as contributors to the symbolic economy of urban centres that is seen as necessary to present the kind of international profile needed to attract tourism (Petrow, 2011). To this end, town planning puts an increasing emphasis on aesthetic concerns and originality of form, which in many cases outweighs and overrides a focus on optimizing recreational opportunities for the public (Grosch and Petrow, 2016).

This concern is reiterated by Linda Williams when she directs similar criticism towards the “architectural spectacle” of many landmark buildings, which are becoming key features of international cities, together with the “‘non-places’ of supermodernity”, such as airports and shopping malls (Williams, 2014). But she extends her criticism of a globalized urban aesthetic for ignoring rural and wild places that do not fit into the dominant spatial logic of modernity.
Subsequently, she describes “gardens, market gardens and other green places” in contemporary cities as products of an instrumentalist approach that reflects the city’s bio-political regime over nature in a globalised neo-capitalist environment, privileging the core of the city over its periphery, and thus relegating the nonhuman world to the margins of civilization (Williams, 2014, 477).

A similar perspective is offered by Maria Kaika, who regards the Promethean approach of modern cities to render themselves independent from nature’s processes as a futile attempt to compartmentalize the world into autonomous “space envelopes” (the home, the city and nature):

[A]lthough the programming vision was to render cities independent from nature’s processes, the materialization of this vision was predicated upon establishing intricate networks and flows of natural elements, social power relations and capital investment cycles, which, in fact, not only did not separate nature from the city, but instead wove them together more closely into a socio-spatial continuum. (Kaika, 2012, 5)

Using the flow of water from places of its production into the urban domain as an example and metaphor, she suggests a “city of flows” and argues for a reconceptualising of nature and the city as hybrid, “neither purely human nor purely natural” (Kaika, 2012, 5). While Williams and Kaika might differ to some extent on a definition of the modern city, both agree in a fundamental way that they cannot see the prospect of a liveable city which treats the concerns of the nonhuman world as peripheral, and both writers agree that the modern urban fabric provides little consideration for a nonhuman world that is not servicing human interests.

In this context, it is interesting to direct the focus to the unique socio-geographic situation that developed in West Berlin after World War II. At the end of the war, heavy fighting in and around Berlin had destroyed at least a third of its housing. Even worse hit was the centre of the city, where 54% of dwellings were completely destroyed. Ruins and rubble fields remained an integral part of the city for decades to come. (Arandelovic and Bogunovich,
Simultaneously, relations between the former war allies that had defeated Germany disintegrated during the Cold War. This led to the formation of West Berlin as a political entity affiliated with the Federal Republic of Germany (West Germany) but located as an island 200 km inside the communist-ruled German Democratic Republic (East Germany). Continually rising tensions eventually prompted the East German government to build the infamous Berlin Wall around the enclave of West Berlin, which, in the process, became cut off from its hinterland (Arandelovic and Bogunovich, 2014).

This unprecedented post-war scenario, dominating the city until Germany’s reunification in 1991, also had a surprising impact on the urban ecology in West Berlin. In the biophysical structure of bombed-out plots and disused industrial wasteland, new vegetation found a unique terrain to thrive in. Largely left to its own devices, nature reclaimed these neglected post-industrial spaces and established itself as an independent nonhuman world within the urban fabric of Berlin. Eventually, West Berlin’s ecologists, disconnected from the more traditional territories observed outside the city, turned their focus onto this new urban scenario right in front of them. Their surveys of the city’s plentiful wastelands revealed a new and distinct combination of species that had developed from previously existent plantsociological categories. Ecologists started to call this phenomenon *ruderal vegetation* (Lachmund, 2013), based on the Latin word for rubble (*rudus*). In the process, Berlin became a pioneering ground for the study and re-evaluation of the urban natural environment.

As a consequence of the wall that cut the city in half, many parts of the heavily destroyed former city centre now lay at the fringes of West Berlin and held little commercial value for developers and entrepreneurs. Large areas of the former Berlin railway system also lay idle. The so-called *Gleisdreieck*, once a major intersection of railway lines feeding three central stations in Berlin, covered more than 20 hectares of now-disused infrastructure and maintenance buildings. Devoid of its formerly central position, it developed into a neglected, post-industrial wasteland. This situation was again
dramatically reversed after reunification, when the area was located once more at the heart of the city. By now, however, it constituted an urban wilderness that featured significant successive *ruderal* vegetation, including a dense forest of maple, oak and birch trees covering up the disused railway tracks. In this form it became a highly contested site. Ecologists and an alternative environmental movement that always had a stronghold in the city pointed towards a high density of rare species and put forward arguments to preserve this vegetation, while city planners and a large part of Berlin’s population regarded the scene as a signature of urban disfiguration and decay (Lachmund, 2013).

After reunification, the momentum began to sway heavily against the survival of this unique environment, which offered large areas of undeveloped prime real estate. Though once radical notions of *ruderal* vegetation had by now entered the scientific mainstream and were gaining credence among parts of the public, most of this land eventually became developed, despite significant opposition. As a result, proposals to integrate at least parts of the vegetation into the fabric of the city as nature parks were raised, and eventually two areas were earmarked for protection.

The most southern pocket of disused railway property became transformed into the *Naturpark Südgelände*, a park modelled on similar principles to a national park in Australia, which enforced strict conservation rules on the enclosed natural environment. The fate of the northern part, adjacent to *Potsdamer Platz*, the newly developed centre of Berlin, was less clear-cut. In 2006, the Berlin Senate put forward a proposal to convert most of the area into public parkland on the condition of integrating the now-protected successive *ruderal* vegetation and the historical heritage of the site. After an extensive planning period, overseen and accompanied by a working committee of publicly elected members, the new *Gleisdreieck* parkland opened to the public in 2011 (Fig. 29).
However, the protection regime of the *Gleisdreieck Park* was far less strict than that of the *Naturpark Südgelände*. In comparison with the *Südgelände* and its stringent ideas of a nature park, here ecology was marginalized in favour of aesthetic goals. As a result, the *ruderal* vegetation that inspired the idea of a designated parkland in the end remained only one facet of many (Lachmund, 2013) and the planning of the park returned to more traditional concerns. “Wildness”, as described by Leonard Grosch from Atelier Loidl, the landscape firm in charge of the project, became defined through its usefulness to human needs:

Wildness is important in a city and should be a basic component of its parks. [...] Different forms of vegetation should – just like the program – reflect the variety of city dwellers’ needs and desires for nature. These needs can be of a purely contemplative or atmospheric sort or be expressed as a desire to participate, for instance, through gardening together. The contrast between wild
and designed forms of vegetation makes both seem more valuable. (Grosch and Petrow, 2016, 46)

While at the centre of the park a large section of *ruderal* vegetation was maintained and small signs on the ground now ask the public to ‘please stay out’ (*Bitte nicht betreten*) (Fig. 30), the majority of the park was converted into more traditional landscaped parkland that incorporated already existing features such as active suburban and interstate railway infrastructure, a *Schrebergarten* (garden allotment), a communal garden run by Croatian immigrant women, and a large adventure playground for children. Other features such as skateboard rinks and basketball courts were introduced (Bordas, 2011; Grosch and Petrow, 2016; Lachmund, 2013; Prominski et al., 2014) (Figs 31–32). This was the environment I entered with my camera.
In 2014 and 2015, I visited the park at regular intervals to explore it with my camera. An important impetus to photograph this complex environment was given through an exchange of ideas with Dr Constanze Petrow, a lecturer in landscape architecture at the Technical University Darmstadt, who was also studying the park. As a guest lecturer at the Technical University I had previously worked with Dr Petrow and since then we had stayed in close contact, so I was aware that she was the co-author of a planned publication on the *Gleisdreieck Park*. As I had already collaborated with researchers in the Darling Downs to take photographs for an upcoming publication, this collaboration promised to provide another opportunity for an exchange of interdisciplinary ideas and her detailed knowledge of the park contributed to my project. In the end, two of my pictures (Figs 33 & 38) were included in the publication, which is titled *Designing Parks: Berlin’s Park am Gleisdreieck or the Art of Creating Lively Places* (Grosch and Petrow, 2016). Five images also accompanied an article by Dr Petrow in the German magazine *Stadt+Grün* (Petrow, 2015) in July 2015.
When I took my camera to the park, I faced multiple layers of human and nonhuman worlds in a condensed urban context. Visually these layers seemed difficult to separate: children played in front of former railway buildings, themselves embedded in grassland, with Berlin’s city trains running on a high-set track in the background (Fig. 33). Past and present, humans and nonhumans, seemed to overlap wherever I looked.

Fig. 33  Joachim Froese, *Gleisdreieck Park Berlin*, digital image, 2015 (included in publication)

Fig. 34  Joachim Froese, *Gleisdreieck Park Berlin*, digital image, 2014
Other parts of the park were less frequented but still showed multiple layers of human and nonhuman interventions: a pathway now cut through a pocket of ruderal vegetation and surrounded a few isolated trees which themselves had previously overtaken the place and covered old railway tracks (Fig. 34). Here the nonhuman world – although contained through the park’s infrastructure – had a stronger presence. As a whole, the Gleisdreieck in its current state seemed to condense Berlin’s environmental debate into a conglomerate of visual traces.

Although in the planning stages there had been fierce debates about the park, it now seemed to be widely accepted by the people of Berlin (Fig. 35), who made frequent use of all the facilities, old and new, on offer. In its entirety, it seemed to be a real-life manifestation of what Marris calls “juggling goals”:

There is no best goal. Even after we agree to pursue all sorts of goals, we still have complex compromises to make between ideologies in contested places and between local and global interests. Society must decide what its goals are on multiple scales, then allocate the best-suited land to these various goals and get going, not shying away from the occasional bold experiment.

(Marris, 2011, 170)

Fig. 35 Joachim Froese, Gleisdreieck Park Berlin, digital image, 2014
In contrast to the practical methodology I was applying in my Brisbane garden where I used macro photography as an alternative viewpoint to ‘get closer’ to the nonhuman world, the photographic stance I took in the *Gleisdreieck Park* did not aim to depart from a human perspective. Instead, I chose a perspectival layering which became a pivotal approach, aiming to visualize the different aspects and facets of cohabitation that intersected the park’s environment. I made use of the condensed perspective of large-focal-length lenses, which meant a physical *stepping back* that was directly opposed to the act of *closing in* which I had decided on in my garden. Here, my aim was to reveal distinct but interwoven layers of human and nonhuman domains.

I photographed the park over a number of months across the changing seasons, as my aim was to watch how the environment as a whole changed over the duration of the year. One noticeable change had to be expected. In winter, the *Gleisdreieck Park* became quieter as fewer people visited. Although most of the deciduous trees and other plants also adopted a state of rest, they simultaneously seemed to reclaim some of the control over the terrain which, many years ago, they had wrangled back from the post-industrial site this place once constituted (Fig. 36).

Fig. 36  Joachim Froese, *Gleisdreieck Park Berlin*, digital image, 2014
Most of the year, however, the place was dominated by human worlds. This realization again stood in unexpected contrast to the situation I experienced in the Brisbane garden. There my ritualistic photography was revealing multiple nonhuman worlds that had claimed ‘my’ garden home. In Gleisdreieck Park, previously invisible human worlds now began to emerge. Playgrounds were closely watched by parents, who regarded with suspicion a single man with camera approaching the realm of their children. The skating rink was staked out and protected by groups of teenagers and young adults, nervous about being photographed while skipping classes or pushing drugs. Sunbathers felt their privacy intruded on, and bike riders yelled at me when I was blocking their way. Here the human world was closely watching what I was photographing, and it became obvious that invisible demarcation lines ran deep across the parkland (Fig. 37).

![Image](image-url)

Fig. 37 Joachim Froese, *Gleisdreieck Park Berlin*, digital images, 2015

To some extent my photographic investigation into the *Gleisdreieck Park* constitutes an exception within the overall structure of my doctoral research as
the photographs I took did not feature in any exhibition resulting from this doctoral project beyond the publications by Petrow (2015) and Grosch and Petrow (2016). Nevertheless, in the overall context it represents an important extension of my practice-led research into urban nature. Further, the panoramic approach which I developed working in *Gleisdreieck Park* eventually became a key component of my last and final body of work titled ‘What is nature?’, which I will describe in detail in chapter seven. In this respect the *Gleisdreieck* project marks a significant contribution towards the final outcome of my practice-led research.

![Fig. 38 Joachim Froese, *Gleisdreieck Park Berlin*, digital image, 2014 (included in publication)](image-url)
Chapter Five

*Seedlings: The Studio as an Instrument of Human Classification*

The studio as an instrument

Every instrument produces artifacts or effects that are intrinsic to its construction. But the nature of an instrument and the interpretation of the artifacts produced by it are also subject to human manipulation and interpretation. The lens or glass and the camera are among the most familiar instruments that were used by experimenters in natural knowledge and artists alike. But [...] we might define the studio itself as such an experimental instrument. (Alpers, 2010, 145).

As described, my practice-led research up to this point had explored natural environments emerging in an urban and/or post-industrial context and all my photography had happened in the field and on location. The project discussed in this chapter departed from this methodology and moved into the studio. Between 2014 and 2016 I raised and photographed plant seedlings in Brisbane and Berlin resulting in more than 100 studio photographs of a broad variety of plant seedlings. All photographs were taken in the same manner: carefully placed and arranged, the seedlings were then lit with a soft ‘portrait lighting’ and captured in front of a uniform black background.

A critical stance towards the studio has defined many avant-garde art practices since the 1960s; proponents of the avant-garde favoured working on location through performance art, public monuments and installations:

Warhol's factory, Beuys's pedagogical experiments, the decentered practice of Fluxus, and the antistudio positions of the 1960s and 1970s shaped a catchall post-studio conditioned on the traditional “European studio ideal”. (Grabner, 2010, 2)

Daniel Buren gave voice to this *Zeitgeist* in the arts in a seminal essay from 1971, in which he criticized the studio and the gallery as crucial factors in a
process of commodification that controls the reception of art works (Buren, 1979).

Guided by my first research question, investigating the capacity of the studio to expound abstract processes involved in the categorization of nature now became a key concern of this project. In this context Svetlana Alpers’ analysis of the studio as an instrument of classification provided an important context for my thinking.

Alpers enlarges upon the connection between artistic practice and scientific pursuit when she describes similarities between an artist’s studio and a scientific laboratory, a comparison already made earlier by Anthony Hughes (1990). She describes a shared agenda between art and science emerging in the 17th century that uses the studio ‘as an instrument’ to represent the world through “the frame of the workplace” (Alpers, 2010, 126). This frame, she claims, derives knowledge through the direct phenomenological experience of an investigated object in front of the artist, an experience that is, however, reliant on its isolation from the world outside the studio.

In contrast to Hughes, Alpers describes the outlook of the studio as an inherently solitary view. In her argument, this individual experience is a prerequisite to a more humane aspect and an affective experience of the world beyond a purely intellectual approach:

> The realities of the studio are not only what is observed there (how the world is put together), but the artist's visual and, often, bodily or phenomenological experience of it (how it is experienced). [...] What I am invoking is not a personal matter, it has to do with how every individual establishes a relation with the world. (Alpers, 2010, 128)

This bodily experience for the artist in the studio is reminiscent of Polanyi’s account of embodied or tacit knowledge as a foundation from which all abstract and conceptual knowledge emerges (Wheeler, 2006, 55). As an instrument that establishes a relation with the world through phenomenological knowledge it offers an “experimental approach associated with scientific thinking to solve problems” (Alpers, 2010, 146). By this
definition it could also be described as an instrument of classification that provides logical structures and conceptual categories which form complex cultural interpretations.

But studio practice, according to Alpers, also entails important restrictions. Using the studio as an instrument to investigate the natural world relies on removing and isolating individual objects or artefacts from this world. This becomes particularly evident in the still-life genre, which emerged directly out of 16th and 17th century forms of studio practice. Typical still-life pictures display objects *inside*, arranged on a table. Moving an object into the studio ruptures its usual relation to the world and sets up a demarcation between the ‘cultural’ world of the studio and the ‘natural’ world outside, an act underpinned by a human claim of ownership in regards to the latter (Brown, 2014).

![Gustave Courbet, The Painter's Studio: A Real Allegory of a Seven Year Phase in my Artistic and Moral Life, oil on canvas, 598 x 361 cm, 1855](https://www.google.com/culturalinstitute/beta/asset/-/iQF1RUWTpmSuw?hl=en)

Alpers identifies these constraints of the studio as an inherent theme of Gustave Courbet’s often-analysed work *The Painter's Studio: A Real Allegory of a Seven Year Phase in my Artistic and Moral Life* from 1855 (Fig. 39). She claims that this painting tries to deny the limitations of the studio in its relationship to the greater world outside.
Courbet depicts himself working on a small landscape canvas. Together with a young boy, a female figure holding a long drape, and a white cat playing at his feet, he is seen inside a vast interior space crowded with people to his left and right. However, the small group (of the boy, the cat, the woman and the painter) appears isolated in the centre of the massive canvas and Courbet himself seems to merge with the landscape he is painting.

The Painter’s Studio consistently negates the special confines of the studio and its separation from the outside world: through the faint imagery of distant landscapes displayed on the studio walls, the vast size of the room in which the crowd has gathered, and ultimately the vast dimensions of the painting itself (Alpers, 2010). Yet it is the small landscape painting encompassing Courbet almost completely (Fig. 40) that conveys a most crucial portal to the world outside and beyond the studio. It simultaneously points towards and overcomes the binary oppositions between the ‘cultural’ realm of the studio and the ‘natural’ realm outside. (I will return to the idea of the portal at the end of this chapter.) Read in this way, Courbet’s famous work undermines the studio’s domination over the natural world – of culture over nature – and anticipates some of the criticism that ‘anti-studio’ positions will come to develop around 100 years later in the 1960s and 1970s.

![Image](https://www.google.com/culturalinstitute/beta/asset/-/iQF1RU4WTpmSwu?hl=en)

**Fig. 40** Gustave Courbet, The Painter’s Studio: A Real Allegory of a Seven Year Phase in my Artistic and Moral Life, oil on canvas, detail, 1855
The studio spaces I work in are best described as makeshift and transitory, set up in improvised locations and equipped with second-hand or low-tech photography equipment. The fact that I have neither a constant residence nor a constant income has forced me to become flexible and inventive in setting up a studio wherever I go. Despite the crude nature of these workspaces, I have always produced meticulously crafted images, defying their improvised means of production. Even my most established studio in Brisbane is at best rudimentary: the darkroom is an old shed that floods during heavy rain, and the studio is situated in the semi-open space under our house, which is dusty and cold in winter, and damp and hot in summer. Over many years of practice I have developed strategies to establish spaces and processes that allow me to work with minimal equipment in almost any space that can be darkened enough to use my own studio lights (Figs 41–42). Beyond constituting an idiosyncratic work methodology, these basic conditions are a consequence of the migratory lifestyle, which also underpins the fundamental structure of my research across locations in Australia and Germany. It is also an attempt to keep the ecological footprint of my practice as small as possible.

Fig. 41 Joachim Froese, transitory studio interior Barcelona, digital image, 2002
Raising and photographing seedlings

The idea to photograph plant seedlings resulted directly from my research into the *Hortus Conclusus* and early modern flower renditions. From a practical point of view, flowers (and plants) also promised to provide an easily movable subject matter, and a rich and interesting focus for a kind of macro photography reminiscent of Karl Blossfeldt's famous close-up images of plant structures executed at the beginning of the 20th century (Fig. 43).
In their sporophyte phase, seedlings have a largely ubiquitous appearance due to the fact that the mature properties of the plant – which any visual taxonomic identification is based upon – are not yet fully developed. Hence a photograph of such a seedling, however detailed it might be, will not provide enough visual evidence to classify it. Photographing a seedling constituted a replication yet also a reversal of the connection between realism and classification so typical for Hortus Conclusus paintings. Because of their undifferentiated appearance, seedlings promised to provide a modus operandi to disrupt and challenge human attempts to categorize nature.

Working in the studio constituted a considerable shift from the projects I had undertaken in the field, where my role behind the camera, by and large, had been that of an observer. Taking photographs in the studio required a more heightened form of interference, as I selected and subsequently removed
subject matter from its ‘natural’ environment into the ‘cultural’ space of my studio. A photographer, even more than a painter, requires the physical presence of an object. The intrinsic connection of the photograph with the object it depicts means that the photographer working in the studio has to take a corporeal object out of the corporeal world. Instead of merely observing and documenting my subject matter within the world(s) around them I now took them into the studio and ‘out of their world(s)’. This rupture, an inherent consequence of studio photography, had direct physical consequences for the seedlings I depicted. However, my physical intervention did not stop here. The living organisms I photographed were not only transplanted into the studio, but they were also grown specifically for this project. This constituted a concrete and even more far-reaching manipulation of nature.

I began raising seedlings by using commercially available seeds of common garden plants, which were planted in specially sourced potting mix chosen not only for its properties as a seed-raising medium but also as an important visual feature in the final photographs. Most commercial garden seeds are hybrid varieties, which generally warrant easy germination and a high likelihood of arriving at suitable seedlings. Seed germination became more complicated when I extended my range of seeds by sourcing native Australian plants, which are generally more difficult to propagate. To cultivate these, I consulted staff of the Queensland Herbarium, and they assisted me with their excellent knowledge of this field and gave me a number of seed samples for my project. Still, with native seeds my germination rate dropped significantly.
Initially, seed propagation took place in our home in Brisbane (Fig. 44), and later also in Berlin, where I continued this project in a garden of friends (Figs 45–46). In Germany I concentrated on plants declared as noxious weeds in Australia. A weed is defined as a plant that is undesirable and not wanted (by humans) in a particular location. As such, its definition is an inherently anthropocentric classification but not a taxonomic one (Arcioni, 2004). Subsequently, many of the plants regarded as weeds in Australia are popular
garden and park varieties in Europe, readily available through German seed suppliers.

Eventually, when I moved ‘my’ seedlings into the studio and looked at them on the little stage I had built, I realised how attached I had become to them. Raising and nursing the little plants from seed had resulted in a surprising emotional bond. Now, observed (and enlarged) through the lens, these budding organisms appeared to be even more vulnerable than they did to my naked eye: an appearance that stood in remarkable contrast to the strength of the physical thrust required to break the seed casing and rise to the surface. Once inside the studio, the seedlings reacted noticeably to the new environment by moving towards the strong directional studio lights. Furthermore, some of the plants responded to my inevitable ‘poking’ with such a shock that it noticeably reduced their speed of growth afterwards, while others gave the impression of being much hardier. Working in this manner it became obvious that I was observing living beings that demonstrated a degree of consciousness through their response to changes in their environment. As a consequence I began to develop a tacit understanding of the similarities germinating seeds show to humans at birth, when life is incredibly forceful yet at the same time vulnerable, a similarity that indicated an experience shared by humans and nonhumans alike. While some of my observations must be considered at least as highly subjective, perhaps even as artistic imagination, this phenomenological experience had a profound impact on my project and expanded my conceptual framework. The affective bond I had developed I now decided to use as a starting point to plan my studio lighting, in order to devise ways to visualize aspects of this ‘interspecies’ relationship.

To this end, I began to use a diffused directional sidelight, normally applied in classical portrait photography of humans. The classical portrait light in photography emulates the soft, diffused light of a window, which in the 17th century was often used as a primary light source by painters using a domestic room of the house as a studio (Alpers, 2010). The link to a domestic space carries important connotations of intimacy and comfort, which the unaware
viewer, who is not a trained photographer, often registers only on a subconscious level. Using this lighting technique to create ‘flower portraits’ also constituted a deliberate move to overcome a perceived distinction and subsequent hierarchy between the human and the nonhuman world.

Fig. 47 Example of botanical classification book

http://grassworld.myspecies.info/files/Watson.jpg

In contrast, the next step I took aimed to disrupt and contradict the emotive quality of my lighting with a deliberate analytical stance. I devised an arrangement (or placing) for the seedlings which emulated the guidelines of applied photography developed specifically for botanical guide books (Fig. 47). This photographic method depicts plants front on, at full size and in sharp focus before a neutral black background in order to describe in detail all
relevant aspects of a (mature) plant in a manner that enables its accurate
classification. This aspect of my imagery referenced a scientific approach
towards my subject matter which was guided by classical conventions of
standardized botanical plant depictions. These conventions made direct
reference to a hierarchical scientific classification system which concentrates
on distinctive physical characteristics in order to arrive at a universal way to
describe and classify the natural world. Lighting and image composition
therefore followed deliberate opposing approaches.

The studio as an instrument provides a phenomenological experience of an
object, similar to a lens that provides an optical experience of it. Like a lens,
the studio as an instrument also leaves markers of its use. Design elements
such as controlled lighting, a constructed plain background and careful
placement of objects all constitute recognizable markers, which are deposited
within the pictorial framework of an image produced in the studio (Alpers,
2010).

But in this case, my studio lighting as well as the standardized arrangement of
seedlings in front of a neutral black background not only constituted studio
markers as described by Alpers. Using the fact that lighting and arrangement
followed contradictory visual and conceptual pathways, together with the
difficulty of classifying plants without their mature properties, I aimed to create
an initial subliminal ambiguity within the images themselves, designed to
leave the viewer slightly unsettled in their response to the imagery (Figs 48–
52).
Figs 48–49  Joachim Froese, *Brachychiton bidwillii* & *Eucalyptus tereticornis*,
digital images 2014–15

Figs 50–51  Joachim Froese, *Acacia melanoxylon* & *Allocasuarina rigida*,
digital images, 2014–15
According to these parameters, I took photographs of a large variety of types: commercially available ornamentals, vegetables, fruit, herbs, Australian natives, introduced species, and weeds. At the end of this process I ‘set free’ as many of the seedlings as possible by planting them in our own garden or other available spaces. Some of them are still thriving. Others, unfortunately, did not survive their harsh treatment in the studio and some more, for which I could not find a suitable ‘home’, were dispatched at the end of the process.

**Arranging the photographs in public displays**

After I had eventually produced a sufficiently large pool of photographs depicting a wide range of seedlings in the standardized setting described above, I began to develop a number of exhibitions and public displays.

Over the last 20 years, I have built a considerable exhibition record with around 50 solo and more than 100 group shows in 15 countries. However, until now, my practice and the work I produced were rooted firmly in the kind of art system criticised by Buren: I produced portable objects in my studio, which almost exclusively found their way into the traditional system of galleries and museums, which, in turn, determined their critical reception and commercial success. Generally displayed in a ‘white cube’, my work stayed entirely within the spatial system described by Buren (1979).

When I started to think about display options for my seedling photographs I continued to think along these well-developed lines and concentrated on traditional exhibitions in galleries. However, the project eventually took me out of my established comfort zone and I began to explore spatial opportunities beyond the traditional gallery context. Eventually, public outdoor displays became a crucial step to expand the conceptual framework of my work.
The first approach to display my images was inspired by Bernd and Hilla Becher, who used typological displays over many years to depict industrial sites and constructions (Fig. 52). Their aim was to create an objective account of disappearing industrial structures such as water towers, oil refineries and coal tipples, which they mostly presented in strict grids of small images, an approach to photography which has been described to resemble the way a botanist might catalogue samples for plant analysis (O'Hagan, 2014).

Although my photographs mimicked the ‘objective’ approach taken by the Bechers, it was my aim to undermine any perceived photographic objectivity in order to reveal the arbitrary nature of human classification systems. To this end, I developed numerous displays which featured different selections and different arrangements of photographs to change the context of each presentation according to ultimately erratic classification principles. These shifting presentations of photographs – which did not confirm the taxonomy of the plants they referenced in the first place, due to their sporophyte appearance – constituted a further attempt to question the objectivity of these classification principles. As a result, my photographs – and with them the classification principles they were meant to represent – became exposed as
arbitrary and subjective cultural constructions. Over the period of the research I produced a number of exhibitions and public displays nationally and internationally; they are listed below in chronological order.

**Hortus Conclusus**, Ecosciences Precinct in Brisbane

My first display of photographed seedlings consisted of two separate works, each presenting a pair of matching framed panels, which I produced for the *Arts/Science Exhibition*, on show at the Ecoscience Precinct in Brisbane as part of National Science Week, 17 to 24 August 2014. These first works were derived in size and presentation directly from Bernd and Hilla Becher’s famous typological displays.

![Fig. 53 Joachim Froese, Common Garden Vegetables – Vegetables I hated as a child, National Science Week Brisbane, archival inkjet prints framed, 62 x 82 cm each, 2014](image)

The first pair of matching frames concentrated on the idea of ‘vegetable’ and featured in matching frames identical photographs of vegetable seedlings. The left frame showed nine pictures under the heading ‘Common Garden
Vegetables’ with the respective scientific name for each seedling featured underneath the photograph. The accompanying panel on the right picked up this arrangement under the heading ‘Vegetables I hated as a child’. However, it now missed three images and featured the common names of the plants depicted (Fig. 53).

A similar approach was used for the second pair. Here the left panel displayed nine photographs depicting ‘Common Medicinal Herbs’, again featuring the scientific name of the depicted plants under each picture. The accompanying panel on the right again picked up the arrangement under the heading ‘Invasive Weeds’. This frame was now missing four images and again featured the common names of the plants depicted (Fig. 54).

This first work, developed for National Science Week 2014, applied layers of competing and contradictory modes of human classifications of flora. Not only did each frame provide a different form of classification, because the viewer
was looking at seedlings instead of mature plants these classifications remained unconfirmed by the visual evidence provided in the photographs. Providing different subjective human perspectives on the usefulness of each featured plant suggested multiple and equally valid scientific and non-scientific models of human classification and categorization.

**Hortus Conclusus**, Brisbane City Council Vibrant Laneways Program

This display was executed as a commission for the Brisbane City Council and constituted the first of two projects developed for public outdoor displays. It consisted of six custom-made large transparencies for a set of pre-installed light boxes which were on show from June 2014 until February 2015 in Brisbane’s Fish Lane, a small alleyway in the inner city near the Queensland Art Gallery.

Because this commission was put out for tender by the Brisbane City Council, I took the idea of communal gardens as a starting point to select seedlings of plants typically found in these gardens. From left to right the images depicted the sporophyte face of broccoli, broad bean, sunflower, cabbage, snow pea and carnation.

As discussed, colonial gardens played a crucial role in the life of early European settlements in Australia. An assortment of seeds from England (and subsequently from around the world) was brought to the new colony on the first boats to ensure the settlers’ survival. Growing food from seeds was often unsuccessful, but the plants that did thrive became, like the white settlers, recent arrivals in this country.

While gardening on public land is not a new concept, a current renaissance of community gardens can be observed and public gardening is recognized around the world as an innovative way to grow food and improve people’s health. The Brisbane City Council supports around 40 of these gardens across its municipality, where they play a vital role in bringing together people from different cultural backgrounds within their local communities. Equally
important to their social role in sustainable local community development, community gardens produce food without the environmental impact of large-scale industrial agriculture. Their potential for urban agriculture within ecologically sustainable city planning is immense, as locally produced foods do not need to be transported and stored. Displayed in a location without any greenery around, the budding seedlings inside the light boxes promised a revival of nature in an urban context (Figs 55–58).

Fig. 55  Joachim Froese, Hortus Conclusus, Vibrant Laneway Program, Brisbane City Council, light boxes, 7200 x 1800 cm, 2014–15
Fig. 56  Joachim Froese, *Hortus Conclusus*, Vibrant Laneway Program, Brisbane City Council, light boxes, 7200 x 1800 cm, 2014–15

Fig. 57  Joachim Froese, *Hortus Conclusus*, Vibrant Laneway Program, Brisbane City Council, light boxes, 7200 x 1800 cm, 2014–15
A second public outdoor project was a commissioned work for *Aquamediale*11 in Germany, which took place from 6 June to 19 September 2015. *Aquamediale* is an annual visual arts festival in the Spree Forest, a region 100 km south-east of Berlin, famous for its irrigation network of canals and waterways (*Fließe*) around the Spree river. It forms a unique landscape, which was declared a biosphere reserve by UNESCO in 1991. The region is also the birthplace of Ludwig Leichhardt, the 19th century Australian explorer and botanist.

My contribution to the festival was an installation of large outdoor photographic panels depicting Australian seedlings of plants that were catalogued and described by Ludwig Leichhardt on his explorations in Australia. The works were installed in five towns and hamlets, each of which
held significance in Leichhardt’s upbringing in this region. They featured: *Acacia oshanesii* (Silver Wattle) in Zuae, *Brachychiton bidwillii* (Red Karrajong) in Trebatsch, *Acacia melanoxylon* (Blackwood) in Straupitz, *Dichanthium sericeum* (Queensland Blue Grass) in Lübben and *Eucalyptus miniata* (Darwin Woolybutt) in Lübbenau. Showing ‘Leichhardt’s plants’ in my photographs, the work linked Australian and German history and botany. However, the displays went beyond this historic context, once again conveying a sense of ambiguity. On the one hand the seedlings harmonized visually with their surroundings; on the other hand they constituted budding foreign weeds, pointing towards global weed dissemination, a pronounced problem in the age of the Anthropocene. Last, but not least, the concept of the weed, or an alien life form introduced into an existing ecosystem, referred metaphorically to my own migratory background, since plants have moved along human migratory patterns (Figs 59–64).

Fig. 59 Joachim Froese, *De Herbis Leichhardtii*, public display for *Aquamediale11* (Zauen), Germany, 120 x 240 cm, 6 Jun–19 Sep 2015
Fig. 60  Joachim Froese, *De Herbis Leichhardtii*, public display for *Aquamediale* 11 (Trebatsch), Germany, 80 x 120 cm, 6 Jun–19 Sep 2015

Fig. 61  Joachim Froese, *De Herbis Leichhardtii*, public display for *Aquamediale* 11 (Goyatz), Germany, 90 x 180 cm, 6 Jun–19 Sep 2015
Fig. 62  Joachim Froese, *De Herbis Leichhardtii*, public display for *Aquamedial*11 (Lübben), Germany, 120 x 240 cm each, 6 Jun–19 Sep 2015

Fig. 63  Joachim Froese, *De Herbis Leichhardtii*, public display for *Aquamedial*11 (Lübbenau), Germany, 80 x 120 cm, 6 Jun–19 Sep 2015
What is nature? POP Gallery, Queensland College of Art, Griffith University, Brisbane

Another gallery display of seedlings was conceived for *What is nature?*, a solo exhibition of my work at POP Gallery, Griffith University, in Brisbane from 17–29 May 2016.

The exhibition featured three bodies of work, all developed as part of my doctoral research. One work comprised 47 prints of seedlings, each sized 22 x 26 cm, distributed in organic clusters across the gallery. These clusters were placed to interact with large prints from the other two bodies of work. The unframed prints were pinned to the wall with steel needles, alluding to the scientific presentation of specimens in collection display cases. Each of the photographs further featured a handwritten pencil note underneath. Some of the captions showed the scientific name of the plant depicted, while others showed common names or small descriptions or comments on the depicted
plant. These handwritten notes suggested the wide range of human classifications that could be applied to engage with plants (Figs 65–68).

Fig. 65 Joachim Froese, *What is nature?*, installation view, POP Gallery, Griffith University, Brisbane, 2016

Fig. 66 Joachim Froese, *What is nature?*, installation view, POP Gallery, Griffith University Brisbane, 2016
Hortus Conclusus, Space Veggies & Earth Plants, Kolga Tbilisi 2016, Tsereteli MOMA Tbilisi, Georgia and Galerie Lichtblick, Cologne 2016

Space Veggies & Earth Plants was an exhibition planned and executed by German curator Tina Schelhorn for Kolga Tbilisi 2016, an annual photography festival in Georgia, on display at the Tsereteli Museum of Modern Art in Tbilisi, Georgia, 12–18 May 2016. The exhibition featured an eclectic range of photographs of plants by 31 photographers from around the world. Works in the exhibition offered a multitude of historical and contemporary approaches on the relation between humans and plants, which bridged the gap between civilization, evolution and nature, and included a variety of styles from documentary imagery to artistic arrangements.

My contribution to this exhibition consisted of a similar set of prints as shown in What is nature?, my solo exhibition at POP Gallery, held simultaneously in Brisbane. However, the images on show as part of Kolga Tbilisi 2016 were
presented in a different format. 36 images were arbitrarily assembled in a close and rigid grid and displayed in two large picture frames. The presentation focused on the idea of the ‘nonhuman portrait’ and without further comments aimed to emphasize the affective quality of my images.

It was an honour to be selected for this international exhibition, which also included historical works by, amongst others, Anna Atkins, Karl Blossfeldt, and Andy Warhol. However, a limited lead-up time and the fact that I couldn’t attend the hanging, framing or printing of my work in Georgia meant that I had limited influence on the display of the work. In my proposal, I had recommended larger prints and a less rigid display, similar to the one I used in the Brisbane exhibition, but unfortunately this did not eventuate. Nevertheless, the exhibition put my research into an important international context (Figs 69–70).

*Space Vegies & Earth Plants* was reconfigured as another exhibition at Galerie Lichtblick in Cologne, on show from 23 September to 23 October 2016 (Fig. 71), where my small prints were arranged in a long row reminiscent of the display of light boxes in Fish Lane in Brisbane (Figs 55–58).
Fig. 70  *Space Veggies & Earth Plants*, installation view, Tsereteli MOMA Tbilisi, Georgia, 2016

Fig. 71  *Space Veggies & Earth Plants*, installation view, Galerie Lichtblick Cologne, Germany, 2016
Portals

In the context of my research, two commissioned works for the Brisbane City Council and Aquamediale11 in Germany presented a significant opportunity to investigate both the conceptual framework for these images and their impact outside Buren’s “cemetery of the museum” (Buren, 1979, 54). Both commissions presented clear guidelines for the works required, which needed to be addressed. The display of light boxes in Brisbane had to be relevant to the Brisbane City Council, while the images for Aquamediale11 had to address the setting of the Spree Forest, a major tourist destination near Berlin.

The fact that I was able to address these two distinct commissions is indicative of the inherently open readings suggested by my photographs. They seemed to shift easily according to variable classification principles, in much the same way as interpretations of the nonhuman world per se are subject to a vast range of diverging cultural frameworks.

Beyond my own conceptual framework and presentation, the environment in which they were installed bestowed my images with another, new and unforeseen, quality, best described as weedy. Displayed within the ‘real’ world instead of a neutral ‘white cube’, the images took on an unforeseen presence of their own. The light boxes in Brisbane, glowing at night, provided the only greenery around, sprouting out of a soil that picked up the colour scheme of many of the brick buildings around. Instead of emulating controlled propagation, the little plants in my images bore a stronger resemblance to small weeds that pop up between cracks in urban pavements.

A similar effect was noticeable with the Australian natives displayed in the German countryside, where the images suggested the peculiar self-driven and almost rebellious quality of these little botanical beings. They became resilient intruders in a geographically alien environment. From this point of view, the varying surroundings in which the images were displayed – and partly re-absorbed – forced new meanings onto my images that challenged the hegemony of the studio in which they were conceived.
Yet although the hegemony of the studio was challenged, it continued to maintain a pictorial presence through the visual markers it left in my images. The contrived light, the neutral black background and the uniform camera angle prevented the works from being absorbed completely into their surroundings. Hence the rupture from the world, which the studio as an instrument of classification imposed upon my subject matter, still remained tangible.

Fig. 72  Wolf Huber, *Nude Man in Landscape*, pen, ink & heightening on blue ground, size unknown, ca. 1505

https://goo.gl/hstWRX

Christopher Wood observes a similar visual tension in his analysis of Wolf Huber’s drawing *Nude Man in the Landscape* from 1505 (Fig. 72). Unusual for a work at the time, the almost naked figure depicted lacks any attribution. Neither does the topography point towards a known story. This unusual feature leads Wood to assume that the image must be a study of a model
executed inside the studio. This study of precise lighting on the body, he believes, was then transplanted into a separate topographical study:

One has the feeling that something has gone badly awry in the [...] drawing. It is as if too many epochal innovations converged at once: the nude, drawn in the workshop from the live model; the landscape, grounded on local topographical peculiarities; and finally, the very idea of an independent drawing, the drawing understood not as a preparatory or mnemonic device but as a self-contained package of meaning, a work of art. All of these were novelties in the period, colliding on this sheet of paper in a kind of historical gridlock. (Wood, 2005, 40–41)

A gridlock similar to the one observed by Wood could be observed as an inherent quality of my studio photographs positioned in the corporeal landscape. Like Huber’s nude figure, my images continued to carry their studio markers, which set them apart from their surroundings.

My photographs in the landscape reversed the tension tangible in Courbet’s *The Painter’s Studio* where the small landscape painting on the easel seems to be akin to a portal *out* of the studio into the world outside. Conversely, as photographs displayed in the public sphere, my works led the viewer back from the world *into* the studio as a human instrument of classification. Both worlds seemed to exist *within* each other rather than next to each other. This observation and the idea of an image as a mode of human classification within another larger scenario or image, sparked an idea, which became a seed out of which my next and final body of work as part of my doctoral research developed.
Chapter Six

Towards an Ecocritical Photography

Nature photography has played a vital role in developing a cultural literacy about our relationship with the nonhuman world in the modern era (Chianese, 2014). My own practice emerged from this broad field and for many years I took photos to depict the pristine beauty of natural environments that I encountered throughout my travels around the world. Unsurprisingly, my first photographs at art school in Launceston depicted the Tasmanian wilderness. I looked at Ansel Adams’ and Peter Dombrovskis’ works for inspiration and took photos of the seemingly unspoiled wilderness I encountered on my extended bushwalks (Fig. 73).

Fig. 73 Joachim Froese, Mount Rufus, 25 x 20 cm, silver gelatin print 1992

Soon my interest shifted to other areas and eventually the still life became my main field of practice. In 2011, however, I began to refocus on the natural environment when I gained a public commission to photograph the countryside around Frankfurt in Germany. The region I now looked at through my camera was a world apart from anything that could be described as
pristine nature – even by European standards. It is one of the central traffic hubs in Europe, dominated by high speed trains and one of the largest airports in Europe, yet it is interspersed with large pockets of *Kulturlandschaft*, a humanly altered and mainly agrarian landscape (Fig. 74). Here I was confronted with nature in an urban context vastly different to the wilderness I had enjoyed and photographed in Australia. With this commission my entire outlook on our relationship with the nonhuman world began to shift and I became aware that very different categorizations of nature underpinned German and Australian culture. The question of what might constitute these categorizations and how humans arrive at them developed into one of the core research questions that have driven this doctoral project.

Fig. 74 Joachim Froese, *Landschaft auf den zweiten Blick (Landscape at a second glance)*, commissioned work for the Regionalpark RheinMain, Frankfurt, digital image, 2011

At the beginning of the 21st century, evidence is mounting that anthropogenic factors, constantly accelerated through the Industrial Revolution, are
interfering with the natural environment to such an extent that all aspects of life on our planet are in crisis. In response to this crisis, a search for a better understanding of our relationship with the nonhuman world is now firmly rooted within the humanities and sciences alike, and it also leads contemporary artists, including myself, to fundamentally rethink their position within a wider political, social and scientific debate (Brunner et al., 2013; Lam et al., 2013; Williamson, 2013). In this context ecocriticism is emerging as an important interdisciplinary school of thinking aiming to define a future imaginary of coexistence with the nonhuman world (Buell, 2011; Flannery, 2016).

Ecocriticism developed from its beginnings in the 1990s, as a literary study of British Romanticism and its Anglo-American affiliations, into the diverse range of creative reflections on the physical environment it presents today. Within this history two major waves of ecocriticism can be defined. Apart from the critical re-appraisal of Romantic literature first-wave ecocriticism is characterized in particular as an attempt to fuse scientific and humanistic thinking into an ecological literacy which typically privileged rural and wild spaces over urban ones:

First-wave studies resonated with its preservationist edge as traditionally understood both by historians and by activists: environmentalism equals nature protection in thinly populated remote areas. Second-wave ecocriticism, by contrast, affiliated itself more closely with the other main historical strand of environmental thinking: public health environmentalism, whose geographic gaze was directed more at landscapes or urban and/or industrial transformation rather than at country or wilderness […]. (Buell, 2011, 94)

As “cultural practice” (Buell, 2011) this second-wave ecocriticism now comprises a wide range of fields with an environmental focus, including the visual arts and photography – and my own practice-led research.

Despite the rapid diversification of ecocritical practice and theory, some common ground can be established. As a school of thought, ecocriticism unites cultural practitioners and critics who wish to contribute towards an understanding of an acutely felt environmental crisis; it applies central importance to a critical investigation of the fundamental principles on which
humans build their relation with the nonhuman world; it aims to overcome the binary opposition between nature and culture; and it encourages an interdisciplinary engagement with social and natural sciences (Bergthaller, 2016). My attempt to define an ecocritical approach towards photography is also based on these fundamental criteria.

Firstly, in order to overcome a binary opposition between nature and culture, ecocritical photography needs to extend beyond traditional tropes of representing nature exclusively as wild and unspoiled habitats defined by an absence of human presence. Instead, the representation of urban and post-industrial scenarios provides an exciting new platform not only to investigate the scope of the impact human activity has on the environment but also to describe some fundamental principles on which our species builds its relation with the nonhuman world, including tacit embodied knowledge of familiar environments.

Secondly, an ecocritical approach must also include a non-representational analysis of photography as embodied material practice and communication to consider the effects this practice has on the environment it depicts and the audiences it addresses.

Thirdly, to understand the full non-representational impact of photography, the photographic industry in itself needs to be addressed. The production of photographic equipment and peripheral computer hardware relies on the extraction of raw materials from the environment while the consumption and constant upgrading of this equipment contributes significantly to an unsustainable mass of electronic waste on a global scale. Reducing the footprint of our own consumption of photography must therefore become a consideration for an ecocritical approach.

My practice-led research so far aimed to apply some of these strategies: on my initial excursions into South-East Queensland, I collaborated with scientists from the Queensland Herbarium and the University of Queensland (see chapter two); the photography in my garden explored ritualistic practice to develop tacit knowledge about this demarcated environment (see chapter
three); in photographing *Gleisdreieck Park* I depicted a unique scenario of *ruderal* urban vegetation (see chapter four); and I investigated the studio as an instrument of classification and a portal between nature and culture (see chapter five). My last and major body of work (which is discussed in chapter seven) considers non-representational approaches to develop a new methodology that uses the selfie and smartphone technology to expound and communicate shifting categorizations of nature. At this point though, a discussion of photography’s relation to nature (and culture) in my community of photographic practice will help to further frame my ecocritical approach to photography.

**Photography and the Depiction of Nature**

During the 19th century, photography was widely regarded as nature’s own medium which seemingly fused nature with artifice (Jeffrey, 1981). However, despite the excitement about nature revealing itself (Batchen, 1997; Garlick, 2009), photography turned out to be remarkably reliant on established painterly traditions that dominated composition and choice of subject matter, in particular in regards to the landscape (Stephenson, 2004). Inspired by a Claudian picturesque ideal, European photographers such as Joseph Gale, Henry White and Camille Silvy depicted ideal, harmonious and purposeful scenarios suggestive of a declared continuity between man and nature (Jeffrey, 1981).

This approach becomes apparent in Joseph Gale’s *Sleepy Hollow* from 1885 (Fig. 75). Trees frame the composition on each side around a centrally placed peasant resting with his horse near a pool of water in front of a homestead in the background. Gale’s imagery draws heavily on canonical representations of landscape such as those in Claude Lorrain’s *Landscape with Dancing Figures* from 1648 (Fig. 76), where even the proportions within the images are comparable, with about two-thirds of the horizontal space taken up by a cloudy sky and the framing trees.
In the United States, photographers were less interested in images of a tranquil countryside but rather focussed on wilderness as their subject matter. Yet, like their European counterparts, they also aligned themselves closely with prevalent painterly concerns. Painters such as Albert Bierstadt (Fig. 77), Thomas Cole and Frederic Edwin Church all saw the American West, based on the framework of their religious beliefs, as a manifestation of divine power.
that guided the attempt of white settlers to conquer the Western ‘frontier’ of the American continent (Brown, 2014; Cronon, 1996; Novak, 2007).

![Image](http://www.metmuseum.org/art/collection/search/10154)

**Fig. 77**  Albert Bierstadt, *The Rocky Mountains, Lander’s Peak*, oil on canvas, 306 x 186 cm, 1863

The Pacific Railroad, built between 1863 and 1869 to connect San Francisco with the eastern railway network, became an important agent in this expansion, and its highly publicised construction work attracted many photographers to follow the progress it made, especially into the mountains. Photographers such as Andrew J. Russell became railway employees, while others such as William Henry Jackson and Carleton Watkins worked freelance along the railway line. The camera as a tool fusing nature and technology was regarded as ideally suited to describe a similar relationship perceived in the continuous advance of the railway. This connection becomes evident when we look at Jackson’s *Cañon of the Rio las Animas* (Fig. 78):

We are conscious of being too close to the cliff above, of having to strain our gaze upward. We are, in fact “in the picture”, and aware of the struggle of the photographer to reach this site. The elevated train, in itself awesome, sends up mists of smoke that masquerade as natural atmosphere, partly consummating that fusion of the natural and the man-made suggested by rock and train. (Novak, 2007, 155)
Photography lent images such as this a unique authenticity which ‘objectively’ confirmed the natural beauty and accessibility of the American frontier to a fascinated audience in the cities along the east coast (Novak, 2007). Wilderness became a lucrative subject for photographers and fuelled a budding tourism market made possible through the fast and reliable mode of transport now offered by the railway.

Public awareness and the accessibility of remote areas to tourism created a fertile ground for an emerging environmental activism in the United States during the second half of the 19th century that began to call for the protection of prominent wilderness areas. The roots of a ‘New World’ passion for wilderness, however, go back further to the American environmental philosopher and writer Henry David Thoreau. His famous line, “in wildness is the preservation of the world” (Thoreau, quoted in Marris, 2011, 20) summarizes a thinking in which wild nature offers an escape from civilisation (Marris, 2011; Novak, 2007). His writing made a particular impression on John Muir, a Scottish-American naturalist and wilderness advocate. In 1892, he became the first president of the newly founded Sierra Club, an organisation which in the 20th century developed into a major lobby group for
environmental protection in the USA. Photographers such as Ansel Adams (Fig. 79), Eliot Porter and Robert Glenn Ketchum aligned themselves with the Sierra Club and their images played a vital role in promoting the agenda of wilderness protection in the United States.

Fig. 79  Ansel Adams, The Tetons and the Snake River, silver gelatin print, 48.4 x 38.2 cm, 1942

A similar development can be observed in Australia, where 19th century photographers such as John Watt Beattie and Nicholas Caire became well known for their depiction of the Australian landscape. Beattie’s work was instrumental in shaping the popular view of Tasmania’s island beauty and he was a vocal advocate for the protection of the island's unique flora and fauna (Roe, 1979). Caire’s images likewise promoted the natural splendour of southeastern Victoria and parts of the Victorian Alps (Cato, 1969). This legacy dominated Australian photography well into the 20th century and reached another climax in the works of Tasmanian photographers Olegas Truchanas and Peter Dombrovskis (Fig. 80).
Truchanas often used the human figure to accentuate the dramatic scale of the landscape he depicted, while Dombrovskis excluded all human presence in his imagery to represent the unspoiled and pure condition of the natural settings he photographed. Like their 19th century predecessors, both photographers were directly engaged in the environmental protection movement, and Dombrovskis’ photographs in particular made a significant contribution to the successful ‘No Dams’ campaign in Tasmania in the 1980s.

Conventions of wilderness photography became challenged for the first time in the late 1960s when two American photographers in particular started to develop alternative concerns. Frank Gohlke began to take photographs of grain elevators and the farmland around them. Later he photographed Wichita Falls after a devastating tornado to describe an interconnectedness of nature and culture that becomes much more apparent during extreme weather events.

Robert Adams, in his series The New West showed the developing urban sprawl in Colorado (Fig. 81), a landscape laid out for cars and mass culture, with an emphasis on private land that constrained any commitment to public
life and community living (Dunaway, 2010). Adams argued for new ways of seeing in order to develop an aesthetic shift beyond wilderness:

Unfortunately [...] spectacular [wilderness] pictures have also been widely accepted as a definition of nature, and the implication has been circulated that what is not wild is not natural. Attention only to perfection [...] invites [...] for urban viewers – which means most of us – a crippling disgust; our world is, in most places far from clean [...]. This leaves photography with a new but not less important job: to reconcile us to half wilderness. (Adams quoted in Dunaway, 2010, 22)

![Fig. 81 Robert Adams, *Colorado Springs, Colorado*, from *The New West*, silver gelatin print, 15.0 x 15.2 cm, 1968](http://jacketmagazine.com/38/iv-brandt-ivb-king-re-adams.shtml)

In 1975 works from both photographers were included in an exhibition titled *New Topographics: Photographs of a Man-altered Landscape* at the George Eastman House in Rochester, which could be seen as a herald of ecocritical thinking. What at the time was received as a rather unassuming display is today regarded as a seminal exhibition in the history of photography, which manifested a major departure from the prevailing focus on wilderness of
Sierra Club photographers such as Ansel Adams and Eliot Porter. The original show was reinstalled in 2009 and toured in the US and Europe to much critical acclaim (Rohrbach, 2010). Finis Dunaway argues that the exhibition not only marked a shift in the aesthetics of American landscape photography, but also called for a new environmental responsibility to be understood in the broader context of environmental discourse:

[T]heir challenge to traditional landscape art involved more than simply a shift in content from mountain and waterfalls to tract houses and industrial parks. Indeed the work of [Robert] Adams and the other photographers in the exhibit must be understood as part of a larger field of environmental, intellectual, and political discourse that sought to create new forms of ecological citizenship. (Dunaway, 2010, 14)

The ecological citizenship Dunaway sees reflected in the works of Adams and Gohlke could be considered as an important antecedent of ecocritical thinking.

Today, in contemporary practice, wilderness photography nevertheless continues to dominate a mainstream of practice that feeds a still growing market for images of pristine natural environments. These glossy, idealised depictions of places that in reality are often ecologically compromised, have been labelled by some critics as “eco-porn” (Millet, 2004) which fuels consumerism and promotes unsustainable levels of tourism to remote destinations already under pressure (Chester, 2013; Chianese, 2014).

Despite this criticism, many contemporary wilderness photographers have upheld a long-term commitment to environmental concerns as the core of their practice. Sebastião Salgado, for example, uses the significant commercial success of his images to contribute towards Instituto Terra, a Natural Heritage Reserve he privately runs on land owned by his family. His celebrated series Genesis (Fig. 82) describes, in his own words, “a quest for the world as it was, […] a journey to the landscapes, seascapes, animals and peoples that have so far escaped the long reach of today’s world.” (quoted from Genesis exhibition display, C/O Berlin 2015).
His large-scale photographs depict some of the most remote places on the planet. They convey a stunning display of natural beauty due, not least, to Salgado’s unrivalled mastery of black-and-white photography, but they are also a salient reminder of what is lost or will be lost soon.

Yet despite his commendable intentions, looking at *Genesis* from an ecocritical stance might provide interesting new angles. Salgado seems to be engaged in a kind of time travel where humans only find a place in his images as ‘primitive’ peoples, idealized, even sentimentalized “until the moment they do something unprimitive, modern, and unnatural, and thereby fall from environmental grace” (Cronon, 1996, 21). Winding back the time by a few thousand years seems to be Salgado’s sole proposition for a meaningful coexistence between humans and nonhumans, at least in this series. This nostalgic view offers little help to address the Anthropocene scenario on our planet and attenuates the critical stance he so adequately put forward in his earlier work, for example in his images from the *Serra Pelada* gold mine and his reflections in *Migration: Humanity on the move*. Even the slightest hint of modernity is now banned from *Genesis*, which appears even more irritating because Salgado himself brings in, and works with, the full force of ‘today’s
world’ in form of a large entourage of assistants and equipment, including powerboats and aircraft to capture his images.

Like Salgado, Subhankar Banerjee has a clearly defined conservationist message, which some critics have linked to ecocriticism (McKee, 2011; Tursi and Banerjee, 2010). His photographs of remote areas in the Arctic north do not categorically reject any impact modernity might have on these isolated communities (Fig. 83). But like Salgado he also uses aeroplanes for the stunning aerial views he shows in many of his photographs (McKee, 2011). It seems that photographers such as Salgado and Banerjee, in trying to depict the remnants of an apparently unspoiled nature in remote areas, need to rely on precisely the kind of technology that is ultimately involved in destroying it.

More recently, on the background of second-wave ecocriticism that is gaining increasing traction, photographers who move away from the powerful trope of wilderness have come to prominence. For many years, Terry Evans has depicted urban and semi-urban scenarios across the North American prairie in which she describes a landscape that is formed by humans through reciprocal
relationships between culture and nature (Ulman, 2016). Juxtaposing portraits and ethnographic documentary with a man-altered landscape, her images tell stories about communities and their activities as well as the ecology of a place she knows intimately (Figs 84–85).

Figs 84–85  Terry Evans, Exploring the Trinity, March 2014 (left) and Woman and Child, Trinity River, July 4, 2013 (right), from: Meet me at the Trinity, digital images, size unknown
http://www.terryevansphotography.com/meet-me-at-the-trinity/3m3pfjcxmg6zx5apk1yq77kr0gfqqa
http://www.terryevansphotography.com/meet-me-at-the-trinity/2yoctgobz2zdawid73rihyfk6xxk5x

Sarker Protick’s series Of River and Lost Lands describes the Padma River in Ishurdi Province in Bangladesh, where riverbank erosion washes away large portions of the high-set banks of the river during the monsoon, a natural phenomenon which is intensified by water released from dams built upstream in India (Fig. 86).

Some might wonder why people stay when they’re engaged in what seems like a losing battle with the river. “This thing has been rooted in our culture, in our songs, our writings, for a long time. And every time it’s referenced, it talks about how people fight with it. It’s strange. They have lost their houses, but they still try to live by the river because it’s how they’ve been living for a long time, six or seven generations, because they are the people of the river. All of their daily activities come from the river—washing clothes, fishing—everything is helped by the river. But unfortunately at some point they have to sacrifice a lot for that.”

(Harlan, 2014, para. 5)
Both photographers show us an ecocritical perspective of worlds formed by humans and humans formed by the worlds they live in, worlds the photographers themselves are part of. The scenarios put forward by Evans and Protick suggest multifaceted ecological relationships humans have developed with landscapes built on “exploration, inhabitation, alteration, cultivation, exploitation, appreciation, study, preservation, and restoration” (Ulman, 2016, 33). While some of these relations are an immediate response to Anthropocene pressures and a rapidly changing environment, others go back many generations and are deeply embedded in long-held cultural traditions. Similar to Evans and Protick, my own practice-led research is focussing on worlds I feel intrinsically connected with. However, photography might be more deeply involved in the complex relationship that constitutes the world(s) around me. A discussion of non-representational approaches towards photography will further explain my thinking.
Representational and Non-representational Approaches to Photography

Photography, we might say, is born of mixed parentage. As an articulation of the energies of nature with a technology of time, photography emerges from out of the Romantic milieu only to find that it is already given over to a scientific method with which it is not fully congruent. (Garlick, 2009, 97)

As a medium, photography occupies an ambiguous position between culture and nature, and its definition between these poles has been debated from its slow inception during the first half of the 19th century (Batchen, 1997; Garlick, 2009). Traditionally this debate over photography’s historical and ontological identity has concentrated predominantly on its representational quality (Burgin, 1982), with the focus on one key question: “Is photography to be identified with (its own) nature or with the culture that surrounds it?” (Batchen, 1997, 17). This question is reminiscent of a similar one in environmental philosophy as observed by Sopers, who marks out a fundamental tension between nature-endorsing and nature-sceptical views:

[Environmental philosophy] is thus shaped by a conjuncture at the present time of two perspectives, both of them centrally concerned with questions about nature and appearing to share certain prescriptive positions in common, but driven by quite contrary impulses: the one concerned with the limits of nature, and with our need to value, conserve, and recognize our dependence upon it; the other concerned to remind us of the cultural ‘construction’ of nature […]. (Soper, 1995, 7)

In the context of my current discussion, which holds the investigation of a perceived nature–culture divide at its core, the similarity of these two debates is crucial and presented an initial focus for my research.

In the beginning, a realist view of photography dominated the perception of the medium well into the 20th century. Photography emerged as a nascent technology at the beginning of the 19th century when numerous individuals independently developed methods to fix camera-derived images on light-sensitive materials (Batchen, 1997). The camera itself, however, had been used for at least 200 years before to replicate and extend the human view.
Johannes Kepler was the first to propose an analogy between the camera and the human eye in 1604, a notion later picked up by Descartes (Wright, 1999). The analogy he drew between the camera and human vision not only established the pictorial representation of camera-derived images within a mechanistic view of the world, but formed the idea that optical images resemble a realistic rendition of the world. This perception continued to hold major currency within modernist views during the 20th century. As an example, the title of John Szarkowski’s seminal exhibition *The Photographic Eye*, held in 1964 at the Museum of Modern Art in New York, drew a direct correlation between eye and camera.

Fig. 87  Anna Atkins, *Dictyota dichotoma*, from: *Photographs of British Algae: Cyanotype Impressions*, cyanotype, 20 x 25.3 cm, 1843

[https://commons.wikimedia.org/wiki/File:Anna_Atkins_algae_cyanotype.jpg](https://commons.wikimedia.org/wiki/File:Anna_Atkins_algae_cyanotype.jpg)

Indeed, 19th century photography seemed to usher in a new era of *technovision* (Garlick, 2009), a mode of seeing that in fact expanded the capacities of the human eye. Anna Atkins’ *Photographs of British Algae: Cyanotype Impressions* (1843) (Fig. 87) revealed unprecedented details in the study of algae, Nadar’s photograph of Petit-Becetre (now lost) provided the first aerial view (1858), and
Eadweard Muybridge froze motion beyond human perception. Nature, it was widely believed, revealed itself through the new medium. Technovision continues to hold significant sway over our imagination today as it continues to extend the limits of our vision. It provides images of distant planets and galaxies as well as views of the interior of human bodies, continues to re-shape our concept of time and distance when it splits seconds into nanoseconds, visualizes our personal and inter-terrestrial past, and delivers instant images across our planet.

A concerted challenge to the realism of photography came through an approach based on semiotics that challenged the view that the apparent non-symbolic, objective quality of the photograph implied a direct view at the world (Flusser, 2000). The semiotic study of signs developed during the second half of the 19th century in two independent schools of thinking. Charles Peirce’s theory of semiotics, closely related to logic, proposed that the human mind relies on a triadic relationship between object, sign vehicle (signified), and interpretant to form knowledge. At the same time the French structural linguist Ferdinand de Saussure concentrated on language as a crucial factor in the construction of reality. His semiology described language as a construction of signs reliant on a signifier (e.g. sound pattern) and a signified (its interpretation) both of which cannot be separated from each other (Yakin and Totu, 2014). While Peirce’s theory of semiotics ultimately refutes a binary opposition between nature and culture, de Saussure’s semiology leads us to define reality as a cultural construction.

Expanding on de Saussure’s semiology as an analytic tool beyond language, the French theorist Roland Barthes was one of the first to investigate the photograph based on its characteristics as a sign. He pointed towards the paradox of coexisting photographic messages with and without code. Barthes described this entanglement of denotation (the photographic analogue) and connotation (the rhetoric of the photograph) as the inherent quality of photographic images (Barthes, 1982).
Later analysts began to shift their attention towards the reception and interpretation of photographs. Critics such as Victor Burgin, Alan Sekula and John Tagg (Burgin, 1982), building on Walter Benjamin’s mid-century work, put forward theories based on the assumption that the photographic image lacked any meaning beyond the interpretation of the observer (Garlick, 2009). This postmodern line of thinking suggests that the reading of photography depends entirely on the cultural background upon which it is received:

Photography as such has no identity. It’s status as a technology varies with the power relations which invest in it. Its nature as a practice depends on the institutions and agents which define it and set it to work. Its function as a mode of cultural production is tied to definite conditions of existence, and its products are meaningful and legible only within the particular currencies they have. Its history has no unity. It is a flickering across a field of institutional spaces. It is this field we must study, not photography as such. (Tagg, 1988, 63)

This debate, between a formalist view that regards photography as an essentially objective medium and a postmodern critique that denies it a singular identity or history, has set the opposing parameters (Batchen, 1997) that have dominated theoretical approaches towards understanding the medium in the present. But, despite their differences, both arguments are based overwhelmingly on an investigation of the representational function of the photographic image.

In order to arrive at a cohesive ecocritical perspective on photography, H. Lewis Ulman puts forward an alternative approach. His suggestion is to move away from a single focus on what the image depicts to concentrate instead on what he calls the technē of photography:

Thus, ecocriticism must attend to two dimensions of photography. First, like other media, photography is a material, embodied practice, and ecocritics might therefore attend to the effects of a photographer’s presence and equipment in the environment in which a photograph is made. Second, photography involves a technē, an art of making which is [...] grounded in formal techniques and aimed at shaping and communicating arguments, and ecocritics must ask how
and to what effect a photograph has been made and presented to its audience. (Ulman, 2016, 31)

Analysing photography as technê, as “a coherent set of principles for making or producing” photographs (Ulman, 2016, 27), he directs our attention to broader, more holistic responsibilities of using a camera, which ecocriticism must attend to. This approach opens our eyes to the behaviour of a photographer within a community or environment that is depicted and/or the consequences the use of photographic (and other technical) equipment entails for the photographed and the photographer. Ulman’s approach considers effects the act of taking photographs has on the environment it depicts, beyond its representation.

By looking at photography as material embodied practice, Ulman refers to non-representational theory that emerged in the 1990s as an approach to understand the world(s) through shared experiences such as:

>[…] everyday routines, fleeting encounters, embodied movements, precognitive triggers, practical skills, affective intensities, enduring urges, unexceptional interactions and sensuous dispositions. Attention to these kinds of expression, it is contended, offers an escape from the established academic habit of striving to uncover meanings and values that apparently await our discovery, interpretation, judgement and ultimate representation. (Lorimer, 2005, 84)

Non-representational theory suggests that practices of subjectification emerge out of gained experiences which describe different but attuned worlds (Simpson, 2011) instead of one general objective version of reality, a view based on von Uexküll and postcolonial theory (Thrift, 2007, Note 4, 255). These subjective worlds manifest themselves primarily through embodied experiences in which technology plays an ever-increasing role as an integral part of a human existence that is becoming increasingly hybrid, as Nigel Thrift puts it:

>It could be argued that the human body is what it is because of its unparalleled ability to co-evolve with things, taking them in and adding them to different parts of the biological body to produce something which, if we could
but see it, would resemble a constantly evolving distribution of different hybrids with different reaches. (Thrift, 2007, 10)

New theoretical reflections on photography are now concentrating on non-representational thinking in an attempt to come to terms with manifestations of photography in the fundamentally changed technical and social parameters the digital era in particular entails.

The idea of basing an analysis of photography on its technology was first formulated by Patrick Maynard in the 1990s. In his search for a more general perspective on photography that he believed was missing (Maynard, 1997), he related human agency to photographic production, which he saw as an extension of the human body's information-gathering and processing systems (Lukitsh, 1999), an angle that pre-empts aspects of non-representational thinking. Maynard formulated his deliberations at an early stage of photography’s transition from analogue to digital technology. However, in order to expand on Ulman’s discussion of technē, it will be necessary to take into full account how the digital revolution has changed the technical parameters of camera technology today.

Cameras are now omnipresent and integrated into an array of devices such as smartphones, surveillance systems, remote-controlled drones, and vehicle automation, and these numerous applications are inextricably entangled with our social behaviour (Gómez Cruz and Lehmuskallio, 2016). Vernacular photography, long regarded as an exclusive phenomenon of the developed world, is now becoming equally widespread in developing countries such as Tanzania, where mobile phone cameras are the main technology spreading photographic practice through large parts of the population (Uimonen, 2016). Incorporated into smartphone technology, cameras are now directly linked to a mode of communication that uses social media platforms such as Facebook, Instagram and Snapchat (Pargana Mota, 2016; Batchen, 2013). The omnipresence of photography in our social behaviour suggests that it can only be understood from the broader empirical perspective of its everyday use:
Photography is tied to both ways of seeing and representing, as well as to ways of acting and performing. Photographic practices allow for different kinds of communicative actions from, for instance, text, speech or music, but they also offer different ways of experiencing the world. Photographic theory, engaging with photography as representation, needs to be complemented with practice-based assessments, especially as photographic technologies have become more complex. (Gómez Cruz and Lehmuskallio, 2016, 4).

This contemporary socio-technical context plays a crucial role in my definition of ecocritical photography, which, in line with Lorimer (and Ulman), considers representational as well as non-representational aspects to propose a ‘more than representational’ analysis of the medium (Lorimer, 2005; Lister, 2016).
Chapter Seven

*What is Nature? Urban Tableaux and Selfies*

![Image](image.png)

Fig. 88  Nicéphore Niépce, *View from the Window at Le Gras*, modern reconstruction taken from original heliograph, 20.2 x 16.2 cm (original size of pewter plate), 1826

[https://en.wikipedia.org/wiki/View_from_the_Window_at_Le_Gras](https://en.wikipedia.org/wiki/View_from_the_Window_at_Le_Gras)

The exposure for the earliest surviving camera photograph, Nicéphore Niépce’s *View from the Window at Le Gras* (Fig. 88), taken in 1826, lasted approximately 8 hours. It is estimated that in 2017, within the same time frame, around 1 billion photos will be taken worldwide (equating to approximately 1.3 trillion a year) (Heyman, 2015). Another estimation suggests that, every two minutes, humans now take more photographs than were taken during the entire 19th century (Toutounji, 2013). This almost incomprehensible avalanche of photographs is directly linked to digital technology and fundamentally changes long-held perceptions about the medium, both in regards to its use, and its representative character.

When the first digital image-manipulation systems began to emerge in the late 1980s they seemed to herald the death of photography, as they were perceived to change the inherent nature of the medium as an indexical sign.
The ability of digital technology to seamlessly manipulate the content of photographs like never before was seen as a radical undermining of photography’s status as a reliable carrier of information (Batchen, 1997).

More than 25 years later, photographic technology has become completely digitized, while traditional analogue processes are relegated to a minor niche within the arts or hobby status for a handful of enthusiasts. Yet despite popular predictions of the end of photography, the social practice of the medium not only continues to follow many enduring rituals of family and personal use (Kelsey, 2013), but its vernacular practice has risen exponentially. In the process, photography that once played a predominantly documentary role has now turned into a powerful medium of communication:

Able to be instantly disseminated around the globe, a digital snapshot initially functions as a message in the present ("Hey, I’m here right now, looking at this") rather than only as a record of some past moment. This kind of photograph is meant primarily as a means of communication, and the images being sent are almost as ephemeral as speech, so rarely are they printed and made physical. […] The "that-has-been" temporality of photography once described by Roland Barthes has been replaced with a "what-is-going-on," a sharing of an immediacy of presence. (Batchen, 2013, 46)

Referring to W.J.T. Mitchell (1994), Robin Kelsey observes that the rapid acceleration of photography linked to digital technology is also fundamentally altering the ontology of the photograph. He identifies two distinct representational spaces in which photographs appear:

One is the space of things, where photographs are made of paper, glass, silver, dyes, and other materials, and where we handle them, hang them on walls, move them about and put them in boxes. The other is the virtual space of our digital network of server farms and hard drives, where photographs have no substance or size and arrive suddenly when we beckon them to our glowing screens. (Kelsey, 2013, 51)

Kelsey suggests that one consequence of the digitalization of photography is the necessity of distinguishing between picture (a constructed concrete object or ensemble) and image (the virtual, phenomenal appearance that it provides
a beholder) (Kelsey, 2013, 52). The current mass consumption of photographs is only made possible because the vast majority of photographs today exists exclusively in the form of image, a format in which they can be easily stored and disseminated. As images, photographs exist as binary codes on digital hardware or, increasingly, as cloud data held in rapidly growing server farms that are not without significant ecological impact (Walsh, 2014).

As a digital image, we cannot touch the photograph and it loses its consistent appearance: its size, shape, form, and colour depend on the digital screen on which it appears. Neither is a digital image bound to a single location; instead it is everywhere and nowhere. Unlike in the past, when photos always existed as ‘hardcopy’, today only a minute fraction of photographs are translated into pictures in order to exist as a material object, and we reserve this older pictorial form for a small proportion of photographs to which we attach certain significance, be it as an object of sentimental or personal value, or as art.

In this context the representational character of the photograph also changes. One out of a billion images loses its individual importance; instead the value of images is transformed into the algorithmic quality of ‘big data’. A continuous flow of photographic data is now regularly used in police investigations in the form of the algorithm. The Boston Marathon bombing in April 2013 was the first occasion on which investigators used ‘big data analytics’, a process in which thousands of snapshots from smartphones, media coverage and security cameras were computer analysed to ascertain patterns of ‘normal’ audience behaviour during the event. The emerging three-dimensional photo-narrative of the Boston Marathon audience helped investigators to crosscheck people whose behaviour was seen as suspicious in this context, and it eventually led to the arrest of the attackers (Männistö, 2016).
The Selfie

The phenomenon of the selfie is directly linked to smartphone technology. Current mobile phones have a designated low-resolution ‘selfie camera’ placed above the front screen which enables the user to watch themselves on the screen while taking the picture; used in this function the smartphone has become a digital mirror that is able to fix the mirrored image. The low resolution usually assigned to selfie cameras and their resulting imagery indicates that the technology underpinning the selfie is designed to produce files which are easy to share and upload within digitized social networks. The overwhelming majority of selfies are viewed on mobile devices while hardcopies are rarely produced, as their low resolution does not allow for lossless printing. The selfie therefore exists almost exclusively as an image, not as a picture, and it is reliant upon the digital infrastructure of linked mobile devices and social media platforms for its existence and circulation (Shipley, 2015).

Most scholars now agree that the selfie has become a phenomenon that characterizes an era and it is widely regarded as an independent genre of image making with its own structural autonomy (Saltz, 2014; Shipley, 2015). Along with the selfie comes a new etiquette of self-presentation with a set of widely accepted instructions in regards to posture, camera angle and facial expressions. It is a carefully stage-managed performative act designed for the digital stage of social networks (Saltz, 2014). Sascha Lobo describes the longing to create a digital self as a social dictate of an era obsessed with selfieness (Lobo, 2014). Often interpreted as a narcissistic form of self-representation, the selfie is perceived as a reflection of an exhibitionist and voyeuristic one-dimensional digital culture directly linked to consumer capitalism (Pargana Mota, 2016).

Edgar Gomes Cruz and Helen Thornham (2015) point out that a traditional analysis of the selfie, concentrating predominantly on the image as a stand-alone (self-)representational signifier, cannot grasp the social consequences of the selfie phenomena in their entirety. Instead, they propose a non-
representational approach that shifts the discussion towards the selfie as a specialized form of technical communication dependent on the algorithms of digital networks that shape our behaviour and bodies along existing power structures:

[The selfie] emerged through nonhuman developments in (for example) software, code, digital design, and digital labour. [...] [These] [a]lgorithms are a materialisation of power relations, negotiations, design; they are forged through human technological relations and within dominant power structures. But they are also, to draw on Latour, “durable” in so far as they are also matter: they are built infrastructure that also generates possibilities of interaction and mediation. They are embedded within, but also make durable, power relations. [...] 

[W]e need to understand the phenomenon of the selfie as a performative and mediatory practice that cannot be reduced to, or solely taken from, the image “itself.” [...] [I]mage-creation (along with distribution and its use in social media), does not only represent bodies, it also generates them. (Gómez Cruz and Thornham, 2015, 5–6)

Jesse Weaver Shipley comes to a similar conclusion when he argues that the selfie must be regarded as an embodied practice that turns “the mobile phone apparatus into both an extension of the body and a technology for abstracting the self” (Shipley, 2015, 404). He describes selfieness as an emotional and semiotic field that emerges through the potential ever-presence of photography. As such it goes beyond a mere re-shaping of aesthetic principles, because it also changes common perceptions of our bodies and our social environment by creating a mise-en-scène (Shipley, 2015, 403) around the body:

In various permutations, selfieness is defined by how a subject composes an image, its captioning, and its circulation to create an emotional field emanating from the self. The selfie creates a time-space that can be intensely focused on a single moment and emotion but, in turn, evokes a broader social world that the protagonist imagines as their realm. (Shipley, 2015, 408)

The assumption that selfieness, in Shipley’s sense akin to semiotic exchange, not only describes but also creates a broader social realm, suggests that
selfieness, and photography seen as a material practice extending from our sensory capacities, must also have far-reaching consequences on biosemiotic exchanges as defined by von Uexküll. It must be assumed that human Umwelten are increasingly influenced by the technology we use. Photography – and technology as a whole – is infiltrating our sentient worlds.

What is nature?

In the previous chapters I discussed the different approaches my practice-led research took to explore and visualize human categorizations of nature and I outlined theories that assume the existence of multiple sentient human and nonhuman worlds. I experimented with a number of approaches to create and arrange photographs that on one hand questioned human modes of categorization and classification and on the other attempted to visualize multilayered sentient worlds. What all these approaches had in common was that, as a photographer, I remained the sole author of the photographs I presented – a fact that up to this point had remained unchallenged.

Eventually the idea of sentient worlds – overlapping and interacting with each other – became extended through my theoretical research into photography as material practice, and in particular my investigations into the selfie. These two research paths now merged, forming my thinking about ecocritical photography, and met with an idea initially conceived when I documented the large outdoor panels of Australian seedlings exhibited in Aquamediale11 for my archive. In this documentation (Figs 59–64) my panels appear as photographs within photographs, akin to portals from the world around them back into the studio where they were produced. Looking at these images, the thought of a photograph within a photograph began to settle in my mind, in particular because I had already played with this thought a few years earlier (Fig. 89).

In 2012, I had photographed tourists around landmark buildings in Berlin and I eventually concentrated on the screens of the many digital cameras around. Now, photographing neither the tourists nor the buildings, I instead photographed
the camera screens surrounding me and with them – as I understand in hindsight, as a result of my research – the practice of photography itself. My view showed somebody else’s view and I stepped out of my role as the single author of the image. Back then, these images constituted nothing more than one of many photographic ‘finger exercises’, but when I re-visited this work I re-considered the idea as a relevant approach for my current research.

Another important inspiration came through German photographer Barbara Probst and her series *Exposures*, which she has worked on continuously since 2000. Based on the idea of subjective and sometimes contradictory witness accounts, *Exposures* consists of panels of photographs that show simultaneous views of a single carefully staged scenario (Figs 90–91). Synchronizing her exposures through the use of radio controls, interconnected cable releases or multiple photographers, she takes a number of concurrent exposures with cameras placed in different locations around her subject
matter. The resulting images, exposed at exactly the same moment from different angles, offer conflicting views of the event, each of which is given equal weight:

Despite the proximity of the cameras and the simultaneity of their exposures, the resulting images are extremely diverse in style, atmosphere, and content, concretely demonstrating that photographs are highly selective interpretations of reality. As her pictures subvert one another, they unsettle our faith in the idea of any sort of photographic “truth,” ultimately revealing the medium’s profound capacity to tell stories and our propensity to believe them. (Irvine, 2007)

Fig. 90  Barbara Probst, Exposure #9: N.Y.C., Grand Central Station, 12.18.01, 1:21 p.m.,
colour photographs, 130 x 86 cm each, 2001

http://barbaraprobst.net/works/exposure-9/

Fig. 91  Barbara Probst, Exposure #69: N.Y.C., 555 8th Avenue, 02.24.09, 6:16 p.m., colour photographs,
168 x 112 cm, 2009

http://barbaraprobst.net/works/exposure-69/
Eventually these diverse streams of research and ideas began to form the concept for a project titled *What is nature?*, an installation of large photographic prints and smartphones for which I began to photograph urban and non-urban landscapes in and around Brisbane.

The project began with a search for locations to show a transition of scenery ranging from traditional landscape perceptions of ‘wild’ nature and rural settings towards more urban scenarios. The first motif that could be seen to fall under traditional tropes of landscape or nature photography I found in seemingly ‘wild’ mangrove forests at the coastal fringes of Brisbane. Later, the Darling Downs, a region 150 kilometres west of Brisbane with which I had familiarized myself during some of the field trips described earlier, offered a more agricultural setting to photograph. These locations were matched by urban settings that expand traditional notions of nature, which I found across the inner suburbs and the wider metropolitan area of Brisbane. Some of these scenes featured suburban housing estates, residential gardens, railway infrastructure and Brisbane’s ubiquitous stormwater canals.

To start with, this mix of locations aimed to visualize the question, ‘What is nature?’ and attempted to challenge pre-conceived ideas an audience might hold about nature in an urban context – one of the major concerns of my research. To depict these locations I used a long telephoto lens and stitching software in Photoshop post-production – a similar approach I had used to photograph *Gleisdreieck Park*. I converted these photographs into highly detailed large-scale fine-art prints (ca. 2 metre by 1 metre in size). As oversized *pictures* (Kelsey, 2013) the photographs emulated a scale and presentation used by photographers such as Banerjee, Kander and Burtynsky whose scale, technical brilliance and fine detail claim an authority and authenticity that stems from the tradition of landscape photography and its “certificate of the real” (Mitchell, 2002, 15).

The rhetoric of such photographs (Barthes, 1982) is defined not only through their form and size as *pictures*, but also through the context in which they are
presented. Viewed and displayed in an art gallery, their value and presence as ‘art’ is defined through cultural and commercial parameters that stem from a system as defined, for example, by Buren (1979). I deliberately chose all such factors to emphasize a reading of my photographs as an authoritative and seemingly objective account of the depicted environment (as an example see What is nature? #2, Fig. 92).

Further in line with the landscape tradition, my pictures include a small person set within the scenery, a trope that was often used by painters such as Caspar David Friedrich to emphasize the overwhelming scale of the depicted landscape. In photography it was emulated for example by Olegas Truchanas in his photographs of the Tasmanian landscape. In my work, however, I attribute an additional dimension to this figure which on closer inspection is depicted in the process of taking a selfie on a smartphone. This act of taking a photo now mutates the (traditional) human figure into a punctum, described by Barthes in Camera Lucida as an element that rises from the scene (Barthes, 1986). The punctum hints at an alternative viewpoint (a second photograph) of the same environment that contradicts the all-powerful, seemingly objective
viewpoint of the large panorama into which the act of taking a selfie is embedded.

Observing the act of taking a selfie is enough to suggest the existence of another photograph embedded within the large picture on the wall. The photograph within a photograph – similar to my Aquamediale panels – hints at a portal, this time into selfieness: “the broader social world that a person who takes a selfie imagines as their realm” (Shipley, 2015, 408). The act of taking a selfie – as a punctum in my work – immediately undermines the commanding rhetoric of the picture's presentation as landscape.

This undermining of convention is confirmed when the viewer sees the selfie that was taken. As part of my installation the selfie – the image (Kelsey, 2013) already embedded inside the adjacent picture – is now made visible on the corporeal smartphone it was taken with (Fig. 93). As if it ‘fell out of the picture’ the smartphone – installed on the wall next to the picture – now shows on its screen the alternative viewpoint created by this other author shown standing in the landscape. Changed from a passive object in my picture into an active source of authorship he now communicates a different message.

Fig. 93  Joachim Froese, What is nature? #2, installation view, Site Eight, RMIT Melbourne, July 2017
In *What is nature? #2*, the smartphone shows the man full frame in front of a motor vehicle not visible in the large adjacent landscape panorama (Fig. 94). Now he and the car are the centre of attention and a shift in meaning has taken place. The person who is rendered small in the large *picture* is now rendered large in the small smartphone *image*. Offering a different type of photograph, the selfie communicates a different perspective which provides new (seemingly subjective) information for the viewer, information which is not accessible through the large panorama next to it. We read the selfie as a personal act of communication so typical of the form: ‘Look at me, this is me, right here, right now, in front of my car!’ The selfie, understood as an embodied practice of communication (Gómez Cruz and Thornham, 2015; Shipley, 2015), can be read as visual evidence of an independent sentient human world beyond my own authorship.

Like Probst, my installations show simultaneously taken photographs. But unlike her work, which assigns equal status to all presented views (as pictures), my photographs now assume different ontological materializations
which do not stand on equal footing. In contrast to the authoritative landscape picture, the selfie constitutes a vernacular digital image which only exists as a binary code appearing as an image on the screen of the smartphone. As a display platform, it leaves the selfie in its ‘natural’ environment: the digital realm where it relies on the interpretation of a piece of digital hardware as a host. However, it also suggests the possibility of rapid dissemination through digital communication. In this form, which could be described as ‘viral’, the photograph emerges akin to an apparition, an appearance without its own properties, a mere gesture without real authority that could be deleted the next moment. As a gesture, it communicates an act of being in the world, a fleeting visual extract from an individual sentient world beyond my own authorship. Made visible through the hardware of a smartphone with integrated photographic technology, this digital image can appear on a screen everywhere and nowhere.

The incorporation of the selfie as an extract of independent sentient worlds and as a residue of human behaviour and biosemiotic exchange also extends the scope of the question ‘What is nature?’ beyond the landscape to include the nature of human behaviour:

The natural is both distinguished from the human and the cultural but also the concept through which we pose questions about the more or less natural or artificial quality of our own behaviour and cultural formations; about the existence and quality of human nature; and about the respective roles of nature and culture in the formation of individuals and their social milieu. Nature also carries an immensely complex and contradictory symbolic load; it is the subject of very contrary ideologies; and it has been represented in an enormous variety of differing ways. (Soper, 1995, 2)

In line with Soper’s seminal book, from which I borrowed the title for this body of work, the non-representational approach underpinning this installation of photographs not only investigates human categorizations of the nonhuman world. It also questions our interactions with other human worlds and by doing so it breaks down any division between nature and culture to extend the question ‘What is nature?’ into the social realm of human interaction. What is
human nature? The communicative act of the selfie forces us to respond. What do we think of this guy showing off in front of his car and proudly posting his selfie?

Fig. 95  Joachim Froese, *What is nature? #4*, archival inkjet print, 180 x 100 cm, 2016

Fig. 96  Joachim Froese, *What is nature? #4*, installation view, Site Eight, RMIT Melbourne, July 2017
What is nature? #4 (Figs 95–96) shows us a different example, and we see one of Brisbane’s typical stormwater drains, in which a young man takes a selfie in front of a graffiti depicting a tree frog. Is he the graffiti artist? Is the scenario we look at natural? What is nature, what is culture, what is art?

Other scenarios like What is Nature #1 (Figs 97–98) return to the notion of wilderness and how we place ourselves in relation to it. It depicts a seemingly impenetrable ‘wild’ mangrove forest with the sea in the background, a view which is counteracted through the selfie which communicates a very accessible location: ‘Look at me: I am going for a walk’. The selfie now changes our perception of the place itself as it is revealed as a site less ‘wild’ than we might have thought. Like the stormwater canal, this is a typical suburban Brisbane setting and both the seemingly ‘natural’ mangrove forests and the seemingly ‘technical’ storm drains (Fig. 116) are planned and introduced by the Brisbane City Council to manage flood water surges during tropical storms (Spalding et al., 2014).
What is Nature #5 (Figs 99–100), on the other hand, shows a patch of ‘real urban wilderness’: an overgrown creek bed spanned by a railway bridge. As one of many flood-prone areas in the Brisbane metropolitan area, this land is inadequate for human habitation and as such it is left alone. It is an example of what Marris describes as “connected-up nature” (Marris, 2011, 138), an environment within an urban scenario that can provide a refuge for populations of otherwise endangered species of fauna and flora (Marris, 2011). In this case the selfie draws our attention to the ‘wild’ state of the photographed environment. Looking at the selfie alone this could be a campsite not dissimilar to ones found in a national park (Fig. 100).
What is nature? #6 (Figs 101–102), the last pair of photographs discussed here, shows the beginnings of one of many new housing estates springing up everywhere on the outskirts of Brisbane. In the background across the hill, now dug up and subdivided, we see the bushland which the gigantic building
site has recently replaced. To create more living space for humans – a new house and garden in the tradition of the quarter-acre block – it has destroyed another nonhuman ecosystem. But within this scenario, which presents clear visual evidence of the detrimental effect human behaviour has on the nonhuman environment of our planet, the selfie in this constellation provides an alternative world within a world: a young family proudly claiming one of these subdivisions to build their own ‘nest’, an act that fuses natural and cultural aspects of the human condition in a single image. Can we blame them as individuals? Can we go on like this as a species?

Finally, *What is nature? #6* connects the beginning and end point of my research. The pregnant woman in the centre of an enclosed plot of land picks up the theme of the Virgin Mary in the garden to link this series with the *Hortus Conclusus*, suggesting a *longue durée* of entangled human classifications that emerged during Europe’s transition into the early modern period.

![Fig. 101 Joachim Froese, *What is nature? #6*, archival inkjet print, 175 x 100 cm, 2016](image)
The installation of photographs for *What is nature?* constitutes an artistic construction of staged scenarios. I used models and explained and discussed my idea for the photograph I was to take with each of them. Although their placing within the depicted scenario thus followed a pre-conceived idea of mine, I offered no instructions on *how* to take the selfie itself, in order to keep it as authentic as possible.

The fact that I relinquish part of my authorship constitutes a crucial move within this work which proposes multiple (human) sentient worlds that form as a response to the shared environment around them, and makes them visible through photography. Following a ‘more than representational’ route of thinking to extend the definition of photography – beyond its role as a carrier of visual information – as a technology and embodied (human) practice opens up a new scope of investigation. As an act of communication it emerges as one of many complex factors contributing to an integrated cognitive system. This system connects body and mind with the wider ecological environment as suggested
by embodied cognition theory (Shapiro, 2010) and infiltrates the biosemiotic exchanges that form our sentient worlds as defined by von Uexküll (2010).

Selfies, simultaneously describing and creating sentient worlds, provide us with an endless flow of subjective viewpoints that reveal glimpses of the worlds the selfie-takers create around themselves. Linked to performances of categorization and classification, these images not only add to a ‘big data’ kaleidoscope of human views but the act of taking them in itself affects the world(s) we live in. Photography used and understood in this way can provide a new, exciting approach to expound some of the abstract process involved in the human categorizations of nature.
Conclusion

This practice-led research project constituted a photographic enquiry into human categorizations of nature. In order to define a cohesive contextual framework for my practice-led research I narrowed down this broad field of investigation and concentrated on western categorizations from early modernity to the present. These investigations advanced my thinking about photography and helped me to find new innovative ways to use it, so that towards the conclusion of the project I arrived at a new perspective on photography. These findings have confirmed my proposal that photography must be understood as a material practice that extends its representational capacity as a visual medium. As a new form of instant visual communication in particular, photography is embedded into our daily lives and therefore has the capacity to work as a more-than-representational tool that presents multiple human sentient worlds. These simultaneous perspectives also offer insights into the multiple worlds of ecology as it is understood biosemiotically.

The two research questions that have guided this project are:

1. In what ways can photography expound the abstract processes involved in the categorization of nature?
2. How do visual legacies of the historical categorization of nature continue to prevail in contemporary culture?

The first research question drove my practice-led investigations and guided my approach towards the use of photography, while the second set the course for my theoretical research. However, both questions could not be addressed in isolation, but instead established a close connection of practice and theory within my research. To use a metaphor from nature, practice and theory could be described as meandering streams with intermittent crossovers between the two areas of study. They formed a fruitful exchange to advance my photographic practice and arrive at a better understanding of how humans are engaged with the nonhuman world.
The project also provided a third path to understanding the nonhuman world: experiential and embodied knowledge. This understanding of tacit knowledge arose from reflection on our daily dwelling in spatio-temporal surroundings with which we are intimately connected.

The consideration of embodied knowledge as a crucial focus of research shaped this doctoral project in two major ways. Initially it directed my attention towards nature in an urban context. Living in Brisbane and Berlin, my life, and my tacit knowledge of place, is deeply embedded in the urban environment. And although humans created this environment, it is not an exclusively human habitat and many nonhumans are cohabitants within a common space. Most of my encounters with nature happen in such urban contexts, and these encounters formed part of how my embodied knowledge was extended to other ecologies dwelling in the urban context.

Considering embodied knowledge of the world also made me aware that photography is more than a form of representation. The practice of photography has fundamentally shaped my life and my understanding of the world around me. This led to reflection of its role in my own existence and its agency in the existence of others (human and nonhuman) in ways that were foundational to a more-than-representational approach towards photography.

Ecocriticism constitutes an important ‘umbrella’ for my research. As a school of thought, ecocriticism unites cultural practitioners, critics and scientists who wish to contribute towards an understanding of the fundamental principles on which humans build their relation with the nonhuman world. It considers tacit embodied knowledge of familiar environments as a pathway to arrive at this understanding, and it extends beyond traditional representational tropes in which nature is presented as wild and unspoiled in favour of urban and post-industrial scenarios. The attempt to put forward a succinct definition of ecocritical photography is a major aim of this project.
Shifting Categorizations of Nature

My theoretical research into the abstract process involved in the categorization of nature began with an investigation of early modern mentalities towards nature which focused on one important historical source: the *Hortus Conclusus*, a short-lived but popular genre in 15th century European painting. Gaining an understanding of these conventions gave me an important comparative model and visual inspiration for the interpretation of natural habitats within contemporary urban and post-wild contexts.

The *Hortus Conclusus* depicts the Virgin Mary placed in an enclosed garden, the description of which introduced a new level of naturalistic renditions of easily identifiable plants and animals. While this naturalism was indicative of a sacred pre-modern concept of Creation in which the nonhuman world was viewed as an allegorical reflection of divine spirit, it led to an early modern secular curiosity about nature and natural processes.

The view of the *Hortus Conclusus* as a complex network of overlapping and sometimes contradictory voices, reverberates in recent environmental models derived from complexity theory and biosemiotics. These theories challenge the long-favoured idea of one objective world to suggest instead a complex interplay of interdependent sentient worlds. In this context Jakob von Uexküll’s concept of *Umwelten* and his theory of biosemiotics are critical. Von Uexküll understood ecology as a web of interconnected sentient worlds that all species construct around themselves in order to communicate with members of their own, as well as other, species.

Emerging Methodologies

The research into historical and contemporary interpretations of nature resulted in a new practice-led methodology enabling a clearer visualisation of some of the shifting human interpretations of nature I had investigated.

Claire Waterton’s concept of performative classification proposes that an understanding of the world(s) around us is based on a constant interplay of
“accurate replication” and “creative improvisation” (Waterton, 2003). I used this concept in the collaboration with scientists from the University of Queensland to photograph plant species for a planned publication. To this end I participated in a number of scientific field trips where I took photographs of flora typical of South-East Queensland. These photographs merged scientific criteria provided by the botanists (accurate replication) and my own artistic interpretations (creative improvisations).

Photographic practice as a ritual was another aspect of my practice-led methodology, particularly during the two years when I established a daily ritual of taking close-up photographs and short video sequences in my garden in Brisbane. The practice of photography became akin to a form of dwelling and the act of taking images was not bound to a pressing time line or an immediately required result. This process aimed to access tacit knowledge through daily embodied practice in ways that enabled the nonhuman Umwelten within my garden to emerge and reveal themselves over time.

A third practice-led methodology was based on Svetlana Alpers’ description of the artist’s studio as an instrument providing the scope for a phenomenological experience of an investigated object. Drawing on this idea, I explored the photographic studio as a means of visualizing human classifications of nature, which led to raising and later photographing plant seedlings in my studio. In this sense the space of the studio was implicated as a site and instrument of classification that left visual markers in the imagery it produced.

This approach to extending the space of the studio led to the use of public outdoor displays, in which studio photographs of plant seedlings were exhibited in an outdoor environment, to explore how this placement might change their representational value. Displayed within the ‘real’ world instead of a neutral ‘white cube’, these images accrued the presence of the surroundings in which they were displayed and were thus imbued with a new sense of contextuality. Nevertheless, as photographs they still carried their studio markers such as the ubiquitous black backgrounds and uniform studio
lighting that set them apart from their surroundings. In this sense the photographs led the viewer back from the world into the studio as a human instrument of classification, allowing for a juxtaposition of classification and the urban context.

Not all of these experiments turned out to be entirely successful; however, their trials and errors contributed towards an innovative methodology that led to my final major series of urban and non-urban landscapes in which I used the selfie and smartphone technology as a means to take photographs and as a display platform. Today most digital cameras are embedded into our communication devices and in the process photography has become an important extension of human communication. Digital images can appear instantly on any digital image viewing platform around the world. Adapting such digital technologies to my theoretical findings in the field of biosemiotics, complexity science and non-representational thinking led to my development of smartphone technology and the selfie as a way of visualising both human and nonhuman sentient worlds.

**Research Findings**

This doctoral research has engaged me in a comprehensive analysis of the contribution photographic practice can make towards human interpretations of nature. The categorization of nature must be understood as a complex and sometimes contradictory series of *mentalties* that have evolved in the *longue durée* of history. As shifting cultural constructions they are nevertheless reliant on non-cultural aspects of complex ecosystems and wider biosemiotic exchanges. Nature and culture are inextricably linked.

*Umwelten*, described by Jakob von Uexküll as subjective sentient worlds surrounding each living being, rely on the specific sensory characteristics of the living subject they surround. Advanced findings in biosemiotics and complex systems theory have expanded on von Uexküll’s theory in proposing a model of multiple subjective worlds that radically challenge the traditional ontological model of one objective world.
Human sentient worlds are increasingly reliant on technologies that extend the functions of the human body. Embedded into our smartphones and social media platforms, photography has significantly affected how we communicate with one other. As with all technology, photography is constituted by human sentience and changes human sentient worlds. This realization must also direct our attention towards the practices of photographers within an environmental context and the unintended ecological consequences of photography as widespread practice.

At the beginning of the 21st century anthropogenic factors are interfering with the natural environment to such an extent that all aspects of life on our planet are in crisis. In response to this crisis a search for a better understanding of our relationship with the nonhuman world is necessary to fundamentally reposition our relationship with the nonhuman world. In this context ecocriticism has emerged as a powerful platform to bring together practitioners from a wide range of professional fields, including the arts. Although photography has been discussed in an ecocritical context, attempts to arrive at a definition of ecocritical photography have been somewhat fragmentary. My research addresses this gap to define ecocritical photography and use it as a new method of visual environmental critique.

Ecocritical photography must extend its view beyond traditional tropes of representing wild unspoiled habitats to include a representation of urban and post-industrial scenarios. To do so it considers tacit embodied knowledge of familiar environments as a new platform on which knowledge can be built.

Ecocritical photography must be understood as a form of more-than-representational material practice and communication and the effects of this practice on the environment must be considered.

To understand the full non-representational impact of photography a photographic industry which extracts raw materials and produces electronic waste on a global scale must be reconsidered. Reducing the footprint of our own consumption of photography must also become the goal of any ecocritical photographer. Understood in this way ecocritical photography can
help us to understand and form a better relationship with the nonhuman world, with which we are inextricably linked.

As an artist I offer images rather than precise answers; or, more pertinently, as a photographer I gather viewpoints. Accordingly, my final research outcome is a series of photographs that end up with a question raised by so many photographers before me: What is nature? Yet it asks this question in new ways, i.e. considering photography as a more-than-representational practice. As such, the installations of large prints and smartphones are a set of interpretations that aim not only to provide some glimpses of the human condition, but will, hopefully, also provide a preliminary sketch in preparation of a much more complex picture, the interconnectedness of the human and the nonhuman condition as a whole.
Project Chronology

**Girraween National Park**: photographic excursion, March 2014 (see chapter two).

**Science field trips**: participation in botanical field trips organised by the Department of Biological Sciences, University of Queensland, 2015 (see chapter two).

**Brisbane garden**: daily ritual of photographic practice, Brisbane Garden, 2014 to 2016 (see chapter three).

**Gleisdreick Park Berlin**: photographic investigation, October to December 2014 and July to September 2015 (see chapter four).

**Studio photography**: raising and photographing plant seedlings in the studio, Brisbane and Berlin, 2014 to 2016 (see chapter five).

**What is nature?** photography for an installation of panoramic prints and selfies displayed on smartphones screens, Brisbane and Darling Downs, 2015 to 2017 (see chapter seven).

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