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IN FLUX
Land, Photography and Temporality

Submitted for the Degree of Doctor of Philosophy
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Abstract

This thesis accompanies a practice as research doctoral project that investigates the perceptual mechanisms and conceptions of land as a site of constant change. It utilises photographic practice as a form of visual communication. The aim is to examine the roles of movement and memory in the perceptual experiences of the environment through a phenomenological framework that involves the consideration of the concepts of place and space from a temporal perspective. The principal theme is how the moving and changing environment can be interpreted through the stasis of photography and what this implies about the individual's relationship to it.

The research methodology is a Rhizomatic multi-site and multi-process approach, utilising various methods and investigating site types appropriately as an interwoven practice. This has resulted in five separate bodies of work that deal with different forms of movement. The work employs close range photogrammetry techniques liberated from the empirical traditions of archaeological photography and time-lapse to investigate the human-scaled aerial view and visually interpret embodiment in the environment.

An exhibition, titled *Continuum* derived from this practice was also shown at Avenue Gallery, Northampton University, UK, from 27th October 2014 - 7th November 2014. A catalogue of works, titled *In Flux; Land, Photography and Temporality* accompanies this thesis as a PDF on the disc provided (appendix # 1).

The research concludes that a consideration of time and space as durational and flowing can be interpreted through the stasis of photography. Through this the changing nature of the environment can be investigated. This is achieved by extending the duration of photographic processes and making them evident in the resulting works. It is also enhanced through curatorial sequencing in a body of work that mimics environmental temporal experience as perceived by the mobile individual.

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Thanks to Terry Evans, for kindly giving me permission to use her work (fig. # 3).

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Introduction

As practice as research within the fine arts, this project is a qualitative analysis through practice in combination with research. It is an enquiry through processes of practice and the artworks are the resulting artefacts of these activities. The underlying methodology of this research is to investigate through visualization via the photographic medium.

As a visual arts research project it is the artworks that come first; as Graeme Sullivan states “visual arts research has to be grounded in practices that come from art itself” (Sullivan, 2010, p. xvii). The aim is to investigate and interpret through visual arts practice and communication. This text is an analysis of the conceptualisation, evolution and critical evaluation of the processes and outcomes that this entails.

This research is an investigation of the perceptual mechanisms and conceptions of land as a site of constant change using photographic practice as a form of visual communication. It considers land as a temporal as well as a spatial entity. As this question is about how we understand and relate to the changing environment, then this study is narrowed primarily to the environment in the form of land, as opposed to other people or animals, or things in themselves, isolated from the environment.

This research was initiated by practice carried out in the field, within the environment itself. The actions involved and results obtained have subsequently been analysed within research frameworks appropriate to the practice. Research in the field was undertaken in parallel with desk-based research, with a cycle of practice leading to research that leads to further practice, and so on. Each resulting body of work has been conclusively resolved as a product of both forms of research in combination.

In the majority of cases, contemporary photographic art is based upon visual source material more directly than other fine art media in that it requires some form of recording, or capturing, of images

of the environment using a camera at a location (the one exception being the related medium of the moving image). This is followed by processing of the gathered images into artworks. These artworks then collectively form a body of work that is presented to an audience as a form of visual communication. It is this process of working from the source material to a visual outcome that is under scrutiny here, both as a form of experimentation to find the most appropriate method and approach to the task in hand, and as a way of investigating the processes of engagement with the changing environment through photographic interpretation.

In making this analysis a number of key terms have been examined that relate to the way we understand the lands that we inhabit as follows:

- Landscape and Land
- Environment
- Space and Place
- Time and Change

Each one of these terms is dealt with separately below.

Landscape & Land

Although many of the artworks (particularly those in the projects *Hinterland* and *Continuum*) could be described as within the landscape genre of photography in the way that they pictorially depict the environment (with a foreground, background, a horizon and sky), landscape is a term not often used in this thesis. This is due to the fact that in regard to this research the term could be misleading. A landscape is traditionally a view from a specific single point, a perspective of the spectator viewing land at a distance; often the scenes are panoramic, elevated as if, if not actually, from the top of a hill, for example in much of the work of John Davies (1976 - 2015). This distanced perspective is largely associated with painting from the 17th century onwards, particularly with Romanticism. The aesthetic considerations of the sublime and the picturesque, drawn from the works of Immanuel Kant *Critique of Judgement* (Ginsborg, 2005) and, in particular, Edmund Burke

(Burke, 1792) did act as was an initial consideration of this thesis, that developed from a deliberation on the sublime to take a phenomenological approach to the mechanisms of perception, in order to interpret our relationships with the environment through photography (See chapter one for a discussion of the sublime in relation to this research).

Landscape is often used to describe the environment as either for aesthetic appreciation (sometimes directly, but often through visual artworks, indirectly) or as something that is controlled and manipulated by human action. Ken Taylor states that the earlier term *landscaef* from c. AD 500 meant "a clearing in the forest with animals, huts, fields, fences. It was essentially a peasant landscape carved out of the original forest" (Taylor, 2008, p.2). Social anthropologist Tim Ingold echoes this sense that landscape means a manipulated and controlled landscape rather than a depiction of the environment when he points out that:

> Scholars […] mistake the connotations of the suffix –*scape* for a particular ´scopic regime` of detailed and disinterested observation […]´Scope` comes from the classical greek *skopos* […] derived from the verb *skopein*, (meaning) ´to look`. ´Scape`[…] comes from Old English *sceppan* or *skyppan*, meaning ´to shape` (Ingold, 2011, p.126).

The concept of landscaping, of creating a landscape physically and controlling it for humanity's need, is therefore a more appropriate understanding of the term. Even the picturesque has overtones of a landscape created for viewing, altered to make it beautiful, rather than a scene that is defined by the observer as being beautiful. Land-scope, as Ingold points out, is often what is meant by the term landscape and would be more appropriate as it describes looking around or over a scene, or panoramic vista more accurately than landscape. This *disinterested observation* has not been the aim of this project.

The depiction of environments as landscape, or *land-scopes* became widespread when the land became heavily manipulated and with the advent of mass urbanisation, both of which are associated with the industrial revolution and are rapidly continuing today. United Nations statistical analysis estimates that 53.6 % of the world's population lived in urban environments by 2014, a rise

in just three years of 1.5% since the 2011 figure of 52.1% (United Nations, 2014) when, for the first time ever recorded, more than half the world's population lived in cities. Writing in 1990, Tony Hiss stated "during the past forty-five years […] almost everyone in the Western world has for the first time moved indoors" (Hiss, 1990, p.10). It is very likely that this rise in the depiction of the environment as landscape is partly a result of the movement of populations from rural land to urban, to a life lived indoors rather than outdoors, where the majority no longer live and work with land, but are separated from it by the built urban environment. Those who do live and work in the land often have no tradition of direct representation of the environment; as they inhabit the land there is no reason for its depiction. Rather, representation tends to be symbolic and ritualised, focusing on specific societal preoccupations (cave paintings, for instance, often deal with concerns with elements of interest, such as the animals that were hunted for food). To an extent this research has made a return to this position, not so much representing landscape as relating to the environment through ritualised actions and repetition that result in artworks that are symbolic metaphors of current preoccupations with humanity's perceptions of land in a contemporary philosophical context.

Rather than use the term landscape to describe the environment, I have tended to drop the scape from landscape, instead using the term ´land` to describe that which is occupied and in which human and non-human life forms live in and relate to, not only as something that can be seen or perceived but also be owned and belonged to, felt and remembered, invested with meanings both specific and generic.

The limitation of the idea of landscape as a specific kind of view and its association with control of the environment are reasons why it is not used here either to define where the work is undertaken or the outcomes of that work.

Environment

A better way of describing what I have been working in, is the environment. Environment is not as anthropocentric as landscape; it includes human and non-human forms of life, and it indicates an ecology, in the broad sense of the term, as a space of complex interactions. This is not to say that this work is environmental in the sense that it deals with specific political issues to do with the environment, as I would readily admit that the capacity of art to change attitudes and detrimental practices is limited. Any visualisation of environmental issues that aims to change opinions would need supplementary information at least, such as David T. Hanson's *Waste land: Meditations on a Ravaged Landscape* (Hanson, 1997) project (see chapter one), and perhaps action in or with other disciplines would be appropriate. This is not such a prescriptive project. The aim is to engage the viewer in contemplation and dialogue about the environment, as a participant through viewing works and then making metaphorical associations through memory and imagination. I am asking simply that connections be made with the works and through them to consider how relationships to the environment exist.

Space & Place

Both space and place are key terms in this research and are dealt with in depth in chapters three and four. It is important to point out that they are not opposites in the way that place is a known space and space an unknown place; they are complimentary concepts. In this thesis I use space to describe the perceived environment as it is spatially understood through the senses. It is the ground within which perception occurs, whereas place is a set of events and memories associated with a location. It is an ongoing and changing narrative of experiences and memory in both the individual and collectively in society about some*where* that the individual engaging with it relates to, whether the narrative is a cultural or a natural one (probably both) as Doreen Massey points out: "´Here` is an intertwining of histories in which the spatiality of those histories (their then as well as their here) is inescapably entangled" (Massey, 2005, p.139). It is a narrative that is

connected to a location and is constantly evolving. Both space and place are subject to constant change for the individual and society as a whole, particularly when the close association of perception to memory is considered.

This research began with a deliberation on photography's ability, or inability, to document change in the environment, to offer a record of place, a location with a visual identity that is understandable and reasonable to an audience as a place. This gave rise to the question of whether or not place can be represented, either visually or by other means, but particularly through photography. The answer lies in either accepting the limitations of the medium to represent faithfully a place, or to not accept this supposition, that representation of place through photography is an inadequate method of dealing with place as a temporal experience. Both positions have their advocates as Liz Wells points out "As has been acknowledged in recent developments in cultural geography, space is rendered into place through visual representation" (Wells, 2011, p.3). This may well be useful or adequate if it fulfils the intentions of those using visual representation, such as archaeologists,[1] who use photography to record and represent place routinely within the context of a broad spectrum of other recording techniques (see below). It may also be the case that, in the absence of other adequate ways of representing details, photography is used as a part of an overall form of representation, despite its limitations. It could be argued that representation is not recording but interpretation, as the prefix re- suggests, it is the presentation of something in a different form from the source. It becomes a conceptualisation of place or a fragment of experience communicated through a transformational medium, although in the example of archaeology, this is rarely, if ever, acknowledged. If this were acknowledged, and if the nature of the medium, the intentions of its user and the cultural contexts of both were taken into account, then the photograph's capacity to represent place as an interpretation and not as a documentation or a record could be accepted.

[1] Archaeology is a major influence on this work and is investigated in chapter two.

In a contemporary art context, there is a tendency not to accept these limitations. The walking artist Hamish Fulton aptly illustrates the point through his practice; he describes the experiences of his walks as distinctly separate from the artworks he makes “It's not possible to represent the experience of a walk, either you made the walk or you didn't [...] It's absolutely not possible to represent an experience like that, they are two entirely separate worlds” (Eyes, feet, road, three connecting walks, one coast to coast route, 2006). What Fulton points out is that the experiences of land and changes in land as place through time cannot be directly related through art, as the artworks are spatially, temporally and perceptually different from the experiences that gave rise to these responses in the first instance, as Lucy Lippard points out “a painting, no matter how wonderful, is an object in itself, separate from the place it depicts” (Lippard, 1997, p.19). It is clear from both these stances that there is nothing that can communicate the experience of place to another individual short of actually taking them to the place and being with them, of sharing the experience. Also an artwork that depicts a place is not the same thing as the place. Perhaps the concept of place is not something to represent; if it is to be fully understood it is something to be experienced, so the questions that gave impetus to this research were: What is the experience of the environment? How do we experience it? And how is this interpreted through photography into artworks that deal with that experience metaphorically?

Both space and place are relevant to these questions and so, importantly, is time and change, for experience is only and can only be understood through the passage of time, either as memory recollected or as knowledge gained and applied. Hence this research concentrates also on investigating and challenging the spurious notion that photographs freezes time. As Damien Sutton puts it “´timeless` does not *necessarily* mean durationless” (Sutton, 2009, p.39, emphasis in original). The photograph, like any other work of art, exists in the continuum of time and alters with it.

Time & Change

There are various ways that we understand time, either as a chronological succession, measured mathematically, or as a durational flow. Or as cycles of return and repetition in accordance with astronomical and everyday cycles, or as a psychical experience, speeding up or slowing down in accordance with our states of consciousness, actions and the stimuli we perceive from the environment. This thesis considers these temporal perceptions in relation to both the making of and appreciation of photographic artworks in chapter five.

Change can only be understood from a temporal perspective. To know change in an environment one either needs to know what it was like before, to remember it, or to understand the signs of change as they can be experienced; either as it occurs, or as an aftermath of an event. Change through time happens at multiple levels and is only understandable as direct experience when this occurs on a human scale, as ecological psychologist James Gibson points out:

> The changes that are perceived, those on which acts of behaviour depend, are neither extremely slow nor extremely rapid. Human observers cannot perceive the erosion of a mountain, but they can detect the fall of a rock (Gibson, 1986, p.12).

In this way the artist can use photographic means to investigate change, by dealing with the elements that are at a temporal and spatial scale equivalent to their perceiving body. Jem Southam's project, *Rock Fall* (Southam, 2010), aptly illustrates Gibson's point about how change is understood and how something as slow as geological change can be dealt with by concentrating on the signs that are equivalent to our own capacities to temporally perceive. The rocks that have fallen from the cliffs to the shore are a sign of a local event that is an indicator of the broader subject of coastal erosion and geological change in an even wider sense. This project has considered the processes of change that can be comprehended at this kind of human scale, investigating visual signs of change through repeated site visits. It has also sought to acknowledge and incorporate visually the consideration that not only do the environments under scrutiny change, but that the individual observing it is also subject to change. This is achieved by

considering the individual as an embodied part of the environment that he or she inhabits and not separate from it.

The practice methodology

At the beginning of the practice a number of experiments with a variety of methods were undertaken in tandem, resulting in several of bodies of work, all being worked through toward resolution. The narratives and dialogues between these methods were lateral and multiple, although all of the practice was operating to answer the same question, i.e. of how photography could be used to investigate the concept of change in the environment. The project had multiple beginnings that ran parallel, sometimes combining together and at other times splitting off or ceasing in accordance with their usefulness within the research framework. This is more in keeping with Gilles Deleuze and Félix Guattari's concept of the rhizome, a relational model rather than a genealogical one, where the works start at one point and then lead to a single outcome or to several related outcomes. Instead this practice works from a number of starting points and through the processes of practice they interacted together in complexity and multiplicity.[2]

In order to resolve the research this practice was structured into a cohesive whole and presented as one body of work in which different methods and artworks interact together in a non-linear narrative (this is connected to the relationship between memory and photography as will be discussed later). This by nature is difficult to narrate in a linear text based structure, so the order of discussion of works through this thesis does not necessarily relate to how it was undertaken; rather the order relates to the particular aspect of theory that the works were concerned with.

The Artworks

Alongside this thesis there is a catalogue of works, also titled, *In Flux; Land, Photography and Temporality* (appendix # 1). Reference to plate numbers in this text will correspond to the plates in

[2] See chapter three for a more detailed account of this aspect of the methodology.

the PDF in the accompanying CD at the back of this thesis and any artworks relevant to it but not in the catalogue will be reproduced here as figures only. Five bodies of work are represented in the catalogue and are discussed here in relation to the theories that relate to them.

These works were conceived principally for two sites of discourse. Firstly for display in a conventional gallery setting, which is theoretically the white cube, an idealised blank space for the presentation of artworks. In practice, however, each gallery space used has characteristics (size, shape, architecture and more general location etc.) that determines both the scale of the work[3] and how the work is curated as a whole.

Fig #1 *Track-way # 9* in a Domestic setting.

The second site of display is the home, a lived-in place where the works are repeatedly encountered in more cluttered and multi-functional spaces over potentially long periods of time (this could include other similar sites, such as the work place, that are also multi-functional spaces of occupation and activity not primarily associated with the acts of visiting and beholding

[3] This is dependent on the works having not been printed before the gallery space for display is assigned.

artworks). These works are not primarily intended for presentation in book form[4] or online in the World Wide Web, or for screen projection. The reasons for this are twofold; one is scale, the works need to be suitably large for their appreciation (larger than is available in a conventional book). Those engaging with the works should have the opportunity for a visual immersion, in that the pieces should be big enough for most of the field of view of the individual to be occupied by the artwork at a reasonable distance. Secondly the works need physical presence as material artefacts that have the potential for display in different contexts over time, as well as the potential for the viewer of the work to have control over the period of viewing. This is more likely to be extended when the artwork is a physical, material artefact rather than in digital or projected form. The scenario here is one where the work can be lived with in terms of the everyday lives of those who view them, that the works may be repeatedly noticed without the intentionality that a visit to a gallery implies.

[4] The digital archive of work, appendix #1, is intended as a catalogue of works, rather than an artwork in itself.

Chapter One

The Research Narrative

This research drew upon a number of disciplines in and around the concept of land and the relation of the individual to it in terms of archaeology, cultural geography, social anthropology, ecological and cognitive psychology, phenomenology and photography theory. This was largely concerned with the individual perception of the environment as a temporal space and place subject to change. It did not deal with the senses of collective relationships to land of a community, rather concentrating on the individual because the process of making artworks via photographic processes has been and very often is undertaken by an individual rather than a social group and the appreciation of photography, although often shared, is also a question of the individual's response to the images as viewed.

I began by considering how the environment is being depicted via photographic means with a view to finding new ways of interpretation that take into account the fact that environments are always constantly changing, that they are temporal spaces. This was considered salient, given current scientific, political and cultural concerns about how the climate of the planet itself is being changed detrimentally by human action. This is now widely acknowledged, even potentially giving rise to the concept of a new epoch, the Anthropocene, where human action is impacting on the entire planet for the first time.

Dealing with and interpreting change as an environmental issue through photography can be problematic, as the stasis of the medium tends not to easily take into account the temporal nature of change. In addition, the aestheticizing quality of photography tends to limit its effectiveness as a tool to augment actions in the lives of those viewing the works that might contribute positively to the state of the environment, or an aspect of it under photographic investigation. Therefore this research started with a consideration of the limitations of photography of the environment to actually act as an agent of change in the attitudes and actions of those that might encounter it. This

was done in order to avoid potential misconceptions of the effects and affects of photography when dealing with and deciding upon the subject matter and approaches under consideration at the beginning of the practical component of the research.

The picturesque and the sublime

This process began with a deliberation of the term landscape and the concepts of the picturesque and the sublime around the theory of landscape, as outlined in the introduction. This initially drew on Burke's Philosophical enquiry into the origin of our ideas of the sublime and beautiful (1792) Writing about the sublime in 1757, before the invention of photography, Burke states:

> I believe that this notion of our having a simple pain in the reality, yet a delight in the representation, arises from hence, that we do not sufficiently distinguish what we would by no means choose to do, from what we should be eager enough to see if it was once done. *We delight in seeing things, which so far from doing, our heartiest wishes would be to see redressed* (my emphasis 1792, p. 63).

Burke draws a distinction between suffering actual pain and a response to the representation of something that would be painful if experienced, in that the viewing of a representation of pain occurs through the aesthetics of the medium, be it a painting (as it was in Burke's time) or photography, and as such it is pleasurable, and not painful for the viewer. Therefore any sense of the need for action that the actual experience of pain would instil in the sufferer is negated by the act of representation as no pain is suffered, on the contrary, the representation is pleasurable to behold. In this sense the viewer's experience is both indirect and different from experiencing either pain or anxiety[5] in the face of the actual experience rather than its visualisation, hence the viewer of the representation of pain or anxiety is not compelled to act as would be the case when faced with pain in actuality. Therefore the use of photography as a political tool, to encourage the viewer to act or change their actions politically is limited to recording, as is the case in

[5] When considering the response to environmental catastrophe or degradation, the individual generally does not experience physical pain directly, hence the use of the term anxiety here, see also chapter two for a fuller discussion of contemporary anxiety in relation to the environment.

environmental photography, of a role of raising awareness through visualisation. It also requires further information for it to function effectively. A clear example of this issue-based approach is the book *Waste Land; Meditations on a Ravaged Landscape* by David T. Hanson (1997).

The main body of work in this book takes as its starting point environmental reports from the U.S. Environmental Protection Agency/Remedial Response Program in America, identifying and then photographing a series of sites using aerial photography. Each site is depicted collectively via three means, a photograph, a map and texts edited from the Remedial Response Program reports. This use of three means of description together is an effective method of conveying data in various forms, both intellectual and emotional in content, informing the viewer. The visual works are augmented by factual authoritative scientific texts from the Environmental Protection Agency. Two forms of visualisation, the cartographic and the photographic, together with the texts serve Hanson's purpose, to raise awareness to a wider audience of environmental degradation across America.

As such it is a successful work, even though it does verge on an environmental report rather than a body of art works, perhaps appropriately in this case. The use of aerial photography is also appropriate, as in many instances access to the sites would have been prohibited and/or dangerous to Hanson's health and therefore in this case, taking to the air was the only option for Hanson to be able to create a photographic record of all of the sites in question. A record that had not been made collectively available prior to his project. This work has parallels with both ecological and archaeological survey and report making techniques in the use of a strategy that employs a number of different forms of information presentation together to give as rounded an outcome as possible in terms of conveying information.

Hanson's work is a successful example of how photography and, in particular, aerial photography can be used when the subject is politically environmental in content, and issues such as difficulties of access can be overcome when the aim is to create a record that raises awareness. This is not

always the case, there are many examples of aerial photography that tend to aestheticize the content away from political and environmental contexts,[6] depending heavily on the unique nature of aerial photography to captivate the viewer (see chapter two) and a strongly abstracted beautification of the subject, relying on the sublime in many cases, such as some of the work of Edward Burtynsky (various works 1985 - present) and Yan Atrus Bertrand (The earth from the air; 365 Days (2001)) amongst many others. Viewers may become distracted and de-sensitized from the political content of the images by their beauty and their proliferation in a body of work when encountered collectively in an exhibition or book.

In the case of Burtynsky the link to the concept of the sublime has been made by critics and theorists alike; Carol Diehl (2005) referred to his work as 'Toxic Sublime' in a review in *Art in America* and this concept was expanded by Jennifer Peebles in *Toxic Sublime: Imaging Contaminated Landscapes* (2011).

Peebles makes the distinction between what she terms the technological sublime and the toxic sublime. Technological sublime is seen as a celebration of human achievement – "For those who see Burtynsky's photographs as ''heroic tributes'' to industry, their sublime response would fall within that of the technological sublime-pride and wonder in humans' ability to master their environment." Peebles goes on "For those who are awed and overwhelmed by the images, but made uncomfortable by their reflections of unchecked environmental degradation, another response is elicited–the toxic sublime."(2011 p.380) Peebles highlights the ambiguity faced with in understanding the affects of photography on the viewer in terms of its effectiveness to function as a political issue-based medium; according to Peebles, a single image can be both technologically and toxic-ally sublime, depending on how the viewer responds. Peebles' technological sublime could be more easily equated with a contemporary version of the picturesque, a celebration of a

[6] Hanson's photographs always have some kind of indicator of the scale of the site, such as a building or mechanical excavator in shot, thereby allowing the viewer to understand the extent of the landscape depicted and therefore relate to it.

technological arcadia, rather than a sublime response, as it does not represent pain or anxiety to the viewer in the way that a sublime image would.

This connection between the aesthetic quality of the photograph being at odds with its subject matter and creating a sublime response in some, but not necessarily all, viewers of the works is a facet of much aerial photography, particularly images that deal with environmental degradation. The aesthetic qualities of the photographic medium make the images at odds with their subject matter; the photographs are simply too beautiful to effectively act as a visual agent of environmental activism. It may in fact be counterproductive, as Burke as points out, the viewer is more likely to feel that his/her anxieties are assuaged by seeing a beautification of degradation "We delight in seeing things, which so far from doing, our heartiest wishes would be to see redressed"(1792 p.63)

This research was certainly influenced by these factors, as the inherent aesthetic qualities of photography were taken into account; in particular in terms of selecting the types of sites that were studied, they were deliberately not chosen as overt indicators of detrimental human impact on the environment in order to avoid evoking an overtly sublime response. This is not to state that a sublime response is entirely inappropriate or unworthy of further research as the theoretical and curatorial work of Wells (see *Landscapes of Exploration: The Role of Contemporary Art in Antarctica* (2012)) indicates, but that it was determined at an early stage that this would not be the intention of this work, particularly in terms of the approaches to practice.

Although this investigation was initialised by a study of the concepts of the sublime and the picturesque (see also the introduction), it was at this point that the research turned away from a consideration of the response of the individual in terms of whether they were attracted or repelled by environments and/or the visual depictions of environments as an isolated observer, toward an investigation of what it is to be part of the environment, to be embodied within the environments

that the individual occupies and undertakes actions within as a way of investigating change in the environment as it is lived, hence the turn to bodily scaled aerial photography techniques.

Aerial photography acted as both an initial inspiration for artworks, (see the body of work titled *Ground Work*) and as the beginning of a research investigation of a relational approach to the photography of land. Key texts that dealt with the history of aerial photography were; *Photography and Flight* by Denis Cosgrove and William L. Fox (2010) and David Campbell's article "*Tele-vision: Satellite images and Security"* in *Source; the photographic review,* edited by Duncan and West, (2008). He highlighted that information gained from aerial images (photographs or satellite derived images) often depend on the biases and intentions of those using and making the depictions. In addition, the images can be and are used as propaganda for military and political ends. An influential artist using and dealing with satellite imagery in his work is Mishka Henna (2011), he has taken the military and political implications of satellite imaging into consideration in some of his work. In the early stages of this research the direct sourcing of images from the World Wide Web in forms like satellite imaging or the use of other forms of archive was ruled out as sources that are secondary to the experience of the environment itself and therefore already mediated by others. Using these kind of images as source material would not be a direct study of the environment as a temporal space (see chapter two for discussion).

This interest in the view from above was also influenced by experiences in archaeology (see also chapter two) and led to work that made use of the aerial view at a scale that is normal for a human being, looking downwards at the ground from a height similar to that of the body. Other artists who have worked in this way include Terry Evans (also referred to in chapter two) and Lynn Silvermann whose work *Horizons* (1979-81) was influential. *Horizons* is a series of pairs of images one above the other, concentrated on the ground below often including part of her feet in the lower image and the sky with the horizon at the bottom in the upper image. These works influenced both the *Ground Work* series and the later *Flow Motion* works in this research, particularly in the inclusion of the body of the artist in the form of feet in the lower images.

Clive Landen also used a human scaled aerial view in his work, *Familiar British Wildlife* (1994). This body of work examines road kills by photographing them from above and when they were initially exhibited, these works were printed at actual scale, as is the intention with the *Ground Work* series. He also uses Latin names in the titles, as is also the case with some artworks in *Ground Work*. His attention to wildlife post-mortem has also influenced the *Continuum* series, in particular the piece *A fox I thought # 1-4* (see fig # 16, plates # 42 & 74) (The title is a reference to the Ted Hughes poem, "A Thought Fox") and the artwork *A Deer in the Wood* (fig 2, plate # 58).

Fig # 2 *A Deer in the Wood* 4:37 pm - 5:07 pm 30 minutes

Although neither of these pieces are views from above, the subject of deceased wildlife is the same and the perspective is constructed to give the viewer the impression that the animal's corpse is at

their feet within a wider environment. Landen's sensitivity when dealing with animal corpses is achieved partly through the inclusion of the environment in which they are found.[7] The works in *Continuum* that include the bodies of animals also do this, broadening the environmental content whilst still foregrounding the animals as subject. A further influence on works with corpses as the element of interest is *What Remains* by Sally Mann (2003); she also includes the environment with the human corpses she photographed in a forensic research centre in America. Her method and photographic outcomes (wet collodion black and white photography), are distinctly different from those in used in this research, but it was certainly the case that her work came to mind when encountering animal corpses in woodland. The influence was indirect in that the resulting visualisation bears little if any resemblance to the work in *Continuum*.

Although in theoretical terms, the concepts of the sublime and the picturesque have some bearing in determining the initial approach and the subject matter of this research, and I would admit that some of the resulting artworks may elicit some form of sublime response in the viewer, this was not my main intention. As this work is intentionally not overtly issue-based, then a sublime response is not necessarily problematic, avoidable or universal in the effect on the audience. If some of the works are disturbing then this may well be a reflection on the subject matter encountered when making the work, as much as an evocation of a sublime response.

I wish now to turn to the main thrust of the research in terms of how the relational approach to the environment was developed photographically and theoretically toward an investigation of the concept of embodiment, to being part of the environment and interpreting this through photographic practice.

[7] The other factor is that In *Familiar British Wildlife* Landen deliberately photographed bodies that were more or less intact in most cases.

Archaeological sources

Undeniable key factors that run through all the practice in this research are my own personal experiences in field archaeology and as a heritage photographer. This lifelong experience unavoidably impacts on both practice and theory. It is from archaeological photography that the compositing practice at the core of all but one of the five bodies of work in this research is derived. The concept of being part of the environment through active engagement with it is also a result of many years spent working in the archaeological environment, on and with the ground, as a work place and a lived-in space of action, of being embodied with and dwelling in the environment.

As well as this extensive experience, archaeological theories were also an influence on this research. Theories and histories of archaeological and aerial photography were also useful in taking a temporal approach to the environment in the work of Cosgrove and Fox (2010) and Bohrer (2011) respectively and most notably in the work of Christopher Tilley *The phenomenology of landscape* (1994) and *Body and Image; explorations in landscape phenomenology 2* (2008). Tilley's assertion that the best way to understand and interpret a prehistoric landscape is by walking, as this was the way that those that inhabited it in the past would have known it, was influential on the *Flow Motion* works. This body of work deals with the idea of motion through walking as an engagement with land and was also influenced by walking artists Fulton (2006) and Richard Long (1968 -2015). In the case of Long it was his drawings with mud to make gallery pieces, rather than his photographs of land art that influenced the use of muddy earth as an experimental ground for *Flow Motion.*

Place and Space

This shift in theoretical emphasis from the sublime to a relational embodied approach entailed an overview of the contemporary conceptions of the terms space and place in a cultural geography context, drawing initially on *Key Thinkers on Space and Place*, edited by Phil Hubbard and Rob Kitchin (2011). This process began with the works of Yi Fu Tuan (*Space and Place: The Perspective*

of Experience (1977) and *Topophilia* (1990)) and Hiss's *The Experience of Place: A New Way of Looking at and Dealing with our Radically Changing Cities and Countryside* (1990).

In order to avoid simple dualistic interpretations of the environment in terms of like or dislike (perhaps, for example, picturesque and sublime) or the known or unknown (insider and outsider), or nature and culture, or indeed interior and exterior, in terms of the environment and when dealing with the concepts of space and place, then a turn towards the temporal was necessary and it was in the works of Ingold and Massey that this was manifested. Both Ingold and Massey view space and place in a temporal framework as complimentary terms linked to events, actions and movement through space that make spaces become places for the individual who encounters them. They also acknowledge that the definitions of both are multiple and not definable as single entities but subject to change over time. Both Massey and Ingold proved to be instrumental in framing this research in cultural geographic and social anthropological terms. For a research project that investigates ways of depicting the changing environment, then, a temporal approach is essential, for it is only through time that change is understood.

Place-learning and wayfinding

In the course of undertaking field work I was undergoing a process of what Gibson (1986) terms place-learning. This is a way of describing engagement with specific environments through time, sites in the case of this research, meaning that the individual is constantly forming and re-forming their concepts of the identities of places, rather than arriving at a fixed definition of a place. This concept is closely allied to the concept of wayfinding. Wayfinding is a way of describing the methods that we use to move through and navigate environments without the aid of maps or satellite navigation through recollection and recognition of change in environments that are already known to us, and those unknown to us but understood by association with past experience we wayfind our way around the sites we occupy. Wayfinding is a concept invented by Gibson (1986) and expanded further by Ingold (2000 and 2011).

Both of these concepts are key to understanding how physically and psychically a site is known through time and is reflected on in practice. A further concept of place-making derived from urban planning theories of the 1960's and 70's (*Project for Public Spaces* 1997) is modified here to describe the effects that undertaking actions in space, like making photographic works, impact upon the individual's understanding of a site as a place of action. For a full discussion of these concepts, see chapter three.

The Representation of Place

Although whilst undertaking practice I am forming relationships with a number of sites as places through place-learning, and as the formation of place is a key issue in the understanding of the environment as a temporal entity, then the question of the representation of place is an important factor when considering the use of photography to interpret the environment. As well as the work of Wells (*Land Matters: Landscape photography, culture and identity* (2011)) it was *Lippard's The Lure of the Local: Senses of Place in a Multicentered Society* (1997) and in particular the works of the walking artist Fulton (2006) that proved most useful (see the introduction). Further research in semiotics into the relevance of the indexical qualities of photography as being universally and pre-reflectively understood depiction was also undertaken in the works of C.S. Peirce (Atkin, 2003), Ferdinand de Saussure (1959) and James Elkins (ed) *Photography Theory* (2007) and found to be of some use, although the semiotic approach tends to draw connections between the sign, the signifier and the signified too rigidly when considering the nature of place and its depiction through photography, not allowing for a sense of the multiple possibilities in interpretation through time that are inherent in the concepts of both space and place as espoused by both Ingold (2000) and Massey (2005).

In the case of the practice in this project the supposition that the experience of place cannot be represented through photography was applied to the multi-site typological methodology in interpreting land as a generic space for the imagination when visualised through photography,

rather than a place for recording and documenting. This meant that the specific histories (archaeological, ecological or otherwise) of each site that could be determined through desk-based research were not of primary importance; rather the information gleaned from the direct experience of being in the land and perceiving the environment came first; hence this research took a phenomenological approach (see below).

The Importance of Space

Space in this research is defined by two factors, firstly it is understood as being the environment as it is perceived. A space with a near and far, a ground, horizon and sky that the individual is within, moves around and is surrounded by. This is described as a sphere of perception by Gibson (1986) and also discussed further by Ingold (2000) in relation to the global, although this proved not to be relevant to this research. A second consideration is that space is always open to interpretation, its meanings can be multiple and subject to change over time. An individual always occupies and moves through space, and, in accordance with experience, intention and attention, they interpret spaces differently and multiply over time. A Key influence on this interpretation was Massey's *For Space* (2005).

During the course of practice I was moving between the research sites by various forms of vehicular transport and it was recognised that this movement was impacting on my perception of these sites. As a result the body of work, *Space Between,* was made that offered the opportunity to elucidate this finding and to investigate it further theoretically. This led to an interest initially in psycho-geography, (Merlin Coverely, 2010). Principally it was the work on non-place by Marc Augé (1995) and Michel De Certeau's work on rail travel that proved most useful. De Certeau's *The Practice of Everyday Life* (1984) was instrumental not only in considering the effects on travel on our conceptions of space and place, but also on the role of memory in our understanding of place (see chapter four). Similarly Guy Debord's *Society of Spectacle* (1977) was also a useful psycho-geographic reference particularly considering the effects of representation on perception. (see

above). Pyscho-geography was only touched upon in this research but is recognised as a potential source for further investigation.

The method of blurring employed in *Space Between* was further elucidated theoretically in the work of the futurist photographer Antonio Bragaglia (1973) and a connection drawn to Bergson's concept of duration in his intermovemental fraction, a durational image that has the traces of the passage of time alluded to as continuous rather than a staccato of measured time (see below and chapters three, five and the conclusion).

The Philosophical Framework

Many of the theorists above, such as Ingold, Massey, Tilley and Gibson have been influenced by phenomenology and it was to this branch of philosophy that this research turned in terms of a conceptual framework.

A foremost question of how the environment is experienced and acted in, as opposed to it being passively observed, was key in terms of the fieldwork, and how this experience, once identified, can be used to interpret the changing environment through photographic practice and communication became a principal focus. This was the reason for a phenomenological approach.

The study of the phenomena of environmental experience asks how we know our environment through the senses and what role does our sensory perception play in this experience? It principally begins with the information from the senses and not with other information that may be available to us. This drew firstly on Edmund Husserl's concept of the epoché, as interpreted by Gallagher and Zahavi (2008), That in order to study phenomena as perceptive experiences then there is a need to suspend what Husserl termed our natural realistic tendencies common to many areas of life including the sciences to accept a "tacit belief in the existence of a mind-, experience-, and theory-independent reality" (Gallagher and Zahavi, 2008, p.22). Rather the phenomenological approach begins with the analysis of how reality is experienced in the first instance through the senses and what the filter of our senses offers to our perceptions of reality.

Taking this stance, the fieldwork has proceeded to be an undertaking to investigate the sensory perceptual experiences of the sites of interest and the impact that this analysis has on the methods of making of artworks through photography. The work sought, through field notes and photographic practice, to phenomenologically analyse the experiences of being and living in the environment as a temporal experience. In this case, this is not only a study of sensory perception, but also the acts of image making as a way of communicating an interpretation of the environment to an audience that is absent from that environment at the time of viewing the artworks.

A key initial influence in this process was Maurice Merleau-Ponty's Phenomenology of Perception (2002). His overall approach of undertaking detailed descriptions of perceptive experience and then analysing them instilled and instigated the same in the fieldwork and the actual use of highly detailed photographic techniques. It was Merleau-Ponty who instilled the desire to understand how I was perceiving the environment through the mechanics of perception whilst in the field and to interpret this through photography.

Three key factors emerged from Merleau-Ponty's theories all of which are echoed in the thinking of other philosophers in this research as follows;

- Firstly that the perception of the environment is an amalgam of the senses and that any phenomenologically-based study should take this into account, even when the medium of interpretation is purely based in one sense (the visual, in this case). The effects of the other senses on how the environment is known and experienced still impacts on my motivations in the field work. It also influences the viewing of artworks and further sensory information can be implied both metaphorically and through the synesthetic imagination in the viewer. Information from the other senses can be evoked through the visual image.

- Secondly our perception of the environment is always coloured by our interests and that we tend to concentrate on the elements that concern us in any given environment, in accordance with our intentions.

- The third factor is that our perception of the environment is always influenced by our mental and physical states, our well-being, both in terms of forming our intentions and in terms of aesthetic responses to the scenes encountered.

The Relevance of Cognitive Psychology

In the course of field work I was carrying out in-depth analysis based on the phenomenological model of studying the mechanics of the senses in relation to the environments under scrutiny and interpreting this through field notes and artworks. This study was based on and of the environment as a temporal experience. It became clear that in order to fully understand what was occurring in the practice, further research into how we perceive in the realm of cognitive psychology could prove fruitful.

Increasingly in the field I was recognising that memory, in many different forms and through a variety of time spans, was playing an important part in my perceptions, both of a scene as it is encountered and looked at (in the short-term, during presence), and as a way of forming my understanding of an environment through place-learning (long-term recognition and recollection, when present and absent from the sites under study).

To further understand this I needed to go beyond the information of my senses, as what I could observe of my own experience alone was not enough to elucidate how I remember visually, how I form images, recognise scenes as known from before and navigate through wayfinding.

Having established a methodology employing a multi-site approach with photographic compositing and repetition (see chapters three and four), it became necessary to turn to other sources to understand how the connections between the environment and individual are formed. This was done through research in cognitive psychology. This cross-over between psychology and

phenomenology is not unprecedented as Merleau-Ponty make references to psychology in his work. As such the link between the two disciplines is already established and a key text in this respect was Gallagher and Zahavi's *The Phenomenological Mind; an introduction to philosophy of mind and cognitive science* (2008). The key question was what role does memory play in our visual perception and what are the implications of this role for the photographic interpretation of the temporal environment through photography? This is a vast question beyond the scope of this thesis alone to answer, but there are clear implications of the role of memory on firstly how the environment is understood whilst perceived and secondly how it is remembered and re-cognised as place.

The main source for the subject of visual memory in psychology was *Visual Memory* edited by Steven J. Luck and Andrew Hollingworth (2008). Three inferences were drawn from this as relevant to this research as follows;

Visual Sensory Memory

David E. Irwin and Laura E. Thomas (2008) describe visual sensory memory as a form of very short term detailed memory of a fixated view retained for c. 500 milliseconds (half of a second) in the mind of the observer before it degrades significantly. They indicate that visual memory is more susceptible to decay than the information that is gained in that brief time. This indicates that the individual has a very limited capacity to retain detailed images in memory that are comparable to photographic detail although they do remember the information they gained from the viewpoint. The implications of this is that the eyes do not record images in the way that cameras do, rather they are conduits of a visual information flow, echoing similar conclusions in the work of Gibson (1986).

Visual short-term memory

Short-term memory in cognitive psychology specifically refers to the capacities of the individual to remember up to four or five things for a numbers of seconds and not to any longer temporary

memory capacity referred to as retention by Husserl as discussed by Paul Ricoeur (1985) (see chapter five).

Movement and visual memory

As the practice component of this research uses digital photographic compositing as a method to investigate movement through space and time in the acts of perception, then the question of whether or not individual visual fixations are constructed together in the mind to form our visualisations of the environment was considered salient. Although as Henderson (2008) points out, this spatiotopic fusion hypothesis was thought to be the case in the latter half of the twentieth century, but that subsequent research into saccadic eye movements have cast doubt on this theory, to the extent that "Overall, empirical and logical considerations strongly suggest that sensory images are not retained and visually integrated or fused across saccades" (Henderson (2008 p. 96)

Saccades are the very short gaps (approximately 20 - 80 milliseconds according to Henderson (2008 p.93)) between visual fixations when the eyes rapidly move to fixate on the elements of interest and during which the eyes do not see (saccadic suppression). The spatiotopic fusion hypothesis is based on the concept that "a sensory [..] image is generated during each fixation and stored in a temporary buffer, with sensory images from consecutive fixations spatially aligned and fused" (Henderson 2008, p. 91) to form a composite image of the environment. Although it is possible to mimic a process like this using computer software, as has been done in this research, the evidence outlined by Henderson from a variety of laboratory experiments suggests that does not happen in actuality. There is no need to go into the findings of these experiments here, but two conclusions drawn by Henderson are that "First, it is likely that directing the eyes to the external world is less capacity-demanding than memory search. Second, using the world as external memory is less error-prone than internal memory" (Henderson 2008 p. 103). Hence the individual

is more likely to constantly refer to the environment rather than to construct a composite sensory memory image of the environment that they occupy.

In this research the compositing process has not been used to confirm or refute the spatiotopic fusion hypothesis, but to highlight the facts that visual perception occurs through time and in motion, that it is a spatio-temporal experience. This is achieved by allowing errors and distortions to be evident in the artworks that indicate the saptio-temporal process of visual perception, as well as to extend the photographic processes themselves temporally and making them evident with a compositing technique.

This photographic compositing process is certainly not unique or novel, exponents of it such as Hockney (2009) have used it since before the advent of widely available digital photographic software in his photo-collages and joiners of the 1980s. His does use it to investigate the spatio-temporal aspects of visual perception through the multiple combination of prints in single composite works, although his primary interest was and appears to remain one of visual perception and perspective, rather than taking a relational approach to the temporal environment as is the case in this research. Others such as Jeff Wall (2007) also us it to create seamless artworks he terms cinematic, that are hybrids of conventional film and digital processes. Both these practitioners have been influential on this research (see chapter four). Compositing is a widespread practice in many forms of photography, both commercially, in fine art and in record photography. This project drew heavily on the practice of close-range photogrammetry as used to record in archaeology. In this context photogrammetric techniques are used to precisely map in detail archaeological and architectural features to scale as technical drawings (see chapter two).

To return momentarily to the relevance of psychology in this research. As an evidence-based science cognitive psychology has certain limitations; for example, there is little evidence of how we retain temporary information beyond the few seconds of short-term memory whilst not necessarily consolidating this information in long-term memory. Also, as Gibson points out in his introduction

to *The Ecological Approach to Visual Perception* (1986 p. 1-4), many experiments in cognitive science take place under rigorous and deliberately constrained conditions in the laboratory, they do not easily equate to the perceptive everyday experiences of the individual in the environment. Whilst I readily acknowledge that the results of evidence-based cognitive research by psychologists has proved useful to this research, and is important in wider contexts for aiding in the diagnosis and curing of illness for instance, it has its limitations. Hence much has been drawn from the work of Gibson in addressing this in his ecological psychology, an environmentally based psychology of perception.

It was also for this reason that at this point the research returned to philosophy with reference to the role of memory in the experience of the environment in the work of Henry Bergson (2002a-d). Bergson proved to be instrumental to this research in providing a framework for understanding the importance of both memory and time as it is experienced in his concepts of the intuitive method and of duration (see below).

The intuitive method as interpreted by Deleuze in *Bergsonism* (1990) is defined as a way of undertaking a task or answering a question one has formulated through practice. He defines Bergson's interpretation of intuition as a confluence between memory and the environment, in that, experience of the environment acts as a stimulus to memory recall that defines the elements of interest in the environment. It is in this way that our understanding of the environment is formed and actions undertaken, like the making of artworks, as is the case here. This relationship between memory and experience is drawn together in understanding the motivations behind making works and proved useful in understanding why I, as an artist, was drawn to certain scenes in environments to make work about, beyond the initial pre-conditions of recognising the signs of, or potential for, change to be photographically interpreted. This stimulus to act to make work drawing on memory and following the intuitive method is elucidated further in chapter three.

Bergson was also key in providing a philosophical framework that underpinned the intentions of this practice in terms of interpreting the relationships between memory and environmental experience through time, and importantly in recognising that time is experienced, or lived, durationally as opposed to being broken down into arbitrary measurements.

Time

In respect of time, as with the analysis of space and place in relation to photography, this research took a phenomenological approach, concentrating on lived time, rather than an historical or archaeological chronology. This placed on emphasis on how time is experienced and the past remembered and recalled by the individual in the present. Along with Bergson the philosopher Ricoeur was an important source, particularly in identifying different conceptions of time in his third volume of *Time and Narrative* (1990). These concepts can be outlined as follows with particular reference to their relevance to this research;

Calendar Time and durational time

The chronometric measurement of time referred to as calendar time is characteristic of the modernist period and still a dominant contemporary interpretation of time. The division of time into measurements of seconds, minutes, hours and so on is considered to be a problematic interpretation by Bergson, who interprets the division as arbitrary and therefore non-existent. Bergson conceived of time as a continuous duration without division with moments characterised by change that flow into one another. He therefore postulates that the instant does not exist.

Lived Time

Lived time is used here to describe time as it is experienced. This could also be described as psychical, in that it can appear to pass quickly or slowly, and can be cyclical in that experiences and actions are repeated and can be habitual.

Astronomical Time

Underpinning both the above is astronomical time, based on the movements of the planets. This is physical rather than cultural (chronometric time) or psychical (lived time). It is responsible for day and night, seasonal and tidal change. It is both successional and cyclical.

Memory

Each of these concepts is discussed in chapter five in relation to photography; the key to all of this is the relationship between memory and time, for as Bergson indicates, the past only exists in the present, as memories recalled, in one form or another. These can be nascent, as Bergson terms them, pre-reflective in Gallagher and Zahavi's terms, or re-cognised; that is, thought of and identified in the mind or spoken word; or as recollected or remembered, connected to a past experience.

Memory is essential for the formation of and understanding of the environment, for navigation around it as well as the basis for forming relationships to it that create what we understand as our sense of place. Memory is also key in understanding the narratives either of experiences of actuality or the experiences of viewing artworks. In the case of photographic artworks then narratives can be created and manipulated that take the nature of memory into account and it was initially in the work of John Berger (1997) that memory was seen as not functioning in a unilinear way, but was, in his terms, radial, with a number of associations being stimulated from one encounter, be it within an environment or with a photographic image (see chapter five). This indicated that by taking a non-chronological approach to displaying and sequencing images in a body of work it was possible to mimic the experiences of the multi-site research practice and through this the experiences of our multi-centered lives (Lippard 1997). It was also possible to reflect on the nature of memory recall and its relation to encountering environments and their visualisations through the repetition of scenes in a non-sequential order in an exhibition, taking full

advantage of the time-lapse technique to interpret the temporal and repetitive nature of encounters with spaces and places.

This use of time-lapse and repeatedly visiting sites over time is one component of the work of Jem Southam, whose projects *Red River* (1989)*, The Pond at Upton Pyne* and *Rock Falls* (2011) have all been influential to this project. He sparingly uses time-lapse to indicate change and makes concerted long term projects involving repeat visits to the same sites (*The Pond at Upton Pyne*) and repeating photography of the same scene in investigations of place. In *Continuum*, the use of the title *tree-fall* is a reference to his work *Rock Falls*. Both elements are events that indicate the passage of time that are perceivable to the observing individual as change in the way that Gibson (1986) defines it (see the introduction). Time-lapse is used extensively in film and photography and is discussed further in chapter five, drawing on the work on photographic narratives in *The Spoken Image* by Clive Scott (1999).

The relationship between photography and time was investigated further in the work of Deleuze, *Cinema One: The Movement Image* (1986) and *Cinema Two: The Time Image* (1989), but it was particularly Sutton (2009) that proved most a most useful theoretical source with his re-interpretation of Deleuze's concept of the crystal image of time with an emphasis on the still photograph, as opposed to the moving image in *Photography, Cinema, Memory: The Crystal Image of Time* (2009). It was Sutton that described the concept of the durational photographic image in relation to the multiplicity of possible interpretations in Cindy Sherman's *Untitled Film Stills* that has been expanded on and applied to the making of photographs in this research.

Summary

In summary, this research began with an investigation of the aesthetic concepts of the sublime and the picturesque derived from Romanticism in the 18th and 19th centuries and then shifted from an observational approach to a relational one, drawing on phenomenology. This was because the concept of the changing environment is better understood if the individual's position within it was

considered as active in terms of undertaking tasks and living with the land, being an embodied part of it rather than a separate and passive observer of it.

The philosophical foundations for this study drew on the detailed descriptive work of Merleau-Ponty into perception and applied this methodology to field work and photographic practice through a multi-site and process approach that can be described as Rhizomatic, in the terms that Deleuze and Gattari frame the rhizome in *A Thousand Plateaus. Capitalism and Schizophrenia* (1987) (see chapter three for a full account of the methodology). From this beginning, both Deleuze and through him Bergson became principal influences, in terms of framing the work within conceptions of durative as opposed to a chronometric time and in terms of memory and intuition in relation to perception and decision making in the field.

The relational approach also led to a study of the relevance of the concepts of both place and space in the understanding of environment from cultural geography principally in the work of Massey (2005) and from social anthropology of Ingold (2000, 2011, 2012), for it is these theoreticians who take time into account in their conceptions of space and place as constantly changing entities. The difficulty of the representation of place in geography and within fine art contexts also influenced this work. It was determined that specific places would not be documented in this research, rather an emphasis be placed on space and time as key to understanding change in the environment through photography, although the concept of place was still taken into account as an important product of the temporal experience, particularly through the concept of place-learning.

Analysis of perceptive experiences of space and time in field work was augmented by Merleau-Ponty with additional material by both Ingold and Gibson proving instrumental in framing the photographic practice as a form of research into visual perceptive mechanisms that was used to interpret the environment as a temporal and changing space of inhabitation. This was also aided by research in cognitive psychology around the concept of visual memory.

The concept of lived time in relation to memory and in particular Bergson's concept of duration informed the research in terms of defining the practice methods and methodology and the outcomes in terms of sites of discourse and narratives in the various bodies of work.

In this thesis, chapter five, *Stasis and Movement*, deals with this relationship between time and the photographic research practice of this project, whilst chapter four, *Perception and Memory,* delves into the phenomenology of memory and perception and its interpretations through field work and photographic digital compositing. Chapter three *The Region and the Space Between* considers the methodology of this project in terms of space and place. *Evidence and evocation* the second and next chapter, sets out the concept of connectedness in relation to this project and analyses the role of archaeology, aerial photography and cartography in evidencing the environment through photography, relating this to early practices that begin investigations into the perceptual relationships of the individual to the changing environment.

Chapter Two

Evidence and Evocation

As living beings, we are part of the environment. We inhabit it, interact with it and impact upon it. We have been born into systems: "To be human is already to be situated in the world, born […] into it without having chosen to be so, to be present to my surroundings" (Gallagher and Zahavi, 2008, p.86). As such we have inherited systems of culture and capital that we have little or no control over as individuals. We are rarely able to decide how the power we consume is generated or how goods are produced and distributed and we therefore cannot take full responsibility for our connections to the environment, whether the impacts that are made by us or by others on our behalf are for the general good or ill of the planet.

This gives rise to a sense of individual anxiety and of disconnection from the environment in general and to a lesser degree from even the environment around us. We are not connected to the land in ways that pre-industrial agriculturalists and hunter gatherers once were, in that we no longer directly depend on our local environment as the primary source for sustenance, but gain this through various intermediaries; few of us build our own homes, grow crops and raise domestic animals for our own food. Therefore, we rarely find that our actions upon the environment impact directly upon our wellbeing. This is not to say that in the past human relationships with their environments were harmonious or impact-free because they were more connected, simply that they would have suffered or benefited directly from their actions upon the land. The archaeological record provides evidence of deforestation and pollution in the pre-historic past, Neolithic and Bronze-Age farmers did not necessarily act in a sustainable way, for example. Through time and across geographies there have been and are many cultures with a multiplicity of belief systems and life worlds and a wide variety of relationships to the land, with varying degrees of sustainability.

This research takes the primacy of experience of the environment as its source material in order to examine how connections are manifest in the individual and analyses the experience through

visualisation with photography, one of many secondary sources available to us, following a phenomenological approach, as Shaun Gallagher and Dan Zahavi point out:

> Husserl, for instance, frequently distinguishes between *signitive, imaginative (pictorial)* and *perceptual* ways of intending an object or state of affairs: I can talk about a withering oak which I have never seen, but which I have heard is standing in the backyard, I can see a detailed drawing *of* the oak; or I can perceive the oak myself (Gallagher and Zahavi, 2008, p.90, emphasis in the original).

The primary, *perceptual*, source here, is the act of perception in the presence of the object itself, in this example an oak tree, whereas the secondary, *imaginative*, source is the drawing of the tree. This could be a photograph, or another medium such as a sound recording of the oak (it need not be only visual, all the senses have the potential for secondary representations). The tertiary, *signitive,* source is signification through language. This has no direct sensory information to offer but communicates meaning through linguistic sounds and text in an established semantic code, bearing little or no resemblance to the perceived sensory information from the object that is written or spoken about.

In the late 20th and early 21st centuries this sense of disconnection from the environment and individual responsibility for it has increased with the rise of a new reality. The digital virtual world has given rise to new ways of interaction and communication and an explosion of readily available information. The digital system is increasingly pervasive, we have been and are being gradually more compelled to interact with it, socially and professionally, to the point of necessity. Although the system offers many potential possibilities for assuaging our environmental anxieties, by joining groups of like-minded individuals on social media sites, or lobbying by signing online petitions, it is ultimately removed from the primacy of interactions with the environment itself. The internet and associated digital realities offer only secondary and tertiary experiences that are always mediated by the input, design and intentions of the originators of content. They are also mediated through a screen on a technological device. This engagement with virtual realities increasingly takes up much time in the day to day lives of individuals, thereby removing them further from their direct

experiences of the environment and increasing a sense of disconnection from it. Although we may gain information about the environment and find ways of engagement politically and socially through digital resources, our experiences are always mediated through them and are not of the environments themselves. Experience becomes characterised by discourse with others, a spectacle of representational communication. As Guy Debord points out: “In societies where modern conditions of production prevail, all of life presents itself as an immense accumulation of spectacles. Everything that was directly lived has moved away into a representation” (Debord, 1977, chapter 1). Acting in and making judgements about the environment directly, as first-hand experience and engagement, is becoming increasingly rare in society.

Aa a result, there is a growing trend within the disciplines of documentary and contemporary art photography practices to take secondary sources as starting points to projects, drawing on archives (the re-photography movement typified by Mark Klett (Klett and Wolfe, 1997-2013) for instance, or the recent work of Adam Broomberg and Oliver Chanarin *War primer 2* (Broomberg and Chanarin, 2013), found photography (Larry Sultan & Mike Mandel *Evidence* (Sultan and Mandel, 1977), Joachim Schmid *Other peoples photographs* 1982 –ongoing (Schmid, 2007) or digital resources such as Mishka Henna (Henna, 2011) see below. This project operates counter to this trend. The choice to go against this is precisely because it is through secondary sources, rather than the primary experiences of perception that connections to the environment are undermined.

The concept of connectedness underpins all the artworks made throughout this project. The research involves the investigation of the mechanisms of primary perceptive experiences of environments through the processes of making secondary “imaginative (pictorial)” (Gallagher and Zahavi, 2008, p.90)[8] images using digital photographic compositing processes to examine the concept of change in the land. This includes an acknowledgement that the resulting works are also limited as secondary sources of experience, but puts forward the idea that the processes involved

[8] Gallagher and Zahavis’ use of the term pictorial refers to the making and reception of images in general and not to pictorialism, a specific photography movement with origins in the late nineteenth century.

in making these works can investigate the primary perceptive experience, pushing at the boundaries of these limitations and communicating an acknowledgement of them in the resulting artworks. This is achieved by highlighting that perception and connectedness are the products of temporal processes.

The works are the results of processes of engagement and entanglement with the idea of inhabitation, of what it is to occupy and be part of space through time, to *dwell* in the environment through processes (Ingold, 2000, p.208). To in-habit is to form processes that become habitual through repetition, over time. This research considers how this temporal aspect of experience occurs. It is the formation of an understanding of and relationship to environments that takes into account the changing nature of both the environments themselves and the actions that form the experience of them.

It is not possible to identify one single origin, or starting point to this project; it is the culmination of my experience and a product of my life world. My past experiences and knowledge become manifest in the artworks made, either directly and purposefully, or indirectly by association and memory. My influences are not purely art historical, stemming from the work of other artists or art movements, although where connections are made they will be discussed. They also include other forms of engagement with the environment and processes undertaken outside the realm of contemporary art. In order to investigate the motivations behind my approaches to this research these influences are key, and central as to why a temporal approach to understanding land has been undertaken.

Having worked for many years as a field archaeologist, I acknowledge that this experience is an unavoidable influence on the work I make, either knowingly or unknowingly. The experience is predominantly practical and oral, acquired by undertaking the tasks of excavation of the environment in a community of archaeologists, as opposed to acquired archaeological knowledge or theory gained through research. This emphasis on archaeology as a process has led to

preoccupations with the environment as a temporal space with the signs of past activity embedded within it, and responded to by physical activities like trowelling, shovelling and mattocking as well as surveying, drawing and photographing. Field archaeology is one of the few professions that still maintains a physical and individual relation to the environment in a very material way; the archaeologists excavate the earth and dwell within it through a variety of associated processes. When considering land from an experienced temporal perspective, then I find archaeology as a process is entirely appropriate as a source for further creative interpretation, as Ingold points out:

> the process of dwelling is fundamentally temporal, the apprehension of the landscape in the dwelling perspective must begin from a recognition of its temporality. Only through such recognition, by temporalizing the landscape, can we move beyond the division that has afflicted most enquires up to now, between scientific study of an atemporalised nature, and the humanistic study of dematerialised history. And no discipline is better placed to take this step than archaeology (Ingold, 2000, p.208).

The processes of field archaeology inform the methods employed in this research, as "*the practice of archaeology is itself a form of dwelling"* (Ingold, 2000, p.189, emphasis in the original). It is a way of temporalizing land as an experience and avoiding divisions between nature and culture, by concentrating on the experiences of change itself rather than the causes of change, be they human or non-human in origin. Field archaeologists understand that land contains layers of meanings and multiple narratives from different temporal phases of occupation and non-occupation. This understanding can be interpreted by and applied to the practice of making visual artworks.

Archaeology as a process

Excavating a site is an intense process of environmental alteration; the land is deconstructed by hand and transformed into a multimedia record, artefacts and environmental samples are retrieved and analysed by specialists. The site is re-discovered, shifting from the unknown and mysterious to the known, discussed, categorised and re-interpreted. In many cases it is also physically transformed or even destroyed. The process is time-consuming, with the excavators spending days, months and even years working on the same site, building a strong sense of

familiarity and dwelling within it in a variety of conditions, through engagement in often physically strenuous tasks, and solving difficult technical and intellectual problems. Undertaking these tasks and experiences has resulted in a particular approach to land and the environment that impacts upon my approach in the making of artworks. These aspects can be outlined as follows:

- Archaeology and memory
- The view of the ground

Archaeology and memory

When working in the field, memories of past experience influence the processes of decision making about the elements that become the subjects of artworks. In principal the environments I encounter often stimulate memories of archaeological features that I have dealt with during the excavations I have undertaken. I recall experiences in the past and these act as the impetus for making an artwork. Many different forms of memory work with and impact upon the perceptive experience, and this kind of memory recall and its impact on making artworks will be dealt with in detail in chapter Four.

The view of the ground

Archaeology is a visual and physical process; a constant high awareness of the ground surface is required in order to spot subtle differences that indicate the presence of features and to find artefacts within the soils under excavation. Over time this has led to a habitual observation of the ground. As such it has become part of my pre-reflective consciousness; it is a tacit habitual action, an awareness and viewpoint undertaken without my conscious instigation (Gallagher and Zahavi, 2008, p.46).[9] This results in an emphasis on the ground as surface in many of the resulting works throughout this project.

[9] "the self-consciousness must be understood as an intrinsic feature of the primary experience […] it is not thematic or attentive or voluntarily bought about: rather it is tacit" (Gallagher and Zahavi, 2008, p.46).

The plan view (I): Cartography

Temporal spatial mapmaking underpins the archaeological record. All of the processes at the core of archaeology aim to locate the materiality of the site in question as a temporal sequence and in a spatial location. This results in the stratigraphic matrix, an abstracted representation of the locations and relationships of all the elements from an excavation. This is crucial to the site's interpretation. Underlying this is the use of various forms of cartography.

The archaeological use of mapmaking conforms to the empirical traditions of cartography, as an accurate visualisation of information. In keeping with this tradition, the discipline of cartography tends to use this spatial survey to gather and record information and present it as empirical scientific data. As such it is assumed that the map, and the archaeological record, are unbiased representations of this information. Critical theorists of cartography, (see Crampton, 2010) are keen to point out that the map is always a product of the time it was made; the cultural contexts and intentions of the makers shape the map's meanings, rendering them far from being unbiased representations. As Ingold points out: "The reality is that no map, however ´modern` or sophisticated the techniques of its production, can be wholly divorced from the practices, interests and understandings of its makers and users" (Ingold, 2000, p.225). As such the use of cartography by archaeologists assumes an objectivity without taking into account the effects that their intentions and cultural backgrounds have on the way that they present the information in cartographic form.

As a result of the aim of archaeology to produce these supposedly unbiased records, the means of the production of that knowledge always remain obscure, or at best, secondary to the presentation of the details and relationships between different kinds of material evidence. Archaeologists use cartography and associated Global Information Systems (GIS) that de-politicise (through technology) critical analysis of their use. In so doing archaeology tends to ignore or leave out many of the social, political and cultural circumstances that gave rise to the excavation.

Archaeology also tends to ignore the embodied experience of the archaeologist. The discipline is, in general terms, yet to take up Ingold's assertion that it is a process of dwelling, concentrating instead on the presentation of results as empirical evidence. There are exceptions to this as, Frederick Bohrer points out, in the work of Dave Webb for example, who photographed many aspects of excavation, most notably through portraiture of the archaeologists in the environment of their work (Webb, 2011) as a supplement to his work conventionally recording excavations. Bohrer also notes that:

> The past few decades have seen the rise of a 'post-processual' archaeology, influenced by the social sciences and humanities, which is as concerned with exploring how archaeology works in the present as with what it discovers about in the past (Bohrer, 2011, p.66).

The example Bohrer gives of this kind of project is *Kalaureia in the present* (Hamilakis *et al.*, 2014). This post-processual approach to archaeology is far from common and has yet to impact on the mainstream of archaeological practice, much of which takes place in the commercial context of development, particularly in Western Europe, and is subject to many restrictions that impact on the scope for experimentation and outcomes of projects.

These empirical tendencies in archaeology to ignore the contexts and modes of production are often paralleled in the tradition of landscape photography. The photograph describes often in great detail, its subject whilst not acknowledging its roots in the traditions of European enlightenment thinking or the nature and presence of the photographer in this process. It is perhaps time for a *post-processual* approach to be made in environmental photography, as well as archaeology.

The plan view (II): Aerial photography and satellite imaging

Cartography and archaeology have long been associated with aerial photography as they are a way of viewing and identifying the traces of past land use (Cosgrove and Fox 2010, p.36-43).[10] However as Bohrer points out "the finds of aerial photography are as much the result of habits of astute

[10] For a comprehensive history of aerial photography and archaeology see Cosgrove and Fox (2010, p.36-43).

viewing as technological accomplishment" (Bohrer, 2011, p.92) and in recent years the process of surveying using Lidar (the combination of laser imaging and radar technologies) and viewing satellite images have superseded aerial photography as a method of finding and analysing features in the landscape (except for rare specific surveys for environmental impact studies or imaging specific excavated sites). Similarly in cartography a wide array of remote imaging technologies provide base information for the creation and modification of maps. The cartographic use of aerial photography was initially developed for military applications in the First World War, and this continues to be a driving technological force that underpins the aerial view, with the development of satellite imaging and more recently the use of Unmanned Aerial Vehicles (UAVs) also known as drone cameras. This is set to increase considerably as the UAV becomes commercially available for the amateur aerial photographer as well as commercial and arts applications.

The connection between geopolitical power and the aerial image is always an underlying consideration, as Denis Cosgrove and William Fox (2010, p.8) point out: "The histories of mapping, survey (literally 'overview`) and landscape art are closely intertwined with power and control in the world's literate cultures." Whether it is the user's intentions to apply the methods of aerial imaging to a different use from its military origins, like archaeology, or to subvert it for other reasons, as an art form, for example in Henner's *Dutch Landscapes* (Henner, 2011) these origins and relationships to power are always a concern.

In *Dutch Landscapes* Henner used images from Google Earth of sites that are censored for security reasons in Holland. The images are taken directly from Google Earth and re-contextualised as artworks, thereby highlighting the censorship and drawing attention to the power structures involved in the free software application. More recent work such as *Feedlots* (Henner, 2013) tend to use images from Google Earth in a directly descriptive mode, not taking a critical stance to the software application and satellite imaging in general, but using it to highlight particular environmental themes. This work tends to be partly compromised, from a particular critical theoretical standpoint, in that it does not take the means of production and intentions of the

producers of software into account, by the direct use of the cartographic grid, detail and the distancing from the subject.

One of the difficulties with taking aerial images from satellite imaging applications is that there is no direct engagement with the subject depicted. The user has no need to go to the site or sites of interest, they are viewed remotely at home or work on a computer screen and created by technologies that have become largely devoid of human presence. Whilst this may be useful in some circumstances and would depend on the intentions of the maker of artworks if they were to be successful, then not only the content of the images but also the context of their origins should also be taken into account. As a secondary visual source of images of the earth, satellite images produced with a high degree of automation and little if any human presence in their making (or evidence of human action in the processes of production), have been ruled out in this project as a potential source for artworks.

With cartography and to a greater extent with the aerial photograph the viewer of the image is placed in a certain position above the earth, usually at some distance. Cosgrove and Fox make the point that “Physical elevation and the ability to see across great distances of space give a sense of mastery” (Cosgrove and Fox, 2010, p.8). Not only are aerial views used by governments for geopolitical reasons, the images themselves also give the individual viewing them a sense of power over the land itself. Even in the large scale prints of, for example, Edward Burtynski (Burtynski, 1985-2013), distancing from the ground diminishes the scale of what is viewed in relation to the viewer’s own body in a way that is not normally directly experienced. The images become ways of framing and containing large spaces, measuring and symbolically controlling them. The aerial image simplifies (perhaps over simplifies) complex environments in a way that is novel in relation to everyday life, not often encountered. Although flight is an increasingly popular method of travel, the views available to the individual are not those of the traditional aerial photograph. When it is experienced it is in the tubular confined space of the commercial jet with a small, scratched oval window to gaze out of. The confined space of the aircraft is at odds with the vast spaces of the sky-

scape and the glimpses of the ground below to the extent that the two are difficult to reconcile. Yet the aerial photograph is extremely popular:

> The average time that a person stands in front of a painting in an art museum, even a famous work, is a matter of seconds. Watch people in the presence of an aerial photograph at the same institution, and they will often spend minutes in front of it (Cosgrove and Fox, 2010, p.9).

This apparent disparity between the fascination of the aerial view and its lack of relation to experience is connected to our capacities for spatial memory. People are most interested in the aerial views of places they are already familiar with, like their home town, for instance. They look for what they know and can identify from a novel viewpoint. Cosgrove and Fox (2010, p.10) suggest that "To view the world from above seems to be an innate human ability that is activated when we are very young." One problem with this is that it assumes we are able to create and recall an aerial visual map in our mind of the environment around us, but consider what happens when one needs to use a map to get to somewhere new. In my own experience I find that I am constantly having to refer back to the map, despite having looked at it only minutes before. My own capacity for remembering aerial views is not innate as Cosgrove and Fox suggest; rather it is very poor, implying that our spatial memory and abilities to navigate unaided are not based on being able to innately "view the world from above" but from a different cognitive mechanism.

What Cosgrove and Fox are referring to is the concept of the cognitive map, a map that we have already formed in our minds; that is, a complex representation of the environment we intend to move through before we embark on our journeys, either by referring to aids like maps or based on previous experience. This map need not be an aerial view entirely, it can also be based on a conglomerate of visual memories of environments at ground level. The implication of a cognitive map is that it suggests we form a spatial representation of the world that is de-centred and allocentric. As we cannot remember the cartographic and allocentric aerial view easily, even when it would be useful to do so, then we may not be able to form complex cognitive maps of our environments as Cosgrove and Fox imply. What Ingold proposes, based on the ecological

psychology of Gibson and Heft, (Gibson, 1979: Heft, 1996, cited in Ingold 2000, p.238) is an alternative schema. He draws a distinction between navigation, using a map to find our way, be it a physical or mental map, and wayfinding, a process of remembering and moving through the environment along lines or paths that are recalled and modified (updated) in accordance with the perceptive experience of change:

> wayfinding is understood as a skilled performance in which the traveller, whose powers of perception and action have been fine tuned through previous experience, ´feels his way` towards his goal, continually adjusting his movements in response to an ongoing perceptual monitoring of his surroundings (Ingold, 2000, p.220).

This model is egocentric rather than allocentric, placing the being at the centre of the world rather than distanced from it, as is the case with the cartographic position of aerial photography. Wayfinding and the egocentric view are central to this research, particularly in the body of work *Flow Motion* (plates # 77 - 86). Gallagher and Zahavi describe the difference between the allocentric and the egocentric as follows:

> Allocentric space is purely objective space that can be defined in terms of latitude and longitude (the global positioning system operates in allocentric terms) […] it doesn't matter where you happen to be standing.[…] Egocentric space, in contrast, is the perspectival space of perception and action that is defined relative to the perceiving or acting body (Gallagher and Zahavi, 2008, p.141).

What aerial photography does is satisfy a desire to see from above, cartographically and allocentrically, that which we are unable to picture in our spatial or visual memory and imagination easily. Because this viewpoint is not centred on our bodily, egocentric experience it offers a view of the world that is normally unavailable to us, hence its fascination and its capacity to hold our interest. It is also the ability to encapsulate vast tracts of land in an image from above, providing, at least theoretically, information that would be useful for navigation, which gives the viewer the sense of power over the environment. This becomes a form of claiming of intellectual knowledge over a site in the case of archaeology, or a position of human authority over the environment from above, in the case of much environmental aerial photography. Like the cartographic approaches of archaeology, aerial photography rarely tends to take into account the processes of its making;

when viewing we appear to be floating, soundlessly, above the earth, as if flying without the aircraft necessary for the making of the image and all the effort, cost and sensory information that mechanical flight entails. It is not the intention of this research and the practice interwoven with it to offer this kind of position, where the individual is effortlessly placed high above the ground, superior to it and disconnected from it. However, both cartography and aerial photography offer a relevant counterpoint to work from, in practice, and have exerted influences in the ways that I have approached the environment as an embodied experience, particularly interpreting the view of the ground from above at a human-scaled perspective, through photography.

One artist dealing with land who makes transitions from aerial photography to ground level, bringing the aerial back down to earth, is Terry Evans. Her projects often include both aerial views (predominantly oblique views rather than vertical) and other ground level images, including vertical images of ground from a human perspective of looking down. In her work *Prairie Scrolls* (Evans, 2011a) she returned to c. 4000 thirty year old images of the ground, taken initially as part of an investigation with ecologists, to make scrolls through digital combination (fig. # 3).

Fig # 3 Image from *Prairie Scrolls* Terry Evans (reproduced with kind permission)

These images drew not only on the ecological work initially encountered, but also a wide variety of cultural sources including Japanese scroll paintings, “biology and Plains Indians and Persian

miniature paintings" (Evans, 2011b). This work and other projects by Evans serve to show that from a ground level, the aerial view is relevant as an embodied interpretation of land, and that further potential for this kind of practice was possible in my own research, particularly through digital combination.

Field Walks

As a source for artworks, this aerial photographic vein was tapped into with the intention of bringing the processes of engagement with land within a visually cartographic framework. The *Field Walk* pieces began with the idea of bringing a temporal spatial element to works based on cartography and aerial photography by photographing the process of a walk. The initial site for the works in this series were fields of stubble, around Allfield Cottages in Shropshire, UK. For most of the year these fields that surround the cottages are not accessible as the crops are grown, but annually, after the harvest, they are used for a few weeks to walk my family's dogs. My interest came from this process of walking, repeated annually during this period of accessibility, and the familiarity gained of what is an ordinary and common environment. It was a readily accessible area of land for experimentation with the concept of a bodily-scaled aerial perspective of the environment, close to rather than distanced from the participant and the viewer of subsequent works.

The two pieces shown here have two perspectives based on the two accepted forms of the aerial view. Fig # 4 *Field Walk with Dogs # 1* is based on the oblique aerial view and *Aerial Walk # 1* (fig # 5) was based on the vertical (cartographic) view.

Fig # 4*Field Walk with Dogs # 1*

Field Walk with Dogs # 1 follows the oblique view, a standard convention of aerial photography. The basic rule was that no horizon would be present in any of the images, concentrating on the ground at an oblique angle. These images were then presented grouped together in a grid, alluding to the cartographic, except that due to the format of the camera, each grid was rectangular rather than square, as they would be on a map. The grid follows the process of the walk from top left to bottom right, the top line and the bottom line following the road to the field and acting as a narrative tool. Although there is a sense of both movement and time in this sequence, each image in the final work is still considered individually; as a result aesthetic and thematic comparisons are made between them. Inevitably some images become more interesting than others. Consequently it is difficult to see this as a single work as opposed to a collection of 56 images. Rather than a flow of time through the work, there is a staccato of comparisons between the individual images. This is due to the presentation of the works in a grid.

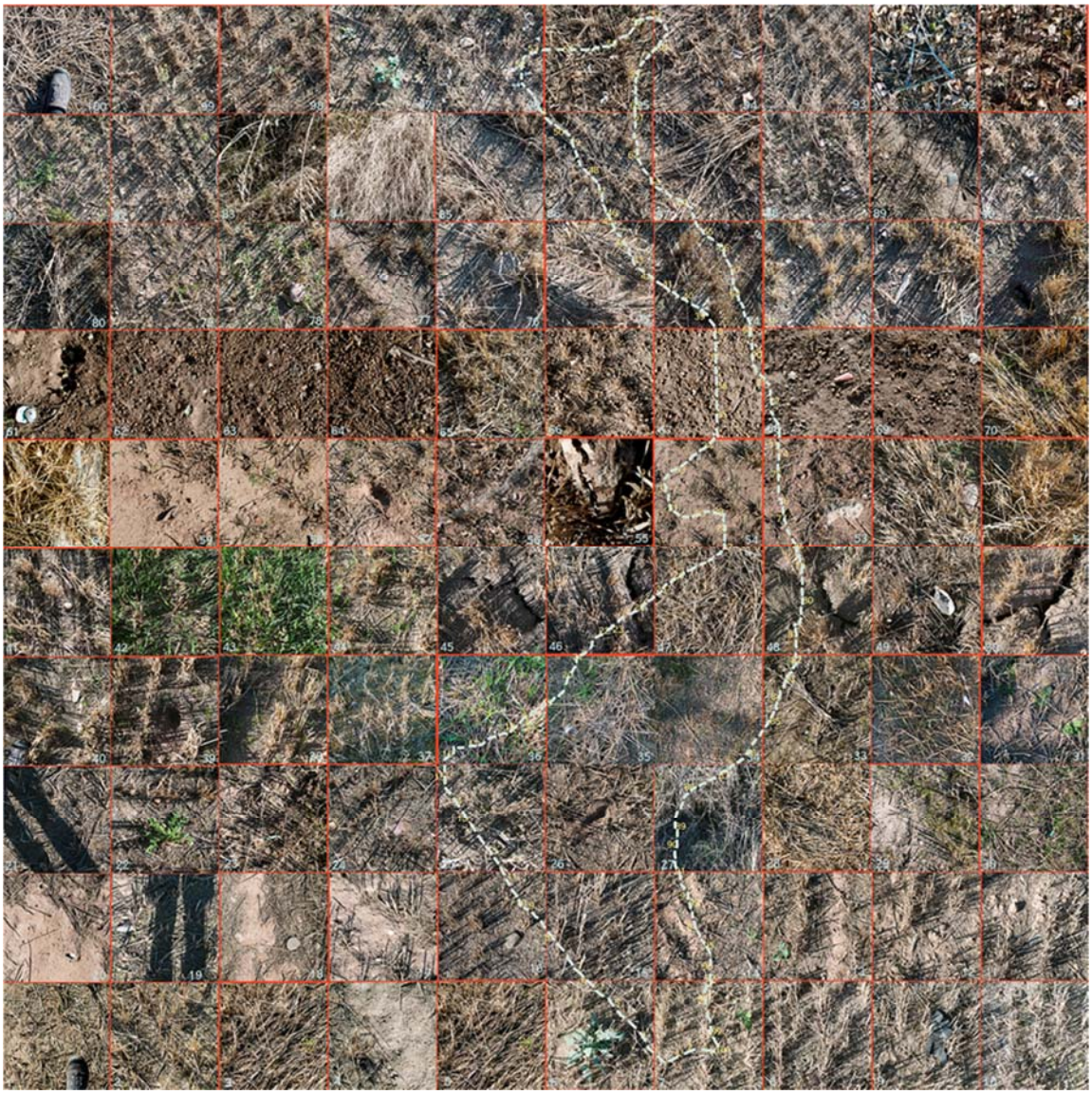

Fig # 5 *Aerial Walk # 1*

A further experiment was made to investigate the same concept of the walk from the vertical aerial perspective, also using the scale of the human body. References to the cartographic were also added digitally, in order to make this reference manifest visually by including what cartographers term “figure-ground separation” (Crampton, 2010, p.13).[11] Each image was cropped square; rather than butting the images together accurately a red grid was also imposed between the images, and a map of the shape of the walk was superimposed over the composite image. The intention was to unify the piece, allowing for more of an oscillation in the viewer between seeing the piece as a

[11] “in cartography textbooks it is often assumed that good map design must achieve ´figure-ground` separation” (Crampton, 2010, p. 13).

whole and as separate individual images. In addition, each image was numbered and the position of the number added to the tracing of the shape of the walk (see fig 6, below).

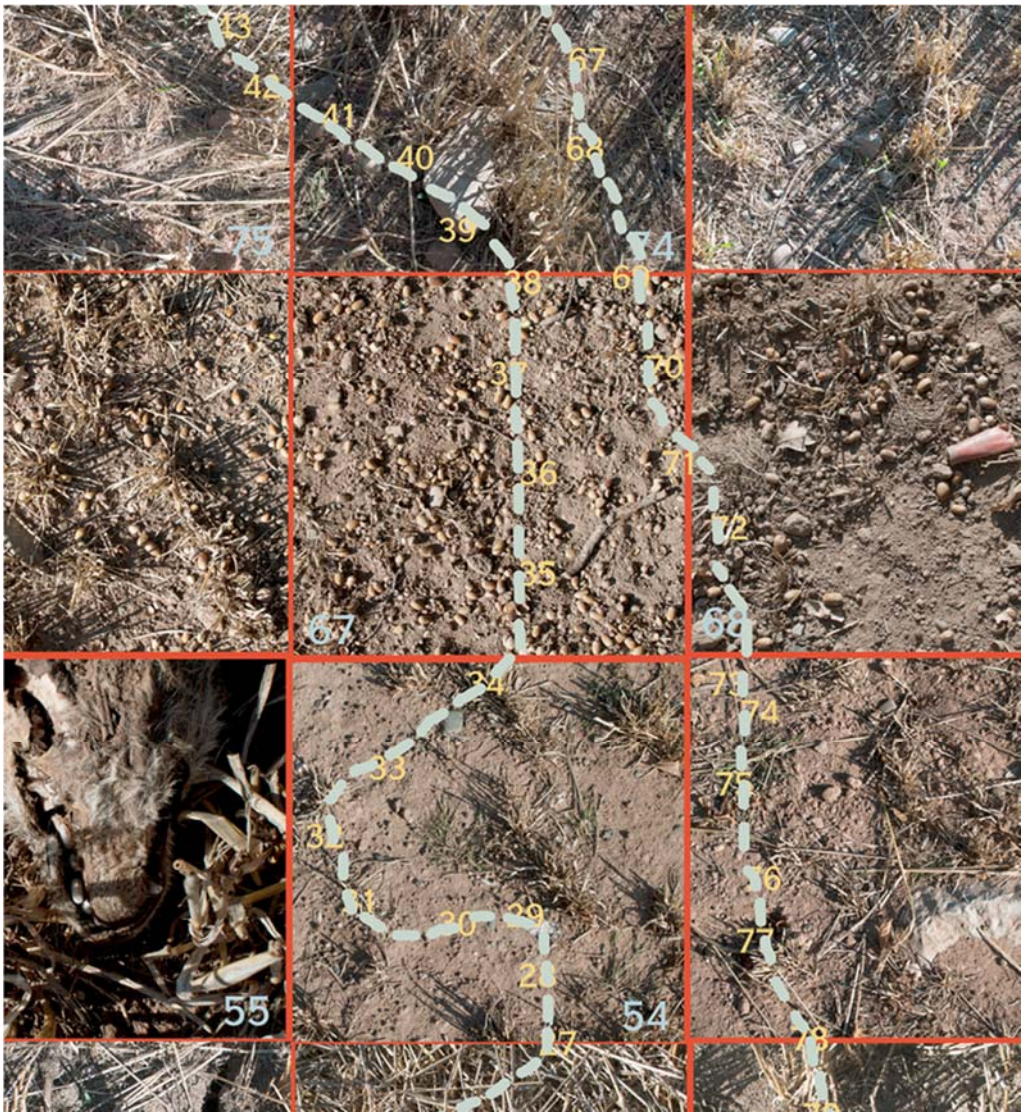

Fig # 6 *Aerial Walk # 1 (detail)*

Because these images are aerial (vertical as opposed to oblique) and do not include many other elements in terms of the dogs and the person present in *Field walk with dogs # 1,* they tend to become less indicative of the linear narrative of the walk through time. The imposition of another layer over the grid of images in the form of the tracing of the path of the walk, the red grid and numbering brings back the linear narrative through the use of tertiary, abstract signifiers.

Analysis of the works with a view to further practice

Both these and other works made in a similar vein, have become allocentric, although each image is centred on the body (egocentric). When presented together in a grid, they do not form a single artwork, rather it remains a collection of images. This use of multiple images butted together in a grid breaks and interrupts the appreciation of the image as a whole. This indicated that a multi-centred viewpoint in a single work was desirable, if the perceptive mechanisms of experience were to be investigated further, and that the cartographic approach, and the grid associated with it, is limited in scope and a method of breaking down the grid was an appropriate way forward.

In the case of *Aerial Walk # 1* (figs # 5 & 6) the use of writing and other abstract signifiers (tertiary sources) applied in post processing was not successful, as rather than unifying the work as was the intention, it created another layer (both physically and conceptually) that distanced those viewing the works further and was therefore counterproductive. The decision was made at this point not to continue with this method.

As a result of these experiments I decided that I would no longer be making direct visual references to the map in resulting works. In terms of the compositing process, the above are very much basic methods that have been investigated further as will become clear.

<u>Close range photogrammetry on the archaeological site</u>

The origins of the compositing process in this research lay in the use of photogrammetry to produce cartographically scaled images, referred to as close range photogrammetry. The incorporation of photography with cartography requires a high degree of technical precision to maintain the accuracy of the scale drawing in the composite image, thereby allowing the archaeologist to analyse and measure details from a photograph. For example, in the case of human skeletal remains, the osteoarchaeologist tends to prefer a photogrammetric representation of the remains to scale drawing alone, as skeletal remains are difficult to draw in the context of

excavation and photographs offer more information, particularly when combined with further graphic information (fig # 7).

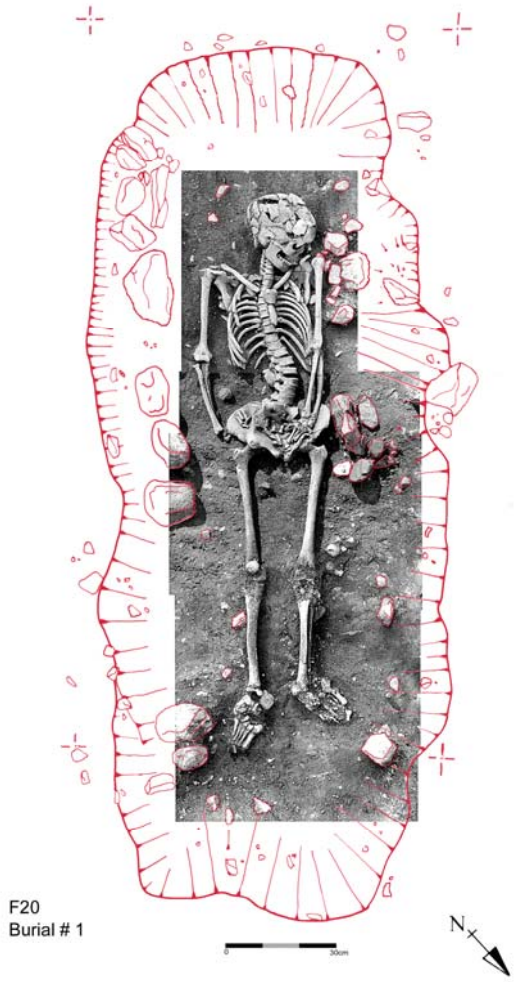

Fig # 7 *A photogrammetric representation of an articulated human skeleton* in combination with scale drawing. In this case the photographs were made using black and white film that was scanned and then digitally combined. In the field a grid of nails was used to maintain accuracy and allow for correction, these were subsequently digitally removed. The red line with hashers indicates the cut into the soil of the original grave and a rudimentary stone lining is represented by both drawing and photography. (Photo, drawing and excavation – the author, 2001)

The above is an example of traditional photographic means using film in combination with scale drawing converted into the final product via digital means and as such it is technologically transitional. Digital photography has now replaced film in the process and many of the signs of how the photogrammetric works are made is not as apparent as they are in the above example. The advent of in camera review and digital manipulation software has meant that the photogrammetric image is now easier to achieve with cartographic accuracy than it was with film technologies alone. As a result many photogrammetric representations tend to appear as if they are single images

rather than composites, as any reference to the process (uneven edges or gaps in the visual information) would undermine the functions of the image as illustration and record.

The archaeological photograph is always presented in the context of a variety of visual and written records and it is from this combination that meaning is arrived at. It offers little comprehensible information in isolation, even to the specialist viewer. It is extremely dependent on supplementary information to function, more so than the photographs extracted from American public and private organisations' archives by Sultan and Mandel in the book *Evidence* (Sultan and Mandel, 1977), for example. These images tend to provide a context without the supplementary information that the photographs originally accompanied or illustrated, but they occasionally include figures undertaking processes that are unclear due to the lack of context in some cases. The archaeological record photograph in itself is absent of most of the processes of excavation and those who undertook the work; in many cases the surrounding environment is also absent, because of the singular (and deliberate) concentration on the details of the archaeology. This lack of recognisable visible information in what is a very pure form of record photography does highlight that much of the indexical, pre-linguistic signs normally present in photography are absent and that a degree of abstraction and conceptualisation is necessary in the form of additional information for the photographs to be understood. This is despite the fact that the photographs conform to the traditional norms of exposure and sharpness. We may be able to discern the earth and stones in an image, as well as holes in the ground where excavation has taken place, but beyond that, without specialist or in many cases specific further knowledge, there is very little visual information in the image itself that indicates any of the information that is gained as a result of the discovery and excavation of the feature (fig # 8).

Fig # 8 *Example of an archaeological feature photograph*

The applied use of photography in the archaeological discipline highlights that despite its ability to render detail, it is highly dependent on the context and narrative intentions of the users of the medium that a function is fulfilled. The potential pit-fall of this approach is the assumption that information is apparent in a photograph, whereas the information may not in fact be present. This is echoed in Jean-Claude Lemagny's comment "In photography I have to learn not to impose meaning because there isn't any, but I can legitimately posit a space and volume. I have the illusion of volume" (Legmagny, 1995, p.137). This indicates that the meaning of a photograph's content is limited, according to Lemagny, to space and volume. Any further information is dependent on the viewer and the context. The archaeological photograph, therefore, is not a representation of facts, but the presentation of a particular conception of the evidence of materiality within the empirical discipline of archaeology.

Archaeologists do make physical additions to photographs to indicate scale in the form of a ranging rod, although, what the bars on the ranging rod measure, (i.e 5, 10, 20 or 50 cm; or 2, 6 or 12 inches each per bar) is not indicated in the image but in accompanying text (if at all). The ranging rod is also used as a method of imposing a grid upon the image, from which measurements can be made. Bohrer makes the interesting point that:

> Visually it shares much with the ethnographic photography that also began in the nineteenth century, applying to an ancient monument the physical rulers and grid system commonly used for measurement of facial and bodily features of indigenous peoples" (Bohrer. 2011, p.54-55).

This has many implications for both archaeology and the re-presentation of the environment through photography. It indicates that most archaeological photography is limited to the gathering of empirical information and further asserts that there is a need for a post processual and reflexive approach, in order to avoid entirely objectifying the environment, past and present, as an exotic other, valued in accordance with possibly dubious cultural assumptions about the land in question, rather than as something we are part of and interact with. When there is over-reliance on depictions of detail as the presentation (and acceptance of) of these details as factual and indexical, when they may be culturally specific, iconic and/ or symbolic, the photograph has a tendency to distance and separate the individual from the environment as an observer, conforming to a Cartesian dualism that negates responsibility and promotes passivity. This highlights empirical knowledge over and above contexts of production and processes that give rise to multiple readings of photographs, relegating the evocation of the experiences and feelings of the maker and viewer of the work to at best a secondary role, if acknowledged at all.

Ground Work

As an individual who has practiced and experienced the two disciplines of archaeology and contemporary photographic art, I recognised that the compositing methods derived from archaeology could be used outside the discipline, liberating them from restrictions of the demands

of the provision of a record and all this implies, to investigate and expose the nature of the medium of photography to interpret the visual perceptual experiences of the individual.

To return to the stubble field where the *Field Walk* pieces were made, the compositing method was used to investigate the ground view in a series of works about the field and its surroundings (plates # 1- 9). The resulting pieces, entitled *Ground Work* were made of between four and ten individual image captures, following the close range photogrammetric approach used in archaeology. These were not photogrammetrically measured, but each image was overlapped as I moved across the scene and then digitally combined with seamless results, as if they are single image captures. The works are simply titled, using one or two words that describe the element of interest of the scene; occasionally these titles would be in Latin with the intention of making a reference to categorisation, in archaeology, ecology and evolutionary theory. This, the highly graphic quality of the works and the plan view, subtly hint at their origins in the recording processes of empirical scientific practices.

Fig # 9 *Under Quercus* (see also plate # 1)

Each work, when exhibited, would be made at roughly actual size (a 1:1 scale, each image would be approximately 1 metre across), drawing on the original presentation of Clive Landen's series *Familiar British Wildlife* (Landen and Taylor, 1994). The intention was to offer a closeness to the work roughly equivalent to that experienced in actuality. There are also echoes of Evans's *Prairie Scrolls* in this work.

In this body of research it was deemed appropriate that the investigation have a strong relation to themes that are present within the archaeological discipline; hence the decision to take a temporal approach to the understanding of the environment as a site of constant change. However, it was decided from the beginning that the sites investigated would not draw exclusively on archaeology as a theme. All environments are in some sense archaeological as they all have pasts that are visually evident, most in Western Europe have been heavily influenced and altered by human action. A focus purely on cultural materiality (one definition of archaeology is the study of material culture) would tend to stress the division between nature and culture that Ingold's concept of dwelling intends to overcome; hence the environments investigated are not overtly archaeological, allowing for considerations also of ecology and other forms of human and non-human presence and action in the environment.

Echoes of archaeology do resound in the subsequent works. A ranging rod was occasionally placed in the scenes depicted to refer to this origin, whilst also making a reference to ambiguities of the photograph as record by allowing, through compositing, the rods to be digitally broken, occasionally distorted or incomplete (see fig # 10 and also plates# 31, 33, 39, 45, 50, 59-61, 63 & 65).

Fig # 10 *Track-way # 13* 12:17 pm - 12:48 pm 31 minutes

Example of the use and digital distortion of ranging rods.

Beyond this direct reference, there is no further acknowledgement of the role of archaeology as an influence in the final artworks.[12] Indirect inferences maybe drawn by those encountering the works, these archaeological allusions are deliberately not made more explicit, due to a preference for an openness of possible interpretation within the project's framework. The method of compositing as used in archaeology is a major influence on the methods employed to investigate

[12] An interdisciplinary experiment with archaeology was undertaken in the course of the research, titled *Field-walk* in collaboration with Dr. Roger White, of Birmingham University. This research encountered difficulties in terms of the lack of available time that Dr. White was able to commit to an extra-curricular project in the current climate of rapid change in academia in the arts and humanities in England, and due to my own need to concentrate on the body of work already underway. It is envisaged that this project will be re-visited after this phase of research is complete.

how photography can be used to interpret the environment as a whole, as a visual, sensory experience.

Once the compositing process is liberated from the need for an accurate record then the photographic artwork is no longer limited to the transparent representation of information. The emphasis can be shifted toward an investigation and interpretation of the experience of land as a site of change for the individual, as a temporal space inhabited and moved through, as a set of processes and events made apparent in the works rather than hidden through formal application within the archaeological and photographic traditions.

This move from the provision of empirical evidence to the incorporation of the intersubjective experiences of the maker and viewer of the works has echoes in current archaeological debates about the use of technological visualisation in the work of Keith Challis (Challis, 2011) and Christopher Tilley (Tilley, 1994). Both recognise the need for the consideration of the embodied experience of archaeology from a phenomenological perspective when considering how the evidence is gathered and interpreted (Tilley) and how it is disseminated to a wider audience via digital means (Challis).

Traditionally, archaeology has removed the experiences of processes of the individual or group involved in the work. It is slow to take a reflexive stance, considering how the relative positions and actions of archaeologists, and the circumstances of the projects themselves, impact on the subsequent interpretations, as has occurred in the related disciplines of social anthropology and ethnography. Although the products of this research do not directly deal with archaeology, there are implications for archaeological practice and visualisation in terms of widening approaches and outcomes of practice toward acknowledging the role of the practitioner through a post-processual approach and broadening the potential outcomes of archaeology in an interdisciplinary context.

These origins in archaeology and the photography of the environment act to establish the methods of the production of artworks and particularly in the case of archaeology as a counterpoint, or

antithesis, to investigations into the processes of both the primary perceptive experiences of the environment and making secondary visual representations of these processes. Key to this investigation are the concepts of dwelling and inhabiting land spatially and temporally from the perspective of the embodied individual. As the practice progressed it became clear that one of the main elements within these processes is movement and how this durative perceptive experience can be interpreted through the stasis of photography using a variety of compositing techniques. These movements are not confined to walking, but also include eye and head movements when looking at a scene, or travelling through a landscape using vehicular transport. All of these processes impact upon how we relate to the environments we encounter and as repeated relationships they develop and change, as do the environments themselves. The next chapter will outline the overall methodology that arouse from these initial experiments and origins of this project, with a particular emphasis on the concept of place and the ways it is encountered and understood.

Chapter Three

The region and the space between

This is a project about the photographic interpretation of land, it is not about a defining a specific place, or locale, as this is a personal experience and unique to every individual. It is not fixed but fluid and subject to change. Instead this is an analysis of the processes that occur when forming continuous understandings of land as place for the individual. This is achieved by taking into account the fluidity of the nature of place as constantly changing through time in a flux of awareness determined by the movements, perceptions and memories of the individual.

This temporal approach to place takes into account the fact that the individual inhabits the geographical environment and is a mobile body that moves through it. He or she does not occupy a single place, but lives a multi-centred life, as Lippard acknowledges (Lippard, 2010). This entails being in many locations that the individual knows and understands as a place where actions are undertaken, events occur and are repeated. These places are ´known` by degrees in accordance with experiences within and of them. Some are more known than others in accordance with the time spent in them and what tasks and actions are undertaken there. These events are constantly being built upon; the more the individual does or is in a place the more they know it as a place and this knowledge is subject to change, both in terms of the individual's experience of it and independently; the site itself may change due to forces external to the individual encountering it. The individual's multiple connections to sites as places is geographically dispersed and in the course of life the individual moves between them cyclically, through relatively unknown spaces via a variety of means. This spatial-temporal experience of multi-centred life as a constant formation process is taken into account in this research and investigated through visualisation with photography. It considers the changing nature of place and the intermediate spaces between that forms the processes of our contemporary, multi-centred lives in relation to the environment. As such it is not centred on a single site but on many sites and the spaces within and between them.

Methodology: The multi-site approach

What is to be photographed? This is a key decision, one that has a great influence on the outcomes of any photographically-driven visual research project.

Initially two main criteria were considered that determined the choices of what sites would be scrutinised. These were change and connectedness. A third more practical consideration was accessibility. All of the sites needed to be repeatedly visited, so they needed to be within easy access of where I was living. There also needed to be few or no restrictions of access; each site needed to be publically accessible rather than privately regulated.

Connectedness

As outlined at the beginning of chapter two, connection and/or disconnection to or from the environment is a major theme of this work. All of the site types investigated are for this reason the kinds of sites that are rarely encountered by most people in the course of their everyday lives. They are all hinterlands of experience, places we are losing connection with. The fields in *Ground Work* are examples of fields that make up a large portion of the landscape of Britain, but are for most of the time off limits due to the growing of crops, and so they remain unvisited. They are worked by a few, often lone, farmers through mechanisation. The woodlands of *Continuum* and the sites of *Flow Motion* are on the edges of this agricultural land, as pockets and corners of uncultivated land deemed too poor to be productive and subsequently left to a few dog walkers or cyclists. Hinterlands on the edges of agriculture. The sites of *Hinterland* itself are all at the edges of towns and suburbs, the largely unused urban hinterland occasionally occupied by those marginalised from society (see fig # 11 plate # 33), and chosen because they were likely to be developed.

Fig # 11 *Settlement Infrastructure*

Space Between is the hinterland of individual experience glimpsed in the course of movement between centres of activity (see below, see also the descriptions of each body of work in the catalogue of works).

Change

There are many potential environments that might visually manifest change in terms of what is happening or could happen to a site, (such as an infrastructure development or weather events like storms, for example). The research approach was not driven by a desire to document change as an external event or set of events independent of the researcher. It was to take into account the relationships that form engagements with environments for the individual, how these are manifest and also subject to change over time. The aim was to investigate and interpret changes that occur

both within the environment and within the relationships between the individual[13] and these environments.

Therefore, from its inception, this project has taken a relational approach to the environment. In order to do this the project began with practice that sought to engage those environments that were readily available to me, part of my ordinary surroundings rather than something exotic, representing a political position directly through subject matter. By allowing myself to be drawn to the kind of sites that resonated with me, I was avoiding pre-determining my response with a particular issue based stance. Rather I wished to remain open to the possibilities that the experiences of the spaces had to offer for interpretation. I was allowing the development of relationships to land to become the theme of the work, an investigation of becoming, being and inhabiting land.

The project began by exploring the local environment to identify sites with the potential for further research. As each site visited was, to varying degrees, different, then each response through practice developed in different ways. Each strand of practice was determined on the basis of what was encountered within the environments, what Gibson terms the "affordances of the environment." He states: "The *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes,* either for good or ill" (Gibson, 1986, p.127). Affordance is actually invented as a term by Gibson to distinguish it from stimuli, for the environment does not act in a way to make a stimulation occur to the individual; "they are in a sense objective, real, and physical, unlike values and meanings, which are often supposed to be subjective, phenomenal, and mental" (Gibson, 1986, p.127).

These affordances are multiple and vary from site to site, so there were, therefore, many starting points and experiments that resulted in bodies of work that are interpretations of different

[13] Myself in this case, although my experiences will correlate to the experiences of others, as Deleuze and Guattari put it "To reach, not the point where one no longer says I, but the point where it is no longer of any importance whether one says I" (Deleuze and Guattari, 1987, p.10).

perceptual experiences of these affordances. These elucidated responses in me strong enough to initiate the making of artworks and in the case of this research, this is the only context that the term stimulus will be used in here: to indicate something that stimulated me to make an artwork.

The development of the processes involved in this analysis was further developed through repetition, by re-visiting the same sites and by repeating the same processes across different sites, allowing for change and temporality to be taken into account. This methodology follows Deleuze and Guattari's concept of the rhizome, placing emphasis on processes of both theory and of practice that move along lines that can be multiple, interweaving and subject to change. As such it is a relational model of research, rather than a genealogical one. Each strand of practice, along with the related theories that underpin them, were undertaken in parallel, in accordance with the affordances encountered in the field. The relationship between theory and practice was often most productive when a distance was maintained between them. The practice was firstly allied to the primary perceptive experience, rather than an attempt to investigate theory through practice directly.[14] Research was then undertaken on the basis of the experiences of the sites (and the journeys between them) alongside the work created as a result, leading to the further development of the work itself and the theories that underpin it.

This approach allowed for the use of a multiplicity of photographic techniques of which the dominant form was digital compositing. It also allowed for connections to be made between these methods, for them to merge together and give rise to new techniques in response to the environments under scrutiny. Some methods inevitably proved to be steps in the research that did not result in finished pieces. An example is the use of the grid in the presentation of multiple images in one piece of work, thereby identifying that breaking up the grid and moving away from the cartographic was a useful development (see chapter two). In other cases the amalgamation of

[14] When this approach was taken, for use in a lecture, for instance, the result tended to be too literal, simply an illustration of a theory rather than an autonomous work of art.

one technique with another gave rise to further methods of practice in response to stimuli in conjunction with interests drawn from research sources. Methods would be devised and tested, left for a period of gestation and returned to in new contexts, reflecting the evolution of the research in interwoven multiple developments. Each of these methods became suited to the particularities of the different perceptive states and experiences that were the products of encounters with the sites of study.

This process was enhanced by taking a multiple site approach, where both similarities and differences between sites could be investigated with the aim of presenting a body of work that deals with concepts of change in the environment in a generic rather than a specific sense. As the project has progressed these sites have not remained fixed. As a site ceased to be of interest, other new sites were instigated in a constant renewal. This allowed for the investigation of the processes involved in the gaining of familiarity with environments.

The Rhizomatic model places an emphasis on the multiplicities and interconnections of theories and practices, rather than on the singularity of tracing an idea from its beginning, looking for its source or essence, toward a study of the ways that ideas commingle, constantly becoming something else. It acknowledges that, through time, outcomes and conclusions are subject to change. As Deleuze and Guattari state “Good and bad are only the products of an active and temporary selection, which must be renewed” (Deleuze and Guattari, 1987, p.10). These renewals are in the form of continuing re-assessment of the work and the processes of work toward the formation of a narrativity across and between them in their presentation to an audience. The work is also renewed in each new context of discourse.

Deleuze and Guattari use the biological analogies of the tree and the rhizome to distinguish between genealogical, unilinear and nodal modes of thinking, towards a non-genealogical and relational model that accepts that there are a number of nodes or ideas and a multiplicity of processes associated with them. The theory places an emphasis on the ways of forming

connections between these nodes, and lines of thought and action. In the case of this research this is entirely appropriate, as at its core it seeks to understand relationships between sites and the perceptive experiences of sites, between the actuality of sites and the simulation of the visual experience of site in the photographic artwork. The narratives that occur between artworks made through (mostly) photographic compositing processes provide a metaphor for the relationships between different forms of environmental experience. This would be what Deleuze and Guattari term the "abstract machine" (Deleuze and Guattari, 1987, p.4) or a meta-narrative that presides over this work and forms its continuity as research and as a body of artworks.

The region of the project

The region of this project is not cartographically bound, it is centred rather on the environments within easy distance of where I have lived during the course of the research. As I have not lived in one place, the sites are spread across two countries (Ireland and England) and located in proximity to my homes. Returns were made to most of the sites in the study, as I have moved between them during the three and a half years in which this practice was undertaken. The region is similar in size to the regions that Evans (2011a) studies in the USA (various series on the prairie in Kansas for instance); It is only the presence of national boundaries and the sea between Ireland and the UK that make this region less homogeneous in a traditional sense, following district or national boundaries, or physical barriers to movement like a coastline. (Most of Southam's work, for instance, is based around where he has worked and lived in Devon and Cornwall, a geographic peninsular bounded by the sea in one country).

This work is not geographically bound within culturally and historically established borders, nor is it bioregional,[15] following physical geographic boundaries such as the sea, but is spatially determined by the bounds of my geographical movement over the time spent undertaking the research. As

[15] Lippard suggests that a bioregional approach would be preferable to a cultural or national one "Bioregionalism seems to me the most sensible, if least attainable, way of looking at the world" when dealing with regionalism in the visual arts (Lippard, 1997, p.35). This project has gone beyond the idea of a bounded region or space entirely.

such it is de-territorialised. This was a conscious decision made because it was not my intention to attempt to define a region, site or scene within a site as a geographical identity, as a place, but to consider my relationship to the environment as an open space of interaction and change, and to encourage the viewers of the work to do the same. To consider place as constantly becoming known, as a process.

This shift in emphasis away from the identities of specific places to the perceptive experience of space is achieved through both titling and sequencing in the resulting bodies of work (see chapter five). Each artwork is titled in accordance not with the *where* of place names, but as a reference to the element of interest on the scene that acted as the stimulus to make a work (*Tree-fall*, *Track-way* for instance). In all of the work undertaken during this research, the sites (or sights) depicted are not identified through place-names as there is no point or need to identify the artworks with specific places. The site as place is not available to the individual who engages with the photographic artwork; rather the works are abstractions from environments, interpretations of space and place.

The decision to work in this way, rather than either focusing on a single site or distinctly bounded region was driven by a desire to reflect on the intermittent and transitory nature of encounters with specific environments in contemporary life. The fact that there is space between these environments, the sites of research in this case, which is also experienced is acknowledged in this project. Far more time is spent away from the sites of study than actually in them and, like a photograph, my memory and conception of each site is characterised by absence for much of the time I have been engaged in the research.

This acknowledgement of movement from, to and between the places of activity is a deliberate reflection on the nature of mobility in contemporary life and the impact that it has on our understandings of the lands we inhabit. For many, it is becoming increasingly necessary to live in numerous places in the course of life in a contemporary form of nomadism. We become familiar

with all these sites of activity to varying degrees, repeatedly visiting them and spending varying amounts of time at each place, building a number of relationships and resonances and, like palimpsests, overwriting these as we repeatedly encounter sites and wayfind within them. We live increasingly multi-centred lives, and move between these centres, so by taking a multi-site approach and considering what happens between these sites, this movement through time and space and the impact that it has on the ways that we perceive and know our environments should be taken into consideration.

The regional bounds of this work are not, therefore, determined by geographic constraints; rather they conform to a formative experience of following paths and networks across the land repetitively in the processes of building familiarity. The region is formed by the linking together of specific sites by the lines of movement, by the pathways between them. As such it is not a geographical region, but a region of experience, as Ingold says; “places exist not in space but as nodes in a matrix of movement. I shall call this movement a ´region`” (Ingold, 2000, p.232).

The distinction between a geographically, culturally bounded region that is allocentric and cartographic, and a region of inhabitation based on knowledge and memory, is that the latter region is centred on the locus of the mobile body of the individual, rather than a point or points in the environment. Every-body (human and non-human) occupies such a region that is not determined by a bounded space or by identities associated with places, but rather on movements through space and *events* that are visits through known and changing places. What distinguishes this region is how the individual relates to it, how it is experienced.

Between and through the two poles of individual environmental experience from the unknown to the known, lies a process of temporal engagement, the building of familiarity with space through time, classically shifting the status of an unknown space to that of an identified place, as something that is static, resolved and interpretively closed; this is something that Massey and others have recognised as deeply problematic. It is an issue that the stasis of photography tends to emphasise

and that this research attempts to overcome. This is achieved by considering relationships to places as events and processes, rather than a process of identity formation in itself, and acknowledging this visually by incorporating processes of movement into the practice. This echoes Massey's assertion that:

> A reimagination of things as processes is necessary (and indeed now widely accepted) for the reconceptualization of places in a way that might challenge exclusivist localisms based on claims of some eternal authenticity. Instead of pregiven discrete entities, there is now a move towards recognising the continuous becoming which is the nature of their being (Massey, 2005, p.20-21).

The recognition of places as processes (and sets of processes) shifts the emphasis of this project from visually defining place and re-presenting it as a closed and fixed entity through the stasis of the photographic image, to an interpretation where the images themselves are also understood as "things as processes", as artefacts (digital or physical) that are subject also to change. This change occurs in terms of reproduction, scale, and context as well as through time, but also in the eyes and understanding of the beholders. The visit to the gallery, or any other site where an artwork is displayed, is an event. In this sense the artwork is an event and an artefact that changes through encounters over time. This has been taken into account in this project in relation to how a visitor to an exhibition or artwork encounters the work and a body of work. In the gallery the culmination of encounters with images and their affect was considered from early on in the research process whilst field work was still being undertaken. The concept of mimicking the experience in the environment in the gallery was considered and implemented using repetition and time-lapse. This will be investigated further in chapter five. It was not the intention of the project to attempt to fix meaning in single images or collective bodies of work, but to acknowledge that meanings in visual artworks are subject to change, just as the environment itself is.

Similarly, the practice itself is not one of identity formation that moves to fixing the unknown as known but one of constant formation, change and re-formation that is a process and practice for the individual who is in and part of the environment. This participation can be described as

consisting of two processes relating to perception and action. Gibson's concept of wayfinding (Ingold's source for the term) is closely linked to this kind of concept of place: "Both animals and humans are capable of homing. More generally, they are capable of way-finding. Or, in still other terms, they can do place-learning. Observers can go to places in their environment that have affordances for them" (Gibson, 1986, p.198). In this sense I am place learning through perception and memory retention returning to the sites and scenes that interest me, that contain affordances.

The second related concept is *place-making;* this relates not to gaining familiarity with a site through repetition, but in this context, in describing the act of making works in the environment, the *field work*, and the various forms of memory retention of those actions. Place-making as a concept has its roots in the 1960s and 1970s in America in the work of theorists such as Jane Jacobs and William H. (Holly) Whyte (Project for Public Spaces *et al*., 1997) as a way of describing a ground-up community approach to urban and suburban planning. In this context I am using place-making to describe the processes of familiarisation gained through making a work in a site. This leads to knowing it as a distinct place for myself, as the one who inhabits a site through action. This highlights the fact that understanding a site is a process that the individual undertakes in a relational way, connecting to an environment that they engage with. It can include altering that environment (such as an archaeological excavation, or a piece of land art sculpture), but this is not necessary to forming relationships, memories and resonances with and about a site. In this case I am using place making as a way of describing the process of making an artwork, of creating a fictional place through photographic interpretation and then through the display of a body of work as a fictional place derived from a number of disparate sites. Place-making is useful as it avoids the problems of defining identity as a static entity, but allows for the fluidity of place, for the identity to change, in this case to make a change from an actual place to a fictional one.

The artworks, particularly in *Continuum* and *Flow Motion,* are interpretations of place-making as a practice where the processes of making are deliberately made evident in order to highlight the changing nature of the environment and the individual's relationships to it. A site changes through

time and its character as place is defined by those who encounter and inhabit it; it has no definitive single identity but rather multiple identities according not so much to the *where* (although place can be used to define a boundary in geographical terms), as to the *when* it was encountered and *who* encountered it. As Massey states: “Places not as points on maps, but as integrations of space and time; as *spatio-temporal* events” (Massey, 2005, p.130, emphasis in original). She defines place as an event as much as a location.

In the case of this research, this fluidity of the definitions of places is not only theoretical in terms of defining the sites as entities of engagement, but also literal, as movement is one of the driving forces in our perceptual experience of land across the region of our habitation.

Identifying a suitable context for investigation: The site type

In the case of photographic re-presentation of this region, the region of experience, there is a need to formulate a contextual framework for investigation that is not based on a single site’s specificity, but nevertheless has enough common distinguishing factors across sites for a cohesive body of work to be produced that interprets the differences, similarities and changes that make up the perceptive experiences of sites as processes. The solution has been to investigate site types across the region, allowing the final bodies of work from these sites to commingle into a single fictive site, not fixed geographically but fixed rather, by their presentation in the site of discourse for each body of work. It is at this point that the project becomes site specific, in the sense that each body of work is modified and re-defined in accordance with the point of interaction with an audience. If this site is the gallery, then accordingly the gallery space impacts upon the work and its production and each subsequent change in venue or shift to other forms of discourse (the web, or book for instance) requires a re-adjustment that entails a further change in the body of work. In this sense the work is constantly evolving even when the fieldwork stage has ceased, as both context and the passage of time impact on the way that the works operate.

The site type that yielded the most interesting results in terms of developing the project was that of the woodland. Woods and forests have widespread cultural resonances, many cultures have folklores associated with them. There is, therefore, great potential for cultural significance to be drawn from the resulting works; forests, woodlands and trees are used widely as metaphors. These resonances may be as similar for the originator of the work as they are for the viewer, but this is not necessary for the work to succeed. New understandings and meanings may come from the processes involved in viewing the works, if there is an openness for this to occur.

The main factor that influenced the decision to concentrate on woodlands as a site type was connected to the technical processes of investigating space through photography. The visual nature of the woodlands proved to be the most advantageous as a setting for experimentation with the compositing of single images in the formation of artworks. The presence of a dynamic three dimensional space with a canopy, tree trunks and masses of vegetation that does not conform to a grid lent itself to the further development of these techniques on a purely practical level, as well as being suitable as a setting to reflect upon human relationships to land, particularly in terms of visual perception. It is much easier to understand a woodland as an environment one can be *in*, rather than *on,* as is the case with more open spaces, particularly when they are re-interpreted using photographic compositing.

The framework of this project is a multi-site approach across a region, with each site in the main body of work being a woodland. Within each site a number of scenes were selected for the making of artworks. These form the nodes of the project that are repeatedly depicted through time-lapse. When considered over time even these nodes also move from being points (neither geographic or genealogical) to lines through time, as became clear as the practice progressed.

Between each scene are track ways of movement within the site. These were repeatedly walked along, following pathways of either human or non-human origin (a pathway made by an animal, a fox, badger or rabbits for instance, is characterised by vegetation above the height of the animal

that needs to be negotiated through--and changed--to gain passage by the bipedal human). Occasionally movement through the wood would follow no path. If repeated regularly enough this process would lead to the formation of a physical pathway. All of these movements are forms of wayfinding, in that they do not relate to the reading of secondary cartographic information, but directly to the information encountered in the environments and past knowledge, spatial orientation and memory.

Between each site there are further movements using various methods involving vehicular transport. These movements follow the established transport infrastructures of different forms of travel, (in this project they have been predominantly by rail, but also by canal tow-path, road, sea and air).

In order to acknowledge that this movement between and in sites impacts on our understanding of them, this work not only includes the sites of interest, but also takes account of the processes of actually getting to and from the sites across a region, movements within the sites themselves and the repetition of these processes in the making of a body of work. Below is a schematic representation of this structure (fig # 12).

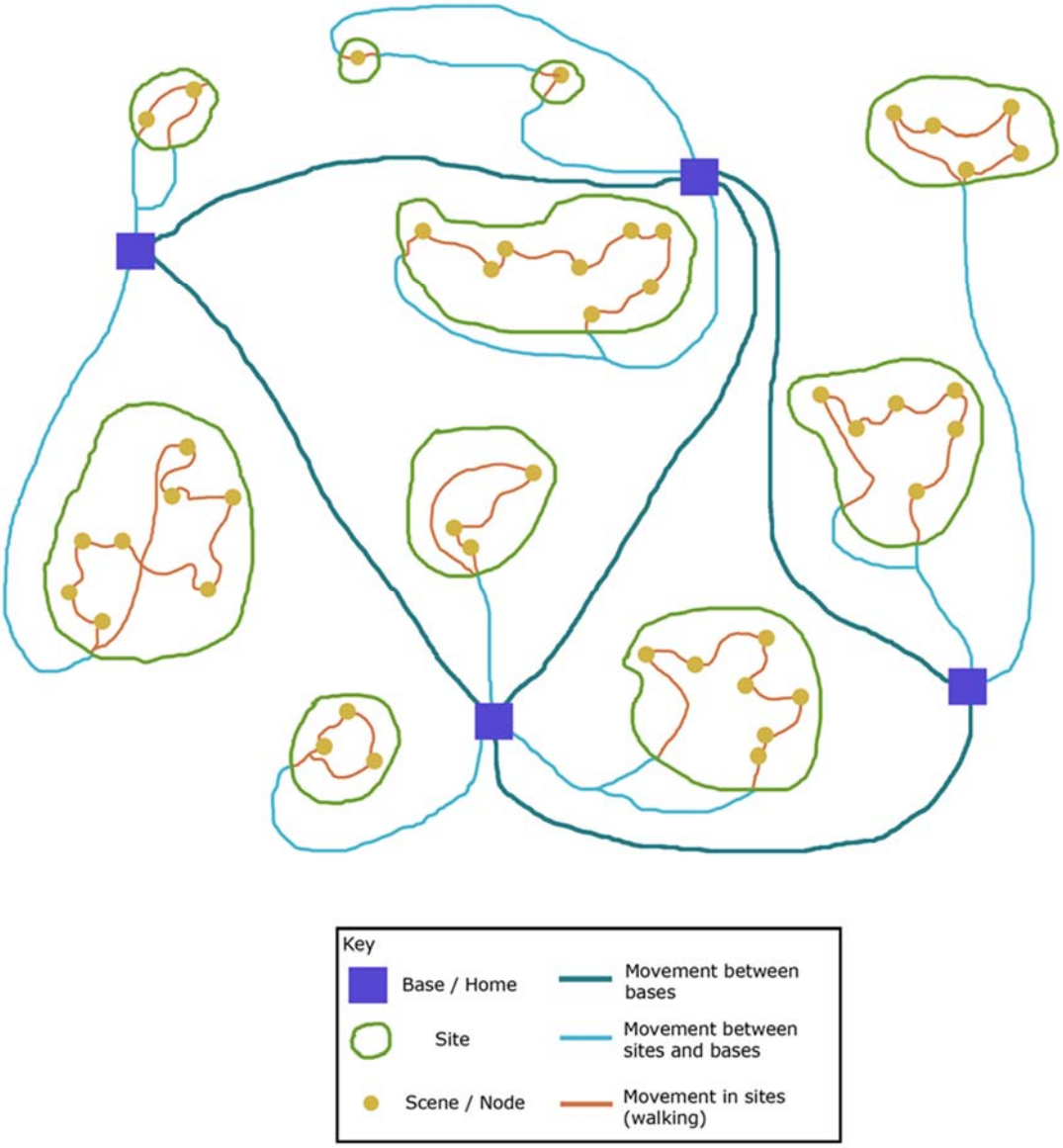

Fig # 12 Schematic illustration showing relationships between scenes, sites and bases and the movements between them.

The above scheme shows the relationships between the sites, the scenes within sites and movements between them. This map simplifies the movements across space and time and is limited in this respect. Boundaries around sites, for instance, are not fixed; paths are rarely followed in the same way or direction. Each new visit to a base, site or a scene would necessitate the overwriting of the earlier paths, if this was to be an accurate representation of encounters with space through time.

The regional scheme represented above affords the division of spatial temporal experience into five separate headings, each representing different forms of experience of space and/or place. Some of these also correspond to bodies of work that investigate these experiences as follows:

- Home or Base
- Movement between bases
- Sites
- Movement in sites and between sites and bases
- Scenes

Home or Base (Purple squares in the schematic)

Home is perhaps the most fundamental form of place; it corresponds to the site most occupied in the course of life and is the lived *in* territory, a private space associated with memory and inhabitation. Over time, home can come to refer to more than one place, as I found to be the case during this research. In the context of this project, base is a way of referring to the places in which I have stayed whilst visiting to make work. These are homes of friends or family in all cases. No practice has been undertaken during this project on the nature of home.[16]

Movement between bases (Dark blue lines in the schematic)

These are vehicular journeys undertaken between homes or bases whilst making work. This corresponds to the work *Space Between* (see below for a discussion).

Sites

Site as a term referring to the areas of work is derived from its widespread use in archaeology where it describes an area of excavation or study. It is used here as a neutral term that refers to a location of activity that could be interpreted as either a space or place, or both. The site is the

[16] See Sri-Kartini Leet's recent project *I Dream of Home* 2014 (Leet, 2014), exhibited at Avenue Gallery Northampton University for an investigation of this theme in connection with memory.

centre of activities, the taskscape, as Ingold terms it: “It is to the entire ensemble of tasks, in their mutual interlocking, that I refer by the concept of taskscape. Just as the landscape is an array of related features, so – by analogy – the taskscape is an array of related activities” (Ingold, 2000, p.95). It is also the work place, a space where the process of making artworks is initialised and the experiences of perception investigated.

Although all of the sites in this study could be located on a map and have boundaries (in the traditional sense of a boundary as a fence or change in land use or ownership), the boundaries in terms of experience have been fluid. On one visit I may only limit myself to a small area of the site, and therefore the boundaries of my experience on that occasion would be smaller than another visit, when I might roam extensively. I may even cross a boundary like a fence, for instance, in the course of wayfinding through the site. I therefore do not primarily see a site as having fixed boundaries in a traditional sense.

Movement in sites (light brown lines in the schematic) and *Movements between sites and bases* (Light blue lines in the schematic)

Photographing during the process of walking has been widely experimented with throughout this project. This linear process of movement tended to result in linear representations with photography once the grid form was ruled out (see chapter two). This was largely a case of structuring the work along lines whilst developing the method by including the traces of events and interactions as well as images of the ground. The bodily perspective of looking down from above at the ground surface that is moved across has remained a constant. The resulting walking pieces relate to an investigation of spatial awareness and movement, of changes in perception as well as the environment as it is moved through.

There is little distinction between works that were made on the way to sites and those made in sites where walking is the main activity under scrutiny; sometimes the artworks cross the boundaries, deliberately blurring the distinction between what constitutes the edges of a site of

work. The main body of work that dealt with walking in the woodlands, *Flow Motion* (plates # 77 - 86), was developed much later in the research process and was a result of developments with compositing processes at scenes rather than from the earlier walking pieces. This is a case of the advantages of a relational and interwoven research practice allowing for cross-over between methods and concepts to actively resolve issues by applying practices from one body of work to another. This will be discussed further in chapter five.

Scenes

Scenes are the actual positions in the sites where a composite work was made. These were often repeatedly visited and photographed, creating a series of time-lapse works in each scene. The scene was initially deemed to be suitable often on the first visit to a site. The positions of the scenes became the objectives of a site visit in order to make works, although the process of getting to and around the site would also entail the making of other works. The making of a work at a scene or scenes within a site was always the primary objective of a visit. Creating these works through compositing was an investigation of visual perception and the decisions to make them a combination between the elements within a scene and my memories triggered by the scene. This will be dealt with in chapter four.

Lines of movement: The *Space Between* sites

This de-territorialised region of experience has been facilitated by the use of vehicular transport. Without contemporary modes of travel-at-speed working (and living) within this large region would not be possible. I will turn to the works that deal with these forms of motion that here.

Fig # 13 *Space Between #1* see also plate # 10

Space Between is a series of works made whilst travelling between bases on different forms of transport. Rail was most frequently taken, although travel by car, aircraft, ferry (fig # 14, plates # 25 - 27) and bicycle were also investigated. Walking was inevitably involved but this occurred not only in getting to sites, but also on site, leading to a different body of work (*Flow Motion*) that will be dealt with later.

Fig # 14 *Force Nine (triptych)*

Any vehicular transportation involves the use of an infrastructure of one kind or another. These routes are predetermined lines of passage that limit the individual's capacity to decide on the

actual route across the land. The extent of freedom of choice and the possible variations of the route is dependent on both the form of transport and the complexity of the available network.

A car is more flexible than a train, as the road networks are more complex and numerous than rail lines. Also a car is controlled by the individual who drives it, whereas in all public transport systems the only way for an individual to alter a pre-determined course across an environment is by changing vehicle.

In many cases, the actual route across geographical space is largely unknown to the traveller. The airline passenger's capacity of control is limited to the selection of departure and arrival points.

The decisions on the route to be travelled by rail or air are not determined during the processes of movement, but based on the desire to be in another place. The traveller hands over the route planning along with other tasks to the providers and operators of the network. These movements are represented by the dark blue lines in the diagram above (fig # 12). They follow routes that are determined by a pre-established transport infrastructure.

The perceptive experiences of these modes of motion are also determined by the mobile environments of transportation, as the nature of the vehicles strongly impact upon the perceptive experiences of the individual. In almost all cases the vehicle is a closed space, what Gibson (1986, p.34) terms an enclosure,[17] where the surfaces of the floor walls and ceiling wrap around the individual and operates as a barrier to many kinds of perception of the environment beyond the vehicle. When travelling in a vehicle two environments are impacting on the individual simultaneously – the enclosed space of the vehicle and the environment that is being passed through. This is falsely externalised by the physicality of the vehicle that encases the individual who is largely static within it, although they are still in the environment they are moving through. To

[17] "*An Enclosure* is a layout of surfaces that surrounds the medium in some degree" (Gibson, 1986, p.34, emphasis in original).

examine this further I will use the example of the train, although many of these factors also apply to other forms of transport.

In many ways the railway carriage represents a classic non-place, as Marc Augé terms it; it is certainly a “space of circulation” for many of those who encounter it (Augé, 1995, p.viii). It has little social or symbolic meaning for those who use the train. It is a way to get from A to B, with little concern for the processes that this entails. Exceptions to this would be railway staff, who see the train as a place with responsibilities associated with their work. Augé consistently ignores those who occupy these mobile spaces in the course of their work in his theory of non-place, perhaps, because along with home, the work place is one of the most common types of place. For the majority of those encountering the intermediate and often mobile spaces of travel, they are the non-places that Augé refers to, but this is not a universal experience, airports and trains are lived in, particularly by those who see them as places of work.

The train for the passenger can be a place of boredom, contemplation and anonymity whilst still occupying a public and social non-place, where interactions and occasionally communication can occur; but the train does not act as a centre for these interactions. This space is socially and commercially ordered and consequently limited as Michel De Certeau points out; “The unchanging traveller is pigeonholed, numbered, and regulated in the grid of the railway car, which is a perfect actualisation of the rational utopia” (De Certeau, 1984, p.111). The traveller is imprisoned within the train, and disempowered by the lack of responsibility for decisions and with limited control for the duration of the journey. In our organised lives, the rail journey is scheduled as a task strangely devoid of the usual modes of action, we become passive and inactive in the act of fulfilling a goal, in getting from one point to another, hence the perfection of a “rational utopia” an achievement without apparent effort, or action, beyond buying a ticket and catching the train in the first instance.

Although regulated in a way that the participant passenger has to conform to, this pause in everyday life creates a potentially unexpected hiatus (due to the restriction of enforced immobility in the very act of motion) within the railway carriage. As a non-place, the railway carriage can become a space of contemplation and imagination, a space for pause and rest, for pre-reflective cognition, for passive observation.

Although the traveller may be "unchanging" the environments passed through and viewed from the carriage are changing and the individual is able to stare out of the window of the train at a constant linear flux (it is curious to note that when I have observed others on trains, looking out of the window is not as common as might be assumed). The interior is a slow environment; we are often limited to or choose to remain bodily static in a seat for the duration of the journey.[18]

The enclosing railway carriage is subject to slow change in contrast to the land passed through that seems to be changing quickly, although it is not. It is not the environment that we see changing, but our position within it. The environment is passed through at speeds that are not possible by bodily locomotion alone and as a result, our capacities for visually comprehending them is limited to a glimpse. The speed of motion limits our capacity to visually perceive the space; our eyes are not capable of reading the elements that are closest to the train, and they pass by in a blur, causing the watcher to look into the middle and far distance. This breaks the continuity of our understanding of the space; we cannot judge the scale of what we see in relation to the body as effectively as if there was surface continuity between the body, across the ground to features in the distance (Gibson, 1986, p.160-164). There is little visual connection from the body through to the scene glimpsed through the train window, as there would be if one was walking or standing in the environment. The blurred and ill-defined shapes of the elements that remain incomprehensible

[18] This varies in other forms of transport, the car and the aircraft offer less opportunity for movement than the train and the ferry differs in that it is the biggest space in terms of potential movement, having a large enclosed space and often an unenclosed (although restricted) space on the deck of the vessel.

in the foreground form a further barrier to understanding, a distancing from the scenes passed through, particularly when re-presented through photography.

Over time the train moves along the constructed topography of the railway line that often offers a slightly elevated view of the surroundings. From time to time this view suddenly disappears and reappears as the train enters and exits a cutting or a tunnel. The immobility of the land is transferred to the railway carriage, where the watching traveller is still in the relatively static enclosed space. The carriage also appears to move in straight lines, not bending as it moves around a curve in the track, adding to a sense that it is the land that moves and not the watcher looking out of the window.

Fig # 15 *Space Between # 7-9* see also plates # 16 - 18

This illusion of change is enhanced by further sensory deprivation. The land that is moved through is observed through the windows of the vehicle, a limited view framed by the rest of the carriage, the scenes become distant spatially and are also isolated from the sound, touch, smell and temperature of the observed environment.[19] The glass looked through may be dirty, scratched and even tinted. Reflections form of both the enclosed space and the opposite landscape on the glass surface and interrupt the view of the environment further.

[19] In the case of sound, the boundaries between enclosed space and the unenclosed spaces passed through can be blurred, as the sound of the train on the rails indicate the forward motion through and interaction with space. This is enhanced further by the haptic experience of vibration caused by motion. Both these experiences cannot be depicted through photography, although there is scope for synesthetic imagination based on the viewer's experience and memory.

All of these limitations to and distortions of the perception of the environment are increased by the restriction of movement. We may be able to notice something of interest, but are unable to slow down or move toward the element, to deviate from our course to take the time to confirm or refute our initial perceptions by further attention and subsequent analysis.[20] The eye fixes on elements of interest and shifts with it until it leaves the edge of the window frame moving forward again to the next element in a constant back and forth movement, attempting to resolve a curiosity aroused but being ultimately unable to fix long enough to do so.

It is through sensory deprivation and the limitation of bodily movement in the railway carriage that we are disempowered by the rail journey, as well as in terms of both the limitations of the rail network routes, the ability to act and make decisions about speed and the direction of movement to get to where is intended, or to respond to what is perceived during a journey.

The lack of sensory information normally associated with the experience of land is further enhanced by the enclosed space of the train. There are parallels with secondary visual sources in this sense; the environment passes by and can be viewed as if watching a silent film through the rectangle of the window due to the absence of stimuli, speed and limited movement in relation to the elements perceived. This experience is not mediated in the way that secondary sources are, but subject to the arbitrary side effects of action toward the goal of reaching a destination. The coincidental correlation between viewing through the window and our experiences of viewing a still or moving image via a screen may contribute to our senses of distance and disconnection from the environment being passed through.

The repetition of journeys

As we become familiar with a journey through repetition we may anticipate some elements of the environment as marking points of progress. We may also notice elements that change with

[20] It is possible having noticed something on a rail journey sufficiently interesting to be prompted to make a visit to the site in the future. This prompting bares little relationship to the *Space Between* works as they are concerned with the experience of vehicular movement.

equivalent responses to them, these responses constitute knowledge, not of a place, but of the particular glimpse of the view, our own partial conceptions of the space from a particular perspective, not fixed but moving in a linear fashion, both spatially and temporally. Because this experience is fragmentary and incomplete in comparison with embodied presence in the environment, then there is a potential for the imagination to fill the void left by the lack or absence of sensory experience. We may see it looks cold outside of the vehicle, knowing it is from the experience of the day retained in memory as well as the consideration that frost is present, for example, but we do not feel it directly, but on the basis of limited stimuli, we are able to imagine it. De Certeau talks of the rail journey as a space for the imagination: “it combines dreams with technology” (De Certeau, 1997, p.113). This is caused by the enforced inaction, or an unanticipated hiatus in action that brings about a temporary pause combined with technologically enhanced speed. It is this combined with the incomplete sensory information of the environment being passed through, that augments this imaginative state, or reverie. In this sense the experience of the environment from the train is partly fictional, but nevertheless an actual experience.

When this experience is interpreted through the stasis of the photograph then the movement is stilled. The maker of the images is able to satisfy (at least partially) a visual curiosity. The glimpse becomes a stare. The camera can mimic the passage of time by inferring to our lack of perceptive visual capacity caused by high velocity movement through blurring. Objects in the foreground are abstracted into largely unrecognisable unfocussed marks often stretched into lines across the scene depicted. They obscure parts of the scene operating as a barrier to conventional photo-realist interpretation. They also simultaneously indicate that the images are from a moving vehicle, placing the viewer in an imaginary non-place that is a means of transportation. The stasis of the image allows for an extended period of observation of the photographically interpreted scene that is usually only available to the traveller for seconds or fractions of seconds, a period of observation controlled not by the experience of motion, or the maker of the work, but by the viewer’s inclinations. Like the view from the vehicle the photograph does not offer further sensory

information of the scene, but neither does it offer any perception of the vehicle (like sound or vibration) except by the inference of motion through blurring.

This use of blurring through photography to represent both the passage of time and the movement through space can also be found in the work of the futurist photographer Anton Giulio Bragaglia, who used blurring of bodily motion as a way of highlighting the temporal nature of perceptive experience, not through sequencing as in the work of Étienne-Jules Marey (multiple exposures on a single negative indicating movement) or Eadweard Muybridge (sequences of images taken of movement), for instance, but by using the abstraction caused by the slow exposure with motion in figurative work. This work was termed photodynamism by Bragaglia in his 1913 manifesto entitled, *Futurist Photodynamism* (Bragaglia, 1973), where he drew a distinction from the chronophotography of Marey. Rather than presenting a staccato of movement in a chronological sequence with temporal gaps between short exposures that indicate changes in position, Bragagila's photodynamism presents what he terms "*intermovemental* fractions" (Bragaglia, 1973, emphasis in original) which are traces of continuous movement itself left on photographic film rather than instances (exposures that are quick enough to show detail) with temporal gaps between them that indicate motion.

The works titled *Space Between* have more in common with photodynamism than chronophotography in that they reference the accelerated movement of a vehicle in single images where movement during the exposure is continuous, intermovemental, as Bragagila terms it. The works differ from Bragaglia's in that, rather than the object of study moving, it is the camera that moves, using the accelerated speed of the vehicle to create motion blur rather than the movement of the element that is photographed.

As vehicular transport is very common, perhaps occurring every day for the individual, it is a common form of experience of the environment and as the works in S*pace Between* shows, this experience is subject to limitation both temporally and perceptually. It is also partially disembodied

by motion and enclosure in a vehicle, creating a disconnection between the individual and the environment traversed through by that individual. By photographing these environments using methods that utilise the *intermovemental fraction*, the images are partially abstracted and the viewers of the works are perhaps able to fill the gaps created by this abstraction with their own imagination. The collective works, viewed in sequences unrelated to the order they were made in or the journeys they were made on, create fictional journeys that can be followed (repeatedly) in various sites of discourse. The most suitable of these, the spaces that this work was eventually conceived as most appropriate is a presentation of prints along a corridor wall or walls. Here the viewer will encounter the works on their own ambulatory journeys and be able to pause and observe the work in their own time as well as encounter them repeatedly in the course of their everyday lives.

Space Between creates depictions of fictional places that *neither* the maker of the work n*or* the viewer of that work has actually been to. It serves as a way of indicating that not all our relations to the environment around us are completely immersive, but are often partial. The affordances of the environment are curtailed, limited, in this case by travelling at speed. High speed travel in enclosed or partially enclosed vehicles create gaps in the continuity of ordinary environmental perception and in part contributes to our understandings of environments as either spaces or places. If travel and movement through space were only available through walking, without the aid of a vehicle (as it was in the not too distant past), then the concept of boundaries between the experiences of different places would not be as pronounced as they are in contemporary society.

If, as Massey asserts, places are as much events as *points on maps* (Massey, 2005, p.130), then places are processes that have to be associated with some kind of site or they are cannot be places; they would be only events and not associated with a location. The photographs made in the course of journeys in *Space Between* do not re-present place, they are not interpretations of places, but interpretation of the experiences of passing through space, of movement of the body in the region of experience. The sites depicted are so partially experienced and in many cases very

partially depicted, that they become spaces of the imagination between the places of actions and events.

This research follows a pattern that is for the maker of the work, for the researcher, a process of place-learning and place-making; It is also an investigation of the experiences of the region within which the place making occurs as *Space Between* attests to, as this also impacts upon the understanding of the sites and scenes under investigation.

Chapter Four

Perception and Memory

The previous chapter was concerned with the concept of place in terms of the methodology of this project, as a driving force for the decisions involved in understanding and developing the overall strategy. This chapter acknowledged that as well as place-learning through encounters with sites, and place-making in terms of undertaking work in sites and making artworks, there are spaces between these sites that have also been taken into consideration.

In this chapter I will turn towards a deliberation of the decisions involved in the processes undertaken at sites in the determination and resolution of making artworks. This is concerned primarily with space in terms of perception and spatial awareness. It highlights the importance of embodiment and movement, with specific attention paid to the roles that memory plays in these processes. Some attention will also be paid to the concept of time as it relates to space, although this will be the main focus of the final chapter that will go on to consider stasis and movement in photography from a durational perspective.

I will begin with an extract from my field notes as follows;

DE - DE - DE

DE - DE - DE

DE - DE - DE

• - • - •

(Like Morse code)

S - S - S

ON WOOD

=

Woodpecker

I venture out for the first time this year, late in January. Snow diminishes, water and temperature rise. Too hot in all my clothes walking to site, out, escaping into the light. Sunlight, occasionally, nearly, for the first time this month.

I wade through the flooded road halfway up to my wellington boots, ranging rods in hand and my bag on my back.

Fields are white, dripping. Slush and ice, water, mud, brown, black, white. I exile myself from indoors and the screen. Breathe, heat even Sweat.

Crunch of the soft compaction on the remaindered snow, off the road into the wet wood, green emerges, slowly, slow shoots show through mushed leaves, green on brown. Life awakens again defying gravity.

The ground is soft and flattened, the wood, though wet, is easy to move through. Without boots I would not venture, as I move the water is rising, snow diminishing.

I consider one tree-fall, near the mere, I've seen it before, never imaged it. Maybe on my way back – Perhaps I always think this here, keener to get to somewhere I am going, although I am not sure where that sums up to be. I intuit to a point of satisfaction. Far enough in to start. I intend only to make one work and return. Before and sometimes still I venture to push all effort beyond my limits of pleasantness. Sometimes fruitfully, but not on this occasion.

Time compacts again as I see the way to where I was last time I was here, flashes of memory and remembered images. Memories embody movement and effort as well as vision. The trigger is the way up that I came down. I could meet myself here.

I turn deeper into the marshy woodland, off human paths to the fox and badger trail – no human prints here. The trail is obstructed only above the height of the mammals that nocturnally traverse them. They all know I've been here, smell my scent and manufactured belongings.

Considering, looking, moving, stopping, listening

DE - DE - DE

DE - DE - DE

A rustle above, the squirrels are still in the ivy here. The camera is still on my back. The drips enhance my spatial awareness loud and quiet to imperceptible. Near drops loud.

Familiar scenes are passed on. Then I know. I've been here before and suddenly it all fits. Another tree-fall, out in the water. Instantly, nearly, perhaps, I simultaneously see the element and remember the image I made here last, subtracting all the other potentials and the environment to inhabit this space. One I have constructed before. I relate much quicker, less to take in, revel and revealing change.

The water is higher (and rising) frozen ice breaks as I immerse my foot, halfway up the boot. I move in and think, not the same position as before. Initially I think it is too hard to get to, the water too deep. Potential of cold not heat now. I move back to the bank put down my bag and the rods. Take off my coat (will it rain?).

Decide to pause ‖

I place the ranging rod near the tree-bowl, not like before.

Out into the water. Why is the best position often mediated by my overall approach (physical not conceptual)? I decide the position I reach in the water, close to my initial look is the one. Difference is good. This is not the same place as it was last time I was here, so I need to emphasise this in my work. I push the extended tripod down into the mud below the ice and water, and work. Difference is what I hope for, with inevitably recognisable similarity. I vary my position as my feet get colder.

Three pairs of socks are nearly not enough. At the end I remove the camera from the tripod and shoot around me to the edges of my composite environment hoping that more kind errors will occur in processing.

It's done, unlike the canine bones image (see A Deer in the Wood (fig #2, plate # 58)*, it was a deer not a dog) I do not have a transformative experience whilst in the process of making, rather this began when I entered my own comfortable space here. The reciprocal place I know much better than the bones site (I guess I'll never go there again).*

Hunger makes me desire leaving.

I move back to the trail home. Finally I do stop and photograph the tree-fall near the mere, but badly – satisfied I have done enough today.

The fields have turned green as I exit the woods still patched by white and brown. I struggle through the flood using the ranging rods to look for shallow ground slowly moving on tiptoe, so as not to allow the wave, so near the top of my boots, from washing over. Ahead three dogs, Jess, Kasha and Granville wag in anticipation and my partner wishes she had her camera. Still waters rising, but I made it without spilling down inside my boots.

Extract from Field Notes January 2013

Making field notes was a method of recording thoughts and noting perceptions when actually in the field, or shortly afterward.[21] Keeping notes offered a way of reviewing and analysing the perceptive experiences and the process of making work in the field. They are aids to the memories of perception and action. Fig. 15 reproduces the artwork made on the site visit referred to above.

[21] Occasionally the conditions were not conducive for writing in the field due either to the weather, (as in the example above) or on a few occasions at one site, the presence of mosquitoes.

Fig # 16 *Tree-fall # 5* Visit # 2 1:59 pm - 2:35 pm 36 minutes

This chapter will deal with the processes of making the main body of work that has formed through research and practice as a way to investigate perceptual relationships to the environments under scrutiny. These processes are undertaken as a result of an amalgam of two factors; my sensory perceptions of the ambient array of the environment and the interrelationships that form with various memory systems in this process.

The work is undertaken in two distinctly different spaces, relating to two markedly dissimilar forms of practice: one physical and material (field work) the other virtual and immaterial (computer work).

Work in the field

The environments under scrutiny are spaces where work is undertaken, as well as the source material for this work. The work is a method of investigating perceptive mechanisms that form relationships with the land. At times this relationship is observational, consisting of acts of

perception with the intention of making work to interpret the perceptive mechanisms. The land is seen as a place of potential source material for recording and use through photography. It is also the space of the initial process of making work by gathering images both for and as an act of interpretation of the perception of the environment.

Digital compositing

The second space is the computer screen. The results of practice in the field are processed digitally using widely available photographic imaging software. This entails the amalgamation and manipulation of images into artworks through both fully and partially automated processes. These two types of space could not be further apart in terms of experience. One is physical and material, whilst the other is digital and therefore virtual, based on the screen rather than in material form. [22] The two forms are brought together by materialising the work as artefacts in print form (see the introduction above).

Field Notes

I began this chapter with an excerpt from my field notes as a way of introducing a consideration of the perceptive experiences and working processes in the field. The above text narrates the process of a site visit. In the case above this is not a first visit and a working relationship had already been established. All field notes, when amalgamated, amount to over 6300 words. They are slightly biased towards descriptions of being in the woods, about 65%, with the remaining c. 35% of notes dealing with the processes of making works and discussions of possible ways of making new work.

[22] It is ironic that although one of the motivating factors for making this work is that the increasing predominance of screen based technologies in our everyday lives makes us less likely to engage with and encounter actual environments, that the screen and computer technologies are used extensively to augment it. This is one of the reasons that this work is not made for screen display.

The interplay of the senses

When considering sensory perception, it is clear that along with vision, all the senses and my relative physical comfort impact on how I act within a space. Analysis of the field notes bear this out, indicating that often other sensory experiences are recognised as well as vision, as the following count of references indicates:

SOUND	34
VISION	26
TEMPERATURE	16
TOUCH	13
SMELL	1

Sound has been referred to most frequently, with 34 references whilst sight has 26. I have noted temperature 16 times and touch 13, giving a total of 29 for the haptic senses, although this is biased in that all the references to touch are about being bitten by mosquitoes, something that was particular to one site that where there was a seasonal proliferation of these insects. No other reference to touch was made. Smell was mentioned only once and this was a reference to the capacity of other animals to smell me rather than the smells that I had noticed (see field notes extract above).

Although this is not a conclusive statistical analysis, it is clear from the field notes that sound played a role in influencing my actions as well as sight, even though my intentions were to make visual artworks that have no auditory component. This emphasis on sound may also be biased because the act of writing requires a relatively static position. Whilst writing, I am not moving around the wood and therefore not making sounds myself that might otherwise obscure the sounds around me. The fact that many of the notes were written shortly after site visits does highlight that sound was something that was recognised as influencing my actions. In comparison

with the other senses, both sight and sound have a greater geographical scope in comparison with touch and, for humans, smell. It is certainly the case that all the sensory information was impacting simultaneously upon my perception of space.

Writing about the sensory experiences of the environment in field notes pre-supposes that attention is paid to them; they are made cognitive through the acts of looking and listening and so on, and then they are made explicit through text. The majority of sensory information that is available to me is not recognised, but pre-reflective, in that sensory information is constantly being picked up from the ambient array that surrounds me and forms my perception as a whole, without my having to re-cognise it, to take particular note of the perception, or to articulate it. For example, I would see the trees around me and hear the rustle of their leaves in the wind, but I am not necessarily going to recognise this as a salient factor enough to verbalise it, either in my thoughts, or in writing in the field notes, through words or text, although it forms a large part of my experience. It forms what Gallagher and Zahavi term "pre-reflective self-consciousness." They go on to state:

> By calling the type of self-consciousness in question ´pre-reflective`, we wish to emphasise that it does not involve an additional second order mental state that in some way is directed in an explicit manner towards the experience in question (Gallagher and Zahavi, 2008, p.46).

When working on site, what I recognise visually and make works about is augmented through an amalgam of all the senses; this is not exclusively a visual experience, but include these pre-reflective experiences that make up my self-awareness of inhabiting space. This echoes what Merleau-Ponty states, in that "the unity of space can be discovered only in the interplay of the sensory realms" (Merleau-Ponty, 2002, p.258). It is the information from all the senses that make up perception simultaneously. The information that we recognise involves a "second order mental state" and can be from any of the senses, even if the intention is to analyse one aspect of perception, like that of the visual as is the case here. Hence the result of analysing one state is by nature partial, at best a fragmentary interpretation of perception that is an amalgamated and

multiple whole. This is due to much of the perceptive experience being pre-reflective and it is also a simultaneous interplay between all the senses.

This interplay is why I noted sense information other than the visual, in that I was aware of it and it impacted on my actions, although I knew my work did not interpret those stimuli directly. The field notes indicate that I was particularly cognisant of sound, more than the other senses, even the visual. The type of environments that were encountered influenced this impression; woodlands do have specific sounds associated with them, such as the woodpecker (see above), or a twig breaking underfoot, which all contribute to the perceptive experience and influence how I move around a space. I would be inclined to move toward the sound of the woodpecker with the hope of seeing it, or conversely if I hear the sound of gunshot, I might well move in the opposite direction;

Gunshot in the distance, on the other side of Shomere. Makes me wary – danger of being mistaken in my movements for prey, makes me extra vigilant, less confident or comfortable here.

Extract from field notes February 2013

In the course of visiting sites, I often found that the sounds of other people made me move away from them, not wishing to engage with them and interrupt the processes I was undertaking. In the above example, there was also the added real danger of being shot at accidentally. As well as influencing actions, sound adds a further spatial dimension to that experienced through vision;

Blackbirds are alarmed behind me chattering like scissors, reversing excavators bleep in the distant quarry.

Extract from field notes July 2012

Here the blackbirds are behind me and therefore outside my vision unless I move to see them by turning around. The mechanical excavators in the quarry are beyond the horizon and outside of my vision entirely, unless I walk over the horizon I am unable to see them. Nonetheless, the aural information allows me to perceive beyond the boundaries of vision, expanding my spatial awareness.

Sound, as these examples testify to, offer a further spatial awareness that adds information to that of vision, including the movements of others, both human and non-human, especially in dense woods, where the vision of distance might well be obscured by vegetation. As Ingold notes, drawing on the work of Gell:

> The Umeda, like many other peoples of Papua New Guinea, inhabit an environment of dense, and virtually unbroken forest, in which things are visible only at close range,[…] Such an environment, Gell argues, ´imposes a reorganisation of sensibility`, giving pride of place to hearing, along with smell (Gell, 1995, cited in Ingold, 2000, p.251).

It is not the intention of this thesis to enter into the debate about the hierarchy of the senses, but the above examples do illustrate that often the sense we pay attention to is the one that provides the most useful information at that time in the specific circumstances that we encounter: In dense woodland, sound plays a greater role than it does in more open spaces, where seeing the source of a sound is more likely.

My point is that vision is not the only sense that influences my actions. It is the “unity of space” that Merleau-Ponty (2002, p.258) refers to in my perception of a woodland that is made up of an amalgam of the information from all my senses, of which both sound and vision were most readily recognised.

It is in this interplay of all the senses, including the relative hardness or softness of the terrain I move through , whether it is water or earth, dense vegetation or a clear path, whether it is cold or hot, rough or smooth (haptic), dark or bright (vision), noisy or quiet (sound) or smelling musky, fresh or decaying that in their combination form my perception of the environment and this is what informs both my spatial awareness and the decisions concerning what I make visual artworks about in relation to the environment. All those sensations that are not visual are absent from the photographic works, although they may be available to the beholder of the work in a synesthetic way; by inference of the scene.

Fig # 17 *A Fox, I Thought #4* 1:35 pm – 1:36 pm 1 minute

The viewer may imagine temperature, smells or sounds for instance, on the basis of their own memories and experience. For example, in the work *A Fox, I thought # 4* (fig # 16, plate # 74), the viewer might be able to imagine the smell of the decaying corpse of the fox, although no smell is present when viewing the work. The awareness of other sensory information and the possibility of synesthetic inference influenced this body of work as an interpretation of perceptive experience, even though it was known that sensory information other than the visual is not directly available, it can be indirectly inferred and therefore was relevant to practice. They are certainly fragments of the experiences of the environment that lead to the making of the work.

The shape of visual perception

The spatial limits of what we perceive is bounded by the capacities of our senses to hear, see, touch and taste, as well as by the limits of the environment we are present within. This creates a *field* of perception centred on the body. The shape of this field is constantly changing as we move through space, and can be described loosely as a mobile sphere. As we move along a path the sphere moves with us. To us the sphere is always partial. The ground surface almost always cuts us off from half of this theoretical sphere, unless we happen to be on the edge of a precipice and then we would be able to perceive, vertiginously, a further quarter of the sphere. This concept of the shape of our perceptions is discussed by both Gibson and Ingold. Gibson refers to both the sphere and the path as follows:

> One may consider the layout of surrounding surfaces with reference to a stationary point of observation, a centre where the individual is standing motionless, as if the environment were a set of frozen concentric spheres. Or one may consider the layout of surrounding surfaces with reference to a moving point of observation along a path that any individual can travel (Gibson, 1986, p.43).

This description that Gibson puts forward of two ways of considering the shape of our perceptions goes some way to describing the approaches of two strands of the practice of this project. In his analysis there is an emphasis on the stasis of the spherical point of view, in order to point out that we are rarely if ever static, as opposed to the movement involved in going along a path.

This work considers both the position of standing in the environment perceiving the sphere that we are contained within, corresponding to the works made and then re-made at each scene (*Continuum*). It also considers the processes of movement across ground, of walking, (*Flow Motion*), of movement along lines, of spheres of motion. Each of these methods has continued during the research; on occasion one has informed and resolved the other, as techniques and observations have filtered between the two methods.

To begin with I will deal with the spherical viewpoint, the works that form the central body of work in the exhibition *Continuum*. *Flow Motion* and movement by walking will be dealt with in chapter

five. *Continuum* concentrates on the ways that we perceive a scene before us from a relatively static positon; the body that is observing the scene is not moving by walking, but is standing and looking at a scene before them. The head and the eyes move around the scene and the camera is used to mimic these motions and multiple viewpoints in the acts of perception, motions that are constant in terms of the human living body, as we are never entirely static.

Fig # 18 *Tree-Fall # 1 Version #3* 4.13 pm – 4.34 pm 21 minutes

When I come to a scene that interests me -- for example, a tree-fall (Fig # 17, plate # 41) -- I identify an element of interest and my attention becomes concentrated on it, ignoring the surrounding environment. This is because "perception is not the object *plus* something, but the object *minus*

something, everything that does not interest us" (Deleuze, 1990, p.24-25). I had become interested only in the tree fall and what it stimulated in me, and not the whole environment around it.

In the process of seeking out a suitable scene for making a work I move in and through the woodland, responding to the environment as a whole through the interplay of the senses and when I notice something of interest I tend to disregard the surroundings of this feature. I also tend to ignore the information from my senses other than the visual, as I prepare to work. The information continues to impact pre-reflectively; I no longer recognise it, ignoring it in order to concentrate on what interests me. This change in attention reflects a natural perceptive tendency to shift from observation towards undertaking a task and concentrating on the elements that are salient to that task. It has parallels in all aspects of life, a hunter gatherer would focus on the plants that are observed as a food source as useful in the acts of gathering, or conversely would concentrate awareness of a predator as a potential source of danger, noticing their movements and avoiding contact. This change in perception when undertaking a task is best described as shifting our attention from the environment as a whole, to concentrate on an element that is useful to us.

As this is a project about our perceptive understanding of the environment as a whole, and not as a series of separate elements in either space or time, then there was a need to return to broader perceptive considerations of the surroundings that the element of interest is within. It is also necessary to take into account the relationship of the body to this environment, for the body is also part of the environment it occupies. Henri Bergson states that:

> Our knowledge, far from being made up of a gradual association of simple elements, is the effect of a sudden dissociation: from the immensely vast field of our virtual knowledge, we have selected, in order to make it into actual knowledge, everything that concerns our action upon things; we have neglected the rest (Bergson, 2002b, p.309).

This ´dissociation` is what I have described above, when I notice an element of interest and neglect the rest. However, in the course of undertaking my work I recognised the need for the rest, for the entire scene observed to be included. Bergson goes on to discuss the faculty in artists particularly

to do this in the making of works: “It is therefore a much more direct vision of reality that we find in the different arts; and it is because the artist is less intent on utilising his perception that he perceives a greater number of things” (Bergson, 2002b, p.309-310).

What Bergson argues is that in order to better understand perception and the environment around us we need to concern ourselves less with what use we may put it to, or how useful it is to us, away from a direct purposefulness; “it would be a question of *turning* this attention *aside* from the part of the universe which interests us from a practical viewpoint and *turning it back* toward what serves no practical purpose” (Bergson, 2002b, p.310). In the context of this research, this has echoes of the philosophy of Arne Naess and the deep ecology movement (Call of the Mountain: Arne Naess and the Deep Ecology Movement, 1997), in the interpretation of the ecological world as something that has intrinsic value in and of itself, not only of use to humanity, to be exploited and managed. It is also the reason why this project seeks to interpret the environment as a whole entity rather than as a series of discrete features that are prioritised by the interests of myself or others.

In terms of looking at a resulting artwork, the task becomes not a practical process based on perceptions to achieve a goal but one that becomes looking in itself, the act of visual perception, followed or accompanied by interpretation and imagination. Therefore all of the scene becomes important and not an isolation of the initial element of interest. All the elements within an environment and an image can impact on all of us in different and multiple ways; they work together as a conglomerate.

A further, and vital, factor that influences the ways that the individual understands, interacts and connects with an environment is what they bring to it in the form of memory, both myself as maker of the works and that of the viewer of the works. It is clear, as Bergson points out “Perception is never a mere contact of the mind with the object present; it is impregnated with memory-images which complete it as they interpret it” (Bergson, 2002c, p.151). Without memory we would not be

able to understand the environments we inhabit, whether this occurs pre-reflectively (nascent, as Bergson puts it) as the application of knowledge, or recalled as part of the re-cognition process, either simply as an identification or as the remembering of past engagements and events. Memory interacts with perception and influences decisions about what elements interest us in the environment. This can take many forms and will be dealt with below in reference to their influences on the practical working processes of this research.

The investigation of a site

On a first visit to a site my intention is to establish a scene or scenes that are suitable for the making of the composite photographic works that are then subsequently visited repeatedly and, in the majority of cases, photographed again. The decision as to what constitutes a suitable scene is what I wish to turn to now.

When I make a first visit, I have no prior knowledge of the specifics of the site. It is not as such a blank slate, totally unknown, as I have already decided that it has potential to be of interest[23] for the project, and I, like any visitor to a new environment, bring with me my previous experiences of similar sites. In this respect I know what to expect and can identify generic features that have been encountered elsewhere. Therefore this is not a primarily aesthetic experience, as Yi-Fu Tuan asserts, that “The visitor's evaluation of environment is essentially aesthetic. It is an outsider's view” (Tuan, 1990, p.64).

Understanding the ecologies and dynamics of any space is not dependent entirely on the specifics of that space. Past experiences, through memory, are all transferable in the mobile body. The newcomer to a space has the potential to offer new insights that add critical evaluations that can help to change the attitudes of the communities that are more familiar with those spaces, challenging and enhancing understandings and thereby contributing to changes in the conceptions

[23] In the case of C*ontinuum*, a site that is identified as a woodland, either by prior knowledge of the existence of the site or cartographic searches using conventional maps or software applications like Google earth.

that form the multiple identities of the site as place. In art the concept of the artist residency is an examples of this: “Some of the best regional art is made by transients who bring fresh eyes to the place where they have landed” (Lippard, 1997, p. 36).

On each visit, I walk to the site, or if arriving by vehicle, walk around the site, in preparation for undertaking the tasks of making works, acclimatising myself bodily to the space. This establishment of embodiment is not, as was first thought, a process of reaching an enhanced perceptual state (described by Hiss (1990, p.3-4) as “simultaneous perception”)[24] but a process of establishing memories in and of the site.

This short term initiation process is an amalgamation between perception, movement and memory. Although short-term memory as described by cognitive psychologists does play a role in this process, it would be incorrect to describe it as a faculty of short-term memory. This relates to the remembering of information from the environment over short periods for reasons of orientation and the undertaking of tasks and is limited, in the case of visual short-term memory, to three to four objects for a number of seconds,[25] rather than for longer periods of up to half an hour, the average time it took for acclimatisation. Short-term memory alone is inadequate to account for this process. Paul Ricoeur uses the term *retention* to describe this faculty of memory, drawing on the work of Husserl: “it can be asserted that the present and recent past mutually belong to each other, and that retention is an enlarged present” (Ricoeur, 1990, p.30). Rather than considering how long a memory is retained in this context it is better to consider retention as an ongoing durative temporal experience. Acclimatisation to a site is reaching the point that all that this durational retention consists of is memory and perception of the site alone. The preparation and journey to the site has become forgotten or has become part of my long-term memory

[24] “the broad-band focus of simultaneous perception, which keeps us linked to our surroundings, are inherited skills built into each of us. People sometimes get so good at blotting out the sights and sounds and smells around them that simultaneous perception, when it resurfaces, can catch us by surprise” (Hiss, 1990, p.3-4).

[25] “Representations in VSTM (Visual Short-Term Memory) can be maintained for several seconds without much cognitive effort” (Luck and Hollingworth, 2008, p.67).

retention. This is borne out by the fact that on repeat visits I am able to orientate myself through a process of retention and recollection, wayfinding, as both Gibson and Ingold term it.

After about half an hour the journey to the site exists only as a memory and I become part of the environment. I am becoming aware of the topology, what the invariants of the space are in terms of horizon, relative gradients and positions of pathways and other features that I move through. This requires effort, physically moving through space and seeking the elements I recognise as salient to the task in hand. In this sense the process of making work has begun and I am actively seeking out the scenes that will be photographed. I look for resonances between myself, and equivalences in the land I am inhabiting and I shift between various perceptive states, in accordance with the affects that being in the environment affords me. Some of these affordances may stimulate thoughts that lead to a lessening of conscious attention, as much as toward a state of heightened awareness where I am more likely to recognise elements that concur, through memory, with previous experiences. These shifts in attention occur rapidly as responses to the environment and thoughts commingle, fluctuating constantly as I move. Although these changes through perceptive states can be rapid, they do not change suddenly, but through a flow in time, as Bergson points out: “states […] cannot be regarded as distinct elements. They continue each other in an endless flow” (Bergson, 2002d, p.210). What seems to be a rapid change in a perceptive state, is a change in awareness, shifting from the pre-reflective to recognition and vice versa. We do not blot out sensory information, but flow between states of cognitive awareness. These states of being and becoming are also influenced by our general emotional, physical and intellectual state, as Merleau-Ponty points out:

> Joy and sadness, vivacity and obtuseness are data of introspection, and when we invest landscapes or other people with these states, it is because we have observed in ourselves the coincidence between these internal perceptions and the external signs associated with them by the accidents of our own constitution (Merleau-Ponty, 2002, p.24).

The individual's relationship to an environment is, therefore, the result of an amalgam of factors; the interplay of all the senses, of memory, recognised or not, and their general psychical state, their wellbeing. All these impact on the decision to make a work.

The stimulus to make a work: Case Study 1

When I come upon a scene that has potential for work it is recognised as being stimulating on the basis of heightened awareness and resonance through memory. This is a development of a connection between myself and the environment on the basis of remembering a similarity that can resonate emotively and imaginatively. It also fulfils, or challenges, the criteria of the project intellectually.

The first criteria that was sought out in a scene is the sign of change. Change is a characteristic of every environment. It is something that happens to an environment independently of my perception of it. In this research I am not seeking out a specific kind of change, only something that is an indicator of variation in the environment over time that can be interpreted through photography; by nature this needed to be a visual sign of change, having occurred, or the potential for change to occur (see the introduction for a discussion of the nature of change).

At the same time, my perception of that environment changes as I move through the environment. Recognising this fact represented a fundamental change of approach, from that of an observer, interpreting change that appears to be external to myself, that I am unconnected to, to acknowledging that not only do environments change, but the individual encountering them also changes and understanding these changes is one of the ways that connections to environments are formed. This shift entailed a consideration of what it is to occupy space through time, to be embodied in environments, but also to acknowledge that the individual is not always present, and that through time, change is perceived not only through presence but also through absence and that the lapse of time between visits is one of the factors that brings change to the fore. This change in approach can be seen in the different approaches of two projects in the catalogue of

works. *Hinterland* (plates # 30- 38) is based primarily on an observational approach to change, more closely allied to a documentary tradition than the later works that form *Continuum* (plates # 39 - 76). Here the compositing process is used directly as an interpretive tool.

A tree fall was identified as an element that had these qualities early in the production of the *Continuum* works (see fig # 17 above for an image of the actual tree-fall). I recognised that the requisite suggestion of change was visually apparent, as the uprooted tree indicated the event of its fall. Tree falls are common signs of change in woodland, to the point that they may be considered mundane; the sight of a tree fall alone might not have been a great enough stimulus to create an artwork, were it not for the memories that were triggered when I first noticed one on a site. Although these memories (related below) are anecdotal, they do indicate that memory is intrinsic to the processes of perception in the environment and for making the artwork. Memory also impacts indirectly on the appreciation of those works by others, and is therefore worthy of further consideration.

When I saw the semi-circle of roots up-ended by the fall of a tree, and the subsequent hollow left in the ground where the roots had been, I was reminded of some experiences I have had in archaeological excavations. Tree-falls leave traces in the form of discolouration and differences in soils. These are marked by one distinct edge, usually semi-circular on one side, with a very mixed and irregular other side, forming roughly a circle in plan view. The distinct edge is on the side that the roots were pulled out of the ground leaving a hollow, subsequently filled by material that forms a different soil type to the surrounding area. These features are termed *tree-bowls*. They offer a dilemma to the archaeologist, whose primary interest lies in the discovery, documentation and interpretation of the material culture of the past: Does the tree-bowl constitute a cultural feature, or is it only part of the natural environment, and therefore less of a priority?[26] Unless the site is

[26] The nature/ culture divide is often still prevalent in archaeology, particularly in a rescue context, where other factors impact on the excavation such as available time and finances. This tends toward prioritisation of the more obvious cultural elements in many cases.

prehistoric, these features are often left unexcavated, as they are difficult to resolve and offer little in the way of information. On a prehistoric site, these features are often investigated as there is a precedence for scatters of flint to be present in the upper soils associated with the tree-bowl. These indicate the use of the upturned tree as a shelter in the distant past, where those sheltering had knapped flint and made tools whilst there. It is not necessary to delve further into the qualities of tree-bowls and the methods of excavating them here, but what is important is that the sight of a fallen tree reminded me of three occasions when I encountered and excavated these features;

- A Bronze-age barrow near Barton-under-Needwood, Staffordshire (1995-1996)
- A Bronze-age settlement at the site of the second runway at Manchester airport (1998)
- A late Neolithic/early Bronze-age site near Gorey, Co. Wexford, Ireland (2005)

What happened on this occasion was that I was simultaneously reminded of my experiences of excavating tree-bowls in three different locations over the course of more than a decade. I did not recall these memories in any order but generically, together, as a sense of the experience of excavating tree-bowls and I was metaphorically transported from my present location. De Certeau makes the point that; “Like those birds that lay their eggs only in other species’ nests, memory produces in a place that does not belong to it” (De Certeau, 1984, p.86). It is through memory that the specificity of place is interrupted to the extent that I was no longer considering the scene in front of me as a place; rather it had become a space for the processes of remembering and contemplation. The past becomes present to me. Time has compacted and three earlier experiences recalled. In my memory, spatial and temporal distances were obliterated, as I drew connections across different environments to the present. This constitutes part of the development of my own intuitive connection to the land I was present in, and therefore a good reason to make a work. I was connected not only to the memory of excavating, but also the pasts that I physically uncovered, to three *imagined* prehistoric situations, of people living in the land c.3,000 to 4,500 years ago. These connections were built through the experiences of actually

digging and on the re-discovered material evidence. Not only am I stimulated by the tree-fall in front of me to recall the tree-bowl excavations, but it also brings back to me imagined prehistoric pasts, interpretations of the archaeological work. As Bergson notes “Memory, inseparable in practice from perception, imports the past into the present, contracts into a single intuition many moments of duration” (Bergson 2002a, p.146).

This stimulus to make work is therefore a simultaneous combination of perception of the tree-fall and multiple memories that are recalled. This leads onto further memory recalls that are not connected to the perceptive act, but a result of memories cascading, of one recall leading to another, and further to an imagined past, brought forward into the present, a combination of fact, the perception of the tree before me, and imagined fictions based on a conglomeration of memories.

I am aware, when making the artwork, that the memories recounted above will not be visualised in the piece, they are not present in the environment, only within my perception of it, and so it could be argued that they are not a justifiable reason for making the piece via photographic means. It is difficult to pin down exactly why this memory recall process actually has an impact on the practice of viewing the resulting artwork, because of this non-transferability, but De Certeau does hint at the process “what has been ´drawn` from the collective of individual memory and ´authorises` (makes possible) a reversal, a change in order or place, a transition into something different, a ´metaphor` of practice or of discourse” (De Certeau, 1984, p.87). Although the stimuli (for memory) of the artwork is different (for the viewer), there is the possibility that some of the intensity and multiplicity of the experience will be transferred through the work metaphorically. Perhaps because of the intensity and multiplicity of my subjective memory recall I am inclined to put more effort into making the work, and this is transferred as a trace in the scene of that intensity, it acts as a stimulus for memories and imaginative fantasy in the viewer in a generic sense, rather than a specific one.

The artwork therefore becomes something else; a trigger offering a different interpretive experience to the beholder of the artwork. The piece is both physically and psychically separate from the environment and once this is accepted then the work operates as a separate stimulus about the scene, but not *of it*. Of it in the sense that it is a record of being there, that the photograph is only a fragmentary trace of being there, allowing the viewer to imagine the experience metaphorically, for the viewer to find resonances with their own memories and through them to imagine those elements not in the scene but those that they might associate with them. When the photograph is printed, made into an artefact, then it also becomes a fetish object; a presence with absence, a substitution for the whole experience, a trace or fragment. This leads to the desire for more and it therefore opens up through memory, toward imagination in the beholder.

A successful artwork operates well in this way through an openness to interpretation. The key to this is multiplicity; a multiplicity of possible readings that are dependent on the viewer's perceptive processes, in whatever form these may occur, and are also dependent on their memories. This can be nascent, as Bergson terms it, pre-reflectively understood, or stimulating memory recall in the beholder. For this openness to occur then the scene has to be considered as a space of possibility, rather than a place for definition and documentation.

The more I intuitively recognised the potential of a scene through the combination of information from my senses as a whole and the multiple memories that are inherently possible in the processes of perception, then the more likely the work would succeed, when translated into a photographic work, in eliciting similarly intense, although different, responses in those experiencing the artwork.[27] The work becomes a metaphoric interpretation of the experience. In order for this to succeed then the work must, like the scene itself be open to multiple interpretation. No scene encountered in actuality can be wholly understood, because it is constantly becoming known to us,

[27] It is worth noting that I cannot predict what a viewer's response to a work will be and this is a hypothetical argument made on the basis of my experience of what constitutes a successful artwork in practice.

as both Bergson and Deleuze would acknowledge. It is through openness that this becomes mirrored in the artwork. It is the decision of what scene to make a work about that defines the parameters of this experience; the intensity and density of active memory recall is one of the defining factors that acts as a stimulus to make a work.

The stimulus to make a work: Case Study 2

The second stimulus to act is ambiguity. This is characterised by my lack of capacity to reach concise conclusions about the scene that is encountered. This differs from the tree-fall images in that the lack of an understanding of the element of interest in an environment remains puzzling for the individual encountering it. The scene is different to those encountered before not similar as with the tree-fall. Memory does not act as a form of connection to the space. For this I will turn to second example, that of Blue Land.

Fig # 19 *Blue Land #3* 11.38am-12.13pm 32 minutes

On one of the study sites there is an area of earth works made up of soil piled up into steep-sided mounds and covered in blue tarpaulin and carpets. When I first visited the site I was unsure of the reason for these earthworks; although there are many possibilities, the most feasible being the cultivation of native wild bluebells for conservation purposes (this has not been established as a certainty). In this case, the lack of a reason for this intervention in the environment, one that obviously required much manual labour on the part of the constructor, gave the space an ambiguity, the question of why these mounds are there has always remained a question.

When these earthworks are interpreted through photography, this quality of ambiguity does transfer visually, leaving many questions that the viewer of the work tries to answer. Some of the sequence of images that were made on this site of a specific scene (see Fig # 18, plates # 43 & 57) have been presented to audiences on different occasions.[28] It became clear that in an attempt to resolve the question of what is going on in this scene, the viewer engages imaginatively with the works. Answers and evocations have been discussed, both in a seminar and in an exhibition. Two people have separately insisted that it is a BMX cycle track. Even when I point out that this cannot be the case, due to difficulties of access and the complete lack of evidence of cycling, they continued to stick to their conclusions. On another occasion a group of twelve PhD arts researchers were asked to independently write down what the photograph reminded them of, without conferring; six of them thought that it looked like a graveyard. This was something that I had not considered as it is not something that the actual presence in the space evokes. Therefore I do not associate the space or its photographic interpretation with a graveyard. This, however, is the tendency of some of those who have not been to the site, but have only seen the artwork depicting it, by far the majority of people who are likely to see the artwork. This indicates that the photograph has an affect that is different to the experience of being at the scene, conclusions are speculated at and memories evoked that do not provide conclusive resolution for the viewer. This

[28] Most recently in the exhibition *Continuum* at Avenue Gallery, Northampton, October 2014 (see plates # 88, & 89).

is what Damien Sutton terms a crystal image, drawing on the work on cinema by Deleuze (Sutton, 2009, p.156), an image that has a multiplicity of potential interpretations, none of which become fixed for the viewer who may oscillate imaginatively between meanings, in this sense they are durational images, they endure in the imagination because they remain open to interpretation. This concept will be dealt with further in the conclusion, where a final consideration of the role of time and space in the photographic depiction of the environment will be made.

The compositing process (I): Field work

Once the decision to make a work is made then I proceed with the compositing process. Since the advent of digital photographic software, compositing photographs together to make a scene is now a widespread technique and is not in itself novel. It has an antecedent in both photogrammetry, as noted in chapter two, and was widely used by artists prior to the advent of digital capture and software. Both digital and conventional methods (and their hybridisation) have been developed to the extent that specific automation equipment and software is now commercially available. Equipment for automating camera movements in the field was not used in this project, as this would not allow for an investigation of visual perception through photography, leaving it instead to a machine.

Artists that have influenced this practice include Jeff Wall and David Hockney. Wall's cinematic photographs are hybrid works combining large format film images using digital software. They are all seamlessly stitched together, unlike these works that include ´errors` from the digital combination processes (see below). Wall's themes in his work, often art historical, only occasionally deal with the environment and are rarely concerned with how compositing could be used to investigate the temporal in relation to photography. Wall's practice ceased to be an influence once the decision to include ´errors` was made.

Fig # 20 *Encroaching mud* An early example of a work that was influenced by Wall's composite techniques in his cinematic works.

Hockney's ´joiners` from the 1980's that have more of a bearing on this research and have similar themes of perception in terms of both space and time. Working before the advent of digital photography, he worked using film and Polaroid prints to create artworks about a variety of subjects, ranging from portraiture to landscape. These works operate on the basis of physically putting together prints to form the artwork as collage, in contrast to this research, that combines image files together digitally, in virtual rather than actual space. Hockney was concerned with similar themes to my own, acknowledging the temporal as well as the spatial aspect of a compositing method. He worked by making composites from different viewpoints and assembling them into grids, in the case of the polaroids, or by overlapping prints together, when using a 35mm or 110 film camera. Hockney often narrated events, like a visit to the dentist (Hockney on photography and other matters, 2009), or someone walking down stairs and giving him a cup of coffee (South Bank Show, 1983), and presented them in a single work, thereby offering the viewer the opportunity to engage with a sequential activity simultaneously, by symbolically compacting time and offering multiple viewpoints of space. The finished works are presented as collages and

not reproduced on a single sheet of paper, as they appear to be when viewed in reproduction. His use of separate prints tended to highlight the stasis of the conventional photograph; rather than offering a flow of durational time, these works are a series of staccato instants or moments. Each print is still obviously separate from its adjacent ones. Although this work offered a novel method of depicting space with photography through collage, this separation of actual prints and his consistent acceptance of the grid (from his polaroid works through subsequent paintings and to his later film works) presents a barrier to a consideration of time as durational, as a flow. (See chapter two for my reasons for not using the grid, after early experimentation).

Fundamentally, this project was based on the photogrammetric techniques used in archaeology, as it was the exactitude needed for the works to function as measurably accurate records that led to the method employed here. Once liberated from this exactitude, it was recognised that this method had the potential as a tool to investigate the nature of photography in terms of both time and space in relation to the environment and our connections to it. Nevertheless, I will refer to some useful parallels between Hockney and my approaches to compositing images.

The compositing process in the field

Unlike a photograph made with a single capture, it is not possible to use a camera as a framing device to define the limits of the final piece, so the process begins by determining the exact position from which the study is to be undertaken and the rough boundaries of the finished work on the basis of the scene before me. It is at this point that the shift from a consideration of the element of initial interest toward the whole scene before me begins. This involves responding to the element of interest in relation to the boundaries of the artwork, a deliberation on what further elements could be included. I then proceed to make the work.

<u>Body – Camera – Environment</u>

The use of a camera in the act of making this work is the employment of a technological tool as a method of investigation and of interpretation. It therefore required skills that needed to be learnt

and put to use. The application of these skills certainly alter the perceptive experience (in comparison to observing without photographing); as the processes of making are undertaken, the camera itself can potentially act as a psychological barrier to experience, as the individual becomes preoccupied with its operation. Although thoroughly habituated by repetition, decisions have to be made to control how the images are captured; therefore these actions cannot be undertaken entirely intuitively, or without decisions about exposure and focus being consciously made, for instance. Ideally the camera would act as an extension of the body seamlessly recording the visual information that the individual is not capable of retaining, converting this into something that can be seen on a device or in print form and therefore communicated. When working on composites with the many exposures that this entails, the camera can mimic the actions of looking, as Hockney stated "The camera, in a sense, is becoming my body, it's taking my place" (Hockney on photography and other matters, 2009). In this way the camera becomes a tool of looking as well as recording, thereby altering perceptions. This has echoes of Merleau-Ponty's famous comment about the relationship of the blind man's cane to his body: "The pressures on the hand and the stick are no longer given; the stick is no longer an object perceived by the blind man, but an instrument *with* which he perceives" (Merleau-Ponty, 2002, p.176). There is one fundamental difference between the stick described above and the camera, for the stick is used as an instrument of perception, necessary for the (hypothetical) blind man, whereas the camera's function is not primarily perception, it is an image-making tool of memory and communication.

In the case of this compositing technique, the camera becomes a tool for investigating visual perception in the field as a secondary function, but its primary function is the gathering of raw materials to interpret the scene into a finished artwork. Ideally it would be the case that the camera and the body act seamlessly together, that the operator becomes unaware of the camera, but concentrates on the acts and processes of image-making, of connecting to the environment through a psychologically ´ invisible ` device, then communicating this to an audience; that is, to be able to gather images without heed to the decisions that the use of the technology requires to

achieve the goal. This ideal of automation, rarely, if ever, occurs in practice (even if camera manufacturers strive to make them do this).

This compositing process is a flow of concentration that shifts through a rhythm of repetitive processes, including actions and observations, memory retention and recall and which moves from technical consideration to un-reflected intuitive actions and back again in cycles.

The compositing method

At the beginning of this research process, a system was established of compositing shots together that produced seamless images, images that, although they are made up of up to 250 individual image captures, can be subsequently be made using software into works that look as if they are single images. This was necessary because the parameters of using conventional techniques needed to be established before the method could be developed further and used as an investigative tool and furthermore, to modify and subvert these techniques. This was achieved largely before the research was undertaken, in archaeological practice and with earlier experiments outside of archaeology. The works in *Hinterland* are examples of this form of compositing practice, works that led up to the decision to allow software combination ´errors` and to use them as a tool.

The concept of creating the seamless composite image underlies the experiments in terms of creating a technical baseline from which further developments could then be made. This is due to the limitations of the software. Although so called ´errors` are utilised in these works, there are limits to the software's capabilities in terms of automation. If these are exceeded then the computation would fail completely. In order to push at the boundaries of possibility, then these boundaries were at first established.

Fig # 21 *Untitled # 3 (Hinterland series)* An example of a work from the Hinterland series with some signs of the compositing process evident. Note the repetition in the bottom left and signs of multiple imaging in the sky top right.

This consideration of compositing methods will be divided in two; firstly dealing with the process in the field, as it relates to capturing images for combination, and then considering the computational processes, both involving levels of automation and manual manipulation.

Compositing in the field

The image capture process can be divided into two basic methods: *layering* images and *tiling* images.

Layering is a process of repeatedly shooting at the same position with a variety of focus points and corresponding exposures for later combination. This involved capturing from two to six images at each position. The subsequent combined image could, if desired, be in focus across the entire image, allowing for continuity of focus across the entire final artwork when the combined single

position images are stitched together. It also allows for specific areas or elements in an artwork to be in focus beyond the capacity of a single shot. Although in practice this method was rarely used, it has some potential.

This method was initially devised in order to achieve seamless integration in the stitching process, but it has given rise to additional advantages that were unforeseen initially and discovered through practice. The continuity of sharpness across the entire artwork is one of the ways that the work mimics the temporal and durational flow of observing a scene. In actuality the individual does not focus on one element in a scene and then maintain that focal point continuously, but shifts her or his eyes around the scene, focusing on different points or further elements, including the one that was of initial interest. Our focal points shift from close to far automatically, and because the works are (mostly) entirely sharp, then this is also achievable when looking at the artwork over time. Just as a scene is observed in actuality then the same faculties of visual perception are used to observe a photograph. Although it is a static image, the act of looking is not, it is also an act of movement through time.

The almost entire focus of each artwork also mimics the way that distance and scale is judged in actuality. In experiments with aircraft pilots in ploughed fields in 1947, Gibson determined that it is not the convergence of parallel lines in the environment that allow the individual to judge distance and scale (Gibson, 1986, p.160-162). Instead it is the continuity of surface and the diminution of scale of the pattern of that surface, with distance, that allow the individual to determine the size of objects and how far they are away from us. If the continuity of surface pattern is broken or there is no surface at all, such as looking up into the sky, then it becomes much harder to judge the distance or size of an object. By creating continuous sharpness across a photograph, the viewer is therefore able to see the elements within a picture as relating spatially through pattern similarities as well as scale.

The layering process is followed by the tiling as outlined in these field notes:

I started working from the right corner, looking at the ground, taking at least two images for later digital composition. I moved the camera (on a tripod in this case) across to the left and back across to the right. Then, after raising the camera position, across to the left again, filling the scene with image captures until I was pointing the camera vertically. I pay particular attention to the element of interest, which can be off centre, depending on how I conceive of the scene.

Extract from field notes July 2012

This process of tiling is a systematic method that follows a grid that is subsequently broken and merged together through digital combination. Each time the camera is moved the view through it is overlapped with the preceding one by approximately 40% to allow similarities that facilitate this combination. After overall coverage is achieved further images are captured in and around the scene to account for any changes of light intensities or movement within the scene, or to fill any potential gaps. All of this is done without reference to earlier captures or, in the case of re-visits to scenes, earlier finished pieces in print or digital form. This entire process does not involve any kind of measurement but relies solely on memory.

The excerpt from the field notes above describes the starting point of the task as a corner of the composite. In my work it has become more common to begin in the middle of the scene and work outwards horizontally, leaving the edges of the work, particularly the top and bottom, till later in the gathering process. The camera moves, roughly, through a series of curves or arcs across the scene that forms approximately a quarter of the sphere of perception, when the ground surface is taken into consideration as obscuring the lower half of a sphere. The boundaries are determined as extending no further than the movement of the head and eyes in the standing body, roughly a maximum angle of 180 % in any direction. This is because, as Gibson states: “Whenever a point of observation is occupied by a human, about half of the surrounding world is revealed to the eyes and the remainder is concealed by the head” (Gibson, 1986, p.112). The specific scope of this angle is based on the decisions made at each scene of what the boundaries of the composite will be; in

some cases, as in the *Blue Land* works, less foreground is deemed necessary. In other cases, such as the *Track-way* series, the foreground is maximised to include my body and the legs of the tripod, for instance.

Summary of compositing in the field

The movement of the camera during compositing partially mimics my own head and eye movements as I stand viewing the scene, except that I do not systematically follow a grid like pattern (necessary to fill the picture plane), as the camera does, but a process that is based on recognising elements in the scene. My eyes would, in observation alone, shift about the scene in a geometrically random pattern in accordance with what the scene affords my perception, by what my attention is drawn to, either through change in the form of movement, or interest in what is salient to me (elements that I recognise and understand), or what is curious and unexpected (that is not understood or new to experience).

In the course of undertaking the task of image gathering I am forced, by the rectangular view through the camera, to consider the details of the scene and start to recognise these further elements of interest. This is what Gibson terms *nesting* (Gibson, 1986, p.9). In this process I not only do this through the camera, but via the image captures that are presented on the camera's screen and checked as part of this process. As I observe the scene, I am capable of understanding it as a whole and of picking out elements of interest. By using a camera I deconstruct this view and recognise elements within elements, such as a cobweb on a tree-fall, a feather, or a gunshot cartridge (fig 17, plate # 41). I also recognise that elements become fragmentary and are layered and often overlapping as Gibson points out: "Units are nested within larger units. Things are components of other things. They would constitute a hierarchy except that this hierarchy is not categorical but full of transitions and overlaps" (Gibson, 1986, p.9).

A further step in this process is therefore identified. I first recognise an element of interest and then recognise that there are further elements both in and around the first element that are also of

interest. It represents a further fragmentation of attention and a multiplicity of interests in the scene. This is a consideration of the scene as space rather than a place I relate to and inhabit. I am more concerned with spatial relations between all the elements in a (nascent) image and I begin to use my knowledge to work out how to photograph and combine them.

The processes of layering and tiling in the field when considered as a whole is a task of rhythmical repetitive movements that flow through time. The fundamental action is compose - capture - check interspersed with movements of the camera. There were times when I would pause taking a break from the entire process or be interrupted, but was always able to continue in the task. This would usually take roughly 30 minutes in entirety, as is reflected in the times accompanying the titles of the artworks. During this time changes would occur in the scene that would be incorporated into the images captured and in the final work.

Once I had completed a task I would usually look again at the scene before me and pause to consider. Initially I thought that the process had altered my state of perception, enhancing my sensory awareness (akin to the simultaneous perception of Hiss, 1990, p.3-4). What has occurred is a change due to the completion of the task and as a result of the process changing the nature of my perceptions. By concentrating on the act of using a camera and spending time looking through a small rectangle I am restricted in my visual perception of the whole environment. I cannot turn and look around unless I stopped what I was doing. Dealing with technical demands also moved my attention from the environment to more abstract considerations necessary to achieve the goal. Although the scope of attention is very narrow when working (and interrupted by technical issues) it is the case that I am still continuing to gather information about the space I inhabit through all of my senses. This occurs pre-reflectively and is proven when something interrupts my work such as hearing a sound in the distance. I often found that after completing a task I became more aware of sound. This is most likely due to the fact that when my vision is restricted through the process, I naturally listen to compensate for this restriction, to maintain an awareness of what is going on

around me at a pre-reflective level in terms, perhaps, of safety. When I stop working this aural perception is recognised and I notice more of the woodland sounds.

A second consideration of how this process may have changed my perceptive state is the completion of the task I have set myself. I have achieved the goal, at least as far as field work is concerned, and therefore have no need for an element of interest in the scene. It is once a task is achieved that the environment as a whole has meaning, I no longer have need to consider elements of interest, as there is no longer a purpose. I have established a changed relationship to the space; it is known better through acute observation, and it is a site of task, or a taskscape (Ingold, 2000, p.195), that is imprinted on my memory. It is the event that makes the scene a place that I associate with through memory and reinforced through repetition. This is not what the artwork represents as this experience is not transferred through the resulting composite to the viewer. The environment (through the images captured in it) becomes the basis for a fictionalised construction as an investigation of perceptive experience, not a representation of it.

The compositing process (II): Computer work

Once the gathering of raw materials has taken place, then the process moves to the virtual space, as images are downloaded into computer archives and software is engaged in the processes of compositing. I do not intend to investigate or explain the nuances of specific software applications here, as software changes rapidly and there are many ways of compositing. Each software application is manufactured according to the needs of a market place. Their functions are tailored to the general needs of those who use them and therefore conform to certain standards and traditions that this market dictates. In the case of compositing software, the general aim is to create seamless images that look like conventional photography. It is also the case that this kind of software is used in a variety of ways, including many that do not conform to this overall goal. Manufacturers are likely to be aware of this, so to describe this work as subverting the intended use of the software would be something of a misnomer, for the intentions of the manufacturer are

not clearly prescriptive as to how the software should, or should not be used., This work, however, does use the software to produce images that are not like traditional single viewpoint photographs.

Within each software application there are a set of pre-determined algorithms for image manipulation and combination over which there are varying degrees of control. [29] Although there are strictly speaking no truly ´manual` possibilities in digital processes, some are localised, equating with manual processes either in the darkroom or in drawing and painting, whilst others are generalised, dealing with generic changes to the entire picture such as the combination of hundreds of images together through a series of clicks of a mouse. Automated processes tend to nest and sequence any number of actions together to achieve the desired outcome. This simplification makes the processes easier and quicker for the user. In this research, as well as using automation, I have also deconstructed some of the paths of automation and restructured them in tailor made ´actions` in order to achieve specific goals.

Compositing operates on the recognition and alignment of similarities between files and their subsequent combination. Two or more images can be combined virtually to form one image, thereby overcoming the physicality of putting two or more prints together, as in the work of Hockney. Through this process the grid structure of compositing can be overcome and manipulated in ways that were hitherto not possible in photographic collage and were only possible to a limited degree in the darkroom by the combination of exposing multiple negatives onto single sheets of photographic paper.

The process is limited in terms of the software's ability to recognise similarities and to combine them successfully; i.e. to the point where the combination is not visible. There are parameters of success, ranging from the seamless ideal, to the point where the computation will simply fail. In between this is a range of composite results that would conventionally be assumed to be errors in

[29] The technical and mathematical details of image capture and the subsequent algorithmic processes of software processing are not the subject of this thesis. Just as it is not necessary to know all of the chemical formulas that go into the making of light sensitive emulsions and their fixing in order to make use of them.

combination that require further ´manual` or local manipulation to correct. This research has exploited these ´errors` as one of the tools of investigation. The element of chance is brought into the image-making processes and exploited. Importantly this operates within controlled parameters both those possible within the restrictions of the software and those allowed, or discarded, by my own decision-making processes.

After downloading the images there are three basic steps to the process: layering, tiling and finishing

Layering of images

The first step as noted in the field work section (see above) is to layer images together from a single viewpoint before further combination. This uses an alignment and blending method designed to create overall sharpness across an image. Errors occur in this process due to non-alignment and excessive variation of focal points in the single images being combined. In the field, time elapses between and during each of the exposures. As well as the changes in focal point and exposure that I instigate, change in the environment also brings change to the images. This movement can be caused by the wind blowing and changing the position of elements in the image, or by light changing, such as the sun being obscured by cloud. When combined together these create digital anomalies in the final images, which are the traces of these changes and therefore signs of the passage of time. Branches can become duplicated, broken or their colour and tone can vary in accordance with changes in light conditions (fig # 21).

Fig # 22 Composite image from a single viewpoint

Tiling of images

When all of the combined images from single viewpoints are joined together then these differences are further complicated in the automated process of forming the entire image. The software works by combining similar areas from multiple images together by a process of comparison. As each image is from a different viewpoint then the software will compensate for the errors in parallax caused by changes in position that result in distortion. Rectangular images are stretched in various directions to fit together. This occurs particularly towards the edges of the final composite:

Fig # 23 Partially complete version of *Tree-fall # 5 Version # 2* see plate # 45 and fig # 15 above for final version

The figure above shows a composite after alignment has been automatically processed but before the files have been combined. Bends and distortions occur to facilitate alignment, although at this point it is incomplete: not all the facets of the images line up. It should be noted though that the individual files are still complete and lie on top of one another. They have not been merged or blended together.

In the image above it is evident that the conceived picture plane has been largely achieved although at the middle left edge there is a gap that could have been filled and the images above that gap went further to the left than was necessary. The aim, at this stage, is to break up the grid, to remove, partially, the evidence of single images, whilst still leaving some signs of processing. The best way to achieve this is by using automation commands that blend the images together. The advantage of the automation is that it takes the difficult decisions of where and how to combine images to chance. If undertaken in a more localised fashion it is much harder to keep the work

integrated and there is a tendency to concentrate on specific areas that is best avoided. Making local adjustments is also very time consuming and likely to result in the failure of the work.

Finishing of the artwork

Once the images are merged together and the evidence of the grid has been largely removed then the composite is rendered into a square or rectangle and any undesirable local anomalies are modified or removed. The piece is finished tapestry like by stitching further images into gaps and piking colour to fill blank spaces as appropriate to the overall image. Further images to enhance the piece are only those captured at the scene in the first place are used and these may have been unintentionally removed by the automation process. At the end the digital file would be archived for retrieval for printing in whatever context was necessary. Printing could take any number of forms in accordance with the sites of discourse. Although all these works have no specific scale to adhere to, in general they should be larger than c.80 cm in height for the works to be fully effective.

Key decisions in the computational process

As the figure above shows, it is possible to create works that neither have straight edges nor conform to the conventional rectangle or square of a photograph. Although there are examples of artists who use compositing with this kind of irregular edge to a work, such as both Hockney and John Harper, in the case of *Continuum* the decision was made not to do this as it would tend to lead to the shape of the work dominating the appreciation of the works.[30]Also these works are intended to sit within the photographic genre, albeit pushing at its boundaries, and not conceived as digital artworks separate from the photographic roots that this work is in dialogue with.

[30] This appears in publications to be more successful than when exhibited, as the boundaries of the paper in the book act as a boundary for the work. When exhibited the uneven boundary of the work is problematic. Either it is shown within a conventional rectangle, with “empty” space around it (as in Hockney’s photo collages), or the image is cut around unevenly. Both where considered too dominant in the *Continuum* series, but was used sparingly in the *Flow Motion* series with the intention of indicating movement.

The computational process operates within the boundaries of possibility on a sliding scale from a conventional seamless result akin to the traditional aesthetics of photography, to a point of simple failure to operate the action required. In between these two extremes are several possibilities to include the various anomalies that are mostly generated by chance through the automation processes described above. Experimentation was undertaken that established what the optimum was for a successful artwork and how this could be controlled. As with similar processes, too few anomalies simply appear to be unintended errors that were not spotted in an attempt to achieve a seamless composite,[31] too many anomalies and they tend to dominate the work and alienate the viewer.

This middle ground was developed in conjunction with the image capture processes in the field and enhanced by the time-lapse approach, where the possibility of return for further experimentation meant an ongoing development could be implemented. The boundaries of acceptability often depended not only on technical considerations but also on the intentions of the overall project: a level of abstraction in one scene could easily prove to be too much in a different scene, so even though a degree of chance was involved in the compositing technique, it operated within both the boundaries of possibility and desirability that proved often to be specific to each scene.

Field and digital work often operated in tandem; as the digital processes were developed they could then be applied to the way that new works were conceived in the field. An example of the close operation of computational technique with field work can be seen in *Tree-fall # 8 Version # 4* (fig # 23, plate # 55).

[31] This is only the case if the artwork is viewed in isolation from other more obviously manipulated works.

Fig # 24 *Tree-fall # 8 Version #4* 12:40 pm -12:53 pm 13 minutes

Here the digital compositing was used to fragment a sapling in the foreground of the piece (centre left in the lower half of the image). The camera was placed very close to the sapling and the focus maintained on the tree-fall, with full knowledge that changes in position would create errors in processing. This was established and enhanced through the previous works (*Tree-fall # 8 Version # 1* (fig 24, plate # 73), *Version # 2* (not depicted) and *Version # 3* (fig 25, plate # 75)).

Fig 25 *Tree-fall #8 Version #1*

5.03 pm - 5.27 pm 24 minutes

Fig 26 *Tree-fall #8 Version #3*

4:54 pm - 5:10 pm 16 minutes

The intention was to mimic the effect of parallax error of human binocular vision when an object is viewed close to the face. The initial idea was conceived in the field, resulting in *Version # 1*. The second visit was in summer, the same experiment was undertaken when the sapling was in leaf, but this failed due to too much interruption of the scene by the leaves near to the camera. *Version # 3* was then made without attempting to use close proximity to the sapling, whilst it was still in leaf. It was eventually resolved in *Version # 4* when the leaves had fallen again.

Finally in terms of the computational processes that make this work possible, it is worth noting that even when an automation process is undertaken with the same original files, operating system, version of software and computer, it has been found that the results are not always the same. This difference is furthered when different versions of software and so on are used. Sometimes one device will be able to do what another cannot despite very similar circumstances. This variability leads to the possibility of creating subtly different multiple works from the same files; although this has not been widely used here, sometimes it was a way of solving difficult images or re-working earlier ones that were not satisfactory.

Ultimately the computing process is almost entirely disembodied and has little relevance as an experienced process. Its lack of materiality facilitates new forms of image combination and

automation is useful as a way of making problematic processes much easier by removing difficult decisions about specific areas of the artwork that could led to its failure. It may be the case that without this automation and its inherent element of chance that these works would not be possible.

Chapter Five

Stasis and Movement

I recently decided not to take a stopwatch with me whilst running. Instead of trying to improve my times, pushing my body toward a progressive improvement of fitness, competing with my former self, I found myself beginning to take more notice of my body, *listening* to what it was telling me. Instead of pushing myself, I began to find that the action of running was pulling me forward. If I felt a minor pain, like a stitch, then I could concentrate on it until it went away without the annoyance of knowing it would make my time slower. I felt mentally and physically relaxed and subsequently more able to reflect on the process of running. With this I also started to notice more around me, to acknowledge the walkers and the dogs in the park, to connect to and engage with the environment. I found that I was not only becoming more aware of this process of inhabitation, but also more able to analyse both the experiences I was having and other thoughts and emotions not connected to the processes I was undertaking.

I have found that changing the way I perceive time whilst undertaking a task like running, has the capacity to change that experience fundamentally. This occurs both physically and mentally, as an embodied experience, altering the way that I engage with the environment and how I am able to analyse my broader concerns, widening the scope of the task (of running in this case), considerably.

Fig # 27 *Still Running* 2006 reworked 2014

An early experiment photographing whilst running (when I was still timing my runs). This piece marked the beginning of an investigation through photography of embodiment and movement that eventually lead to this body of research. Initially this work was linked to the role of cartography in our understanding of the environment and was presented in grid form as a spatio-temporal map of the process of running, like the pieces referred to earlier (fig # 4-6).

Subsequent work has moved away from any sense of map use or map-making (through photography) to one of wayfinding, of movement through the environment using spatial and visual memory. These movements are by nature linear, hence the re-working of this piece in its present form.

This work lead to the *Ground Work* and *Flow Motion* projects and has also had an influence on the *Continuum* works.

So far this thesis has dealt with the concept of place and perception of space in relation to the making of artworks, both within the environment and through digital processes. In this chapter I will turn the emphasis towards the role of time. In particular I will be dealing with the apparent stasis of the photograph in a world that is both constantly flowing through time and in perpetual motion.

Above I have discussed running as a clear example of how there are different ways to perceive time and I have described how it is possible to change perceptual positions. I have moved away from a chronometric concept of working toward a time in the future when I will be faster. If I continued with the concept, this is a time that I would never actually reach, as I would always be wishing to be faster. By no longer measuring time or even distance as I run the process has been altered. I now see running as a physical, meditative and repetitive process connected to a spatial environment and have found that instigating this change has improved the usefulness of running in my life.

These two perspectives on time are examples of what Ricoeur refers to as calendar time and phenomenological, or lived, time. Calendar time is a culturally generated method of measuring time, which has a beginning, an axial moment, from which dates are derived and can be marked. Calendar time has the sense of past, present and future embedded within it. It is chronometric, in that time is counted by divisions of hours and seconds, etc. Lived time, by contrast, is psychical and can be cyclical. It includes Husserl's concepts of retention and protention within it, as are all forms of memory (Ricoeur, 1990, p.25-26). It can be subjective and intersubjective (a group travelling together will experience the wait to arrive at their destination in similar ways).

Underlying both these concepts of time is astronomical time, "the day as based on measuring the interval between the rising and the setting of the sun" (Ricoeur, 1990, p.106). In both cases physical time is characterised by succession and duration as Ricoeur states;

> What gets emphasized is the continuity of the whole or the totality of the continuous, which the term duration (*Dauer*) itself designates. That something persists in change

> – this is what enduring means. The identity that results from this is therefore no longer a logical identity but precisely that of a temporal totality (Ricoeur, 1990, p.29).

It is the relationship between chronometric time in relation to photography and lived time in terms of cyclical repetitions of actions in connection to perception, that is of interest here, for as Sutton notes; "it is not necessarily time itself, but the experience of time, that makes up perception" (Sutton, 2009, p. 58).

The chronometric interpretation of time: *Photography and its complicity in the modernist interpretation of the instant and the moment.*

During the modernist period, just as our relationships to the environment were altered by industrialisation, cultural perceptions of time were also altered, at least when considering industrialised cultures.

The advent of the railways in the 19th century meant that for the first time there was a need to homogenise time, so that trains could run to an agreed timetable. Similarly the workings of the factory and related industries required time to be agreed upon, as to when collective work periods started and finished. Working for a company, organisation or an institution also led to the temporal division of activities; between work and leisure, between the public and private, segmenting time; the workplace stressed different periods, a series of moments and instants in a chronological and endless (till death) sequencing of time with a division of tasks and roles in life, what Deleuze refers to as "becoming mad in depths."(Deleuze, 1990, cited in Sutton, 2009, p.76). This concept of time has become hegemonic; we are unable to avoid calendar time in our everyday lives, and the fragmentation of time that this implies, as we undertake various tasks and roles in a variety of locations. Knowing the time becomes necessary.

Sutton points out that photography has a role in this process of segmentation, by creating an emphasis on the importance of the instant: "It is the instantaneity of photography, albeit one that artificially presents time as granular rather than a fluid phenomenon, that provides the photograph with its images of time" (Sutton, 2009, p.59).

The stasis of photography emphasises this moment as a point in time (granular), rather than a fragment of a line of continuous temporal succession (fluid). It is in this way that photography is complicit in the modernist perspective of time, closely allied to the measurement of time as a series of segments. Sutton states “In modernity our ideas of time have coalesced around particular concepts of the moment. Photography’s division of time and space has been instrumental to this” (Sutton, 2009, p.5).

This has been augmented and used both by the photographic industry (for example, the Kodak moment, Instagram) and by photographic artists of the modernist period. The taking of a photograph hinges, technologically, on the ´correct` exposure, a process that creates a particular moment, as Henri-Cartier Bresson terms it, a decisive moment. These factors all place an emphasis on the staccato of chronometric time.

Through technological development, the potential time that it takes to expose a photograph has shortened to the point that the individual does not have the capacity to recognise the exposure as a process, rendering it instant as far as our temporal perception is concerned. This reading of the photograph as instant leaves out the processes leading up to and after the exposure, and, as Bergson points out: “However brief we suppose perception to be, it always occupies a certain duration, and involves, consequently, an effort of memory which prolongs, one into another, a plurality of moments” (Bergson, 2002a, p.116). In this case the photograph cannot be instantaneous, particularly as the individual not only takes out the camera (or phone) and prepares it to make an exposure, but he or she also experiences memories that endure from the moment around the exposure. There is also an actual image from the moment that acts as a further aid to memory. Bergson states, in fact, that the instant cannot exist:

> the part played by consciousness in external perception would be joined together, by the continuous thread of memory, instantaneous visions of the real. But, in fact, there is for us nothing that is instantaneous. In all that goes by that name there is already some work of memory (Bergson, 2002a, p.144).

In the 21st century context of both commercially and technologically driven instant gratification, it would appear that this is a difficult argument to sustain. The instant in this context means simply not having to wait until one can afford to buy something, or to wait for a computer to finish the process one has set it to do, rather than the impossibility of the instant event. In the context of this research it is the perception of the instant as a point in time that is refuted, following Bergson's assertion and applying it to practice.

In effect, photography suffers as a result of the speed of image capture. The process becomes obscure, or transparent, in the resulting image. This work has sought to bring process back into the photograph, echoing John Hilliard's desire "to identify and articulate the special character of the medium and to foreground it, rather than deploy it only as a convenient ´transparency `" (Hilliard, 2001, cited in Campany, 2003, p.282).

All five bodies of work in this research seek, by foregrounding the nature and processes of photography, to address this false instant. This has been achieved by slowing down and multiplying the capture process (*Ground Work* and *Hinterland*) as well as making both movement (*Space Between*) and the process of making (*Continuum* and *Flow Motion*) evident in the resulting works. Through these processes so called instants are prolonged into moments and then extended beyond each picture frame through the temporal narrativity of sequencing in each body of work.

<u>*Flow Motion*: Movement and stasis in photography</u>

Bergson argues that to align time with space through chronometric measurement creates a falsehood that breaks the continuity of time by differentiating between time periods, such as seconds, as instances or points on a line. However the division of time in this way is arbitrary and based on a mathematical measurement (one second) that can then be broken down into fractions of itself to infinity. Hence time as conceived by Bergson is better considered as a durational flow, the continuity of a line through space. What could be instants in this flow are not, as no matter how short the perception, it still occurs durationally and can also endure in our memory.

The moment in Bergson's theory of duration is certainly a more fitting way of describing what the photograph deals with and what the works in this research have investigated. This is not the decisive moment, a more important *point* in time than those preceding or following it, but the durational moment, one that is characterised by the continuation of affect, the continuous flow of time. It can be distinguished, or bracketed, by changes in the environment and by the intentions, actions and perceptive states of the individual. In photographic terms this has more in common with Bragaglia's intermovemental fractions[32] than it does with Cartier-Bresson's decisive moment.

In *Continuum* I have used the not quite seamless combination of a multiplicity of exposures to indicate the flow of time through extended and interwoven moments, from a relatively stationary position, only dealing with the movements of the head and eyes as they occur in durational perception. In the *Flow Motion* works this has been extended to the walking body. Walking is the fundamental form of motion for many species and, as Gibson points out: "Animals and people do in fact see the environment during locomotion, not just in the pauses between movements. They probably see better when moving than when stationary. The arrested image is only necessary for a photographic camera" (Gibson, 1986, p.197).

From the start, this project has been an attempt to resolve the issue of how photography can be used to interpret the visual perceptive experiences of walking, from the grid pieces dealt with in chapter one to the eventual resolution of this problem in the *Flow Motion* pieces. This has entailed following the linear patterns formed by the process of movement across the ground surface. This stretching out of the grid resulted in a number of pieces that followed ground views through the progress of the walk, either to and from sites or within sites themselves.

[32] See chapter three.

Fig. # 28 *Flow motion # 16* [33]

As in the example above, images have been butted together to follow the walk, roughly faithful to the sequence of the experience, but, like the grid works, these were ultimately unsuccessful, a conclusion reached when a version of the above piece was exhibited. There are two reasons for this: one is that the chronological and unilinear display of the work (see below) results in too literal an interpretation. The second reason is that, like the grid works (figs # 4 -6), each print operated as an entity on its own and was in conflict with the work as a whole. The work became too granular, to borrow from Sutton (2009, p.59) rather than fluid.

The resolution of this dilemma of how to deal with the motion of walking through the stasis of photography came about as the result of the processes that were simultaneously being developed in the *Continuum* series, particularly the *Standing Ground* pieces (figs # 28 & 29, plates # 60, 61 – 63 & 65).

After gathering the images for one of the *Track-way* pieces (fig # 10, plates # 40, 50 – 53, 59, 62 & 64), I noticed that my actions had left physical traces, altering the environment and leaving footprints in the muddy ground. I immediately saw this as a potential for further work, initially photographed this using much the same process as the *Continuum* pieces.

[33] A version of this piece was exhibited in the show Continuum at Avenue Gallery, University of Northampton, UK October 2014.

Fig # 29 *Standing Ground # 1*

This initial work reminded me of Keith Arnatt's *Self-Burial (Television Interference Project)* (Arnatt, 1969). A series of nine images that appear to document a progressive burial of Arnatt's body, from the point where he is standing above ground to the point where he is apparently completely buried. Although the performative aspect in Arnatt's piece is lacking in the above work (fig # 26), it did indicate the possibility of further inclusion of the body in subsequent pieces.

At this stage of the research I had started to include my own body in the artworks, particularly my legs and feet in the *Track-way* pieces. This was influenced by Gibson, who points out that our perception of the environment is foregrounded by our awareness of our own bodies: "The optical information to specify the self, including the head, body, arms, and hands, *accompanies* the optical information to specify the environment. The two sources of information coexist" (Gibson, 1986, p.116). As such I wished to bring this awareness of my body into the artwork, thereby visualising my embodiment in the environment.

After the above first *Standing Ground* piece I decided to return to the process based on photogrammetry used in the *Ground Work* series (see chapter two), but to incorporate the methods of the *Continuum* series, allowing errors to occur and remain evident, but also to leave traces of my body, resulting in the *Standing Ground* works that were eventually exhibited (fig 29, plates # 60, 61 – 63 & 65).

Fig 30 *Standing Ground #7*

This return to the human scaled aerial view was then extended forward through the walk in the *Flow Motion* series, to create linear works. Using digital compositing methods (developed whilst making the *Continuum* pieces) the granular staccato of the earlier walking pieces was resolved and translucency was also added, through in-camera multiple exposure and layering. This added an element of the transitory to the works, mimicking a flow of motion, a continuity through both time and space, in the resulting works (fig # 28).

Fig # 31 *Across #1*

In *Flow Motion* the location no longer matters, in the sense that the *where* of the image is less likely to arise as a question for the beholder of the artwork. The ´where` becomes the surface traversed, in this case a surface deliberately selected for it malleability as a metaphor for environmental and bodily simulacrum and change, as earth, water and body commingle in the images.

The *Flow Motion* series has much in common with the *Ground Work* series that was undertaken at the beginning of this research, but a comparison between them highlights two very different ways of describing the environment, although both deal with the bodily scaled aerial view and walking. While *Ground Work* describes space using graphic detail, it is ultimately static and lacking the mobility of the body, and the environment itself. The act of walking is not referred to directly, although it played a major part in the experience of the space. Here space simply *is* or *was* rather than constantly being, or becoming. Its stasis highlights that what is depicted is past-- from a past moment-- the element of change and the flow of time is absent. Change is alluded to metaphorically in the transitory nature of what is described in the image.

In contrast, the mutability of the ground, it's relation to time and to the role of the participant walker in the environment is brought to the fore in the *Flow Motion* works, for as Ingold points out, "To describe the properties of materials is to tell the stories of what happens to them as they flow, mix and mutate" (Ingold, 2011, p.30). The narrative of movement is alluded to in the ghostly

fragments of my feet, and the effect I have on the mud, the soft ground surface, is described through the change and dissonance in multiple exposure and image combination through time. The works extend the motion explicitly and with it the duration of the moment. This is only implicit in the *Ground Work* series, achieved through their intended scale (actual size) and the movements of the eyes in the process of viewing the works.

There are parallels here with the works of land artists Fulton and Long in the *Flow Motion* series, in that the act of walking is interpreted as an artistic process of connection to the environment. They have different responses and uses for photography, although they both use the cartographic mapping of walks as record, and Long uses mud in some of his gallery pieces. Fulton uses text both to explain and visually interpret walks in conjunction with photographs, particularly to highlight how the experiences cannot be communicated, as a statement of the act. Long uses photography to document his sculptures in association with walks. Ingold, discussing Long's use of photography, states "paradoxically, the very medium of photographic representation, while it affirms the work of art in the sight of others, wipes out the artistic intention that motivated its original production" (Ingold, 2012, p.16). *Flow Motion* addresses this by including the photographic process within the resulting image.

This incorporation of photography into the act of motion has also removed the need to alter the landscape. No alteration, sculptural or otherwise was thought necessary in any of these works (with the exception of the placing of ranging rods in some), even though viewers have thought this may have been the case (particularly the *Blue Land* series (fig # 18 plates # 43 & 57) or the *Shrine* images (plates # 56 & 69)). There are many forms in the landscape, signs of change often instigated by human actions, which can act as sculptural ready-mades and have been exploited as such in this project.

This amalgam of techniques derived from three bodies of work is an example of how the Rhizomatic approach to practice can successfully resolve difficult issues in visual research practice.

Having a number of concepts around a theme simultaneously applied through a variety of practices can lead to resolutions through the crossover of ideas and techniques.

Cycles of repetition

Repetition in the practice of site visits and photographic processes forms an underlying structure in this research. Repeating a photographic process almost always results in a new piece of work that is subtly different from earlier pieces. It offers the possibility of developing strategies further in small increments, rather than taking larger steps by conceptualising a new approach. Through this repetition a body of work is arrived at with nuanced differences of technique and content. It is also the beginning of the formation of a narrated body of work.

Repetition has not only been applied to techniques, but has also been used to investigate relationships to the sites under scrutiny. This has included a study of the processes of familiarisation, leading to the consideration of the site, not only as the place of investigation but also as the space of practice. This has involved cycles of return, repeated visits to the sites under scrutiny.

This methodology has led to a cyclical consideration of time as well as a durational one. The interest in cycles of action and repetition reflects the highly repetitive nature of our everyday lives, something that is deeply embedded in our nature. Saccadic rhythms are developed early in infancy, responding to daylight and darkness in sleep and wakefulness; weeks and months are repeated in the calendar. We create habitual lives based around actions performed repetitively. These develop in accordance with a complex series of habits built up through life that are multiple and can be astronomical, cultural, social or highly individualised, depending on the nature of the habit. It is through this process of habituation that we know our individual environments. As Merleau Ponty points out: “We must therefore avoid saying that our body is in space, or in time. It *inhabits* space and time” (Merleau-Ponty, 2002, p.161, emphasis in original). To in-habit the environment is to undertake processes of repetition within it, to repeat actions that then become habitual.

Fundamentally this habitual and cyclical structure of life is much older than the chronological measurement of time. In addition to an interest in archaeology, therefore, this work has been influenced by ideas of the imagined prehistoric and pre-modern world, when perceptions of time were more likely to be effected by the astronomical cycles that drive changes in daylight times, seasonality and climate, in relation to location. This understanding of time is not human-centric, but physical. It has no connection to the chronometric counting of days and years (the counting of cycles), but is more deeply rooted in a sense of return (the cycles themselves). The day returns to night, spring returns to spring.

Nomadism in many hunter gatherer cultures (past and present) follow these patterns of return, a result of the necessity to move through the seasons (particularly in the temperate zones) to follow resources and avoid climatic extremes for survival. Movements that would follow repeated cyclical patterns. A group would know from past experiences, learnt knowledge and ancestral belief systems when to go to a site that would yield seasonal food sources or provide shelter. This nomadism is reflected in the multi-site approach of this project, with cyclical repetition of visits, returning to known scenes to undertake practice.

With the advent of agriculture (c.10, 000 years ago in Europe) many populations became static, but were, and still are, for the relatively few of the population who still work on the land, wedded to seasonality, growing and gathering crops and practicing animal husbandry either for subsistence or as a business in accordance with the seasonal cycles of the planet. “The temporal return to similar places (of nomadism) now becomes the pure return of time in the same place, the repetition of a series of gestures” (Debord, 1977, chapter 5).

This constant return, to sites and processes in the case of nomadic cultures, or to processes and gestures in a static location in agriculture (planting and harvesting, or lambing for instance) suggests that prior to a chronological view of time (characteristic of the modernist and to some

extent, the post-modern periods), time was also viewed as a cycle of repetitions, a constant return that connects the society and the individual within it to the changing environment.

It is now no longer necessary for the majority of the world's human population to follow the cyclical patterns derived from environmental conditions. Urbanisation, industrialisation and technological innovation has moved people away from the rigours of directly living within the cycles of the planet in a rural environment. Prior to the development of these infrastructures there was a need for survival, of intimate knowledge of the environment. The loss of this need and its consequences is one of the motivations for this work.

By following a cyclical pattern of repetition in the devised strategy I have investigated the establishment of intimacy with the environments of study; this is a form of place learning (Gibson, 1986, p.198), of gaining familiarity with sites through repeated encounters and recognising both that which changes and the underlying characteristics of permanence, at least as it can be perceived as such at a human temporal scale. This knowledge forms the foundations of actions in the environment of interpretation via visualisation with photography. Changes are known and investigated in a rhythmical pattern of visits.

Time-lapse and the repetitive cycle

This has been developed through an investigation of time-lapse, by repeating the photography of scenes as described in chapter four. Time-lapse as a method is widely employed both commercially and artistically. It is usually associated with films like *Koyaanisqatsi: Life Out of Balance* (1982). In photography time-lapse has been experimented with by many who are concerned with the depiction of land, notably Jem Southam's *Rock Fall* series, where he uses time-lapse of tidal difference sparingly as a metaphor for geological change (Southam, 2010).

Time-lapse commonly operates by a comparison of change after periods of measured time have passed. In film this requires that the camera's position is maintained precisely. This exactitude has crossed into still photography, notably in the work *Sea Change* by Michael Marten (Marten and

Macfarlane, 2012) who, like Southam, also photographed the sea at high and low tide, creating works that show how this change can dramatically alter the way a landscape looks, to the point where it is difficult to recognise the similarities. It was not my intention to expose the chronometric concept of time through this repetition of spatial and temporal exactitude that Clive Scott refers to, stating; "Time-lapse photography […] makes the action of chronometric time available to perception" (Scott, 1999, p.166). This predominant use of time-lapse highlights the filmic narrative of sequencing by slowing down the succession and exposing what is normally absent in the moving image, the lapse between two or more still images. Slowing down is a characteristic of psychical, lived, time, something that is experienced, whereas the effect of time-lapse is usually to highlight measured time.

In this context time-lapse is used to investigate the cyclical nature of the experience of land in lived time, highlighting each visit to a scene in a cycle of visits characterised by absence in the intervening periods (absence and presence in a spatial sense, rather than a temporal sense). Neither space nor time are measured, for this is not how the environment is experienced and moved through. If this was to be an exclusively chronometric time-lapse project, then I would agree with Sutton's assertion that it would be too limiting "the time-lapse or timed exposure is reflective of the unfolding nature of time but also strangely limiting in its visual appraisal. The temporal ellipsis…defines the image as a discontinuous set" (Sutton, 2009, p.58). This discontinuity echoes the lack of fluidity in photographs of walks, a difficulty eventually overcome in the *Flow Motion* pieces (see above) that reflect on the durational perceptive experience of motion, as do the *Continuum* works.

Each artwork in the *Continuum* series is intended to contain a sense of durational flow within it, through the explicit compositing process, rather than relying on the sequencing of time-lapse pieces. Simultaneous viewing of the repeated scenes is avoided in presentation in order to avoid a chronometric rather than a fluid lived concept of time in the works. This would lead to a process of comparison that is likely to dominate other possible resonances, inhibiting other potential ways of

reading the works. The only occasion when simultaneous presentation is used directly is with two pieces about a tree-fall that are considerably different, and do not lead to the overpowering comparison (figs # 31 & 32, plates # 44 & 45). Here differences within the site itself, of position and composite construction, inhibit an overtly dominant comparative reading of the works. What the time-lapse image as a simultaneously viewed sequence also fails to achieve is an interpretation of the compaction of time between visits.

Fig # 32 *Tree-fall # 5* Version #1

1.59 pm - 2.24 pm

Fig # 33 *Tree-fall #5* Version #2

1:59 pm - 2:35 pm

Time compaction

When making a repeat visit to a site the intervening period between the ´now` of being present on the site and the ´then` of the earlier visits is compacted. This occurs as a result of encountering the site as a trigger for memory; all of the elements that are pre-reflectively picked up on, or recalled consciously as having been seen before, remind me of the last visit to the site. In effect, presence brings a freshness to remembrance that makes one psychically feel as if much less time has elapsed since the last visit than actually has. The past exists vividly in the present, to follow Bergson. This is reflected in my field notes at the time:

Time compacts again as I see the way to where I was last time I was here, flashes of memory and remembered images. Memories embody movement and effort as well as vision.[34] The trigger is the way up that I came down. I could meet myself here.

Extract from Field Notes January 2013

When a site has been visited many times, recall tends to favour the last visit, while earlier visits are overwritten in memory. This occurs on a practical level, as it is necessary to recall what the space was like last time, rather than a time before the last time, in order to be able to wayfind through the site. This is geographically specific, not ´site` specific in the way that I define the site. If I visit a part of the site I have not been to in a while, perhaps three to four visits ago, then it is that visit which will be recalled, the last time I was at that specific location. Therefore, on a single visit to a site there are potentially many pasts that can be recalled, depending on my movement through the environment. These memories are only those that correspond directly to the site, and the scenes and experiences within it. A specific re-encounter remembered repeatedly creates a cyclical experience that is enhanced by the repetition of tasks within the environment. Each time I revisit a scene I am also reminded of the artwork made, as well as my last visit, although I deliberately do not bring a print to view with me on a visit, preferring to rely exclusively on memory.[35]

The psychical time compaction caused by this specific recall varies with movement to different parts of the site and is a result of re-encounters and recollection. Both the site and I have experienced change in the intervening period. This is recognised as a difference from what is remembered, a discontinuity between the before and the now, hence I do not consider the site and scenes within it as identical. Rather it is experience renewed, overwritten as new in memory. Hence when re-making an image of a scene I prefer to consider it not as time-lapse in a traditional

[34] Just like the perceptive experiences that memory is interwoven with, then many memories are not just visual, but also aural and physical, an amalgam that is reflected in the perceptive experience.

[35] There are also further potential memories that influence the perceptive experience, not connected to the site, similar to those experienced on any other site whether the first visit or any subsequent ones. See chapter four for an investigation of the relationship of these kinds of memory to the making of artworks.

sense, but as a new encounter with the scene, a repetition but also a reinterpretation, not a reproduction for comparison.

Narrative

The repetitive cycles imbued within the practice of this project have strongly influenced the ways that this work is curated as a whole in its presentation to an audience. This applies to any site of discourse that this work appears within. It is also the reason why the work is conceived as best displayed in a gallery[36] and it is this setting that will be referred to here.

The experiences of a collective of artworks as they are normally encountered in a gallery is a cumulative gathering, a psychical filling up of affect, with one work leading onto and interacting with another, and all the other works in an exhibition. The build-up of affect is a product of retention, a succession through time of visual perception comingling with memory. This creates a meta-narrative across a body of works and can be partially controlled and developed to elicit specific responses and to restrict other less desirable responses (such as, in this case, an over-emphasis on the comparison between time-lapse pieces). Presence in a gallery is a moment of affect that cumulates as it endures in memory; it is therefore a durational moment stimulated by the works individually and collectively in the memory and imagination of each individual visiting the exhibition. This whole experience need not be chronological, in fact it is likely to have facets of multiple temporal lived experiences, one of which is radial, as Berger points out:

> normally photographs are used in a very unilinear way[…]Memory is not unilinear at all. Memory works radially, that is to say with an enormous number of associations all leading to the same event. If we want to put a photograph back into the context of experience […] we have to respect the laws of memory (Berger, 1997, p.46).

As well as this radial association --of the possibility of any number of memories cascading from a single (durational) event, that is, in this case, encountering a photograph-- there is also potential for both psychical and cyclical temporal experiences in the viewer. These can be augmented to an

[36] It is also conceived as being displayed in domestic settings where repeated viewing would be more likely than in a gallery, see the introduction for a fuller explanation.

extent, certainly intimated, in the ways that the work is collectively displayed by not creating a unilinear narrative, with a beginning, middle and end, but by seeking to disrupt the sequential experience.

This is initially achieved by giving the individual control over the order in which the works are viewed. In a gallery viewers are able to consider an initial affect and may be drawn to specific works intuitively and/ or make decisions on where to look and in what sequence to observe the work. When faced with a wall of artworks the individual may look at them as a whole, from a distance, and then move toward one artwork to look at it specifically. The viewer is then likely to move on to look at the adjacent image to the right or left, moving along the wall from one image to the next in succession, a succession that is inevitable regardless of the actual sequence of viewing.

What becomes important is the relative positioning of artworks. The intention is to interrupt the succession by taking the process of retention into account, by utilising memory of works previously seen to disrupt linear sequence by constantly reminding the viewer of scenes they have seen before in the exhibition, thereby adding a cyclical component to the cumulative effect of the exhibition. In *Continuum*, this is achieved by the display of time-lapse artworks in a non-sequential (i.e. they are not placed next to each other) and a non-chronological order (i.e. they are not arranged in the sequence of their making).

When *Continuum* is exhibited (plates # 85 - 100), works are displayed along a wall in a single line and printed at the same height in the majority of cases, forming the central presentation form, from which deviations in terms of size and groupings are developed in accordance with the restrictions and possibilities of the space. Each repeated scene is depicted between one and three times within this framework. Each artwork is positioned on a wall away from its partner piece or pieces in such a way that direct comparison is either not possible, or only possible at a distance (plate # 88) (with the exception of plate # 44 and 45, mentioned above). The intention is to create an experience that mimics the experiences of encountering different environments through time.

This is achieved by an activation of memory in the viewer. When moving around the gallery space, the visitor will encounter a further depiction of a scene they have seen elsewhere that will have been partially retained in their visual memory. Specific invariants in each depiction of the scene will act as triggers for recognition and comparisons will then be made. The viewer will be unable to make direct, simultaneous visual comparisons, but would either work from memory alone, or actively move back to the depiction of the scene encountered earlier. This creates a cyclical pattern of return in the viewer's experience of the exhibition that mimics the actual process of repeatedly revisiting the sites of the scenes. Key to this is the gap created by spacing the works apart, which is filled with other artworks that are also repetitions of scenes. These serve to fill the temporal ellipsis between the time-lapse works and creates a further layering of cycles continuously returning upon themselves in the memories retained by the viewer of the works and their experience moving around the exhibition. The actual sequence of making the work is also disrupted, as works are not shown in chronological order, but on a basis of visual coherence between different scenes in a further narrativity across the body of work. This places emphasis not on the sequences of change, but rather the experience of the environment as changing constantly, as a continuum of change.

It has never been the intention to control precisely the sequence or time spent viewing these works; any individual should be free to view an exhibition in any way they wish. However, the curatorial arrangement of this project is intended to facilitate a cyclical and fictionalised experience of the woodland environment as a generic space by avoiding chronological sequences and direct geographical references in a spatial-temporal succession.

Each image stands alone as an autonomous and discreet entity, it has its own narratives that are facilitated with the breaks, distortions and repetitions indicative of the durative processes of making. These create the potential for oscillation in the viewing experience, between a consideration of the content of the work and the anomalies of the process of their construction. It is by these means that a consideration of the temporal nature of the environments that are depicted is elucidated.

It is hoped that this careful augmentation of the work and its curation might result in a slowing down of the visitors' engagement with the work. This quote from the comments book of the exhibition gives an indication of this:

> As I looked at the photographs I appreciated that they weren't simple landscapes but the subtle changes became apparent that had occurred over time. I spent ages looking and appreciating and seeing more and more ´movement` particularly movement in the trees and tree falls which you could walk by and miss. It has taught me to spend longer in galleries!!
>
> Comment from visitors' book, Avenue Gallery, University of Northampton 6th November 2014 by Maxine Little

Conclusion

In Flux

An investigation through photography of the temporality of space and place in relation to the changing environment.

This practice as research doctoral project was initiated with a proposal that outlined the aim and objectives, methods and methodology of this research. It is worth considering these original ideas in order to conclude the findings of this research and to identify developments achieved and the contributions to new knowledge that have been gained as a result.

The following text is taken from this proposal in terms of the aim and objectives. As with any research project, these initial ideas have been developed and answers to some of the questions that have arisen form this beginning formulated and answered. This conclusion will outline this process and its outcomes.

Nature and Us: the space between

A study of emerging and transient natural environments and our relationships to them through the medium of photography.

This study aims to explore through photography new ways of creatively interpreting the relationships between individuals and the 'natural' world in specific local geographic landscapes and environments. The research attempts to move beyond documentary photographic records of landscape environments, toward an engagement with the processes involved in developing human and personal relationships to places over time. To progress understanding of the interrelated nature of the issues and to respond practically to this process, the study will take an interdisciplinary approach to research.

The first objective is to study specific marginal unmanaged environments and

> spaces in which the seasonal growth and decay of flora and fauna is manifested in a largely uncontrolled way. In most cases these sites are undervalued, whether as part of a larger geographical space or as an ecological environment.
>
> The second objective is to question and revise the cultural and social values that are placed on these chaotic environments as 'islands' within the UK, where the majority of land is demarcated for specific activity, which is highly controlled and managed.
>
> Thirdly, the research will explore and develop interpretations that go beyond the bounds of conventional photographic practice. Innovative strategies of practice will be explored in the production of artworks; these will draw on the new digital technologies and will involve crossing between and hybridisation of disciplines.

Extract from the original proposal 2011.

The nature/culture divide

The original title for this thesis, *Nature and Us; the space between* alludes to the idea that there is some separation between the natural world and the world of humanity, the cultural world. During the course of this research the dualistic division between nature and culture was found to be problematic when considering the photographic interpretation of land. It gives rise to the sense that the artist/photographer of the environment is separate from it, a passive observer, rather than an individual who is an active part of the environment and has impacts upon it. The opposition between humanity and the rest of the life on the planet implied by a nature/culture divide is also not inherently helpful in understanding how the individual is connected to his or her environment, or in the use photography as an interpretive tool of this, the experience of inhabiting land.

Rather than concentrating on the natural and its relationship to the human, the concept of the relationships of the individual to the environment as a whole, both cultural and natural, became a key component of this research. This was identified as a key contemporary question in terms of a

growing sense of individual and social disconnection from much of the actual physical environment and responsibilities for it as outlined at the beginning of chapter two. Hence the sites of study were selected in terms of their marginality to the experiences of the majority of the populations that inhabited the region of research (see chapter three) in the practice of everyday life. These rural spaces are not frequently visited and very rarely identified as sites of everyday activity for the majority, despite the fact that these types of marginal and rural sites are common in the region of study.

This sense of disconnection was identified as giving rise to a sense of collective anxiety that is also connected to environmental change and the detrimental impacts of human actions on the planet. Hence this research sought to address this by researching how the individual relates to the changing environment occupied experientially, not as an observer of either a natural or cultural landscape, but as part of both a natural and cultural space, and interpreting this visually, through photography.

Temporalizing space and place

As a consequence of this re-framing the question became, how, both practically and theoretically, can this shift away from a culture/nature dualism be made in terms of the photographic interpretation of the environment?

In theoretical terms it was in the work of Ingold (2000) that a solution was found (see chapter 2, p.47), that by temporalizing landscape, then a culture/nature dualism can be avoided by considering the environment as constantly changing, both physically in actuality and in terms of how the individual interacts with it and remembers it over time. Hence this research shifted toward a self-reflexive understanding of land within a temporal framework and the title was changed to *In Flux; Land, Photography and Temporality* to reflect this change in emphasis.

In Ingold's opinion, it is the discipline of archaeology that is best situated to be able to achieve this temporalizing process, as it is both a physical activity that is intimately involved with the land and it

has a temporal dimension. In practice archaeology still tends to be primarily culturally focused, although there is some interest in understanding the ecological as well as the cultural environment of the past, most archaeological projects tend to have not bridged the culture/nature divide as yet and are still heavily biased to toward the study of past human activities exclusively.

Although it was helpful to identify the archaeological as a key factor in temporalizing environmental study through photography, particularly given the influence it tacitly has on my practice due to personal experience, and of also providing the basis of the photographic methods employed and investigated in this project; a wholly archaeological emphasis would have still had the likelihood of a bias toward the cultural. So in terms of practice, the solution lay in not identifying the elements of interest as cultural or natural, as archaeological or ecological, but in seeking out change. This is inherently both cultural and natural in many cases, as the impacts of human and non-human activities impact upon each other and interact in forms of destruction and decay, construction and growth and so on.

In this research I have extensively utilized the concepts of space and place within this temporal framework of change, following on from Massey's emphasis on the event in our conceptions of place; "Places not as points on maps, but as integrations of space and time; as *spatio-temporal* events" (Massey, 2005, p.130, emphasis in original). I have also applied this to a conception of space as the perceptual environment of the individual that is also understood as an ongoing series of events experienced through the mechanisms of perception. These events that form both space and place have, by nature, an openness to multiple interpretation simultaneously and as events, they are likely to change through time. In the case of space and place, then the likelihood is that an environment considered through time is likely to shift from being understood as a space of perception and possibility to a defined, but changing, place in the experiences of those encountering them.

When a time span is considered that is longer than it is possible for an individual to experience, then place and space are likely to alternate with changing occupancy and use of different societies and even species. A location is an inhabited place that becomes an uninhabited space over time and can then become a re-populated place and so on. These changes become apparent on the archaeological site, where the materiality of several pasts are made simultaneous by revelation through excavation. Multiple pasts exist in the present and changes from place to space and back again can be observed and is represented by the evidence of temporal phases of use and non-use, in human and non-human contexts. This is perhaps what Ingold means when referring to archaeology as being ideally positioned to interpret a temporalized landscape, combined with the idea that to know an environment temporally is to dwell in it, to inhabit it and to undertake tasks within it, like excavating, or making artworks.

This concept of multiple pasts existing simultaneously and only in the present echoes the philosophy of Bergson (see chapter five) and in this research I have used photography to communicate this concept of a temporal environment to an audience. The multiple pasts of numerous single image captures are presented together in single artworks simultaneously and symbolically depicting the passage of time in the each scene, a factor that is enhanced by referring to the length of time passed in the captions for each artwork. Presented together, as a body of works, a further layer of time is added as each scene represents a temporal phase in the environment as experienced (a sign of the presence of the artist/maker of the work) and/or the act of looking at the artwork for the viewer. This is achieved through repetition of scene depiction, a version of time-lapse that through controlled display, mimics the temporal experiences of presence and absence and of memory recall.

In this research I have taken this conceptualisation of the land as temporal and invested it in photographic artworks in order to investigate human individual relationships to the changing environment primarily through the mechanisms of visual perception. This has been achieved through the use of compositing and repetition to create a generic space, in the case of the

Continuum works, that is a fictional woodland, which is then presented together as artefacts in an actual place, for instance, a gallery. In the case of an exhibition, the event that forms place in this work becomes the visit to the gallery.

The representation of place

This interpretation of space and place within the temporal framework has implications for the theory of representation of both place and space through photography. In terms of place there is certainly no shortage of a wide variety of positions, from Fulton (2006) and Lippard's (1997) differences between the experience of place and the experience of the artwork about the place and the impossibilities of the representation of experience, to Well's (2011) comment that "space is rendered into place through visual representation" (Wells 2011 p. 3, see the introduction), to the idea that the only thing that a photograph can represent is space and volume, and that all else is brought to the experience of viewing through the context of presentation, and the memories, experiences and knowledge of the viewer according to Legmagny (see p. 63 of chapter two).

Whether or not place can be represented, that is depicted faithfully in visual form in the case of photography, depends upon the definition of place, rather than on the meaning of representation. In this research place has been defined, in accordance with Massey's conception, as a series of spatio-temporal events linked to a location (otherwise it would not be a place, but a series of events only). As such it is fluid, subject to change and therefore difficult to represent singly, with the stasis of photography (or a drawing, or painting for that matter) when it is experienced and sensed multiply through time. This is even the case when, by using composite photographic techniques the temporal experiences of place are investigated, as is the case here. Massey states;

> This is an understanding of place - as open […], as woven together out of ongoing stories, as a moment within power-geometries, as a particular constellation within the wider topographies of space, and as in process, as an unfinished business (Massey 2005, p. 131)

As an unfinished business, the direct representation of place is therefore limited. At best a photograph is a trace or fragment of experience and therefore only a very partial representation of place.

Photographs do, though, function as a part of the overall process of place-learning on a cultural level. They can only do this when functioning with a wide variety of other media, including the visual, audio, the written and so on (for example, Hanson's *Waste Land* (1997)) and when, importantly, considered as part of the temporal continuum. They also would need to be identified, hence many landscape photographs have their place names in the title, as well as the date it was made. All this information would ideally be placed in some kind of an archive, for it to fully function on a cultural level, but need not necessarily be. Photographs of environments have a role in the constantly changing identities of the places they depict as partial fragmentary representations in the overall knowledge that forms the sense of place for the individual or society encountering or researching them, they become part of an ongoing mediation about our understandings and senses of places. They do not faithfully represent place in isolation, but only as part of a broader body of material that is constantly evolving, as is the site itself.

Hence when a geographer, an archaeologist, or an ecologist uses a photograph to illustrate a book, article or report, then the photograph does represent place, albeit partially. But a photograph intrinsically isolated from any further information that augments it does not alone represent place, for it cannot be universally understood as being specifically faithful to the place it depicts in the eyes of the beholder. The senses of the places that we encounter are both subjective and constantly changing, therefore the viewer of a photograph of a specific place will have needed to have been to the place *and* to make the specific connection to it in their memory, to re-cognise it as somewhere they have been, for the photograph to act as a representation of place, for them.

As it is most unlikely that the majority of those encountering the artworks in this project have been to the socially marginal unfrequented places that acted as the source for this research, then there

was therefore no reason to be faithful to the specific sense of place as it is experienced when making these works. This is even the case when it is the process of making that forms that sense in the individual/artist through place learning. Hence none of the cultural indicators of place in a conventional sense, such as place names, are included in this work. There was no attempt to document the specific identities of each place through photographic depiction. In the context of the exhibition no further information about the sites is given to the viewer beyond titles that allude to the element in the image that instigated the work and the time it took to make it in the environment. Similarly the artist's statement (at the back of the digital archive on the disc in appendix 1), does not refer to the locations of the scenes depicted.

Rather this work sought to evoke relational interpretations of the environment as a generic space, allowing and provoking the viewer to consider their own relations to the kinds of spaces depicted collectively, through memory, affect and imagination. This is a different kind of cultural function that the photographic artwork can perform to that of the representation of place, it becomes an evocation of space, allowing for the multiplicities of interpretation inherent in the concept of space, creating an openness for the imagination of the beholder to act within.

In the bodies of work presented here, this capacity is used to investigate changing rural marginal spaces that are infrequently and only temporarily visited, whereas these sites may have been known and worked in the past they are now largely vacated. This is as a result of shifting population demographics, from a rural to an urban life that is increasingly transient and multi-centered for many. This is caused by technological industrialization and most recently compounded by the rise of digital realities, where life is lived through the screen on a variety of devices.

This work re-visits sites that are becoming marginalised and outside the realms of everyday experience as lived-in places to re-invest value and status in these margins through photography, not to identify them as places, but to ask the viewer to consider them as changing spaces that have both cultural and ecological value and are under threat as a result of their marginalisation, for if no

one knows and cares for them then when they are altered and degraded for economic gain no one will object to their degradation. This is the foundation of the political motivation of the selection of sites as a subject of analysis; the sites are then used as the basis of an investigation of the generic relationships of the individual to the environment, as this relationship is important if the sites in question are the kinds of sites that we are losing our connection to, simply by no longer inhabiting them. In the course of research these sites have become the scenes of experimentation into the perceptive mechanisms of this relationship and a key factor in this and the acts of viewing the resulting artworks is the role of memory and it is this that I wish to turn to now.

Memory

As the role of memory in photographic discourse, and the role of photography as a tool of memory in contemporary culture is a vast subject, this research has concentrated on the role of memory in environmental perception and its implications in the acts of making and viewing artworks.

In the course of this research it was increasingly evident that memory plays vital roles in all aspects of environmental perception, form simply applying learnt knowledge to the understanding of the environment pre-reflectively; to the relatively temporary forms of retention that form our continuous knowledge of the environment we are present in and move around; to the impact of long term memory recall as a result of encountering stimulus in the form of identifying elements of interest.

Certain conclusions can be drawn from this research regarding these as follows;

Long term memory recall

Having identified the intuitive method as outlined by Bergson and Deleuze as defining the interaction between memory and the acts of making works, it became clear that although memory was a key motivator in the decision to make works, these memories are not directly transferable through the artwork to the viewer. What may be occurring is that the intensity and effort of the creative process constitutes a transformation through intention that De Certeau describes as

metaphorical (see chapter four). This could be described as the abstraction, not only of memories, but also of the stimulus for those memories in the environment, when it is depicted. This in turn may offer the viewer, if receptive to it, their own, different recollections from the re-interpretation of that stimulus through visualisation with composite photography, in this case. This connection, between environment, individual recollection and imagination, metaphorical abstraction and communication to an audience is an interesting area of possible further research. This would involve the analysis of viewers responses to artworks made through the intuitive method that are motivated by recollection.

Again drawing on the work of De Certeau, memories recalled can act as disruptions to the individuals experience and sense of place, when actually in an environment and when viewing an artwork depicting an environment, creating a metaphorical space of abstraction and imagination. In viewing an artwork this leads the viewer away from the question of *where* the image was made, its origins, into what the image means and evokes within the individual through memory and imagination. In this work this effect has been enhanced by deliberately not answering the question where are these images made? Leaving it instead to be speculated upon, a process that will encourage recollections of similar places the viewer has encountered. Thereby broadening the potential impact of this work as a generic meditation on the changing relationships of the individual to the environment.

A further consideration of the characteristics of long term memory recall that has impacted on this project is its effect on the experience of lived time, in particular with reference to the viewing of a body of work, but again, also in the experience of the environment in actuality. Berger points out that memory does not act in a unilinear way, but is in his terms, radial, that is memory recall radiates out from one event, the encounter with a stimuli. What can be inferred from this is that memory recall does not respect the chronology of successional time, at least in terms of the order of recollection, an individual does not recollect in the order that past events occurred, but are random, often simultaneous and can merge together. What this tends to omit is that recollection

occurs in actual, astronomical, time and is by nature unavoidably successional, for as well as recall occurring in accordance with stimuli, it can also cascade in succession from one memory to another and co-mingle with the imagination of the individual, as the example of my memories of excavating tree bowls and the influence that this had on making the *tree fall* works illustrates in chapter four.

Retention

Berger's inference is that narratives in photographic series can be and are better considered as multiple, simultaneous and also cyclical, to reflect on the relationships that photography has to memory and it is this interpretation that has been applied here. This is achieved by exploiting the retentive capacities of a viewer of an exhibition through a curation that deliberately disrupts the chronologies of making and the geographic space of the region under scrutiny (see chapter five). The individual is encouraged by the positioning of works to engage in acts of memory recall and comparison through retention that mimic actual experiences of visiting and moving between sites over time.

Movement

In this research, both memory and movement have been taken into account as strong indicators of environmental change as it is experienced by the individual; as movement and memory together form the basis of environmental perception for the individual.

These factors have be incorporated into the photographic artworks of this project both symbolically and metaphorically through the use of camera movements, multiple compositing techniques and repetition, alluding to the site as not fixed and static, as a single traditional landscape image might, but by allowing the signs of the processes of change inherent in the making of these works visually apparent. Through this the image is invested with the imprints of multiple temporal positions that lead in turn to a series of potential oscillations between considerations of the depicted contents of the images and their means of construction (see also below, Contributions

to New Knowledge). Central to this is an interpretation of movement, both within the environment and the individual, whose movements augment his or her environmental perceptions.

This dual emphasis, on memory and movement, functions to address the interpretation of the environment as a site of constant change through photography, for change is instigated through a movement of one kind or another, be it ephemeral or cataclysmic in scale. It is noticed as different from what we have known before. Movement is at the core of our perceptual understanding of change, for along with sound, itself a product of movement through friction and vibration, we would not know the environment as a temporal space, or even an environment at all. “A wholly invariant environment, unchanging in all parts and motionless, would be completely rigid and obviously no longer an environment” (Gibson, 1986, p.14).

Movement occurs across space and through time. As practice has shown, space needs to be taken into account when considering the role of the temporal in the photographic interpretation of the environment, for it is by movement through space and in time that the processes of inhabitation occur that form relationships with and connections to land.

In *Time and Free Will*, Henri Bergson (2002e, p.57-94) makes a division between time and space, associating the measurement of time (clock or calendar time) with movement through space. He eschews space in relation to time on this basis, preferring a fluid, durational, interpretation of time separated from space. In the context of this research, this is problematic, for one of the conclusions drawn from this project is that, in a consideration of temporality of the environment through visualisation, space and time both need to be taken into consideration equally. This is echoed by Massey and Ricoeur who both identify relationships between time and space in reference to Bergson:

Ricoeur states; “There is no confusion here between space and time, contrary to what Bergson thought, but movement from the intuition (unobservable as such) of time to the representation of a determined time” (Ricoeur, 1990, p.55).

Massey states, “Bergson’s overwhelming concern with time, and his desire to argue for its openness, turned out to have devastating consequences for the way he conceptualised space. This has often been attributed to a classic (modernist?) prioritisation of time” (Massey, 2005, p.21).

It is this sense of openness, from both Bergson and Massey, of conceptualisations of both time and space together, that has provided a key to the interpretation of environmental change through photography.

Time

What Bergson rightly took issue with was the measurement of time as a false segmentation, something that photography is described as being complicit with, as Sutton points out (2009, p.5). When this is applied to the photographic interpretation of land then the same could said to be true of space; namely that the measurement of space, in the form of cartography and through photography, particularly the aerial view, is a form of modernist segmentation of space. The use of photography as a record in archaeology illustrates that it is a poor tool of measurement, requiring further supplementary information to elucidate the intended meanings and interpretations on an empirical level. Also, once measured, the space becomes defined and closed to further interpretations, it implies it is resolved and categorised, leaving little room for the imagination. [37]

Space, in this research, has been interpreted as open in accordance with Massey’s conception: “we understand space as the sphere of the possibility of the existence of multiplicity in the sense of contemporaneous plurality; as a sphere in which distinct trajectories coexist; as the sphere of coexisiting heterogeneity” (Massey, 2005, p.9). For this openness to be considered through photography then space must be thought of as existing in time, as constantly becoming and changing.

[37] The rejection of the measurements of both space and time through photography in this project is why the ranging rods are occasionally placed in scenes and why they are broken or distorted; this alludes to the inability of the photograph to record with exactitude.

Therefore, the opening up of both time (memory) and space (movement) as multiple and simultaneously plural in their possible interpretations can be more appropriately applied to photography of the environment as a changing entity, through a consideration of how movement can be interpreted. This led this research away from any sense of documentation or documentary, toward an abstraction of land that investigated and interpreted the perceptual experiences of being embodied in the spaces of the environment through time.

This work has created various illusions of space through both pictorial and human-scaled aerial viewpoints. It has also used the stasis of photography to create various illusions of time through the incorporation of movement and multiple viewpoint compositing. Each individual piece is also created as a meditation on the lived experience of time and space, specifically on the nature of change that characterises our understanding of the temporal, particularly when considering the environment as a space that is inhabited and experienced through perception.

Contributions of new knowledge

There are two contributions to new knowledge that have arisen from this research that can be outlined as follows;

Photographic compositing and visual perception

The first relates to the spatiotopic fusion hypothesis and the process of photographic compositing. If as Henderson asserts this hypothesis has been disproved (see chapter one, p. 35), and that the mind does not composite visual memories together to form its visualisation of the environment, then the photographic composting process does not mimic the way that the individual perceives it. Rather the evidence suggests that visual information is constantly being undated by reference to the environment (see also chapter one p.35) and that the eyes do not act as devices that record visual memories in the way that a camera records images. Instead the eyes act as conduits of a continuous durational flow of visual information to the mind. Therefore photographic compositing is not creating a vision of the world that mirrors its actual perception, for the human mind does not

composite visual memories to form its perception of the environment. Compositing can, though, be used to depict space photographically in new ways (particularly via digital combination) and to infer symbolically to the temporal durative nature of perception, providing some evidence of the process is manifested in the works, as is the case in this research.

The durational image

This brings me to the second contribution of new knowledge. This research has considered the nature of the photograph in relation to the durational perception of the environment as temporally fluid, rather than a staccato of instants or moments in accordance with Bergson's theories of temporal perception. A central theme of this research has been to overcome this staccato implied by the still, single viewpoint photograph.

I wish now to turn my attention to the interpretation of the photograph as durative, for as photographs exist, they must also exist in the actuality of time as they are perceived; for as Peter Wollen states, "The moment captured in the image is of near-zero duration and located in an ever-receding ´then`. At the same time, the spectator's ´now`, the moment of looking at the image, has no fixed duration" (Wollen, 2003, p.218). Photography does not freeze time, nor does it record an instant. It creates a depiction of movement stilled, presented in a form that is in itself subject to change and movement. In print form, as is the case here, the beholder of the artwork controls the duration of their engagement with the work and can return to viewing it at a later date. In this sense a photograph endures through time and changes accordingly.

Damien Sutton (2009, p.156) refers to Cindy Sherman's *Untitled Film Stills* as examples of durational images. In his concept of the crystal image, drawn from Deleuze's interpretations of cinema, this durational quality is derived from the fact that the viewer is unable to fix on a single interpretation of the image, and is likely to oscillate between interpretations, through layers of meanings in the sense that the image is ambiguous, having more than one possible interpretation.

It is made durational through the viewer's inability to fix on a single meaning. Many of the works in this project, such as the *Blue Land* works, (plates # 43 & 57) operate in this way.

There is also another, new, kind of durational image at work in this research. This is the result of another form of oscillation within the artworks, particularly those in the *Continuum* series and also in the *Flow Motion* series, caused by the compositing process being made evident. When a viewer encounters one of these works they may be drawn to observe the scene as a whole, considering the main element of interest in the scene such as a cage or a tree-fall, and then on closer inspection notice further elements of interest nested within the scene as a whole. They are likely also to notice that there are digital anomalies --traces of the compositing process and changes that occurred during image captures-- as well as details more conventionally depicted. This sets up a further oscillation between considering the artwork as either depiction or process; as space or event. Through this variation the durational nature of the works' construction is elucidated and, metaphorically, the durational nature of the lived experience of the environment is mimicked in the experience of viewing. Similarly the beholder cannot fix conclusively on either the interests of the scene or the anomalies of its construction and oscillate between them.

The originality of this work also lies in its application of new digital technologies to the concept of change in the environment by interpreting space in lived, or phenomenological time, as opposed to representing space measured chronometrically and chronologically in calendar time as place. Much photography that takes the temporal into consideration relies on the chronology of calendar time, using techniques like re-photography, chronologically presented and simultaneously viewed time-lapse, and photographic collage using overlapping prints. My work uses digital computation, particularly automated processes, to combine image files together in an immaterial, virtual, form that are then printed as artefacts, materialised for wall display. By manipulating multiple images together in their virtual state it is possible to blur the boundaries between each specific image capture and to control the extent that the process of the making of the artwork is made explicit to the viewer.

In conventional photographic collage, the prints always remain individual when presented in an artwork, referring to their specific moment of origination in a staccato of moments, to chronometric calendar time. In contrast, when this combination is achieved via digital means, without the materiality of the prints, it is possible to break these distinctions between moments, between individual image captures, to the point when it is not clear what an individual capture is in a finished work. This variability of the ability of the technology to render these combinations can then be controlled to allude to the passage of time in space as a durational flow, through multiple moments and multiple viewpoints. This digital technology allows for more subtlety and variation in the possible interpretations of the environment through photography, of which the bodies of work that constitute this research are examples. This work successfully blurs the boundaries between the environment as an entity and the environment as an event through this process.

Through these techniques I have investigated the experience of the changing environment as both cyclical and psychical, acknowledging the durational flow and constant fluidity of space experienced through time. This has been achieved through various forms of abstraction such as blurring, distortion, repetition and disruptions in the continuity of the artworks. The artworks are also used collectively to create cyclical narratives through curatorial structures that use and allude to the nature of memory retention, both in the field as part of the processes of making and in the viewing of the artworks. In this sense this work has established new forms of durational images.

Implications of this research

This methodology highlights the importance of elucidating the processes involved in the entire undertaking of practice as research through photography, namely that a self-reflexive and post-processual approach, to borrow from archaeology, to contemporary art projects with photography benefits from taking the distinctiveness of the medium into account, as one that by its nature tends to make process transparent, often to its detriment. This includes considerations about how photography depicts space and time. Such an approach need not be technologically specific, for the

implications of foregrounding the processes of making in photography could be applied to many forms of the medium and not just digital technologies.

My final reflection on the results of this research by practice is that it is possibly the lack of consideration of process in photography that the discipline of phenomenology, the philosophy of the senses, has been only belatedly applied to photography to elucidate further interpretations of how we relate to and engage with the environment and others within it in general. This research makes a beginning. There is certainly further scope for a closer alignment between phenomenology and lens-based media than has been practiced to date.

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