The Photograph as Haptic and Virtual Object: Realms of Ephemeral Sensation and Material Objecthood

Volume One

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Dedication

This PhD by Project is dedicated to my parents Bill and Bet. They instilled in me the importance and preciousness of education, encouraging me to see learning as an essential part of how we live our lives.

Abstract

The Photograph as Haptic and Virtual Object: Realms of Ephemeral Sensation and Material Objecthood, comprises practice-led research evaluating the dimensional qualities and objecthood of the photograph in light of recent technological developments and philosophical discourse. The project appraises tensions between the object/subject placed in front of the camera apparatus to be photographed, and the photograph as representative of abstract space, abstraction produces a space for the viewer to enter into the image.

Through a combination of arts practice and accompanying text the research investigates what a photograph can be in hybrid form, querying the thingness of the medium through technological convergence. The artwork produced contributes to an examination of the dimensional qualities of print, rousing in the viewer a desire to touch the artefact.

Intrinsic to this study is an investigation into the history of photography and its pre-history (1790-1836). Contemplating the material and representational charge the photographic medium has to transcend the history of analogue, and seep into the virtual. The research is informed by key texts on photography by Roland Barthes, Geoffrey Batchen, Jean Baudrillard, Elizabeth Edwards, Lyle Rexer and Marina Warner, and on the phenomenon of landscape and nature with reference to Tim Ingold and John Wylie. Rather than presenting the distant perspective and spectacle of the view or *scape*, the work presents an interpretation of being *in (and* passing through) landscape. Rather than looking *at* landscape, a subjective perspective of embodied experience of place is offered. Source material is the landscape of East Scotland, and photographic collections held in archives at V&A, London (collections previously held at National Media Museum, Bradford), Grenna Museum Polar Centre, Sweden and Harry Ransom Center, Austin, Texas.

Through focussing on three bodies of practice-research, *Glass Landscapes* (2014-15), *An Expedition* (2015-18) and *Neither Here nor There* (2017-20) each invite a search for place through the photographic act, beginning and ending with landscape. Drawing from nineteenth century proto photographers the research is further informed by contemporary photography exhibitions - *Shadow Catchers* (2010, V&A London, curator Martin Barnes), *What Is a Photograph?* (2014, ICP, New York, curator Carol Squiers), *Emanation: The Art of Cameraless Photography* (2015, Govett-Brewster *Art* Gallery, New Zealand, curator Geoffrey Batchen) and *Light, Paper, Process: Reinventing Photography* (2015, J. Paul Getty Museum, Los Angeles, curator Virginia Heckert).

The artist's methodology as maker (both my own and others) is at the forefront of this research. Deliberating on a compulsion to create interpretations of landscape in abstract form, new insights into representations of place are presented through the material and temporal qualities of the medium.

The key research question of this PhD is:

- How can the imprint of the maker reposition photography's connectivity to the referent?

Acknowledgement

The completion of this PhD was both a challenge and delight. A seven-year period of research interrupted by personal loss and a global pandemic.

I would like to begin by thanking my Supervisors Dr Nicky Bird and Dr Jim Harold, for their willingness to take this journey with me. Their positive spirit and enthusiasm for this PhD by Research Project will never be forgotten, our conversations were intense, insightful, uplifting, and on many occasions, good fun. I would also like to thank Michael Mersinis for his support during the early stages of my studies along with thanks to the GSA PhD student community.

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My thanks to SGSAH for giving me the opportunity to undertake my residency at Dundee Contemporary Arts (DCA) in 2017, and to Beth Bate Director of DCA, for her support. To Annis Fitzhugh the Director of Fine Print Studio at DCA, who so generously shared her incredible knowledge and expertise of contemporary printmaking and managed to make me think like a printmaker.

Finally, an abundance of thanks to my Family, John, Greta, Olwyn and Velvet, their continued support, love, patience, kindness, and goodwill was inexhaustible, motivating me on to complete this PhD by Research Project.

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Chapter One

Introduction

To see the view, I close my eyes …

> I have a sense of something familiar, this terrain although elusive it is known to me. Immersed in this landscape, fabricated purely by my mind's eye, it is internal, eternal and unfathomable, this visceral view is compelling. I am possessed by the extent of possibilities, of its depth and of its density.[1]

1.1 Introduction

Through its two volumes, this PhD investigates hybrid interdisciplinary practice-research developing original methodologies to expand the possibilities for photographic print. Concentrating on fostering a greater understanding of what has been a determining aspect of the photograph, (its object-ness).

The exploration of *objectness* invites investigation into the haptic qualities of printed matter, experienced by maker and viewer of the artefact. In this thesis through historical and technological discourse, connections between photography, printmaking and painting will be explored. The aim of the research is to fully exploit the tacit capabilities of materials and through this process extend practice-research within the Fine Art discipline.

The structure of Volume One takes the form of reflections on the practice-research through chapters with complimentary methodology sketches. The overarching premise to the methodology of the PhD has been a hybrid process. Reflecting on the potential of the photographic referent through Roland Barthes's seminal text Camera Lucida and Jean Baudrillard's theory on the absence of latency in digital photography, with Geoffrey Batchen's evaluation of the referent through early experiments in the history of photography (specifically cameraless) bringing to the fore the material and tacit qualities of the medium. This research project explored through blended experimentation of traditional analogue and digital technologies, introduces new hybrid practices.

[1] Jacqueline Butler conference paper: "To See the View I Close my Eyes…" presented at *Symposium: Imagination: Diverse Approaches & Perspectives,* Leeds Beckett University, (2017).

The methodology sketches link to the progressive new knowledge this research brings to fine art practice, through a series of practice-led experiments to expand the potential of photographic print through interdisciplinary discourse. Exploring the nuances of the hybrid process to making art raises a key research question:

How can the imprint of the maker reposition photography's connectivity to the referent?

Through the process of developing the research two supporting questions also arise:

How can the synthesis between analogue photography and digital image capture extend the visual and conceptual possibilities of evocations of landscape, both real and imagined?

How can technological convergence advance the field of cameraless photography?

Each chapter utilizing the body of work to frame philosophical reflections around the following reoccurring themes:

Place; both real and imagined: light and shadow with reference to the photograph.

Dimensionality and focal planes, the flatness (or otherwise) and

Fuzziness of 2-D, 3-D, and virtual space.

Touch; tangibility in both physical and virtual space.

Volume Two comprises of four sections. The first three sections evidence the works produced in chronological order followed by an appendix documenting experimental works. **Volume Two, Section 1** comprise of work titled ***Glass Landscapes*** **(2014-15) pp.3-9**, Section 2 ***An Expedition*** **(2015-18) pp. 10-24** and **Section 3** ***Neither Here nor There*** **(2017-2020) pp. 25-56.** The final Section of **Volume Two: Appendix: Experimental Work, pp. 57-83** present the experimental building blocks of practice-research, documenting the progressive journey to demonstrate the capability of the photographic print. The completed works that resolve this PhD by project are: *Horizonflux* (2016) **Volume Two, Section 2, pp. 10-15**, *Little Phantoms* (2019) **Volume Two, Section 3, pp. 25-34** *LightSensitive* (2020) **Volume Two, Section 3, pp. 35-47** and *Photosculptural* (2020) **Volume Two, Section 3 pp. 48-56**, encourage a search for place, beginning and ending with landscape. My source material are the landscapes of Angus and Fife in Scotland, and photographic archive held in National Media Museum, in Bradford England, V&A, London, Harry Ransom Center, Austin, Texas and Grenna Museum Polar Centre, in Grenna, Sweden. Archive room,

photography darkroom and landscape are identified as makers spaces. The thesis queries the concept of the artist studio in relation to these spaces and reflects on how these contrasting locations have impact and expand the developing methodology of the practice-research to evoke a haptic experience of landscape. Intrinsic to this is an investigation into the materiality and history of photography synonymous to my field. A range of approaches are applied to critically examine the evolving practice-research. These include, reflective writing, performing artist talks and delivery of conference papers. This approach supports the development of each stage of the research and expands the conceptual and practical methodologies applied.[2]

Writing acts as companion to the visual artefact, my intention is to make transparent the voice of the artist and bring to light something of the rhythmic nuances of the physical process of an artist's body thinking and making. Rather than a singular Methodology chapter, the use of the methodology sketches interspersed throughout the thesis more aptly reflects the drive and playfulness of creativity. Cross-referencing between Volumes One and Two is essential to fully interrogate the research questions of this PhD, and intrinsic to the process of making art. From the whisperings of doubt and apprehension of beginning a new piece of work, to reflective mutterings and murmurings whilst engrossed in making, ending with lucid assertions on the relief of completion. I am certain the craft of thinking and reflecting for so many artists are predominantly refined through the act of making and understood through the object/artefact produced. New theories form and so often lay silent, deeply embedded in the artefact, therefore this research must be read, word and artefact/object in tandem. Collectively Volumes One and Two of the research places importance on sensory engagement to interrogate the photograph as haptic and virtual object.

This chapter introduces the structure and content of subsequent chapters of Volume One of this thesis. Beginning by outlining recent contemporary writing on digital photography's physical presence, leads to consideration of the indexical and material qualities of photography. Ideas around the maker's space, whether archive room, artist studio or the

[2] For detail on the range of outputs delivered through the period of this research see this volume's Appendix I: Research Dissemination, 169-172.

darkroom are presented through three significant bodies of practice-research. Thinking about the surface of the photograph introduces reflective discourse around the haptic and immersive qualities of the medium.

1.2 The Photograph's Physical Presence

Throughout Volume One of this thesis a series of closely connected words are used stemming from the singular word *photograph.* The small addition of **y**, or **ic**, or even **icness** in words such as photograph**y** the photograph**ic**, and photograph**icness**, take this research project to the perimeter, expanding thinking beyond medium specificity into hybridity. Perhaps it is because the word photograph is itself so provocative, with recent debates on the medium's specificity so volatile. Since the early 1990s there has been a picking at the bones of photography, bones exposed as a result of rapidly evolving digital technology. Lev Manovich's essay accompanying the exhibition *Photography after Photography* questioned an acceptance that the digital represented "a radical rupture with photography."[3] This "rupture" resulted in a process of checking and cross-checking of what constitutes a photograph.

The physical presence of the photograph and its status has been central to contemporary discussions. As recently as 2014 (when I began this PhD) Carol Squiers asked *What Is a Photograph?* through a group exhibition she curated at the International Center for Photography in New York. In 2011 James Elkins affirmed *What Photography Is* in his book of the same name. This was a year after the symposium *Is Photography Over?* (2010) held at San Francisco Museum of Modern Art that questioned the value or relevance of continuing to consider photography as a distinct and specific practice or discipline in light of the advent of new technologies. Writers including David Green, Olivier Richon, Laura Mulvey and Geoffrey Batchen responded to the question *Where is the Photograph?* in 2002[4]. Whether presented with open-ended questions or assertive statements the fascination with, and conundrum around the mutability of photography continues. As Squiers asserts in her introduction to the exhibition "We are in a moment - which may

[3] Lev Manovich, "The Paradoxes of Digital Photography" in *Photography after Photography: Memory and Representation in the Digital Age* (Amsterdam: G+B Arts International, Cop, 1996), 2.
[4] David Green, *Where is the Photography? (Maidstone: Photoworks; Brighton, 2003).*

stretch on for years - in which the photograph shifts effortlessly between platforms and media"[5]

The bodies of artwork made during the period of this research act as catalyst for contemplations on current photographic practice: both my own and of my contemporaries, to stimulate an examination of the relationship between the discipline and medium that we recognise as photography, impacted by technological change.

Structuring the writing in this way, rather than a conventional thesis format separating out literature review, methodology, etc., reflects more aptly the intuitive actions of an artist at work and forefronts the significance the process of thinking has to the act of making (and visa-versa). Like the fantastical character of the conjoined push-me pull-you twin llamas from Dr Dolittle, my research will at times be drawn one way that refutes another, thoughts led by risk taking through creative play invite one to explore a multitude of pathways. Through the two volumes of this thesis, I weave practice with theory to consolidate, clarify and resolve the questions this practice-research raises.

1.3 Of Wonderland

This research originated from a desire to resolve a series of photographs I had been working on, drawing from the photo-technological processes of the nineteenth to the twenty-first centuries, I began to produce what I describe as analogue/digital hybrids. The work was made in response to a collection of glass negatives made by the nineteenth century English writer, mathematician and photographer Charles Lutwidge Dodgson, better known by the pseudonym Lewis Carroll, author of *Alice in Wonderland*. The collection at that time was held in the National Media Museum in Bradford. *Glass Landscapes* (2014-15), **Volume Two, Section 1, pp. 3-9**, was developed through an intensive visual study of the direct surface of Dodgson's photographic glass plate negatives. Examining these delicate objects, I cultivated an ambition to explore and encapsulate something of an experiential interpretation of the magical qualities of the space not inside the photograph (the image)

[5] Carol Squiers, "Introduction" In *What Is a Photograph?* (Munich; Prestel. 2014), 42.

but from the surface. By working with this particular archive of negatives and prints I began to develop a synthesis between the dynamic qualities of analogue photography and digital capture.

The resulting photography series formed the foundation to research that developed into two new areas of practice-research. From each glass plate negative made by Charles Dodgson over one hundred and fifty years earlier, through the scrutiny of my digital camera's *eye*, by retracing each scratch, ripple or finite defect of the photographic emulsion coated onto the glass plate, a new way of looking at photographs is revealed. Reflecting on this work and by studying Lewis Carroll's own writing, the Alice books, alongside discovering Robert McFarlane's nature writing, my interest in creating space beyond the tangible and the seen intensified. When reflecting on *Glass Landscapes* (2014-15), one begins to consider the photographic space as a pointer to abstracted place, something I later describe as landscapes of Wonderland. This will be discussed further in Chapter Two *Wonderlands: Investigating the Imprint of the Maker.*

What has become evident to me in undertaking this research is photo- technology's capacity to translate and present something about our place in the world through illuminating the traces of making photographs. Blending what is physically *out there* with the internal and emotive actions of the maker offers a portal for the viewer to contemplate variable sensations of lived experience. Photography's visualization of a moment (or moments) in time underpins the aura that surrounds the photograph as a magical object. This smearing of time in relation to the act of a body forever caught moving through space and time, stains the skin of the photograph. Revealing the technical restrictions and limitations of photography perhaps articulates most effectively a multisensory sensation of *being*.

1.4 Into the Archive

Archives have for some time now been a main source of inspiration to develop my research practice. I have spent many hours immersing my time and thoughts into various photography archives, both from private and public collections. After working with the Dodgson Collection, it seemed obvious to me that the next stage to develop my research

further would be to return to the archives. Returning to the National Media Museum's photography archive I decided to set my search away from the illustrious pioneers of early photography I had become familiar with during numerous visits to the archive, such as Dodgson, Julia Margaret Cameron and William Henry Fox Talbot. Instead I started to search through the work of the less celebrated and unknown photographers of the nineteenth century. My steer was to gather images of landscapes from early expeditions, the first photographs capturing land formations that until that point had never been seen in the western world, and of which little was known. During an initial visit to the archive the image of a specific photograph from the *Glass Landscapes* (2014-15), series kept coming to mind (fig.1), **Volume Two, Section 1, p.9.**

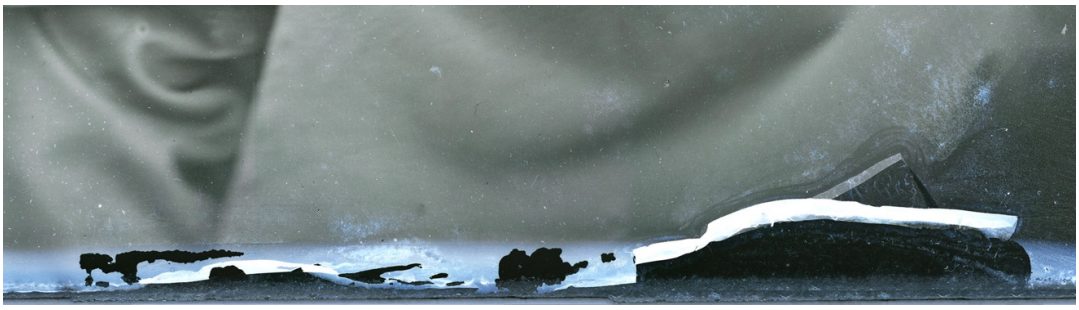

Figure 1. Jacqueline Butler, *Untitled* from the series *Glass Landscape*, 2015. Digital print on Museum Archive paper, 47cm x 19 cm. ©Jacqueline Butler.

This is made by digitally capturing miniscule details from the cracked edges of the brittle photochemistry glass-plate image that originally captured the drapery of Dodgson's jacket in the early 1850s. I had always felt this image was one of my most successful pieces, I nick-named it, *'Iceberg'*. This refers to the resemblance the abstract shapes depicted, have to the edge of an iceberg. This fragment connected back to the original (fig.2), a self-portrait of the photographer and author of the Wonderland stories, whose photography and writing has so deeply influenced me.

Figure 2. Charles Dodgson, *Self-portrait c.1856.*
Inverted digital image from original wet collodion negative.

My head submerged in thoughts of imagery of colossal blocks of ice in water led me to refine my next search in the archive to images of early polar expeditions. While there were many interesting and beautiful studies of both the North and South Poles in albums and large framed prints, I came across an anonymously authored composite made from several photographs, cut, pasted, collaged and hand painted that presented an unfamiliar view. I could not place this ice-filled domain, it was a landscape beyond recognition, alien, imaginal: it was inspirational. This shift from the fantasy world of Dodgson's photography and Wonderland stories to the reality of documentary material from polar expeditions may appear to be disconnected. Both the underworld of Wonderland and icescapes of the extreme northern and southern hemispheres were unreachable, and outlandish. These landscapes evoked sensations of fear and desire, being magical and limitless.

I continued and eventually found a modest collection of photographs, correspondence, and news clippings known as The *Andrée Expedition* of 1897. Reading through the news clippings and letters I discovered the expedition failed with all the explorers lost within weeks of commencing the adventure. This material tainted with failure and loss imparted an enthusiasm in me to begin new work to advance this research project. This grew from

individual responses under the working title *The Andrée Expedition* (later growing into a body of work titled *An Expedition* (2015-18), **Volume Two, Section 2, pp. 10-24.**

Initially I replicated methods I had become accustomed to when creating *Glass Landscapes* (2014-15), working directly from the negative using a DSLR camera and macro lenses to capture extreme details of the negatives and prints. Progress proved to be slow and difficult and I became dissatisfied with the results. During this period, I began reading *Phantasmagoria* by Marina Warner and at the same time ventured into working with 3-D software to extend into new methods of making. Although I had made initial steps into 3-D printing with parallel arts projects I was developing at the time, my interests with this technology focused on the thinking it activated whilst using the software, to its process rather than final product. My endeavor became to re-evaluate the objecthood of the photograph through a study of dimensionality and form. As the figures of the explorers are captured in so many of the *Andrée Expedition* photographic collection, I chose this time not to obscure "photography's particular conditions of representability"[6]. I was not seeking to create forms emblematic of landscapes seen or experienced. Instead my aim was to evaluate ways of combining images I was producing of imagined place with those represented in the archive photographs. I wanted to look both into and onto the photograph, to expand thoughts on the indexical through combining the subject *in* the photograph with the materials *of* the photograph. I took the decision to broaden my methods and generate work in the photography darkroom alongside photographing details from the original archive prints. Working in the darkroom contrasted significantly with working in the archive, it was more haphazard, I did not deliberate, my behavior was spontaneous and responsive to the chemistry and the environment. This made me much more aware of the impact the making space, the 'artist's studio', has on the directional flow of practice-research. Whether the studio is an archive room, darkroom or computer. By changing my place of work, I realized that *studio* can encourage transient behaviour, making permissible divergent methods of practice. I combined analogue photograms with 3-D technology producing video and screen-printed outputs. The divergent methods explored during the initial stages of

[6] Geoffrey Batchen, " 'Photography': An Art of the Real" In *What Is a Photograph?* (Munich: Prestel, 2014), 47.

fostering work for *An Expedition* (2015-17) will be discussed further in Chapter Three *Distant Horizons: Illuminating the Indistinct.*

1.5 Neither Here nor There

It was at this point that an opportunity to undertake a residency in East Scotland materialized. The residency was organised by The Scottish Graduate School for Arts & Humanities (SGSAH) in partnership with Dundee Contemporary Arts Centre, under SCSAH Internship-Doctoral Artist-in-Residence Scheme[7]. The research question and focus of the residency was: How can contemporary technologies compliment and extend the production possibilities of more traditional technologies?

I envisaged the residency would create space for final reflections on my steps into video capture using 3-D technology. I least expected that the residency would have such a fundamental impact on my research, not only altering my working methodology but also my philosophy as an artist working with landscape. *Neither Here nor There* (2017-20) **Volume Two Section 2, pp. 25-56,** is a substantial body of work and gives reign to many facets of this research project. This work enabled the interdisciplinarity practice to flourish, resulting in the creation of new forms of artefacts, borne of hybrid practice in concept and form. The final stages of the practice-research will be discussed in Chapter Four, *Particular Qualities of the 'Somewhere': Evocations of Landscape through Abstraction*, and Chapter Five, *Material Histories*.

Chapter Four maps my creative journey learning traditional printmaking techniques and developing new methods of making evidenced in the body of work *Neither Here nor There* (2017-20), concentrating on the series *Little Phantoms* (2019) **Volume Two, Section 3, pp. 25-34.**

[7] The Scottish Graduate School for Arts & Humanities (SGSAH) is the world's first graduate school in the Arts and Humanities. SGSAH work in partnership with the arts heritage sector to offer training and support to doctoral researchers in Scotland. Artist Residences and Internships are offered as part of the training programme.

I walked into and through the landscape of Dundee and Angus, my studio environment shifted from the private intimacy of darkroom to the public domain of the landscape and printmaking studio. The tacit qualities used in the printmaking studio expanded my methods working with digital techniques; 3-D scanning and printing. Sensations of 'being' and 'doing' took hold and as a result my ambitions for the practice-research shifted, questioning how the synthesis between analogue photography and digital image capture could extend the visual and conceptual possibilities of evocations of landscape. My interest in abstraction translated well into developing visual representations of an embodied experience of place.

Understanding how artists such as Alison Rossiter and Letha Wilson interrogate medium materiality unlocked a greater understanding of my interests in the surface of print and the material qualities of photography. Fascinated by a *touch once removed* that encouraged a yearning to handle, steadily infected my work. I moved into new forms of cameraless print, with later works *LightSensitive* (2020) and *Photosculptural* (2020). In Chapter Five: *Material Histories*, the final resolution of these works is discussed within the framework of the pre-history of photography and the development of cameraless photography in the early nineteenth century, introducing a new way of seeing and understanding the world.

1.6 Methodology Sketches

Throughout Volume One of the thesis, the final section of each chapter reflects on the methods of practice-research to develop each body of work. These sections are structured as Methodology Sketches 1-4 (printed in cyan blue). The word sketch perfectly contextualises my intent and methodological approach as an artist. To plan, outline and make rough drafts; playfully misbehave and act opportunistically; create space for chance encounters.

At the forefront of my methodology has been an enquiry into what was (and is) understood as photographic practice, given the widening range of technologies available for the artist to capture something of real-world experience.

1.7 Conclusion

Chapter Six draws the findings from this research project to conclusion. Reflection on the generation of *loops* of photographic representations of lived experience, bringing together the resolution of the key research question that was an implicit driver to this practice-research. A new understanding of the photographic index is presented visualising the imprint of the maker merged with the subject of the photograph (the landscape). Drawing forth the significance of betweenness inherent in the hybrid methodologies develop through this research. The dimensional qualities of the final artefacts produced expands photography, generating new forms of printed matter to experience.

The implicit driver for me has always been my mindfulness of the photographic referent. Like a bee's sting caught under the skin, it is the inherent impetus to the artwork generated through the research. No matter how far the final output takes us from a pictorial representation of the real world to abstract form, I am ever conscious of the indexical power the photograph has, what Markus Kramer defined as "indexical-technological transformation."[8]

Chapter Two begins to trace the mark of the maker in repositioning thoughts on the photographic referent through examination of the material qualities of the medium.

[8] Markus Kramer et al., *Photographic Objects* (Heidelberg: Kehrer, 2013), 41.

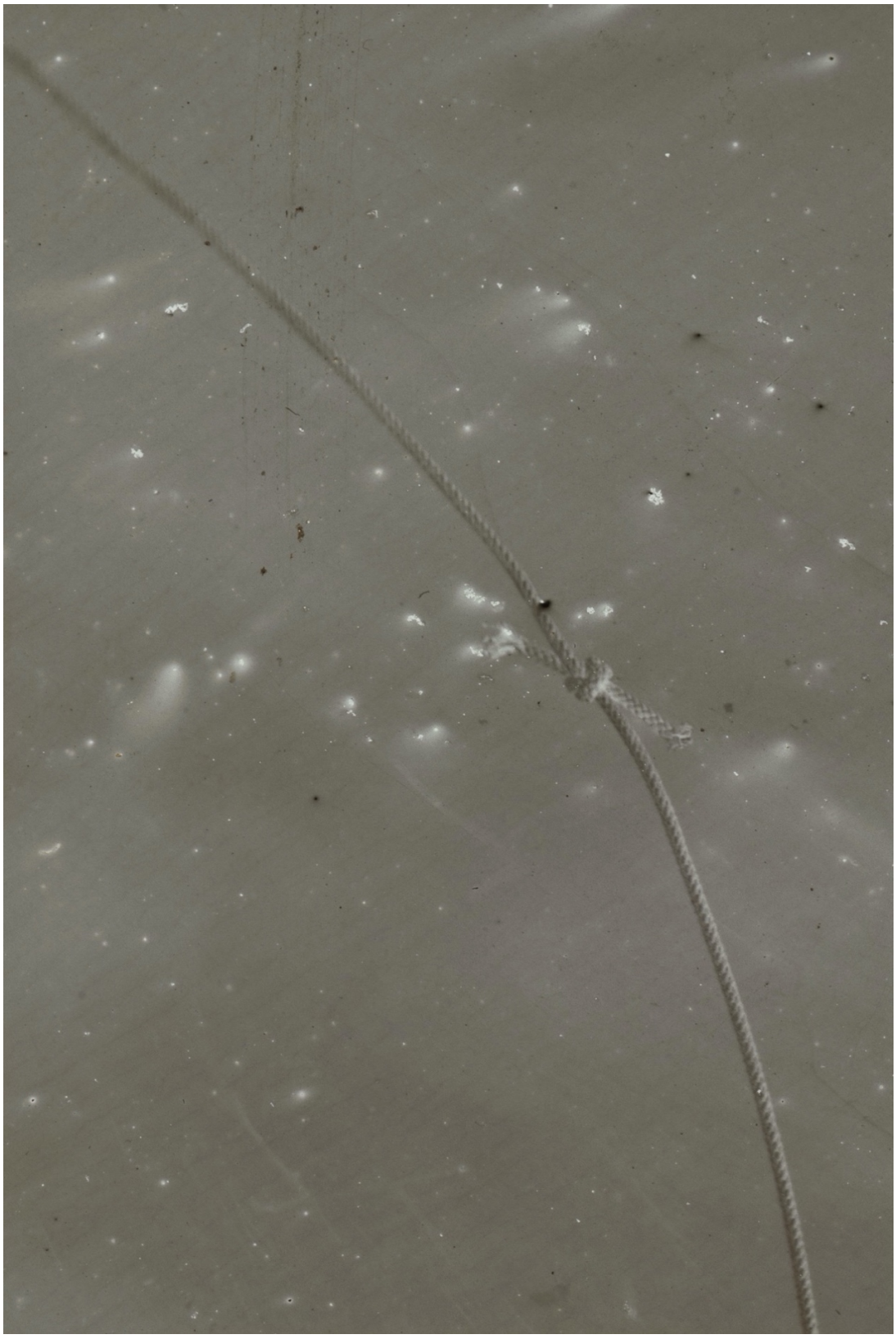

PLATE TWO

Chapter Two

Wonderlands

Investigating the Imprint of the Maker

> Alice had not a moment to think about stopping herself before she found herself falling down what seemed a deep well. Either the well was deep, or she fell very slowly, for she had plenty of time as she went down to look about her, and to wonder what would happen next [...] Down, down, down. Would the fall never come to an end?[9]

2.1 Introduction

This chapter will begin to appraise the research question foundational to this research: How can the imprint of the maker reposition photography's connectivity to the referent? Initially investigated by charting the development of *Glass Landscapes* (2014-15) **Volume Two, Section 1, pp.3-9**.

This first stage of this research project focused on revealing the residue of a historical body in the act of making photographs (Dodgson), fixed by the materials of the technology; the sticky emulsion of the wet collodion print. Influenced by the synergy between the writing and photography of Dodgson (Carroll), and his construction of Wonderland in the Alice books through the language of photographic process. Much of this research examines the importance of place: both real and imagined in the act of making, my starting point is to examine the dynamics of the Archive Room as creative catalyst. Tracking the evolution of *Glass and Paper Landscapes* (2014-15) to understand the expansive representational potential of photography, my practice-research shifted from seeking a recognisable pictorial representation towards the abstract, with reference to the cameraless work by Juan Fontcuberta. The history of photography endures throughout this study as foundational to my evolving practice-research. *View from the Window at Le Gras* (1826) acknowledged as the first surviving photographic image from the history of photography by Joseph Nicéphore Niépce, introduced the *pre-history* and history of the medium to me, opening a search for place through the photographic act. Through a study of the methodologies of the

[9] Lewis Carroll and British Library, *Alice's Adventures underground: A Facsimile* (London: The British Library, 2008), 2-3.

contemporary photographer Thomas Joshua Cooper, questions are raised around an embodied experience of place.

2.2 Dodgson-Carroll: Photography and Writing

In Lewis Carroll's second Alice book *Through the Looking Glass,* Alice passes through to *an-other* side where the familiar is strange, like the strangeness of looking through the ground glass viewer of a camera, Alice is a scopic vehicle. The beginning of the opening chapter finds Alice sitting curled up in an armchair in the drawing room, she muses on the "*beautiful things*" in the "*glass-room*" and yearns to explore the glasshouse that lies on the other side of the mirror. Alice announces to her cat they will:

> [...] pretend the glass has got all soft like gauze, so that we can get through. Why, it's turning into a sort of mist now, I declare! It'll be easy enough to get through [...] And certainly the glass *was* beginning to melt away, just like a bright silvery mist. In another moment Alice was through the glass.[10]

In an instant that which was solid, the looking glass, softened and dissolved allowing Alice to enter a space that she at once recognised as both the same and yet different. She becomes aware of looking and being looked at from the other side and begins to explore what is in view and "quite common" to that which is out of view, she steps beyond the looking glass mirror, to discover what lies beyond the frame.

Reading the Alice books whilst studying the Dodgson Collection I became resolved to framing views beyond the looking glass mirror. Using the photographic space of my digital camera to explore the subject of my gaze; the series of works made by Dodgson, I intended to create landscapes of places invented in my imagination in response to the Wonderland writing and Dodgson's photography.

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[10] Lewis Carroll et al., *Alice's Adventures in Wonderland and Through the Looking-Glass and What Alice Found There*; *The Centenary Edition.* (London: Penguin Books, 1998), p127.

Figure 3. Charles Dodgson, *Alice Liddell in the Rectory Garden, Oxford,* 1858.
Inverted digital image from original wet collodion negative.

Looking at the Dodgson negatives so intently one becomes acutely aware of the wet collodion process and the power the process of making has on the imagination. When photographing details from a glass negative one of the first subjects was of Alice Liddell as a young girl reclining in an English garden. She has her eyes shut (fig.3).

This image is the result of the glass plate coated in a volatile solution of combustible material mixed with ether, then loaded into Dodgson's camera. Alice lay in the summer heat as the glass, still wet was exposed to the brightness of the sun in the rectory garden. Alice is transformed into negative; she appears the same and yet quite different. Her eyes remain closed, caught in continuous sleep, through photography she is transported to a dreamscape. Over time the emulsion with age, become brittle and crack, but the Alice in negative still lies there, in the garden, eyes closed captured forever in the bright sunlight of 1858.

In *Through the Looking Glass*, a child's act of imagination has such power to make solid glass dissolve, and through this act, create a vantage point to step into and see the familiar

in an altered state. As with the looking glass mirror, through the process of analogue photography the real is transformed into an altered state, confined within the negative. Through this technological process the subject captured becomes untouchable and irreal. Residue preserved from the past is gently unveiled, and through the wet collodion process the history of past moments of making materialise. Inside the negative between the glass and the emulsion, past dust settles, and the trace of a fingertip leaves its imprint (fig.4).

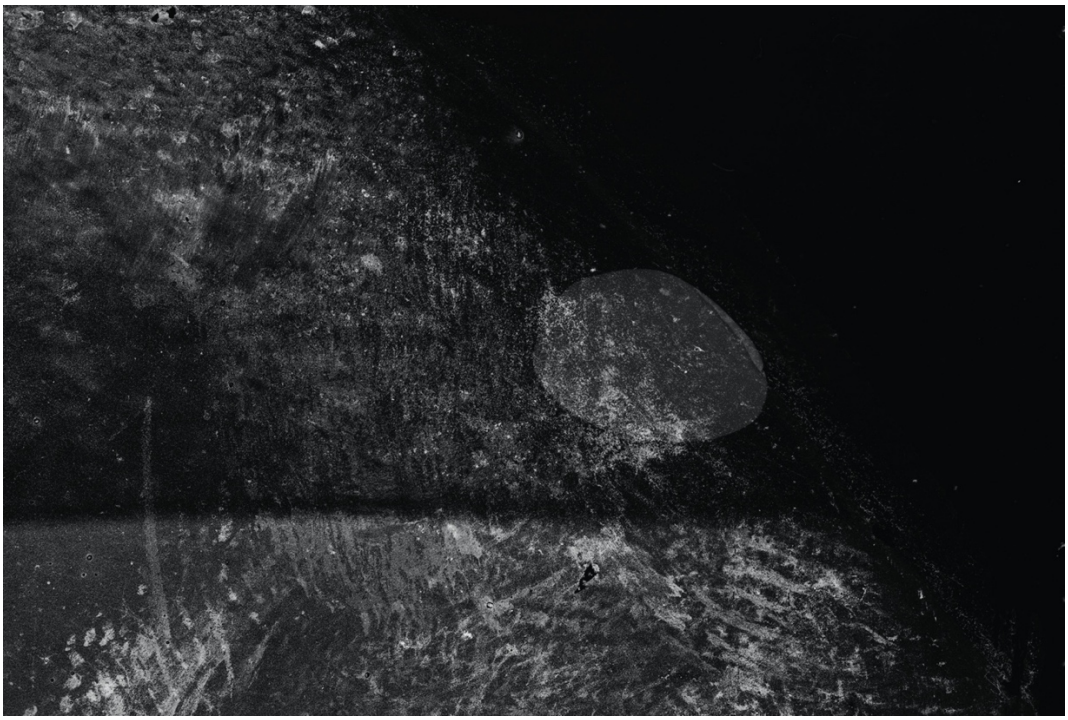

Figure 4. Jacqueline Butler. Detail of digital photograph taken from original wet collodion negative, 2014. ©Jacqueline Butler.

2.3 From Looking-Glass Mirror to Digital Frame

The subsequent series of images produced were made by photographing details and fragments of Dodgson's glass negatives. The work produced mirror the symbiotic relationship between, Dodgson and photography and Carroll in Wonderland. It is impossible to view Dodgson's photographs without first thinking about Wonderland, and in turn to read the Alice books one cannot escape the language and condition of photography, the way it seeps into Carroll's descriptions of the world and characters in Wonderland. An experience common to any photographer of the nineteenth century looking through large format camera apparatus onto the ground glass, where things are seen upside down, too large, too small, or in reverse.

Developing methods to scrutinize the miniscule details of the grain of the emulsion on glass-plate negative, the microscopic qualities of the medium revealed the imprecisions of the early technology. Initially compelled to visually capture the central subjects in the photographic image, I became indifferent to the subject that ought to be the main point of concern. My eye intently wandered aimlessly and through compulsive acts (of myself and Dodgson), my aim became to fuse the trace of the historical body of the photographer/maker with the subject in the photograph and introduce dialogue between image-makers, past and present (fig.5).

Figure 5. Jacqueline Butler, *Untitled,* from *Glass Landscapes* series, 2014.
©Jacqueline Butler.

Exploring the surfaces of early photography revealed what was hidden in the layers of photographic emulsion and prompted thoughts on the unseen and unsaid. Through the alchemy and objecthood of photography I searched to find the wonderment of evoking the sensation of being *in* this world.

2.4 Wonderlands of the Archive

Photography Archives having played a significant role in my research, on occasions of self-doubt or uncertainty, I have often sought refuge spending days, weeks, months seeking inspiration. I am not only attracted to collections of photographs, but intrigued by the physical space they inhabit, the archive itself. Archive rooms are a kind of Wonderland to me, these places that hold documents of histories ignite my imagination.

Nina Lager Vestberg in her article *Archive Values* (2008) describes the photography archive as a "supremely static container of still images - as a curiously dynamic environment"[11]. The archive room captivates me, a place that through its intense stillness evokes a dynamism. My lasting impression when working in archives is of an atmosphere that lingers and heightens the desire to touch and handle the artefact, this is what attracts me. The tranquil confinement of the photograph within the archive acts as stimuli. This experience intensified my interests in the tacit qualities of print, something that directly informed later stages of the practice-research leading me to explore 3-D print technology.

Whilst reflecting on the process of digitising archives Vestberg contemplates the significance of the objecthood of photographs to an archive, and she laments the loss of their physical presence. She believes the material trace of the handler (keeper/curator of collections) reveals to the viewer a holistic narrative of the history of its being. She writes:

> [...] the front of an archival news photograph is arguably an indexical sign of the event without which the photograph would not exist, the stamps and scribbles imprinted on its back are indices of something equally intrinsic to its material realization[12]

To frame the indexical in this way we have to acknowledge the photograph as an object *in* the world, rather than purely a tool to present a visual copy *of* the world. Bringing together the image printed into the photograph with imprints left by the photographer or archivist

[11] Nina Lager Vestberg, "Archival Value," *Photographies* 1, no. 1 (March 2008), 49-65. https://doi.org/10.1080/17540760701786725.
[12] Vestberg "Archival Value", 53.

there is no longer a separation between back and front. As a three-dimensional object that exists in the world the photograph becomes less transparent, as an object one is more aware of its opaque qualities. This interrogation of the photograph as both object and image sanctioning a holistic reading, is integral to its cultural value.

2.5 Evocations: Interpretations of Landscape in Abstract Form

By using digital technology to photograph a Dodgson glass negative, the hybrid transfer of media from early photography to now collapses time and blends the artistic authorship. *Glass Landscapes* (2014-15) in temporal flux present an indeterminate place. They are representations of a somewhere we almost recognise, yet through their pictorial strangeness they act as pointers to abstracted place. Lyle Rexer writes of wanting to see photographs "split open, turned inside out, exposed. The result will be [...] photographs without pictures, or rather photographs that refuse to disclose fully the images they contain."[13]

The 'views' of Wonderland I created evolved purely from an exchange between tracing the mark of the makers and photo-technologies. In hybrid form the photographs become mutable vessel for memories of place. The original intention of photography to represent the subject of the real world at a specific moment in time is transformed by getting *under the skin* of the photograph and working between *image* and *objecthood*. *Glass Landscapes* (2014-15) make visible partial glimpses, presenting a layering of place and time in abstract form. As Rexer writes of abstract photography:

> The guarantee of a photograph is not its image, its representation, so easily conflated with its subject; it is its surface, its utter two-dimensionality [...] No longer looking through the photograph but seeing with it, we experience photographs on the far side of William Henry Fox Talbot's uncertainty at the birth of photography. His sense of something unprecedented. The abstract photograph signifies not the given but the possible. And in an image-chocked world, perhaps it signifies a necessary antidote to a growing numbness, an image-blindness.[14]

[13] Lyle Rexer, *The Edge of Vision: The Rise of Abstraction in Photography* (New York, NY: Aperture, 2009),9.
[14] Rexer, *The Edge of Vision*, 180.

Exploring the surface of Dodgson's negatives, the resulting abstract images *Glass Landscapes: Untitled* Volume Two, Section 1, pp. 7-9, open up potential possibilities to experience representations of imaginal place. Concentrating on its dimensional surface by enlarging the faults and flaws of the collodion emulsion brings to the fore the banal aspects of the original image, its edges. Building on Rexer's concept of seeing *with* the photograph, through this process they become illuminated by the data capture technology of digital photography and as if by magic alternative vistas materialise. These impalpable facsimiles of place are formed by the materiality of photography itself, or rather its processes. Studying the Dodgson glass negatives one becomes aware of unevenly coated emulsion, or dust from inside the camera that settled on the emulsion whilst wet prior to exposure, or even the occasional fingerprint of the maker (fig.6).[15] All give way to the process revealing the photograph's hidden history of origin, contained within the surface of the chemistry of the medium. Fore fronting the abstract qualities of the material surface of a photograph, opens up the photographic referent, pointing towards the material process of the maker with technology. Through this approach my intention is to produce abstract photographs that challenge Rexer's separation of the representational from the abstract, to a blending of the given with the possible.

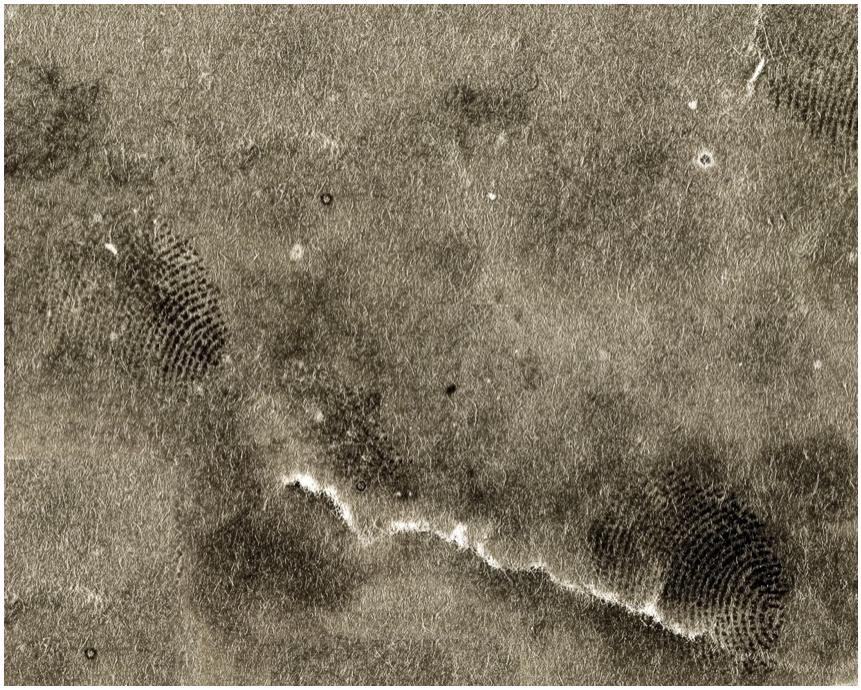

Figure 6. Jacqueline Butler, *Untitled,* from *Glass Landscapes* series, 2014.
©Jacqueline Butler.

[15] For another insight into bodily trace imprinted into a historical print, see Carol Mavor's *Pleasures Taken.* Her examination of the photography of Julia Margaret Cameron in relation to the haptic, and her contemplation on the imprint of the photographer Cameron on glass plate negative and print.

2.6 The Imprint of the Maker

When describing cameraless photography Geoffrey Batchen places importance on the handling and touch of the artist. He writes:

> The cameraless photograph always depends on a touching of referent and light-sensitive surface, but their manufacture also involves the touch of the artist, who handles both. Such pictures are made not just taken, and for many artists this difference matters.[16]

A photograph that reveals something of its haptic capacity from inception to realisation extends its potential as a representational tool. Through the history of photography from the early studies by William Henry Fox Talbot in the early nineteenth century to Juan Fontcuberta's *Constellations* series in the late twentieth century, the tangibility of process (particularly the enigma of cameraless photography) has continued to fascinate.

Figure 7. Juan Fontcuberta, *Constellations,* 1993. Chromogenic print from a photogram 120cm x 80 cm.

Fontcuberta's work poses a conundrum between fact and fiction, he plays with the viewers expectations and belief in the authenticity and veracity of photography. In the work

[16] Geoffrey Batchen, *Emanations: The Art of the Cameraless Photograph* (Munich: London, 2016), 40.

Constellations (1993) (fig.7) we are presented with large prints of constellations of stars, appearing as magnificent vistas of the night skies. The shooting stars are in fact marks of squashed insects and dust captured by placing light sensitive paper onto his car windscreen. But as Batchen writes the image is "an indexical trace of the evidence of his own rapid passage through terrestrial space and time."[17] We have a document of the detritus of the artist's own journey through time presented as images of the universe, these are indeed an authentic document of a cosmology of sorts. Greg Hobson comments [Fontcuberta is] " master of the art of photographing ideas, he subtly asks us to have faith in doubt and he plays a tug of war with our beliefs."[18] This "tug of war" in the context of *Constellations* (1993) places uncertainty on what we see. Through the act of the maker and the imprint he/she makes, photography's connectivity to the referent is repositioned. The indexical charge remains, although altered by making visible the material interventions of the artist.

"Photographing ideas" is an apt way to describe my approach to developing imaginings of Wonderland. *Glass Landscapes* (2014-15) **Volume Two, Section 1 pp.4-9,** are composites, each hybrid print is evidence of the process of making by two artists: (Dodgson and myself). Each contain images of two places (nineteenth century subjects in Dodgson's photography studio in Oxford, and antiquated glass negatives in the archive rooms in Bradford in the twenty-first century). These doublings collapse and fuse into a singular print. This builds on Thomas Joshua's Cooper description of "the unbreakable paired indexical relationships between the place of place itself, and the place of place represented by the photographs"[19] *Glass Landscapes* (2014-15) adds an additional indexical layer by adding the trace the maker.

In digital technology, the print, although not actually necessary is still identified as a potential outcome alongside the screen-based image. The digital photograph is examined in the positive, unless one inverts the image purposefully in software such as Photoshop, a negative image is no longer part of the processes of photography. It is peculiar for those who have experienced the process of analogue photography to consider that contemporary

[17] Batchen, *Emanations,* 40.
[18] Greg Hobson, National Science and Media Museum, "Joan Fontcuberta: Stranger Than Fiction Exhibition Trailer," YouTube Video, *YouTube*, November 11, 2014, https://www.youtube.com/watch?v=m5zxDX77gho.
[19] Thomas Joshua Cooper, "Gauging the Distance - The Reach for Extremity and Emptiness." (PhD Thesis, Glasgow School of Art (GSA), 2017), 10.

digital photographic practice no longer requires the subject to be seen in negative. I have held an original nineteenth century glass-plate negative up to the light and through this action become aware of the enigma of the negative. The interplay between the positive and the negative, suspend the subject caught between a concrete palpable space and the immaterial. The photograph begins to act as conduit between the fact and fiction. By revealing the limitations of the technology, the aesthetic presented begins to act as stimulus opening a space for thought and reflection.

2.7 Abstraction: The First Visualization of Photographic Time

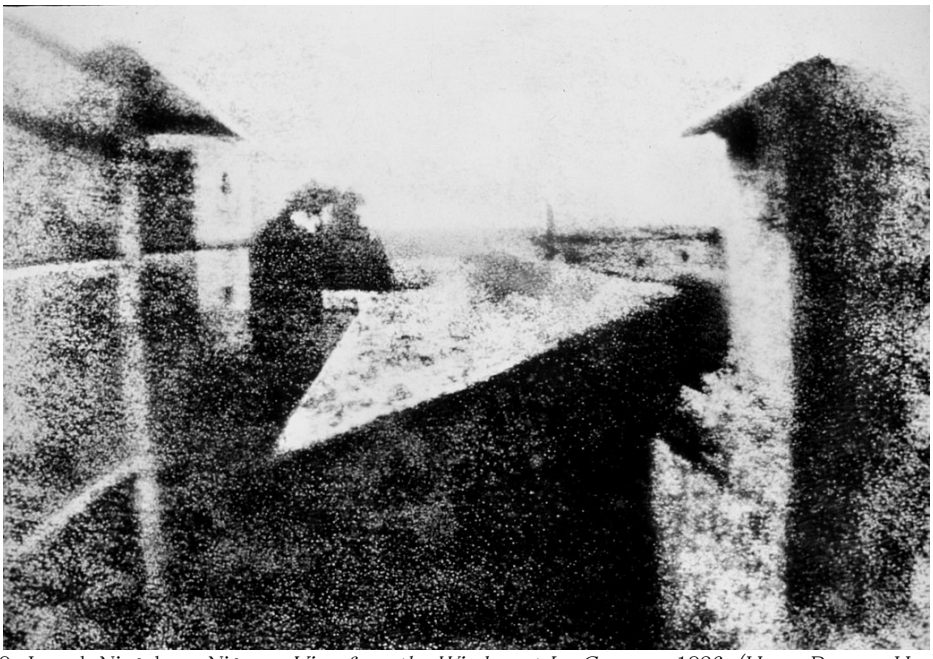

Figure 8. Joseph Nicéphore Niépce, *View from the Window at Le Gras, ca.* 1826, (Harry Ransom Humanities Research Center, University of Texas, Austin) Enhanced version by the Swiss Helmut Gersheim, *ca.* 1952.

This prompts my thoughts on an image taken from a window in Burgundy, France around 1826 (fig.8). The view, taken from an elevated position, looks over rooftops; in the distance, there is a courtyard and a pear tree. The scene, captured on a highly reflective pewter plate using a process known as Heliography, is believed to be the first permanent photographic image of nature made using a camera apparatus. The landscape is unclear. Poignantly Joseph Niépce's *View from the Window at Le Gras* could not have been disclosed without the evanescent sunlight of 1826. The plate coated with light sensitive Bitumen Judea after exposure to sunlight was washed with a mixture of oil of lavender and white petroleum, this aromatic mixture dissolved the areas of bitumen that had not been hardened by light. But rather than capturing what Henry Fox Talbot described as the

"fleeting and momentary,"[20] this document of light and shadow presents not a single moment, but progressive moments over an eight-hour period of exposure.[21]

Jai McKenzie speculates that Niépce on viewing his exposed and fixed pewter plate "may well have recognized that this image represented [...] features of light based expressions of space and time."[22] The peculiar effect she describes we recognize as the first permanent visualization of photographic time. McKenzie concludes that from its embryonic beginning photography inextricably connected light with space and time. Taking McKenzie's hypothesise one step further, my practice-research not only investigates light-based expressions of space and time but exploits the limitations of its material process to bring forth new ways of making photographic representations of place. Viewing early photography, instigates a precarious sensibility, in its ability to expose the trace of a personal experience of time.

Returning to the aforementioned view, captured by Niépce nearly two hundred years ago, it has the weight of the context of its making, stretching the limits of technology, its failure to depict accurately what lay in front of the camera, the view from a window offers something other. Through the actions of light, utilizing the materiality of photography, whether the qualities of a grainy underexposed pewter plate or illuminated pixels, the inadequacies formulate a pictorial representation between that which is recognisable and the abstract.

In *Glass Landscapes* (2014-15) persona of the maker are split. Dodgson, Carroll and myself, become indistinct through the photographic act forging "a connection between the

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[20] William Henry Fox Talbot, "Some Account of the Art of Photogenic Drawing," *The London and Edinburgh Philosophical Magazine and Journal of Science* XIV, no. March 1839 (1839): 36-48. http://www.nearbycafe.com/photocriticism/members/archivetexts/photohistory/talbot/pf/talbotaccountpf.html.

[21] Jai McKenzie in her book *Light and Photomedia* describes the value of the temporal dimensions of this image. She writes: (the) day-long open shutter creates a lasting, tranquil, and illuminating visual experience [...] this day is a day that seemingly never ends. Through those eight hours of light and shade, most of this day is rendered visible. Specifically, shadows fall on both sides of the gabled roofs due to the long exposure, creating a peculiar effect that is not normally seen. Movement however is not visible; even the sun, which imperceptibly moves from the eastern horizon to the western horizon, travels too quickly for its image to be captured. Mckenzie, *Light + Photomedia: A New History and Future of the Photographic Image,* 17.

[22] McKenzie, *Light + Photomedia,* 17.

inner world of emotion and the outer world of materiality."[23] These abstract forms remind us of a *somewhere* that sits between the recognisable and the abstract and between the sunlit garden of the rectory, the underworld of Wonderland and the archive room. The photographic referent is splintered and repositioned, as we see familiar iterations of place through the strangeness of abstract form.

2.8 On Slowness

Wet-plate collodion was amongst the first photographic processes to be developed, it was introduced in 1851 and became widely used by the late 1850s. Dodgson was one of the early pioneers of the medium working with the process from the mid 1850s.The advantage of working with wet collodion was that exposure times were dramatically reduced, making it particularly popular with portrait photographers. The disadvantage was that the glass plate had to be exposed and developed whilst still wet, as once dry the emulsion was no longer receptive to light. Preparing a collodion negative is technically challenging and dangerous, given the process requires the use of combustible chemical materials. This technology instilled in the photographer a great commitment to the process of making photographs. Wet collodion is highly volatile and fragile, a process where there is a greater certainty that the final results will reveal the limitations and failings of the complex nature of the process. This early technological process is recognized as imperfect, complex, unstable, and unreliable. The intimate engagement with the photograph as object, induced by the precariousness of its process, invites a slow viewing and reading of the image. This slowing down forces the viewer to engage with and look carefully, growing an awareness of the process of taking, alongside making photographs **Volume Two, Section 1 pp. 4-5.**

Slow viewing of a photograph replicates the photographer's approach to creating a photograph. Thomas Joshua Cooper *coaxes* the final framing of each of his photographs. He writes: "The viewing-process is as slow and as purposeful as possible. Consequently, *slowness* has become an intentional part of the subject-matter in all of the pictures I

[23] Lyle Rexer, *The Edge of Vision: The Rise of Abstraction in Photography* (New York, Ny: Aperture, 2009), 99.

make."[24] Cooper notably describes "making" rather than taking the photograph. His method is to see and experience the places he intends to photograph prior to bringing the camera into play, explaining the significance of "Registering the "feel" of place".[25] The camera apparatus perhaps acts as a distraction, its voracity inducing the imperative to *take* the picture. Cooper's methodology is to bring the camera to the picture rather than discovering the picture through the camera. The direct bodily engagement with place assists the slowness to enable Cooper to form a "relational reality"[26] to the terrain:

> First and foremost, the visual discovery of the picture within the site is completely and singularly ocular and improvisational. I discover the picture by using only my eyes and my hands to determine exactly where, what and how the picture will begin to occur. When I have done this, I finally bring the camera to the site that I have discovered and make the picture there.[27]

My approach to practice-research like Cooper's is a measured and resolute process to make the photograph through a visceral connection to place (Cooper's ""feel" of place"). Unlike Cooper, the unification of body with technology is imperative to my bodily engagement with place, to see 'with' the apparatus, enables me to capture a fundamental experience of place.

Cooper uses an 1898 Agfa Field Camera and analogue darkroom process which he identifies as key to his methodology and the technology of analogue seems responsive to the slowness he requires. Digital photography is often described as a technology of speed, with the ability to produce and disseminate at pace. I would argue that this is dependent on the methods the artist/photographer use as with any technology the handling may differ. As Ruth Pelzer-Montada affirms when reflecting on the digital developments in printmaking: "The association of older process with slowness is somewhat ironic, given that digital process can be extremely protracted and time consuming."[28]

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[24] Thomas Joshua Cooper, "Gauging the Distance – The Reach for Extremity and Emptiness." (PhD Thesis, 2017), 142.
[25] Cooper, "Gauging the Distance", 6.
[26] Cooper, 10.
[27] Cooper, 125.
[28] Ruth Pelzer-Montada, *Perspectives on Contemporary Printmaking: Critical Writing since 1986* (Manchester: Manchester University Press, 2018), 3.

In his essay *Photography as the Medium of Reflection* Bernd Steigler defines photographs as "the index fossils of historical reality" and writes of photography's distinct "referential and reflexive character."[29] Reflecting on how the digital age makes us ever conscious of the constructed photograph and acknowledging the ability that computer software has to manipulate images, he argues that we still hold a belief that photography links us back to something tangible that affirms our (and others) existence in the world, the referent continues to resonate into digital photography. He considers photographs, whether analogue or digital as: "visual reflections of reality; they are realism mediated by medium and concentrated in images - even if this reality is radically constructed."[30] Photography, whether actual or virtual, is still identified as a tool that confirms our presence in and of the world. Even when discredited, our desire to believe in the photograph's ability to capture and convey historical reality is resolute.

2.9 Conclusion

Glass Landscapes (2014-15) **Volume Two, Section 1, pp.3-9,** form landscapes that combine histories of technology with methodologies of makers from the past and present. The results are photographic riddles like the Cheshire Cat in Alice in Wonderland, they are elusive and impalpable, provoking a desire to reveal something of the unseen. This leads to an examination of an experiential interpretation of place through photography. This chapter has demonstrated how this series begins to interrogate the research question: How can the synthesis between analogue photography and digital image capture extend the visual and conceptual possibilities of evocations of landscape, both real and imagined?

I search for what is concealed: to discover in-between, a place or places that exist in one's thoughts, to create visual representations of the *mind's eye*. Lines of thought on doubles, opposites and inversions reverberate throughout the chapter when evaluating the materiality of the medium, the nuances of the referent and the mark of the maker. My emphasis has been to establish the significance of revealing the artist at work and through

[29] Bernd-Alexander Steigler, "Photography as the Medium of Reflection" in *The Meaning of Photography*, ed. Robin Kelsey and Blake Stimson (New Haven, Conn.: Yale University Press, 2008), 194-97.
[30] Steigler, 195.

this process alter how we see and understand the representational in photography. Drawing from Batchen's and Mackenzie's contemplations on the work of Fontcuberta and Niépce, by utilising the limitations of the technological process to *make* photographs, a visual strangeness of a reality in abstract form is presented. *Glass Landscapes* (2014-15) take abstract photography beyond Rexer's focus on surface and 2-D, heightening the spatial-temporal dynamics unique to photography through the indexical layering of maker and place.

Martin Barnes when explaining the choice of title for his exhibition *Shadow Catchers* (2010-11) summarises my thoughts perfectly, he writes:

> The title (Shadow Catchers) has been chosen rather broadly to evoke the idea of fixing traces, accepting elements of mystery and dealing with forces beyond normal vision. It concerns the dynamics of time and space, revealing the unseen, entering the labyrinth of the subconscious and making links with the meditative, symbolic
> and metaphysical realm."[31]

To end this chapter the following section *Methodology Sketch 1: Glass and Paper*, outlines my methodological notes that underpin *Glass Landscapes* **Volume Two, Section 1, pp.3-9**. Drawing from the methods developed working with museum archives, as discussed in this chapter and Methodology Sketch 1.

Chapter Three will focus on the conceptual development of my practice-research created as response to another nineteenth century photography collection held in the archives at Grenna Museum in Sweden. Reflecting on visual imaginings of an island located in the east of the Arctic Ocean drawing on my fascination with the qualities of light and shadow. The work builds on methods established, exploring the photography darkroom as studio space and the beginnings of tentative experiments into 3-D computing technology, to further the development of this research into new forms of techno-hybrid imaging.

[31] Martin Barnes and V&A Museum, *Shadow Catchers: Camera-Less Photography* (London Merrell Cop, 2010), 8.

PLATE THREE

Methodology Sketch 1

Glass and Paper

Glass Landscapes (2014–15) **Volume Two, Section 1, pp.3–9,** comprise a series of giclée prints representing panoramic views of landscape. These views may remind one of familiar places, of distant hills and mountain ranges, but within the series there are other vistas that appear unworldly, places that can represent an abstract sensation of being.

Studying a range of antique negatives from 19th century photography, the foundations for the methodology initially came through reading about and directly handling archive materials. It was important that the accumulation of historical and analytical knowledge worked in tandem with the physical process of touching and handling archive objects. I familiarised myself with public archive space and the museum processes of collecting, cataloguing, viewing, and handling, such as in the National Media Museum's archive.

I began by studying early photo-chemical processes and printing techniques through the work of pioneers such as Joseph Nicéphore Niépce, Louis-Jacques-Mandé Daguerre, William Henry Fox-Talbot, Sir John Herschel and Fredrich Scott Archer. Through direct contact, I became familiar with photography processes of the early nineteenth-century such as daguerreotypes, calotypes, tintypes, collodion negatives, ambrotypes, stereoscopic prints and a wide range of camera apparatus and optical devices. It became clear that an exploration of the material trace of a technology close to the point of its invention married with my ambitions to develop new processes and techniques to making photographs in the twenty-first century. This research began at a point when chemical analogue process was in severe decline, being rapidly usurped by the image capture of digital photography.

In the archives At NMM I was particularly attracted to the Royal Photographic Society's Collection (RPS).[32] Now held in the Victoria and Albert Museum in London, much of the archive can be discovered online. When I first worked with this material there was no detailed information online and I was reliant on the knowledge and expertise of the museum

[32] Established in 1853 the RPS Collection is one of the oldest photography collections in the world containing photographic apparatus, objects, prints and negatives of historic significance.

curators and archivists, and on my serendipity when navigating and experiencing this vast resource. Working in these conditions, many opportunities arose to directly handle fragile historic materials, something that is now rarely permissible. The experience now is bereft of touch as initial searches are predominantly handled virtually through the V&A Collections database (fig.9). To conserve these objects direct handling is limited, one's view is distant, at best arms-length. The impact of touching, handling and holding objects created at the early stages of the medium's history, drove many of my thoughts, ideas and actions. As an artist, this haptic approach to discovering an archive is essential, creating the impetus to make and craft the final work. A multi-sensory engagement with objects in archive collections at an early stage of practice-research builds a sensibility and deepens the understanding of the substance and configuration of material form.

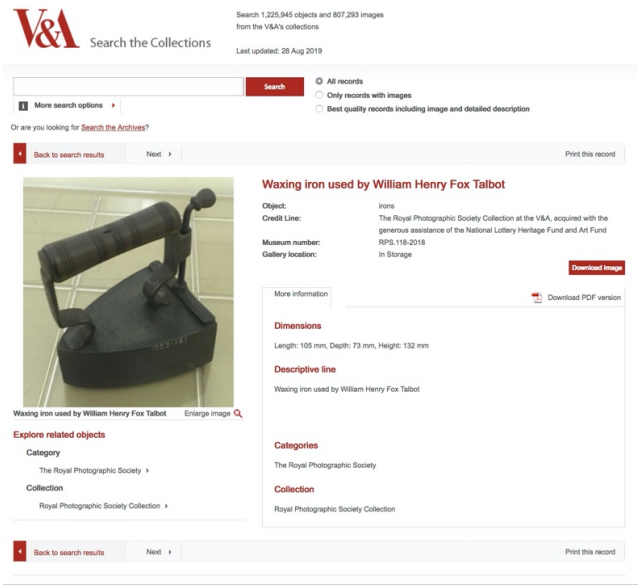

Figure 9. V&A RPS Collections, *Screengrab of online archive data search engine*

I studied Dodgson's photographs for portals to Carroll's Wonderland. Working with a DSLR camera I began to survey the details of Dodgson's prints and negatives using macro-lenses. As I progressed my study, details of the history of photographic process were revealed, returning to the moments when Dodgson the photographer applied collodion emulsion onto his glass negative plates. The indexical nature of the photograph presented not solely the depiction of the subject captured by the camera (i.e. the child), but also the depiction of the technological process. The uncoated corner on each glass slide (fig.10) **Volume Two, Section 1, p. 4,** documents a method used to enable the photographer to handle the negative avoiding contact with the wet emulsion. This visual code provides a

pointer to the actions of the maker's handling from the darkroom tent to the camera: coating, loading, and exposing the plate. This imprint presents a sense of the vitality of a photographer's process of making, at work in the 1850s and 60s.

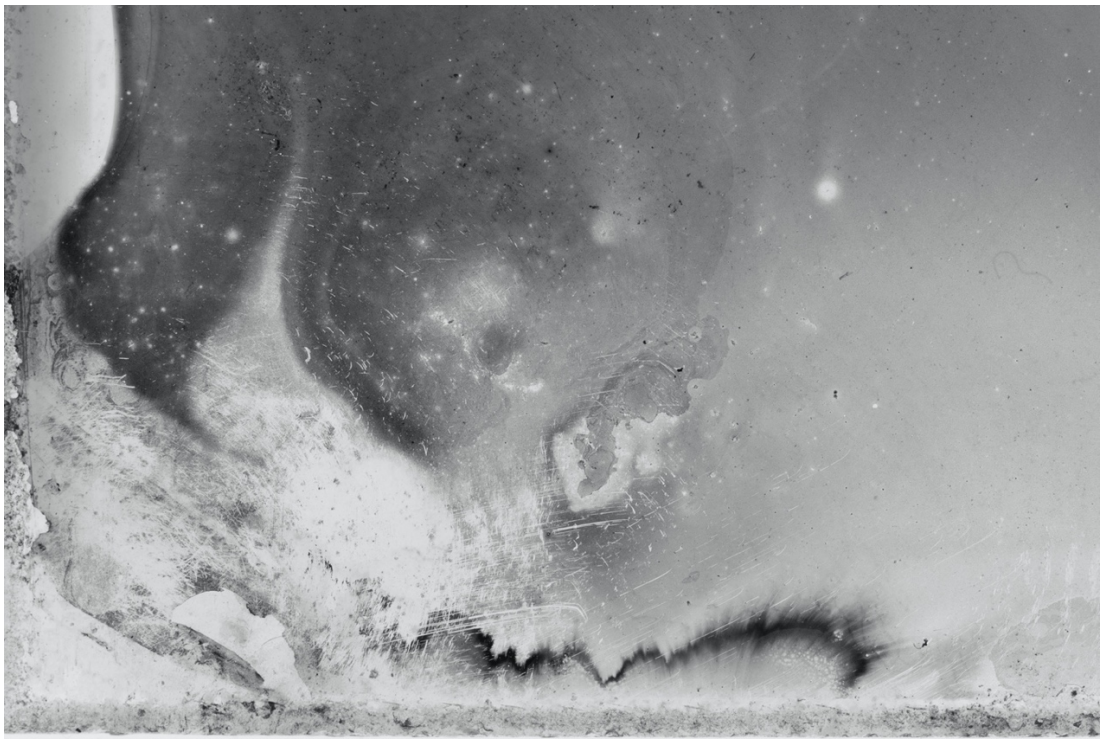

Figure 10. Jacqueline Butler, *Untitled,* from *Glass Landscapes* series, 2014. ©Jacqueline Butler.

My methodology outlined above created new routes to deliberate on traces of moments from the past, the resulting work presented a space for medium reflexivity. By this, I mean it was imperative that on viewing the *Glass Landscapes* (2014–15) one would be encouraged to escape to an individual imagining of Wonderland. At the same time, it builds an awareness that the Wonderland we escape to has been constructed from reproductions of details of photographs made by Dodgson in the mid-nineteenth century during a period of rapid technological developments in photography.

As an example, in *Glass Landscapes: Untitled* (2014) **Volume Two, Section 1, p. 6,** the viewer is presented with a scene that appears to be of pale blue expansive skies with a grey open highway extending into the horizon. Are the specks we see natural detritus caught on a windscreen as a result of a long drive? Looking in more detail, one notes many of the specks are intentional markings: a semi-circle or five lines crossed through a longer line, scratched into the image (Fig.11). Marks that document Dodgson's process to catalogue

his negatives, it was his habit to directly scratch out the emulsion of each negative with referencing numbers and marks.

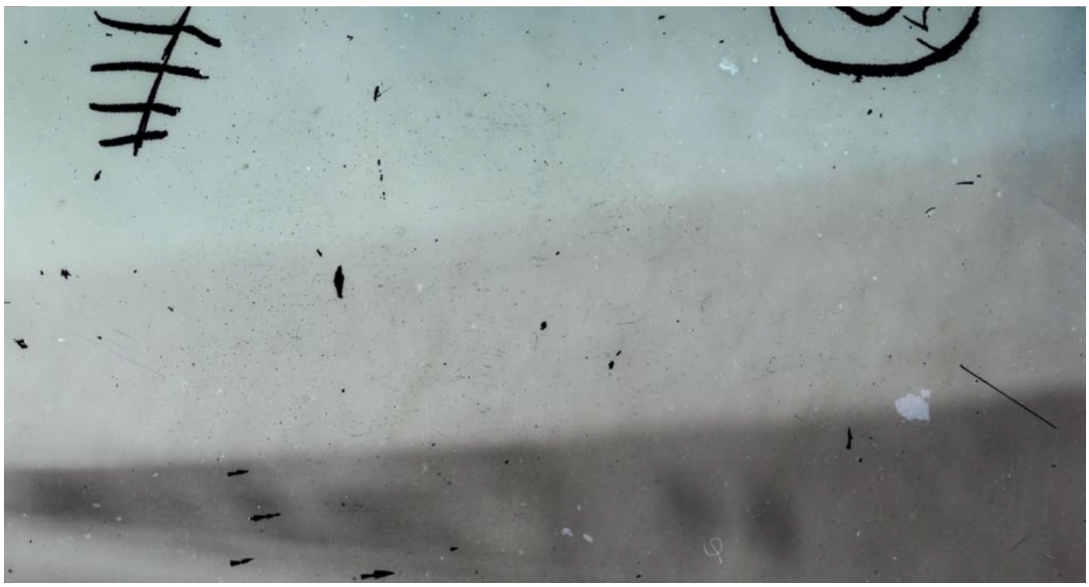

Figure 11. Jacqueline Butler. Detail of *Glass Landscapes: Untitled* , 2014–2015. ©Jacqueline Butler.

Developing *Glass Landscapes* (2014–15) created the opportunity to study the technological advances made during the first fifty years of the invention of the medium. This allowed space to evaluate the conceptual drive that informed my research. The unfolding pictorial documents I produced reveal not solely a mirror image of things of the world captured by conventional camera apparatus, but also the material residue of the labour and skills required when working with the volatile chemistry of early photography. Understanding these processes makes one ever conscious of the labours of crafting a photographic image in the first half of the nineteenth century. The accidental *fixing* of the trace of the physical presence of Dodgson in mid-process of making a glass negative plate, reveals a memento to his dexterity of skill, physical and mental concentration, and his dedication and diligence. The early landscapes I constructed, Volume Two, Section 1 pp.4–6, are evocative of shapes, shadowlands that are almost recognisable, views more abstract in form. On slow looking, each contain a double view. On first sight they appear slightly absurd, an untenable scape of alien land is seen, as if formed from recollections of dream states, on further examination a scape of the material qualities of the maker and medium are fore-fronted. The work becomes a riddle of dimensions in space and time, referent of the real and the virtual at once.

Markus Kramer, when discussing the photography of Thomas Ruff, outlines three phases of Ruff's oeuvre. In Ruff's early work (Phase One) the indexical technological transformation acknowledges the conventional understanding of photography, although altered by digital transformation through the likes of Photoshop. The output of the data is still recognisable by the viewer in its context as a 2-D print of a "physical depiction of the referent", the landscape or thing present in the 'real' world. This representation affirms the context of the indexical in relation to analogue photography. One assumes that this is what the essence of photography "must always be"[33]. The late phases (Two and Three) suggest what a photograph can become. The referent may come from internet images with transformation of data through computer software manipulation, output across virtual, 2-D or 3-D print. This markedly moves our understanding of what a photograph is and suggests a deviation from how the indexical is interpreted and understood, that is conceptually driven by the process of image generation. What Kramer describes as "The Indexical Technological Bracket," shifting the image capture of the world we inhabit using the traditional camera apparatus, to virtual capture from the internet and computer image data. Kramer describes this as a shift from a real "first order world" to a virtual "second order world" experience[34]. In this "second order world" the artist depiction or view is presented through indexical technological transformation, shifting from pictorial representation to photographic objecthood. *Glass Landscapes* (2014-15) combines the imprint of the maker (past and present) with the subject of the photograph to create imaginal place. This practice-research through indexical technological transformation repositions photography's connectivity to the referent, bringing both objecthood and representational qualities together in each photograph.

This research straddles both first and second order world experience. I have come to realise through the hybrid nature of my practice-research; blending analogue with digital, the real with the imagined, the physical and virtual, presents indexical technological transformation through a process of layering. Carol Squiers describes the creation of technological layering as "both systems as one flows together."[35] This creates an analogue-

[33] Markus Kramer et al., *Photographic Objects* (Heidelberg: Kehrer, 2013), 19.
[34] Kramer 2019, *Photographic Objects,* 46-48.
[35] Carol Squiers et al., *What Is a Photograph?* (Munich; New York: Delmonico Books-Prestel; New York, 2013), 10.

digital stream flowing in synchronicity entwining the technologies to "recast into one materiality of the physical world,"[36] – the photographic print.

Chapter Three interrogates the significance of the flaws of medium materiality, and limitations of photo-technology in expanding and transforming pictorial representations of landscape.

[36] Squiers *What is a Photograph?* 42.

PLATE FOUR

Chapter Three

Distant Horizons

Illuminating the Indistinct

> The climate yesterday was one of clarity, in which difference appeared. Today's is of a diffuse light, in which differences are blurred. Yesterday it was "natural" to distinguish and today it is "natural" to dive into the indistinct. Yesterday it was reason and today it is intuition [...] Even though I do not want to be in the fog, even though I prefer yesterday's panorama, I cannot avoid today's climate [...] I am obliged to allow the concrete fog to bathe and penetrate me to my pores. [37]

3.1 Introduction

Exploring the phenomenon of natural and synthetic light *captured* through silver halide and computer algorithms, this practice-research creates depictions of landscape that sit between pictorial representation and abstract imaging. Alongside Volume 2 of the thesis, this chapter concentrates on the research question: How can the synthesis between analogue photography and digital image capture extend the visual and conceptual possibilities of evocations of landscape, both real and imagined? The research studies natural and synthetic light forms and the shadow-less phenomena of the virtual. Speculating on the experience of the changing light conditions of the Arctic, the resulting practice-research *An Expedition* (2015-17) **Volume Two, Section 2, pp.10-24**, exploits the immersive qualities of extreme white and dark light.

Building from Chapter Two this chapter outlines the progressive steps from archive room to photography darkroom as *studio space.* Introducing the Andrée Expedition Photography Collection and initial reflections using this archival source material to stimulate new research methodologies. This was established through various experiments alongside the shift of *studio space* from archive room to the photography darkroom (both black and white and colour). My search for place through the photographic act, advanced through a study of the cameraless photography of August Strindberg, and his interest in the chance interventions of nature in art, converging the material qualities of the medium

[37] Vilém Flusser, *Natural:Mind* (Minneapolis, Mn: Univocal, 2013, 127.

as endorsement of the natural phenomena of *being* in the world. Drawing from the sensual dynamics of Strindberg's work and the material degradation of the Andrée photographs, the chapter progresses to contemplate the expansive potential of the medium through the flaws and limitations of the material and temporal qualities of photography, what Mary Ann Doane describes as "an *enabling impediment.*"[38] An evaluation of the dimensional qualities of the photograph are explored through the *out of focus* photography of Uta Barth, Marco Breuer's fascination for photographic surface, and the illusory qualities of the stereographic image. Discourse surrounding the index relating to medium materiality is examined through James Welling's *Flowers* (2004-11), and the writing of Mary Anne Doane, Daniel Rubenstein and Anna Sluis.[39] The nuances and peculiarities of light resonate throughout the chapter, beginning with the *whiteness* of light, and progressing towards the darkness of shadows through the writing of Jun'ichirō Tanizaki. The chapter concludes with an examination of a key stage of the research when my investigation of hybrid process led from the still to the moving image. This resulted in a series of short films as response to my interest in the immersive qualities of landscape.

3.2 The Andrée Collection

Reading journals from polar expeditions of the late nineteenth century period, one becomes aware of the harsh conditions many explorers experienced. The enigma of seasonal change in the extremities of northern and southern hemispheres generate thoughts of alternative domains. The reduction of daylight as winter approaches, is preceded by endless summer days of enduring continuous blinding sunlight, as the looming blackness of winter yields a life with no sun. The dramatic light-change impacts on our ability to determine time of day. Light or darkness is continuous, therefore how do we know when one day ends and another begins? We are caught either in endless daylight or forever in the twilight. In these extreme geographical locations, understanding of time is challenged, shifting our temporal experience. Real time falters, leaving a blurring and thoughts of an in between place.

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[38] M. A. Doane, "The Indexical and the Concept of Medium Specificity," *Differences* 18, no. 1 (January 1, 2007):128-52, https://doi.org/10.1215/10407391-2006-025 ,130.

[39] Daniel Rubenstein and Katrina Sluis, "The Digital Image in Photographic Culture: Algorithmic Photography and the Crisis of Representation," in *The Photographic Image in Digital Culture,* ed. Martin Lister (Abingdon: Routledge, 2013).

Studying in the archive led me to a collection known as *The Andrée Expedition*. The Andrée Expedition was led by the Swedish balloonist S.A Andrée in 1897. His aim was to be the first to reach the North Pole by hydrogen balloon. The crew comprised Salomon August Andrée, Nils Strindberg and Knut Frankael. Strindberg the youngest of the explorers took the lead as expedition photographer.

Figure 12. Nils Strindberg, *View from the Expedition Balloon,* 1897.

Andrée not only sought to claim the North Pole for Sweden without ever touching ground, but also capture the first views of the Arctic through aerial photography (fig.12). In the late nineteenth century, the North Pole was yet to be conquered, and the terrain of the Arctic region was predominantly uncharted and uninhabited. The Andrée expedition caught the public imagination, this was a time before air flight had been invented, it would have been almost impossible to conceive the views we now have access to via Google Earth mapping and satellite imaging. Andrée and his crew in flight observed the view below, of landscape seen from a new perspective. Floating far above, looking through milky blue skies at the landscape below, what a spectacle to see a place at that time only imagined, never before seen, or photographed.

Within days the expedition was doomed to failure and the men were lost, they simply disappeared. It was not until thirty-three years later in 1930 that the bodies of the men were discovered on a small island known as Kvitøya. Their personal effects including diaries, journals and rolls of exposed photographic film were found at their base camp.

3.3 The Shadowland of White Island

Kvitøya translated to English as White Island, is the northern most territory of Norway, a remote island located around seven hundred miles from the North Pole. The island has remained uninhabited since it was first discovered in the early eighteenth century. This is mainly due to its inaccessibility caused by dense fogs, shifting plateaus of packed ice and the rocky coastline.

When Andrée landed on White Island in September 1897 no photographs of White Island existed. After weeks on the ice-floe enduring the extreme cycle of seasonal light searching for land in the hope of shelter and survival, Andrée, Strindberg and Fraenkel died within days of reaching the island. The final journal entries are few, the writing sparing and at time nonsensical. After the blinding sunlight of summer days on the ice-floe, the men arrived on land as daylight was dramatically reduced and the looming blackness of winter began. Rather than a sanctuary White Island became the men's endpoint. When discovered the rolls of negative film from the expedition were still intact, stored in their original cases of sheet iron. From the many rolls of exposed film, no images were taken on the island. We are left with a poignant visual silence to reflect on this final devastating period. To this day Kvitøya has rarely been photographed and as yet satellite imaging technology is still unable to fully map the geographic detail of the island (fig.13).

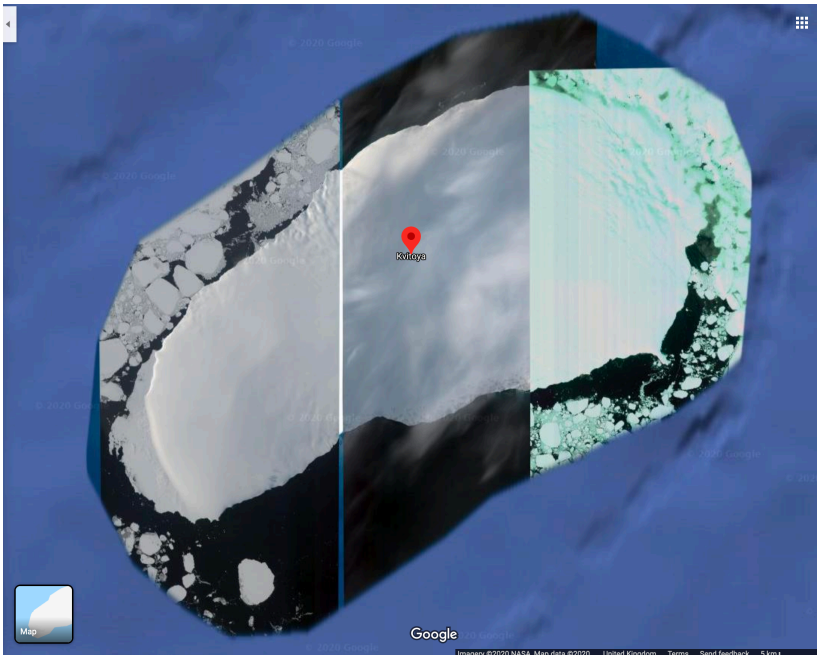

Figure 13. Satellite image of White Island, © Google.

I have become fascinated by the idea of this island, its name *White*, a colour that has no hue, in opposition to black. I am reminded of the creamy surface of the wet collodion negative, as described in Chapter Two.[40] The emulsion produced through this process is sensitive to blue light, the spectrum of cool colours, condensed into unbroken white plains and warm colours convert into dense dark tones. Collodion photography presents a world of extreme light and shade. In her novel *The Waves* Virginia Woolf describes the shadow-less intensity of white light "*The sun fell in sharp wedges inside the room. Whatever the light touched became dowered with a fanatical existence. A plate was like a white lake. A knife looked like a dagger of ice. [...] Everything was without shadow.*"[41] Caught in the abject whiteness of sunlight, Woolf's description of "a fanatical existence" seems to aptly describe the subject's environment in the Andrée photographs.

As a response, I set myself the task to construct views from and of an imagined White Island. This developed into the body of work later titled *An Expedition* (2015-17) **Volume Two, Section 2, pp10-24.** This comprised of individual works titled: *On White Island: Chemistry Geology* (2015) **Volume Two, Section 2 pp15 & 17-19,** *Ice-flows and islands* (2015) **Volume Two, Section 2, p.20,** and *Horizonflux* (2015-16) **Volume Two, Section 2 pp. 10-15 & 21,** ranging from black and white to colour, and from still to animated image.

When constructing images of White Island, the Andrée photographs were my main point of reference, their haunting beauty presented me with shadows of things past. I was building an impression of this island from the photographs taken on a journey across ice-floes, a place that is neither land nor sea, a place with no fixed anchor point as the ice unrooted is always in flux.

[40] See section 2.8 'On Slowness' of this volume, 33-35.
[41] Virginia Woolf, *The Waves.* (Ware, Hertfordshire: Wordsworth Classics, 2000), 61.

Figure 14. Jacqueline Butler, *The Andrée Collection* photograph taken at NMM, Bradford, 2014. ©Jacqueline Butler.

3.4 Nature: Elements of Being

Viewing the small Andrée prints (fig.14), being aware of their fragility and of the tragedy that surrounded them, the men appear as phantoms. The impact the harsh climatic conditions must have had on their bodies is seemingly imprinted directly on to the damaged film (fig16). It is interesting to consider this knowing that the origin of the word film comes from old English filmen meaning membrane or skin. Merleau Ponty in *The Visible and the Invisible* writes of flesh as:

> not matter. not mind, not substance... we should need the old term ″element,″ in the sense it was used to speak of water, air, earth, and fire, that is, in the sense of a general thing, midway between the spatiotemporal individual and the idea, a sort of incarnate principle that brings a style of being wherever there is a fragment of being. The flesh is in this sense an ″element″ of Being[42]

Flesh of the body and of the photograph bring together elements essential to being.

[42] Maurice Merleau-Ponty, Claude Lefort, and Alphonso Lingis, *The Visible and the Invisible* (Evanston, Ill. Northwestern University Press, 1992), 139.

Figure 15. Photograph from original print, *Andrée Collection,* NMM Bradford.

Whilst undertaking this research I discovered that Nils Strindberg, the chief photographer of the expedition was the nephew of the playwright August Strindberg (1849–1912). As well as writing August Strindberg painted and had an interest in photography. In the 1890s he created a series of cameraless photography experiments. An early method he called crystallographs entailed placing saline solutions on glass which crystallised when exposed to heat or cold, he then made direct contact prints from the snow crystal 'negatives' he described as frost flowers.[43] Katherine Steidl (2011) writes: "by leaving the glass plate completely *untouched*: the material of the saline solutions determines the formation of the picture and so its actual emergence is not controlled by the artist's and is therefore an autopoetical production of chance."[44] This reflects Strindberg's interest in the phenomena of nature and chance and reiterates Talbot's philosophy reflected in *The Pencil of Nature*. Rather than representations *of* nature Strindberg's photograms were in essence 'part of it'.

[43] Clã©ment Chã©roux, *The Elemental Photographer: August Strindberg,* Tate, 2005, https://www.tate.org.uk/tate-etc/issue-3-spring-2005/elemental-photographer.
[44] Katherine Steidl, *Traces of/by Nature: August Strindberg's Photographic Experiments of the 1890's*, IWM (Institute for Human Sciences), February 10, 2011, https://www.iwm.at/publications/5-junior-visiting-fellows-conferences/vol-xxix/katharina-steidl-2/

Strindberg continued working through the 1890s completing a series of colour photograms in 1894 which he called Celestographs. This involved submerging unexposed photographic plates in trays of developing chemicals and leaving them outside overnight. The results of his experiments captured what he described as imprints of the night skies. Geoffrey Batchen describes Celestograph VII (inscribed on the back by Strindberg as: "*Stjernor/Étolies/La région d´Orion*" (*Stars/Area around Orion*): "Dark, almost earth coloured, and sometimes further marked by ink or grease stains these photographs are speckled with dots and other deformations, analogies, if not necessarily direct transcriptions, of a greater world of phenomena."[45] The Celestograph (fig.16) rather than capturing light of the moon and stars of the night skies, are inscriptions of the particles of dust and dirt that settled on the liquid surface of the developer[46]. Douglas Fuek writes "surfaces not only look weathered with an atmospherically-created patina, but even seem to have been made in physical collaboration with the weather."[47]

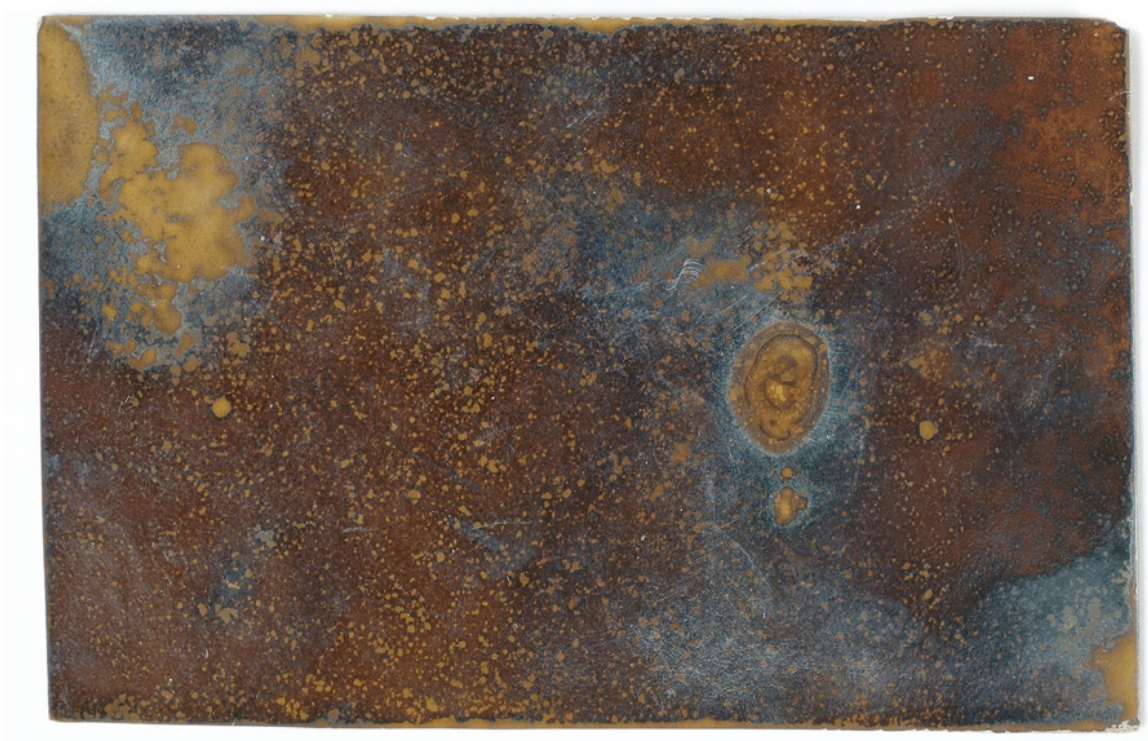

Figure 16. August Strindberg, *Celestograph,* 1894. Courtesy Royal Library, Stockholm.

[45] Batchen, *Emanations,* 16.
[46] See the earlier discussion of Fontcuberta's *Constellations,* in this volume, section 2.6 'The Imprint of the Maker', 29-31.
[47] Douglas Feuk, "The Celestographs of August Strindberg | Douglas Feuk," cabinetmagazine.org, 2001, http://cabinetmagazine.org/issues/3/feuk.php.

There is a poignant connection between August and Nils Strindberg's photography. The chance intervention of nature consumes the photographs whether snow crystals, dust, or seawater, and makes visible each makers connection to the natural phenomena of landscape through the material process of photography.

3.5 Fuzziness: Picturing the Indistinct

There is a photograph in the Andrée Expedition photography collection where all three men push their boat through high banks of snow and ice in an attempt to cross the ice floe. (fig.17) The expedition's photographer, Nils Strindberg is in the photograph: therefore, one must assume the camera was intentionally set up to capture the scene, staged for posterity, positioned to bear witness to the valour of the men at the same time as capturing the futility of their predicament. The camera becomes complicit as the vessel for imprinting the voracity and brutality of nature. Once the shutter opened the image was received onto the light-sensitive film, infolded in its latent state for over 30 years. The resulting print is soft, hazy and unstable, it has a quality that suggests a dreamlike space.

Figure 17. Jacqueline Butler. Photograph of original print from *Andre Collection,* NMM Bradford. ©Jacqueline Butler.

Bernd Huppauf writes that "Fuzziness ignores the common conception of the image and transcends the world of visual representation. It loosens the bond between a picture and the thing represented."[48], the reality experienced becomes abstracted. He writes that fuzzy images are: "free from the standard demand of clarity and distinctiveness [...] their own unique contribution to an imagined world to become visible itself." [49]

Talbot's invention of the Calotype, unlike the sharp detail of the daguerreotype, has a soft hazy quality brought about by the absorptions of chemicals into the grain of the paper and by the processes required to make positive prints. This was a point in history before the invention of the photographic enlarger, therefore the calotype paper negative and later glass plate negative (used by Dodgson) required direct contact printing between negative and photographic paper. This tacit layering technique introduced a new way of seeing objects from the world. Batchen surmises: "Talbot recognises from the outset that photography provides an indexical truth-to-presence, even if not necessarily a truth-to appearance. A photograph, he reminds us, tells us that something was there, but not exactly what it looked like."[50] Arrested from the progression of life through photography the subject is suspended in time, their appearance is affected by the processes and materials of technology. In this altered state they emerge as reality abstracted. In *Camera Lucida* Roland Barthes describes this as "a superimposition [...] of reality and of the past"[51] defining the "That-has-been"[52] as the essence of the photograph. Elizabeth Edwards describes photographs literally as "raw histories"[53]due to the inherent qualities of the medium (particularly their indexical potential). Reflecting on Barthes writing of photography's essence she concludes:

> 'a photograph preserves a moment of time and prevents it being effaced by the suppression of future moments'(Berger and Mohr 1989:89). Fragments come to stand for a whole, as an expression of apparent essence, what it is 'to be' something.[54]

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[48] Bernd Huppauf, "Between Imitation and Simulation Towards an Aesthetics of Fuzzy Images," in *Dynamics and Performativity of Imagination The Image between the Visible and the Invisible*, ed. Bernd Huppauf and Christoph Wulf (Routledge, 2009), https://www.taylorfrancis.com/books/e/9780203363898, 230.
[49] Huppauf, "Between Imitation and Simulation", 233.
[50] Batchen, *Emanations*, 9.
[51] Barthes, *Camera Lucida*, 76.
[52] Barthes, 77.
[53] Elizabeth Edwards *Raw Histories: Photographs, Anthropology and Museums* (Oxford: Berg, 2001), 5.
[54] Edwards, *Raw Histories*, 8.

The raw history of photographs reminds us of a past presence captured in the world at a given moment in time, a past that is ever present. Batchen describes this perfectly as "appearance-as-disappearance, as yet another paradoxical play of absence within presence, blindness in insight"[55] The photograph as a continuous reminder of our own mortality and of loss.

The Andrée photographs had a profound effect on me, so much so that initially I found it difficult to work with them. Rather than concentrating on photographing details from the surface of each print, as was my usual method when working on the previous work, I decided to construct new negatives to create images that would evoke this dream-space, shifting from a representation of the visible to that of the unseen, in an attempt to 'feel' this illusory place.

3.6 Whiteness and Nothingness

Bea Uusma retraced the journey of the Andrée Expedition by quite literally walking in their footsteps nearly one hundred years after the original expedition set out. Travelling north on a ship heading to the North Pole, when seeing maps of the Arctic seas scattered over the captain's cabin, Uusma comments, "As in 1897, our maps of the Arctic are white. Because there is nothing here". [56] Her comment induces thoughts of a place of nothingness. Map after map unchanged for at least one hundred years, the whiteness reveals a void. Viewing the landscape from her boat, Uusma notes that even the vanishing point between the earth and the skies above become fuzzy and indistinguishable, presenting a landscape of dense hollow emptiness. The idea of this spatial mist descending informed the production of a series of studies, **Volume Two, Section 2, p.15,** *On White Island: Chemistry Geology* (2015). *On White Island: Geology Chemistry* (2015) (fig.18) ,is an example of what I describe as space-volatility, the corporeal self is antagonised by this temporal and topographic flux.

[55] Geoffrey Batchen, *Burning with Desire: The Conception of Photography* (Cambridge, Mass.: MIT Press, 2006), 192.
[56] Bea Uusma, *The Expedition: A Love Story: Solving the Mystery of a Polar Tragedy* (London: Head of Zeus, 2015), 49.

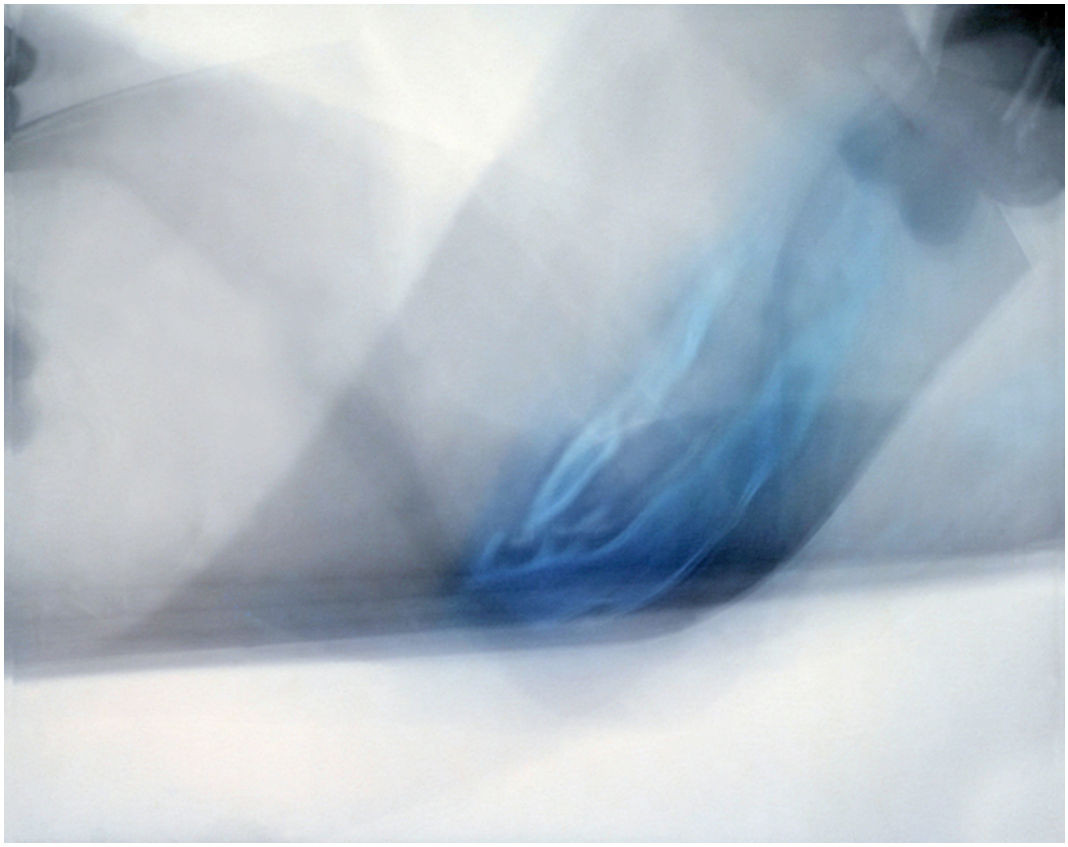

Figure 18. Jacqueline Butler, On *White Island: Geology Chemistry*, 2015, 80cm x 64 cm. ©Jacqueline Butler.

Travelling to the exact point where the balloon came down, 82º 56º parallel, Uusma describes her experience descending on to the packed ice. She writes:

> There's no yield at all. A milky white haze fills the air … there's a whiteness. I take a few steps. I cast no shadow. It's like walking inside a cloud, and somewhere in all this whiteness the sun turns in perfect revolutions, round and round. Without ever dipping towards the horizon.[57]

Uusma travelled on to 90º N: the North Pole. A place where "everytime of day at once"[58] exists, taking small steps in a clockwise or anti clockwise direction, one can shift from one date to another. Through a few steps we become time travellers, stepping into yesterday and tomorrow. Bringing forth the imperative of photography to capture and document the actuality of our presence in the world, at the same time as seeing our past-ness. Returning once more to what Barthes refers to as "That-has-been"[59] of the object.

[57] Uusma, *The Expedition*, 60.
[58] Uusma, *The Expedition*, 84.
[59] Barthes, *Camera Lucida*, 77.

3.7 Looking, Being and Passing Through

I realize now that my fascination with the photographic surface is partially an attempt to unravel and present the multi-sensory experience the artist has whilst making photographs. A search for place transpires through the photographic act and through this process of *searching* the sensation and desire to capture an embodied experience is enhanced. The German artist Marco Breuer connects the actions of the body of the artist to the photograph through direct physical actions. His darkroom methods include sanding, folding, heating and even setting the surface of unexposed photographic paper on fire, before developing and fixing the print. Breuer initially worked with photography in a more conventional way using his camera, he moved to cameraless techniques to open up the potential of the photographic print, and in the process expand photography. Working with cameraless technique encouraged him to "look inward"[60] and challenge preconceptions of the capability of photographic print. In an interview in 2018, Breuer talks of his inspiration from nineteenth century photography and questions: "what was it like in the nineteenth century to make a photograph without ever having seen a photograph? When there were no preconceived notions, there were no categories, nothing was clearly defined."[61] By studying the earliest experiments in the history of photography Breuer was released from the shackles of the established conventions of darkroom printing, freeing him to explore the rawness of the medium's materiality. The *rawness* of each print present indexical qualities that flesh out and exploit the spatial and temporal dynamics of photography. Batchen describes Breuer's photographs as "surrogate bodies." Through Breuer's aggressive onslaught of the photograph's surface, the *wounds* of the photograph become symbolic of the body, "like any other body, they also bear the marks of time, not of a single instant from the past, but rather of duration of actions that have left accumulated scars."[62] The viewer is left with an artefact that is pained and exposed. (fig.19)

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[60] San Francisco Museum, "Marco Breuer: Pushing the Boundaries of Photography," YouTube Video, *YouTube*, September 24, 2018, https://www.youtube.com/watch?v=3hQ_3yuk_Cc.
[61] "Marco Breuer: Pushing the Boundaries of Photography."
[62] Batchen, *Emanations*, 46.

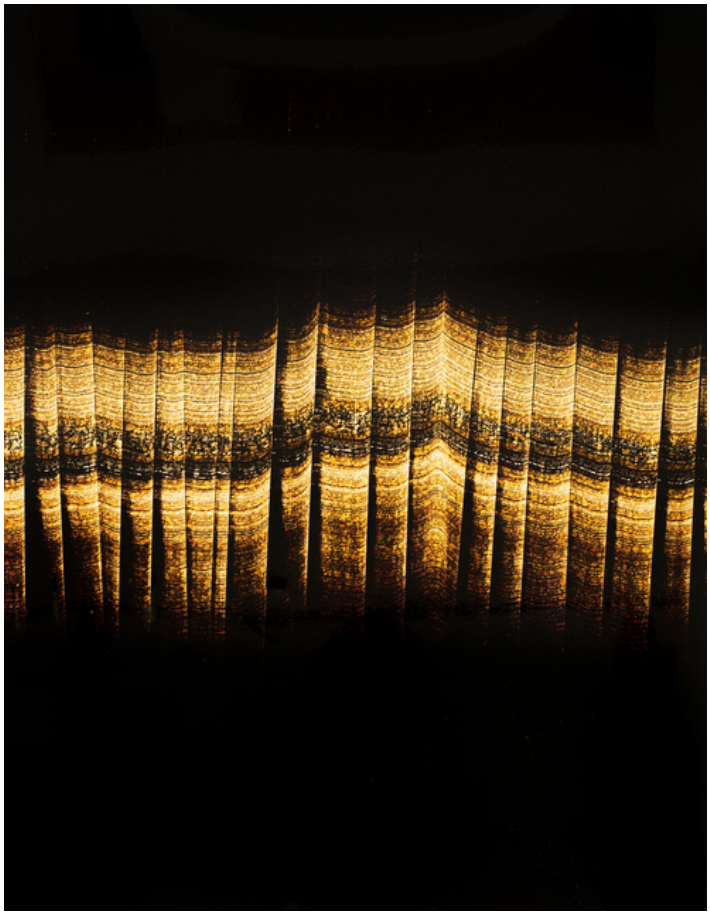

Figure 19. Marco Breuer *Untitled (C-1705)*, 2015. © Marco Breuer

Evaluating Breuer's methods against my own, both have the intent to disrupt the photographic surface through methods such as folding or tearing. Breuer's actions are direct, abrasive, aggressive and violent physical gestures, they damage the surface of the print, like wounds exposed to the viewer. My marks are ephemeral working with the mark of silvered shadows. I do not fold the photographic paper (I barely touch it), instead I capture a shadow of a fold. Any tear I make is *healed* through the process of digital scanning, there are no edges starkly exposed to the viewer (fig. 20 & 21). The weave between analogue and digital process quietens my actions, *shadowed* folding and twisting rather than opening-up, seals the subject within the image. The messiness of methods I use in the darkroom such as: sticking prints together, waiting for the liquid chemical to partially dry then peeling back each print, are *cleaned up* as they are converted into digital data, through a process best described as digital petrification.

Figure 20. Jacqueline Butler, *Ice-flows and islands*, 2015, Giclée print on paper, 40cm x 42cm.
©Jacqueline Butler.

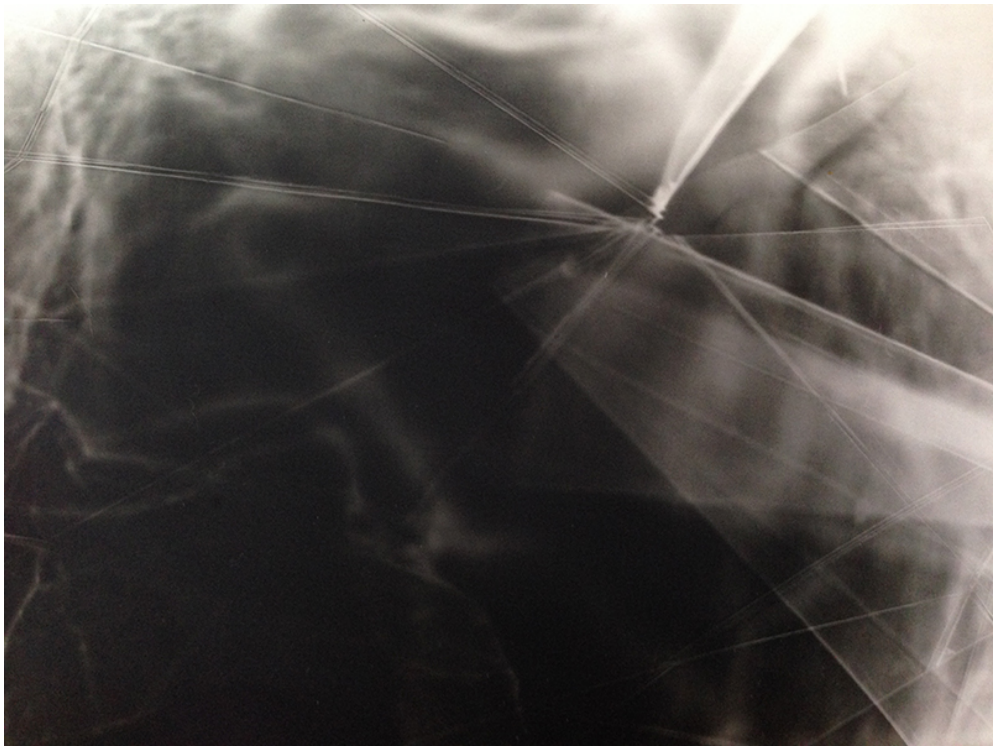

Figure 21. Jacqueline Butler, *Ice-flows and Islands*, 2015, Giclée print on paper, 34cm x 27.5cm.
©Jacqueline Butler.

3.8 The Importance of Vagueness in Looking and Seeing

There have been many debates around the *clean* precision of the digital in contrast to the *dirty* imperfections of analogue photography. The aesthetic merits of both technologies can be championed as superior (depending on the argument). These debates are ongoing, forming part of the continuing history of Photomedia. Whether we should strive for perfection and sharpness or celebrate the faults and flaws photography offers has been discussed since the beginnings of the invention of the fixed photographic image.

Huppauf when considering the out of focus qualities of an image refers to William Henry Newton, one of the founding members of the Royal Photographic Society, who in 1853 argued against the perfection of image sharpness. He felt the subject of the photograph being slightly out of focus brought it "closer to the magic and suggestive qualities of the objects of the visible world".[63] The word magic has been associated with photography since its inception when the medium first presented miniature representations of the world. It continues to offer exquisite perspectives that convey the visible and invisible iterations of the world we inhabit. Huppauf surmises that this elevates photography "to the status of a true reflection on reality" and suggests "fuzziness"[64] frees the image to our imagination. The lack of clarity and indistinctness not only invites speculation on imagining the world but also comes closer to a truer representation of facets of sight. We do not see the world as a camera lens does, from a singular focused perspective, Huppauf describes this sharpness as an "abstract ideal" viewing a fuzzy image he affirms there is a "vagueness" a "non-systemic movement in space". The fuzzy image comes closer to the experience of human perception, seeing through binocular vision.

Timothy Morton's essay *Magic Death*[65] summarizes many of my thoughts on the potency of photography. A photograph reveals a fragment of things past. It points to and reminds us of the absence of the object held within the photographic image. As Michel Henry writes

[63] Huppauf, "Between Imitation and Simulation Towards an Aesthetics of Fuzzy Images," 242.
[64] Huppauf, 242.
[65] Timothy Morton, *Realist Magic: Objects, Ontology, Causality* (Ann Arbor, Mich.: Open Humanities Press, 2013).

"everything is there but nothing is present"[66]. We anticipate that the photograph will act as a vessel to prompt memory, but perhaps instead we are left with an empty shell, it is a reminder of that which is irretrievable. Marianne Hirsch suggests that photography can only bring back the past in the form of a "ghostly reverent" placing an emphasis on the photograph's "immutable and irreversible pastness and irretrievability." stimulating a consideration of the link between photography and death, the photograph is a continuous reminder of the fragility of life.[67]

How we see, not purely physiologically but also experientially, is interrogated through this research project. Through the processes, principles and mechanics of analogue photography interfaced with digital media capture, the language and history of photography prompts new ways to represent a sensation of landscape.

Like the shattered "absent" glass that Morton writes of in *Magic Death*, the out of focus fuzziness present in a photograph denies the viewer a sharp, clear perspective. When the photographic image is distorted the object has no boundaries, it fragments and disperses. Morton states that beauty is "a warning that one is fragile"[68] he continues "In beauty, an object is vaporized. It loses its memory."[69] The delicacy and instability of beauty as described by Morton is explored in works such as *On White Island: Chemistry and Geology* (2015) and *Ice-flows and Islands* (2015) **Volume Two, Section 2, pp 15-20**, through light, colour, tone, focus and depth of field. Encountering the inescapable magnificence of shadow play, one becomes immersed in each image's elusive formlessness, lost in a hazy splendour of the photographic print. To disremember is like the pull of focus, a reference to the edges of perceptual vision (like the edges of Dodgson's glass negatives). The blur sanctions a release, a point of escape from the necessity to pin things down, a space between subject and meaning. The dispersal or vaporization of the object through photography stimulates us to disremember and shift to the imaginal.

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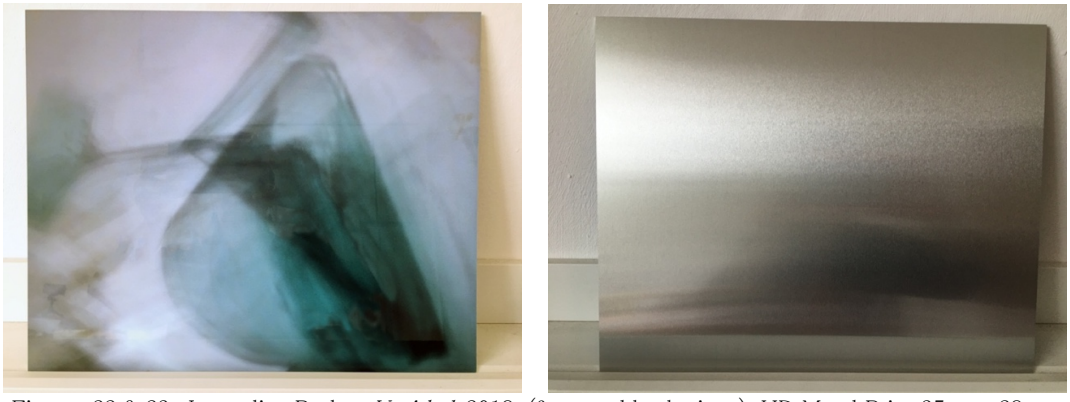
[66] Michel Henry, "Material Phenomenology and Language (or, Pathos and Language)," *Continental Philosophy Review* 32 (1999): 343-65, https://pervegalit.files.wordpress.com/2008/06/pathos_and_language.pdf.
[67] Marianne Hirsch and Harvard University Press, *Family Frames: Photography Narrative and Postmemory* (Cambridge, Mass ; London: Harvard University Press, Dr, 2016), 20.
[68] Morton, *Realist Magic: Objects, Ontology, Causality, 205.*
[69] Morton, 217.

To consider the out of focus one has to evaluate that which is in focus. My exploration of the touch of objects on photographic paper, and the resulting sharpness of the shadow of the object in a photogram, reveals an emotionally traumatic layer: *On White Island: Chemistry Geology* **Volume Two, Section 2, pp 15-19.** Increasing the distance between photographic paper and object (to be captured) results in a fuzziness, the final images become strange and unrecognisable. In this altered condition they become detached as a recognisable thing in the world, as Morton would put it the "object is vaporised" inducing a sensation of loss. Whether the space of 3-D virtual animation or of the analogue photogram each technology strives for image clarity. This research expands photography, creating a fluidity of medium materiality. I make *twisted* visual representations through subversive methods, to present expressions of experiencing landscape. The objecthood of the print is intensified using materials such as metal and high gloss surface, accentuating a desire to touch (fig.22 & 23) **Volume Two, Section 2, pp 22-23.**



Figures 22 & 23. Jacqueline Butler, *Untitled*, 2018, (front and back views). HD Metal Print 35cm x 28cm.
©Jacqueline Butler

The aesthetic of the blur present in the Andrée photographs suggest a view that is situated between optical function and minds' eye, mapping a weave of physical, emotional and imagined experience. There is no longer a sense of solidity in the Andrée photographs, the bodies appear as if projected from a magic lantern, the figures become visible only as shadows.

Figure 24. Uta Barth *Field #11, 1995*, chromogenic print on panel, 56cm x 73 cm.

The photographer Uta Barth uses shallow depth of field in her photography to create *out of focussness* (fig. 24). She describes the lack of focus in her photographs as the moment of the *Augenblick*– this translates from German as the *blink of an eye*. Barth's writes of her photography [there is] "a literal shuddering of vision– that illustrated the radical instability of the visual exchange between subject and object."[70] After a period contemplating a critic's question: What about perception? she wrote:

> This is an interesting space of mind: when we lose all assumed meaning: lose the inevitability of narrative; lose the impulse for interpretation. A space of mind that is dislodged from making meaning and yet sees beyond 180 degrees before us.[71]

This "space of mind" reflects on an embodied sensation of visual *capture* and an abstract process of remembering. We do not remember the past in a linear manner, we glide, slip, race and flounder, where there are gaps, we use our imagination and fact dissolves into fiction. The act of forgetting is intrinsic to memory. Marina Warner describes "the flickering evanescent indeterminacy of thought"[72], and of the instability of images in memory she writes:

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[70] Matthew Higgs, Jeremy Gilbert-Rolfe, Pamela M. Lee, *Uta Barth* (London: Phaidon, 2004), 9.
[71] Higgs, *Uta Barth*, 137.
[72] Marina Warner, *Phantasmagoria: Spirit Visions, Metaphors, and Media into the Twenty-First Century* (Oxford; New York: Oxford University Press, 2008), 217.

> Images quiver and dissolve [....] in memory (they) lack definition, especially at the edges, how remembered faces move in and out of focus with gaps and lesions, how mental picturing possesses uncanny clarity and presence while simultaneously jumping and wobbling and eddying[73]

When using 3-D digital capture software, a series of sharp focused photographs are required to build the 3-D image. The software cannot decipher blurred imaging resulting from either the movement of the subject being photographed, or lack of focus. The resulting composite reveal focus *errors* as gaps and holes in the final rendered image. The fuzziness creates fault lines, these flaws induce an abstract alternative vista.

3.9 On Both Sides

Continuing to study the Andrée Archive I realized that many of the photographs in the collection are stereographs. Although I have never viewed any through a stereoscope, I can imagine how they were intended to be seen. Kaja Silverman, when reflecting on Oliver Wendell Holmes's essay *The Stereograph and the Stereoscope,* first published in June 1857, considers how the stereograph *sees* in response to "an external solicitation, which is both tactile and visual."[74] Holmes wrote that when looking at a stereographic photograph through the stereograph we experience "something more than a surface." Holmes describes an embodied viewing, his description of the sensation of a branch of a tree protruding from the foreground of a photograph suggests physical violation of the body of the viewer, as the subjects of the image: "run out as if they would scratch our eyes out."[75] This description of looking suggest an immersive experience by the viewer into space, and a projection of the subject of the photograph protruding from the surface. This combination of looking and touching Silverman suggests:

> not only can we "feel round" what we see, but other bodies can extend into the space we [the viewer] occupy" the subject in the photograph and the

[73] Warner, *Phantasmagoria,* 217.
[74] Kaja Silverman, *The Miracle of Analogy, or, The History of Photography*, Part 1(Stanford, California: Stanford University Press, 2015), 107.
[75] Silverman, *The Miracle of Analogy*, 106-107.

> viewer of the photograph entwine, each reach out and project into the space between the physical space of the world and the photograph."[76]

The double space of the stereograph combines the foreground with background, and the confines of the two-dimensional is broken. A double view is presented, where images are the same but quite different, the viewer entangled with the subject in the photograph. Bringing thoughts back to Alice returning to Wonderland through the looking glass. The viewer is both drawn into the frame and at the same time forced back. Through the stereoscopic view the confined surface of the photograph become illusive.

The images I produce become abstracted through disrupting the mechanics of photography. By exploiting the bare components and processes of a medium we are presented with a provocation to question the realism of our fantasies. When writing of the qualities of cameraless photography, specifically the tacit connectivity of the subject/object to the photographic paper, Geoffrey Batchen comments:

> A reversed-tone inversion of the natural order of things, such photographs appear to emit their own light, to emanate rather than record their images. Placed thus within the inverted commas of candid self-reflection, photography is freed from its traditional subservient role as a realist mode of representation and allowed instead to become a searing index of its own operations, to become an art of the real[77]

3.10 Skewing the Index

Like the glass room described in Carroll's *Through the Looking Glass,* through the photogram and cameraless photography there is a mirroring of realities. The reality of the thing represented from the world placed directly onto the paper, e.g., a flower, is partially abstracted and presented as *other* through the shadow capture of the process. This establishes a dichotomy between the indexical nature of the medium through its materiality

[76] Silverman, 107.
[77] Batchen, *Emanations*, 5.

and the representational qualities of the referent, between *image* and *object*.

Figure 25. James Welling, *Flowers,* 2004-11. Colour photogram.

James Welling when discussing his photogram series *Flowers* (2004-11) (fig.25) describes his desire through photography to ""un-peel" the image"[78]. The un-peeling in Welling's *Flowers* (2004-11) destabilise the photographs' representational qualities, unsettling and confusing the viewer as to what the photograph is *pointing at*. Replying to Lynn Tillman's question "Does it matter whether you're making an abstraction or a representational image?" Welling replies:

> Increasingly I'm finding less and less of a difference between representational and so-called abstract pictures. There are always representational and abstract elements in any photograph. For instance, the white border on a print is a photogram, the shadow of the blade of the easel.[79]

[78] James Welling in conversation with Lynne Tillman, Denise Bratton, David Zwirner (London, and Maureen Paley, *James Welling: Flowers* (New York, Ny: David Zwirner Inc, 2007), 5.
[79] Welling, *James Welling: Flowers,* 2.

This suggests that the photograph presents a double index: the thing represented (the flower), and the materials of the maker (the darkroom easel). The synergy between subject and material process creates an in-between, where representation and abstraction merge. This I understand as key to my objective in repositioning the photograph's connectivity to the referent, and in the process untangling the indexical properties of this practice-research. Mary Ann Doane's analysis of Georges Didi-Huberman's reflections on the indexical status of the Turin Shroud, examines Charles Pierce's two definitions of the indexical sign, the trace or imprint of the object and the pointing *at* the something of/in the world. Doane contemplates E.H. Gombrich's essay *Conditions* of *Illusions* on the limitations of medium materiality. Gombrich's theory on illusion (his focus on painting) is determined by the significance of the artist's knowledge of the "power of indeterminate forms."[80] The gaps or absence created by the artist's skills, maximise the limitations and constraints of the materials used, creating a portal for imaginative discourse. Enabling the viewer to project real (or imagined) experiences to enable their individual interpretation of the image.

The photographic index "haunted by its object"[81] has steered the medium's capability towards creating a strong resemblance to the object it represents. Through this, the gap for imaginative discourse is closed leaving little for the viewer to participate in or contribute to. My interests are towards an index of haptic *moments* of the photographic process that present the "index's privileged relation to contact, to touch, the assurance of its physical link, as well as its resistance to iconicity".[82] Abstraction in my practice-research has steadily become more explicit and integral. The hybrid nature of my methodology presents the indistinct, inviting play with the viewer, to touch back to an impression of things, and speculate on memories of place.

Uta Barth comments that photographs are "tied up with pointing at things in the world and thereby ascribing significance to them" her interest is "in everything that is peripheral rather than central."[83] The "pointing at" becomes skewed by *fuzzying*, the view defaults from the

[80] M. A. Doane, "The Indexical and the Concept of Medium Specificity", *Differences* 18, no. 1 (January 1, 2007): 128-52, https://doi.org/10.1215/10407391-2006-025, 130.
[81] Doane, "The Indexical and the Concept of Medium Specificity", 134.
[82] Doane, 134.
[83] Barth, *The Long Now,* 9.

centre to the edge. Through material-play the vitality of the margins of technology comes to the fore. The trace of the performance of the maker of a photograph is no longer hidden, instead becoming integral to the narrative of the image. The *reveal* of the process of making photographs challenges the mediums representational vitality.

Daniel Rubenstein and Katrina Sluis acknowledge that the process to discredit the indexical capacity of the digital image requires a re-evaluation of the indexicality of analogue, and re-examination of the history of photographic theory. Rubenstein and Sluis focus on *Camera Lucida* and Barthes's theory of photography's essence, the connection to the referent. They argue that by excluding an important component of photography, the materiality and processes required to make visible the image of the subject in the photograph, Barthes' theory is flawed. Presenting the *what ifs* of technology failure: " what would happen to the indexicality of the image if the film chemistry was not 20C but at 90C - instead of indexicality it would be porridge!" and question "Is it still possible to speak of indexicality of the "latent image"?" Raising this question Rubenstein and Sluis confirm the power and enigma of the latent image in photography as holding as much "mystery and magic"[84] as the emanation of the referent in photography, through its invisibility and impenetrability. They conclude:

> If the image and the object share a commonality then this commonality contains within it something radically unknowable that cannot be accounted for by visuality alone, but by the presence of invisibility within the visible as well as the sensory within the intelligible. In fact, the old binary model 'object-image', has to be replaced by the ternary 'object-unknowable-image' where the unknowable makes room for the processing operations that convert event in the physical world into something we recognise as an image. This observation applies equally to the analogue and the computational image.[85]

[84] Daniel Rubenstein and Katrina Sluis *The Digital Image in Photographic Culture: Algorithmic photography and the crisis of Representation,* 6-7.
[85] Rubenstein and Sluis, *The Digital Image in Photographic Culture,* 6-7.

3.11 Illumination

Thinking of the Andrée photographs, the latent images captured in the film emulsion lay in the seawater, preserved by the deep, cold harshness of the landscape of White Island. Once developed, narratives created and transformed by ice and snow were made visible. The snow-covered earth that contaminated the photographic film summoned up magical visions feeding the imagination.

Reflecting on the immersive qualities of extreme white and 'dark' light, the landscapes I construct provoke contemplation on the imperceptible qualities of light on the human imagination. Robert McFarlane in his book *The Old Ways* describes the snow-covered Downs of Wiltshire, he writes:

> Low light saturating the landscape with a dull glow that never thickened to a shine but still drew blues from the long lying snow Where the chalk showed, it was the yellow of a polar-bear fur or an old man's knee. I found it bleakly beautiful: the air battened down, the light at its slant. I felt both absurd and wonderful. [86]

This description blends land with body, human gesture with nature.

To distinguish between abject blackness and the shadow, recognising the variation of shadows one can suggest something other than Warner's reminder of the afterlife[87]. A shadow cast gently into a dimly lit space may give way to a space for repose and meditation. The soft and elusive qualities of shadows, as with a photograph, can be ascribed to the potency of silence. Jun'ichirō Tanizaki reflects on the clash between traditional Japanese values for darkness and shadows in contrast to the glaring light of the western modern age. The magic of shadows that Tanizaki describes is delicate. The heaviness that permeates in the darkness, rather than being ominous and frightening, remind us to slow our thoughts,

[86] Robert Macfarlane, *The Old Ways: A Journey on Foot* (New York: Viking, 2012), 292-293.
[87] Warner, *Phantasmagoria,* 2018.

our actions become pensive and purposeful. The shadow becomes a stepping-stone to an imperceptible time, of a distant past. As Tanizaki describes:

> when we gaze into the darkness that gathers behind the crossbeam, around the flower vase, beneath the shelves, though we know perfectly well this is mere shadow, we are overcome with the feeling that in this small corner of the atmosphere there reigns complete and utter silence: that here in the darkness immutable tranquility holds sway. [88]

Tanizaki's description of the shadow is multi-sensory, the experience of 'dark-light' combines sight with sound. Immersing thoughts into the confines of the photograph, can increase an understanding of the varying properties of light and how this relates to a physical experience. Light enters our bodies in order that we can see, seeing is an act of embodiment. It is ironic to think that by the time the ability to make permanent an image from the camera lucida was introduced to the world in 1839, the science of optics and vision was fundamentally changing. As Jonathan Crary explains:

> By the early 1800s [...] the rigidity of the camera obscura, its linear optical system, its fixed positions, its identification of perception and object, were all too inflexible and immobile for a rapidly changing set of cultural and political requirements. [...] Vision is no longer subordinate to an exterior image of the true or the right. The eye is no longer what predicates a "real world."[89]

3.12 Conclusion

Two final works **Volume Two, Section 2, pp. 11-15,** conclude this chapter. They combine 3-D imaging with traditional printmaking techniques and through video, widen the scope of this practice-research. Through hybrid methodologies an immersive experience extends the visual possibilities of evocations of landscape. Through this

[88] Jun'ichirō Tanizaki, *In Praise of Shadows,* (London: Vintage 2001), 33.
[89] Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, Ma: Mit Press, 2012), 137-138.

process cameraless photography is expanded and the photogram is reinterpreted through virtual space.

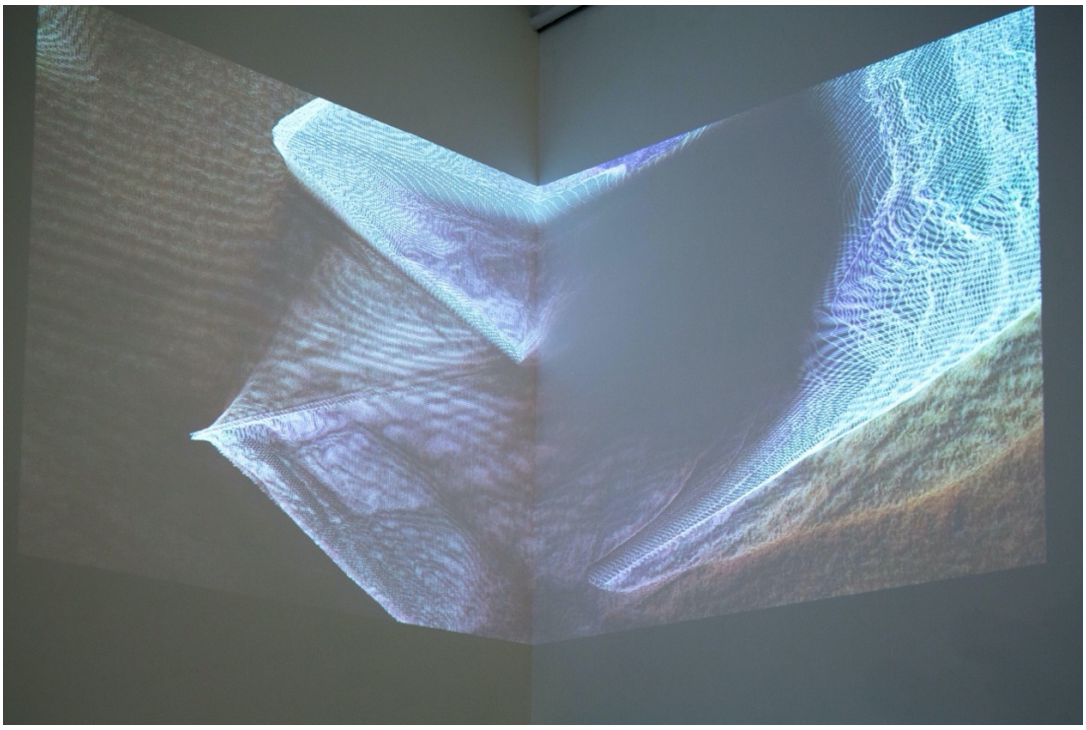
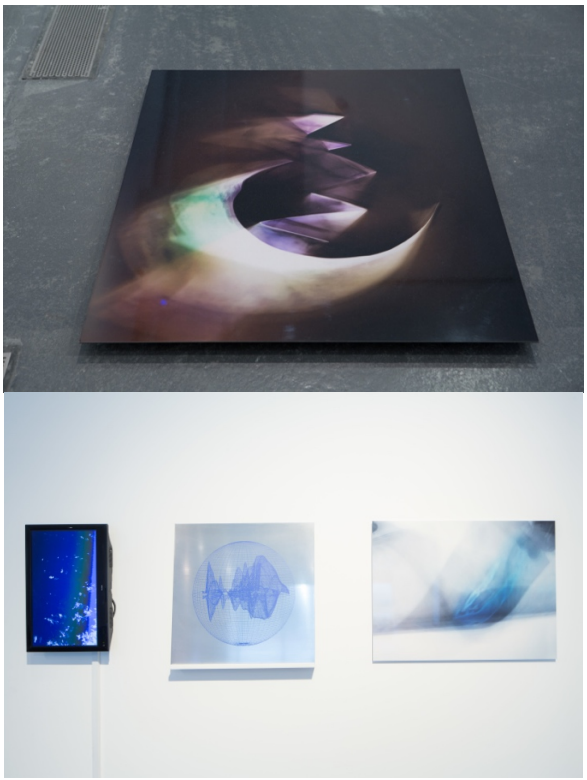


Figure 26. Jacqueline Butler. Photographs of installation, exhibition *Whereabouts You Are,* 2016, Reid Gallery,
Glasgow School of Art.



Figures 27 & 28. Jacqueline Butler. Photographs of installation, exhibition *Whereabouts You Are,* 2016, Reid Gallery, Glasgow School of Art.

The resolution of *An Expedition* was tested in two exhibitions in 2016 (figs.26-28).[90] I produced video work and exhibited them alongside prints made using various techniques: cameraless, analogue photograms processed digitally, and traditional screenprint.

This created an opportunity to expand the layering methods I began as described in this chapter. The results challenge what a photograph can become in expanded form. Introducing new ways to experience the haptic nature of print, I explored the qualities of light through print, screen, and projection. The videos in *Horizonflux* (2016) illuminate the work through screen and projection, In Horizonflux: *Unicorn* (2016) **Volume Two, Section 2, p.13**, the video comprise of multiple animated still images (a virtual flick book) whilst *Horizonflux: Without Light* (2016) **Volume Two, Section 2, p.14,** comprise of a sculptural 3-D image. Slowly rotating in the blackness of the virtual space, these evocations of dark-light immerse the viewer in the tranquillity of darkness as described by Tanizaki earlier in this chapter. Each video explores the photographic visualisation of time allowing a haptic fluidity of the photographic image. *Horizonflux: Without Light* (2016) **Volume Two, Section 2, p.14,** was projected into a corner of the gallery space, the rotation of the sculptural form in the video creates an illusion of space folding in on itself, and at the same time the gallery walls appear to become semi-transparent, folding in and out to create a virtual trompe l'oeil. The illusive qualities of the projection draw the viewer in, immersed in this illusory space one finds oneself reaching towards the projected light in an attempt to *catch* and be *caught* in the image[91], the sensation is quite extraordinary. This experimental work through expanding technology offers a new visualisation to experience imaginal space, leading to new thinking around photography's unique qualities in the visualisation of time and place. *Horizonflux* (2016) is responsive to and advances the conceptual evocations of landscape through technological convergence.

This chapter explored the haptic and dimensional qualities of light, the experience of *being* through fuzzy imaging, the limitations of medium materiality and the potential for indexical *flex* to expand the capabilities of the photographic print The later practice-

[90] *Whereabouts You Are*, Reid Gallery, GSA, and Sheffield Institute of Arts (SIA), 2016.
[91] The sensation to catch and be caught mirrors Silverman's description of the immersive experience of viewing a stereographic photograph, entwining the subject of the photograph with the viewer. See this volume, section 3.9 'On Both Sides', 64-65.

research explored the tangibility and immersive qualities of the image to provoke the inherent desire of the viewer to experience the visual through touch, the immateriality of light and digital media brings an acute awareness of the multi-sensory body. The process to resolve this stage of the practice-research, realised through *Horizonflux* (2016) was a result of folding and twisting, both in my making and thinking. Batchen and Edwards contemplations on the inherent qualities of medium's indexical potential [92] anchored the work, the abstract form, and fuzzy images I produced reference the medium itself (its fluid materiality). The *pointing at*[93] is skewed as I make horizons of something mutable and transferable between the realistic and the experiential.

A photograph, he reminds us, tells us that something was there, but not specifically what it looked like.

Methodology Sketch 2: An Expedition from the Archive completes this chapter through reflections on working in the photography darkroom and the impact this shift in location of maker's space had on my methodologies. Introducing the Andrée Photography Collection to my research led to further interrogation of the processes and material surface of photography and the results of *playing* with light.

Chapter Four continues to explore the boundaries and of the limitations of Photomedia through exploring and exploiting the faults and flaws of technology. Contemplations on landscape are explored through the phenomena of walking into and through landscape

[92] See this volume, section 3.5 'Fuzziness: Picturing the Indistinct', 53-55.
[93] As discussed by Uta Barth earlier in this chapter, section 3.10 'Skewing the index', 67-68.

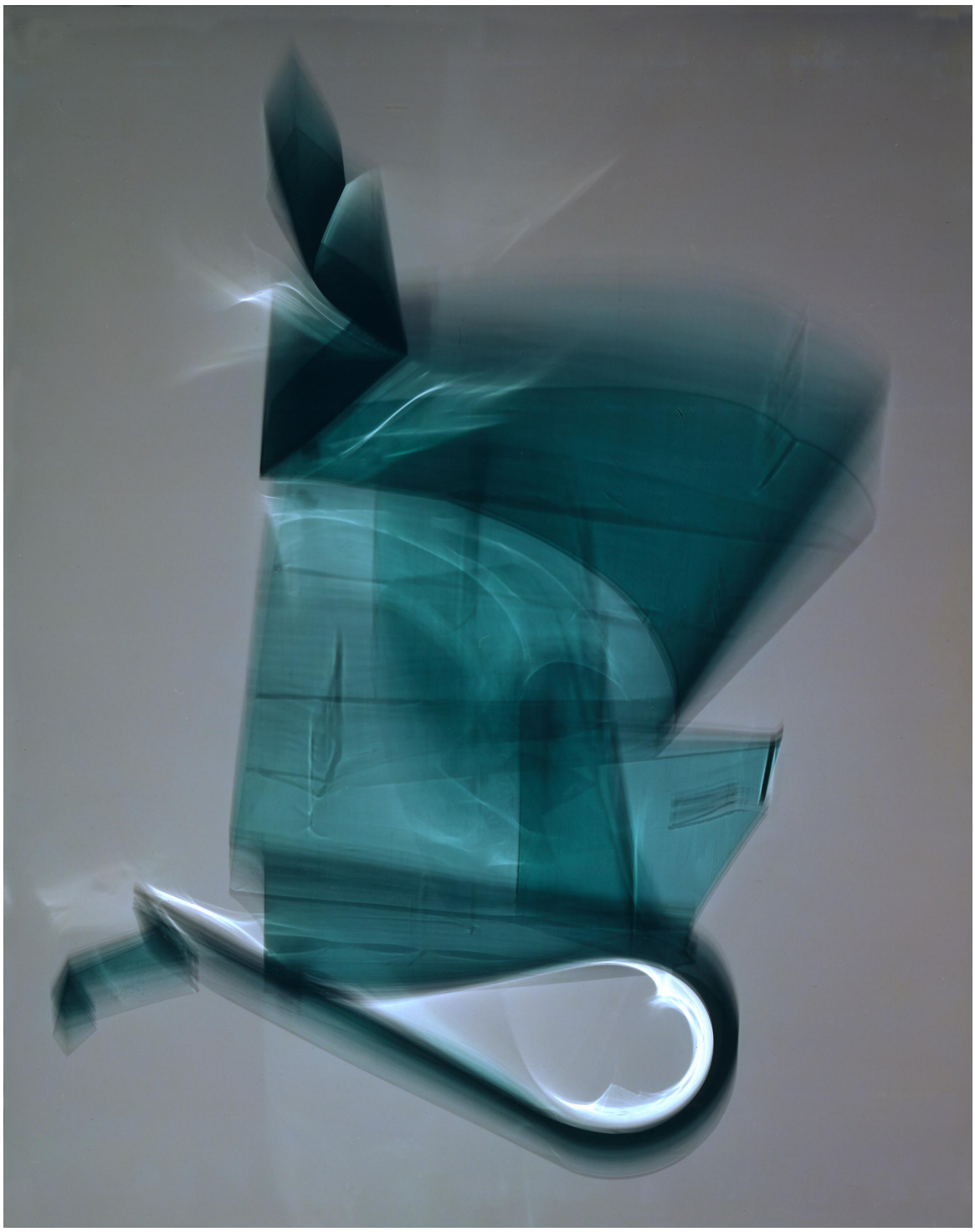


PLATE FIVE

Methodology Sketch 2

An Expedition from the Archive

An Expedition (2015–17) **Volume Two, Section 2, pp.10–24, Appendix: Experimental works, pp. 58–61,** is a series of digital images comprising a combination of c–type and giclée prints, animated videos and digital HD printing on metal. All the works were conceived and originate from the darkroom using cameraless techniques.

Creating imaginings of landscape in the confines of a photography archive was conducive to the environment of the study rooms of the museum. To an extent my behaviour had become assimilated to that of the archivist–curator. I had defined a meticulous method of collecting and cataloguing the surface of each photograph. Image–capturing every square millimetre of the surface. Perhaps this methodology was fostered as the weight of the history of the medium and the importance of the preservation of photography archives infected my thinking.

The methodology I refined to produce *Glass Landscapes* (2014–15) when applied to the Andrée Archive felt restrictive, the rhythmic flow of making became less creative and lacked spontaneity. To progress the research my methods would have to change.

The Workshop of Chemistry and ‘Dark’ Light

I began to develop methods of working in chemical photography darkrooms, using both black and white and colour printing techniques. The darkroom, as with the archive spaces was an environment conducive to considered reflective study. However, the darkroom was not a space for diagnostic interrogation (as the archive had become), as a workshop the onus was on actions, making it permissible to experimental speculation and free–flowing play. In the chemical photography darkroom, the effect of light (diminished and at times absent) considerably altered my mood and resulting actions. My movements seemed as if in slow motion, time expanded, my body felt weightless, slow, almost ethereal. In this space the delicacy of light created a feeling I can only describe as body–transparency.

There is a strangeness to the photography darkroom. Although a place of print production, historically the photographer's workplace, conditions caused by the diminished light of the red safe light, along with the odour of photochemistry create a body sensation that transforms the experience of the environment, the space becomes less rigid, wobbly almost untenable. This unworldly tension invites intersection between memory and the real world. Memory stirring between the personal and the imagined. What I mean by this is, one brings personal memories of physical experiences in/of the world, alongside the imagined memories stimulated by the archive material and the tempered dark-light of the darkroom.

As the practice-research progressed, I became conscious that the images produced contained narratives borne from the working environment of the darkroom. Utilising the tools of analogue photography: light and shadow, colour and tone, developer and fixative, it became apparent my altered state whilst inhabiting the darkrooms, induced by the sensation of limited light and chemistry in the air, impregnated and consolidated each work.

As a direct result of this blending of memory-time and real-time, the physical experience of working in the darkroom induced me to abandon the photographic camera apparatus from my methodology. Working solely with cameraless techniques, both of analogue (and later digital), brought me closer to the origins of the technology. Bringing analogue process into play drew more closely from the earliest printing techniques introduced by the pioneers of early photography and proto-photography. Removing the lens from the process placed onus on the connections between the surface of the photographic paper and the surface of things of the real world that came in contact with the paper, whether they be light-matter or object-based. This profoundly altered the prints produced.

The Andrée Photography Collection comprise copies of artefacts sent from The Polar Centre at Grenna Museum, in Sweden where the original collection is held. The material I used included printed photographic copies. Not having the opportunity to handle the original negatives held in Grenna, I was left with poor quality copies to survey. By closely studying the material it became clear the emulsion from the original negatives had been severely damaged, the surface appeared to have been pitted and stained. Its reference was

to the geographical place originally photographed in 1897, but also through the poor condition of the emulsion there was a visual residue of the duration of time the film had been soaked in the saltwater and ice. The chemistry and geology of the landscape had left its mark on the negatives (fig.29). This history of contamination and erosion was documented by the splits and wrinkles of the emulsion coating, one could see where the chemical material of photo-emulsion was slipping away from the plastic material of the filmstock.

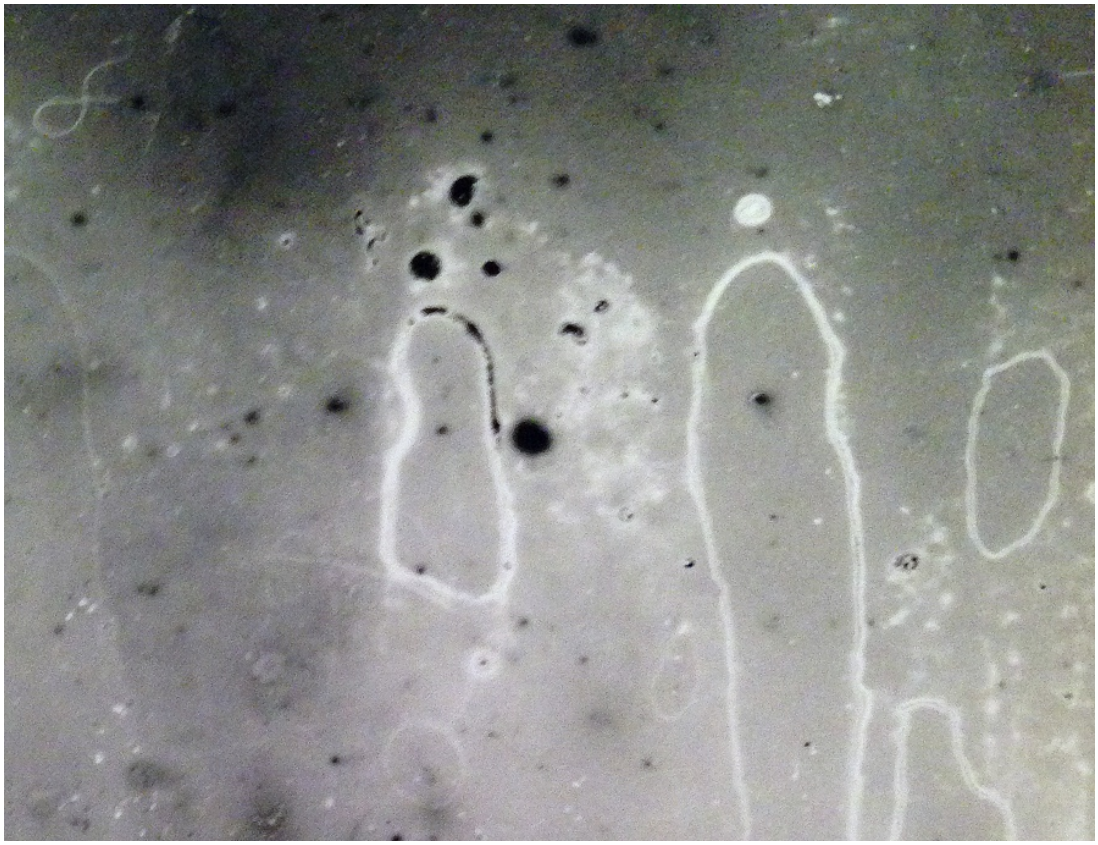


Figure 29. Detail of damaged photographic emulsion from surface of original print from *Andrée Expedition Archive* (1897).

Reflecting on the condition of the plastic film, the foundation and backdrop to any celluloid negative, I responded by constructing new negatives from plastic and coloured acetates, and from this forming contact prints under the light of the photography enlarger. These responses were driven by a knowledge of the history of the material layering of celluloid film stock, specifically the exposed negatives containing images of Andrée and his fellow explorers. Lying dormant, absorbed by the geology of the island: water, natural minerals, and salt, consigned a trace of the biology of place to the photographic emulsion. This period of the film negatives' chemical transformation whilst in the landscape struck

me. The landscape of this island had made its mark not only on the three men who had died on the island, but also on the grain of the photo-emulsion and the final photographic document; like the blood, bones and flesh of the men, the film was distressed and deteriorated. With this in mind I began a process of scratching, folding and then re-flattening acetate sheets, to create new forms of negatives. I set negative reproductions of the Andrée photographs into my darkroom enlarger and then placed my folded negatives directly onto the surface of the unexposed photographic paper. I set the exposure timer at various exposure times and when the enlarger light came on the performance began as I moved the folded acetate across the surface of paper. The pace and rhythm of actions were dependant on the duration of the exposure. This method of sandwiching light between two negatives at various distances from the photographic paper, formed a new technique from which a series of photographic prints were created. Initial experiments began with black and white silver print techniques, to reflect the photographic materials used by the explorers, at the time this seemed to give the work a level of authenticity (fig. 30).

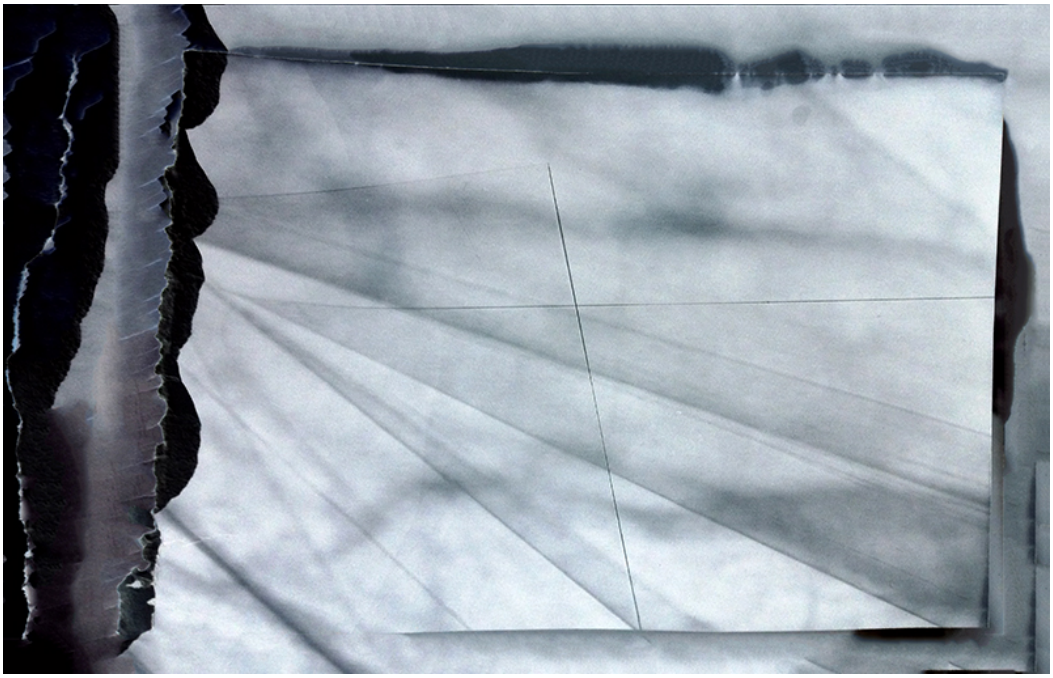


Figure 30. Jacqueline Butler, *On White Island: Chemistry Geology,* 2015. Digital print on paper, 43.5cm x 34cm. ©Jacqueline Butler.

The acetate negatives I produced became less flat, gradually moving from 2-D to 3-D. The highly reflective quality of the plastic 3-D forms used as negatives enhanced light reflection and refraction, creating intensive light burns on the photographic paper Volume

Two, Appendix: Experimental works, p. 59. This produced intricate patterns and fluid shapes (fig.31).

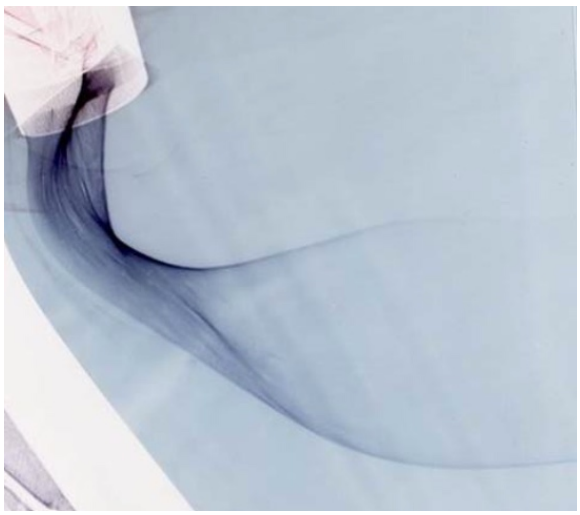


Figure 31. Jacqueline Butler. Detail from darkroom of light refraction captured onto c-type print, 2015. ©Jacqueline Butler.

Working in the complete darkness of the colour darkroom made me ever conscious of not being able to see one's bodily self, the focus was solely on mapping the geography of the darkroom cubicle, feeling a way through the mechanisms of the photography enlarger and the material qualities of the hand-made 3-D acetate negatives and the photographic paper. When the time came to expose the paper, with the switching on of the enlarger light came the performance of making, acting quickly and spontaneously for the duration of exposure time. These staged moments left their marks on the paper, denoting an embodied transformation, an opaque document of body-transparency materialised in the photographic print. The images through the photographic act capture the things of the real world transformed.

Thinking in Movement

As the darkroom work evolved, I became increasingly aware of the impact the physical presence and experience of my body had on the process of thinking and making art. Working in the physical spaces of the photography black and white darkroom, the soft illumination of the red safelight is sympathetic to thoughts, of dreams and reverie. The solid blackness of the colour darkroom creates a quietness and stillness initially encouraging slow action. When using 3-D computer software the luminescent properties of the screen with its rich blackness and absence of shadows creates a sensation of envelopment. In both analogue

and digital space, I became absorbed in the depths of dark-light.

This shift in thinking of oneself in various stages of transformative transparency led me to consider the act of body movement and the performative nature of making art. The degrees of significance of the acts of performance were dependent on the maker's location. Chapter Four examines the shift from the maker's space of the museum archive and photography darkroom to the printmaking studio and finally into the landscape.

PLATE SIX

Chapter Four

Particular Qualities of the 'Somewhere'

Evocations of Landscape through Abstraction

> No, Roberto told himself, the pain that this light now causes my eyes informs me that I am not dreaming I see. My pupils are suffering because of the storm of atoms that like a warship bombards me from that shore; for this vision is nothing but the encounter of the eye with the powder of matter that strikes it. To be sure, as the Canon had said to him, it is not that objects from a distance send you, as Epicurus had it, perfect simulacra that reveal both the exterior form and the concealed nature. You receive only signals, clues, and you arrive at the conjecture we call vision.[94]

4.1 Introduction

This chapter examines methods developed to produce a body of work titled *Neither Here nor There* (2017–20) **Volume Two, Section 3, pp. 25–56**. My overarching aim is to contemplate how the flaws and limitations of technology can reveal a visual representation of the sensory experience of seeing and being in the world.[95]

Until this point, I had never held a desire to have a direct experience of walking in landscape nor did I consider it as essential to progress the research. At a very early stage in the PhD research the methods I chose were drawn from a mediated experience of space through surveying the surface of photographs. The vistas created had no direct reference to a particular geographical location, the material references were from the chemistry of photography, rather than the geology of nature and the interior place of archive and darkroom rather than exterior land or field. Given an opportunity to develop new work whilst on a residency at Dundee Contemporary Art Centre (DCA) in 2017–18[96], I took a

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[94] Umberto Eco and Willian Weaver, *The Island of the Day Before* (Gran Bretana: Cox & Wyman Ltd. Reading Berkshire,1996), 65.

[95] An earlier version of this chapter contributed to the publication *PhotographyDigitalPainting: Expanding Medium Interconnectivity of Contemporary Visual Art Practices*, 2020, Edited by Carl Robinson. This chapter is published with the permission of Cambridge Scholars Publishing. See Appendix II of this volume,166.

[96] Print Studio Residency: Q&A with Jacqueline Butler in *DCA Stories* https://www.dca.org.uk/stories/article/print-studio-residency-a-qa-with-jacqueline-butler

new approach, moving out of the studio, introducing walking as a method of making, it became a new thinking space. During the residency I interrupted periods of time spent in the printmaking studio at DCA with regular walks in the nearby landscape. Although Dundee and Angus were not familiar to me, I recognised it as part of my history, a fragment of my homeland.

A series of contemplations on my approach to studying landscape will weave through the chapter examined through a phenomenological perspective. Focusing on the material and temporal qualities of the medium and interrogating a question fundamental to this research: How can the synthesis between analogue and digital capture extend the virtual possibilities of evocations of landscape both real and imagined?

Taking the form of a reflective meditation on the history of Photomedia, with reflections on my research practice from 2017–20, I will appraise the impact the theory of optical science from the early nineteenth century had on the late watercolour paintings of Joseph Mallord William Turner. Alongside this I will consider how photography's unique visualisation of time presents an abstraction of the representation of place, through an examination of Louis-Jacques-Mandé Daguerre's famous daguerreotype of the *Boulevard du Temple* (1838). Daguerre's later *dessins-fumée* present thoughts on the materiality of the medium, and the trace of the artist on the process of making. I begin this chapter by examining the surface and objecthood of the photograph through the work of contemporary American photographer Alison Rossiter.

4.2 The Depth of Surface

Figure 32. Alison Rossiter, *Kilborn Acme Kruxo, expired 1940,* 2010.

Geoffrey Batchen describes Alison Rossiter's photograph *Kilborn Acme Kruxo, expired 1940* (2010) (fig.32) as:

> All surface and no depth, it is the most elemental of photographs, the result of a volatile, unpredictable relationship of light and chemistry photography without recourse to cameras or any outside referent ... Rossiter presents photography as something to be looked at, not through, and to be made, not taken. This photograph is not of something; it is something.[97]

What is of particular interest is how Batchen places emphasis on the objecthood or *thingness* of the photograph. In his essay he describes Rossiter's photograph as, "A shiny rectangle of arbitrarily induced monochrome tones on a two-dimensional surface".[98] He refutes the idea of the photograph as a "transparent envelope",[99] a metaphorical window to be looked through, instead declaring the importance of the photograph's opacity and solidness as a surface to be looked at. By circumventing the representational power photography has to transport us to a recognised *somewhere*, Batchen expounds the unique "something" of making. His reference point is of course analogue photography, specifically Rossiter's cameraless methods of developing and fixing out-of-date expired photographic

[97] Batchen, " 'Photography': An Art of the Real", 47.
[98] Batchen, "'Photography': An Art of the Real", 47.
[99] Barthes, *Camera Lucida,* 5.

paper stock. In essence, whether analogue or digital, Batchen's focus is on the material surface of the photograph reflecting the substance of its making to the viewer. This makes one astutely conscious of the dimensional qualities of the medium. Although two-dimensional and flat, we are ever conscious of a photograph's surfaces (both back and front) and therefore its objecthood. The relationship we have with a photograph changes when the awareness of its objecthood is raised. Placing materiality centre-stage, one interrogates the photographic image differently. We (the viewer) are encouraged to look onto rather than into the photographic surface. This enhanced awareness of the material substance of the medium brings forth thoughts of the haptic and our desire to touch.

When considering the tactility of photography, one is naturally drawn towards analogue processes and the allure of the photography darkroom. Since 2007 Rossiter has been creating cameraless photographs using expired silver gelatin paper from the early 1900s. With on-going titles such as *Pools* (2010-2017) and *Pours* (2009-2010), her work oozes the physical interaction between photographer/maker and the chemistry of the darkroom. She writes of the "serendipitous resemblance"[100] of her work to American Abstract Expressionist painters. The curator Virginia Heckert likens Rossiter's "calculated acts" in the darkroom to methods used by Jackson Pollock "capitalizing on the natural viscosity and flow of paint".[101] Although Rossiter is inspired by and associates her work with painting, it is very clear that when using the liquid materials of darkroom chemistry, she has no interest in performing as a painter with brush in hand. She works with her knowledge as a photographer using "my simple tray of developer, either rocking it or dipping a piece of paper into it, or pouring the developer onto a piece of paper".[102] Therefore, for Rossiter the gestural marks are not derivative of the painter but the photographer. Her methods originate from the technical procedures of black and white darkroom printing; traditional techniques of hand-to-tray, the rhythmic ebb and flow of the fluids created by "rocking" developer, stop bath and fixative. She works across the surface of the paper to coax the latent image out at times with her fingertips. Rossiter's fascination with black and white darkroom printing is

[100] Alison Rossiter, "Muse: The Darkroom", *Art in America* (June 2017): 51.https://www.artnews.com/art-in-america/features/muse-the-darkroom-63268/
[101] Virginia Heckert, *Light, Paper, Process: Reinventing Photography* (Los Angeles: The J. Paul Getty Museum, 2015), 18.
[102] Robert Enright, "Paper Wait: The Darkroom Alchemy of Alison Rossiter" *Border Crossings* 30 (2011): 71.

irrevocably sensory. Describing her actions when in the confines of the darkroom she observes:

> Moving in the space with safelight is second nature. In the darkroom I am confident of my actions, one thing leads to another and chance is welcome. My entire photographic experience is at my fingertips in there. What more could I ask of a room.[103]

This fosters contemplations on the visceral connectivity of a maker at work, drawn by the enchantment of the darkroom. Rossiter compares her knowledge of darkroom materials to that of a scientist, having over twenty years of experience and training as a photographer mastering technical procedures. Marrying a scientific methodology with the sensibility of the creative, impulsive acts outlined above, seems contradictory. Rossiter's actions work against the darkroom rules. Rather than technical perfection her intention is to reveal the faults and flaws of the paper print, her behaviour elicits uncertainty. This places the limitations and imperfections of the technical process centre stage. Through her methods Rossiter destabilises the medium. Challenging the rigidity of process by welcoming the flex of chance, her actions make visible to the viewer a narrative of the labour of the photographer that underlies the making of each image. This approach to working with (and against) technology is something I have applied to my own art practice, whilst on the residency at DCA. On the residency I developed new methods of combining photography, printmaking and 3-D technologies. In the course of this chapter I will describe the background to the creation of the body of work *Neither Here nor There* (2017-20) **Volume Two, Section 3, pp.25-56. Appendix: Experimental Works, pp.62-83**. The resulting work bears reference to the continuous technological development of optical media practice influenced by the history of optics, the wonders of darkroom chemical processes and digital technology. Utilising optical devices from the history of photography, the work reveals something about landscape, somewhere between realism and imagining, between representation and the abstract. In the work there is a residue of the recognisable, tracing the substance of an object of this world. The images visual strangeness suggests something other, beyond the real. Consolidating a range of photographic technologies, one begins to

[103] Rossiter, "Muse: The Darkroom"51.

evaluate the tangibility of a photograph in a period defined by Fred Ritchin as "After Photography".[104]

4.3 On Being and Belonging: Standing Back and Stepping In

Neither Here nor There (2017-20), triggered as a personal response to the rise of nationalism resulting from the Scottish (2014) and BREXIT (2016) referendums, and my status as an exile returning to my homeland. The motivation behind the work is both political and personal, a contemplation on identity through landscape, recording the sensation of a physical experience of being in and passing through a place.

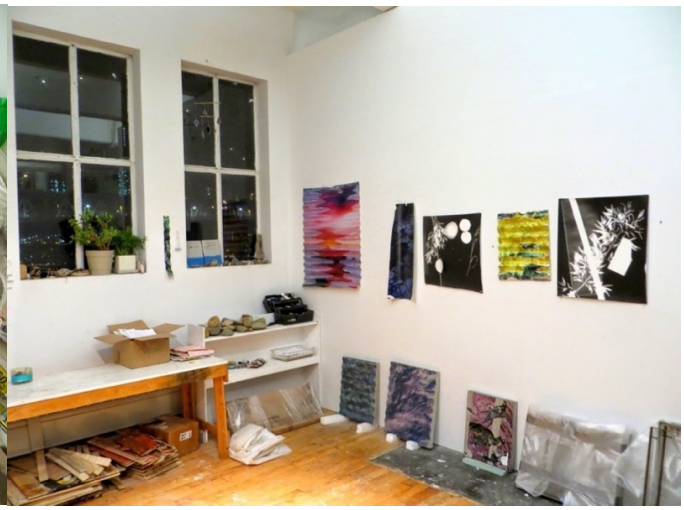
The premise for the residency centred round an exploration of contemporary technologies that questioned how evolving digital technology could complement and extend the production possibilities of more traditional print media, such as printmaking and photography. This linked directly to my interest in medium materiality and developing new methods to blend technologies. My studio environment was a fine printmaking workshop with traditional printmaking and digital print resources. The residency not only gave me the opportunity to develop my hybrid prints, but as I was to be based in the Printmaking studio, this created space to evaluate printmaking's relationship to photography. I was introduced to traditional methods of printmaking: photo etching, lithography and relief print, and digital methods of carbon printing, laser cutting, lenticular printing and 3-D scanning and modelling **Volume Two, Appendix: Experimental Works, pp. 65-69, 72, 73, 76-79.** Alongside this I continued to work with methods I had established prior to the residency using digital photography and analogue cameraless techniques, such as lumen and photogram contact printing **Volume Two, Appendix: Experimental Works, pp. 70-71.** The physical demands of traditional printmaking made me ever conscious of the intensity of the actions of a printmaker at work. All of these techniques link to my on-going fascination with blending technologies. The acquisition of technical skills and understanding of a wider range of print media enhanced my thought process. This increased my curiosity of technological histories, principles and practices, and had a profound impact on the progressive stages of the project.

[104] Fred Ritchin, *After Photography* (New York; London: W.W. Norton, 2010).

Through the residency it was my intention to explore the impact of advancing technology on traditional printmaking and expand my interdisciplinary practice. This began through an investigation of the imprint in both virtual and physical environments. Over time my attitude to the physical acts of studio practice and of walking in landscape became conflated.

I began mapping the textures and surfaces of landscapes, with an ambition to create an imagined place both through print and virtual space. The location of the residency has been a source of inspiration, whether the urban landscapes of the cities and towns or rural landscapes of the coastline, hills and glens of North East Scotland. I developed a process of making, to map places using the texture and surface of land that I saw and physically experienced. I gathered detritus whilst walking the landscape and with this material pieced together magical objects through the use of the discarded and mundane. In areas of dereliction and decay I discovered beauty **Volume Two, Appendix: Experimental Works, pp. 70-74.** Working with a range of materials found from my walks and using a broader range of processes which involved more physical interaction expanded my approach to the dimensionality of the medium.

This led to consideration of the work of the artist Letha Wilson. Wilson uses industrial materials such as concrete and steel combined with photographs taken from rural landscapes. Her processes include pouring concrete onto her photographs, mounting prints on steel, bending, folding, cutting into and crushing colour photographs. (Figs.33-35)



Figures 33-35. Letha Wilson's Studio, March 2015. ©Letha Wilson.

Wilson's interdisciplinary practice results in three-dimensional form. Although her work is often free standing and therefore sited as sculpture, their appearance retains a photographic quality. Her work makes us conscious that actions of tearing and cutting break the conventional photographic frame and through this process expand the experience of photography. Wilson fights against the reverence she has for photography by using methods that reflect a manifesto of "*Ways to say 'Fuck You' to a photograph while still secretly adoring it*" as listed in one of her early notebooks.[105] On one hand she embeds her work in the tradition of the canons of modernist photography by reiterating the importance of capturing the "decisive moment" whilst taking her landscape photographs on location, yet what materialises through working in her studio counters this. In *Rock Hole Punch (Red Utah)* (2014), concrete quite literally punches into the centre of the c-type print and through this process the photograph physically collapses in on itself (fig.36).

[105] Letha Wilson, *Concrete Canyons: Letha Wilson's photo/sculpture mash-ups re-envision the American West.*, interview by Vanessa Nicholas, *Magenta Magazine*, 2017, http://www.magentafoundation.org/magazine/letha-wilson/.

Figure 36. Letha Wilson *Rock Hole Punch (Red Utah),* 2014.
Unique c-print, concrete, 33cm x 27cm x 4.5cm. ©Letha Wilson.

Wilson's hybrid prints create a space where two narratives collide. One is of the materiality of land and the dichotomy between the urban (concrete) and rural (red rock of Utah), the other is of the materiality of photography, as the photographs fold in on themselves due to the weight of the materials, concrete on photographic paper. She presents an anxiety of the digital, the coated paper suffocating, through the weight of the death-throws of analogue. Wilson studied as a painter, although she had been introduced to the darkroom as a student, in her early work she used digital photography. Finding the materials expensive and restrictive, she began making analogue prints in the colour darkroom which brought a shift in approach. Wilson explains this: "allowed the material of the photograph to open up, [...] I would cut, tear, fold; and that's what I've been doing [...] The darkroom is part of my process. When I'm in there I feel I can try anything."[106]

Many of Wilson's works are large-scale, reflecting the monumental landscape vistas she evokes, and her approach predominantly involves very physical interaction with the materials she uses. Like the artist Marco Breuer, discussed earlier, Wilson's actions are

[106]Letha Wilson, *An Analog Path for Photography*, interview by Tom Winchester, *Hyperallergic*, August 12, 2011, https://hyperallergic.com/32208/an-analog-path-for-photography/.

big and bold. Although inspired by Wilson's approach, I came to realise that my position within expanded photography was realised through hybrid practice and advanced through still, slow actions. Working in the printmaking studio involved very physical engagement with materials, this instilled a deeply concentrated deliberation with the material processes I used, as I made, I became more introspective. Limited by the available paper size and the restricted dimensions of the printing press beds I become more aware of scale, **Volume Two Appendix: Experimental Works, pp.67–69, 75–79.** The first works made were small photo etchings of details from the landscape (fig.37). The size reminded me of small tintypes I had seen in archives. The history of photography continued to have a hold on me.

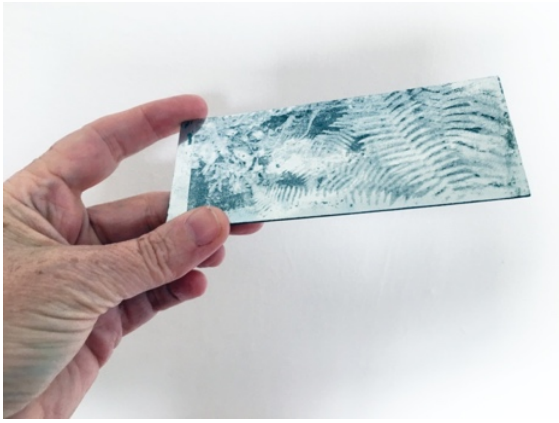


Figure 37. Jacqueline Butler. Image of photo-etching plate, 2017, 12cm x 5cm. ©Jacqueline Butler.

Looking and touching a print (whether etching or photograph) encourages thoughts on the surface of things, and of the material qualities and tangibility of the image in its various states. Joanna Sassoon highlights in her discussion on the materiality of photography "With its delicate relationship between light and shade, its negative and paper forms, and its back and front, the very physicality of a photograph provides important information for understanding its technical origins."[107]

Not unlike discovering a fly trapped in amber, what is presented is a slice of time and space, the title of my practice *Neither Here Nor There* refers to a place of no particular location at no particular given moment, time and space are elusive, there is a suggestion of something intangible, a play between absence and presence, which takes the viewer to a

[107] Joanna Sassoon "Photographic Materiality in the Age of Digital Reproduction" in *Photographs Objects Histories: On the Materiality of Images* , ed. Elizabeth Edwards and Janice Hart, (London: New York: Routledge, 2010), 199.

liminal space. It also suggests the instability of what I describe as *image print*, expanding the idea of the flat paper print to the imprint or caste and to the screen. Accumulating technological residue across materials turns *to in-betweeness*, whether it is photochemistry, relief print or electronic data.

Georges Didi-Hubbermann, writes of the imprint as the "dialectical image [...] something which shows us both the touch of loss as well as the loss of touch." [108] Through the imprint we see the trace of the surface of an object, there is a mark of the thing that has been, by touching the imprint we are reminded that this trace is an impression, the inversion made turns everything inside out, it is subversive. Through this we are continually reminded of the absence of the thing caste, the experience is of hollow loss.

When considering my interests in the works of such artists as Letha Wilson and Marco Beuer, I am conscious that I am both attracted to and repelled by the artists abrasive physical engagement with the artefact. I admire the aggressive gestural acts, the art *shouts out*, it is unflinching. The disruption of the surface of the artwork creates an excitable intensity, prompting a *loudness*. Reflecting on this and the quote above I have come to realise why I am attracted to digital.

During my residency, the sensation of touch was heightened by my growing awareness of the labour-intensive processes of printmaking. To etch a plate, you have to first cut, file, clean and polish the plate, then apply the soft or hard ground. Areas of the ground are lifted off by drawing or mark-making (my marks were made by placing found objects directly onto the soft ground plates and running them through the etching press), the plate is then placed in acid and gentle strokes with a feather remove the burnt metal. The plate is then cleaned off to reveal the bite. Finally, the ink is applied, this is done by first forcing the ink into the areas of relief, the excess ink is wiped off the surface before printing through the press.

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[108] Georges Didi-Hubbermann cited and translated by Ruth Pelzer-Montada, "'Authenticity in Printmaking - A Red Herring?'" in *2nd IMPACT International Printmaking Conference,* (2nd IMPACT International Printmaking Conference, Finland: University of Art and Design., 2001), http://www.uiah.fi/conferences/impact/pelzer/Pelzer-Montada.pdf.

On a daily basis, I would shift my labours from the intaglio press to mastering the principles of 3-D scanning **Volume 2 Appendix: Experimental Works, pp. 65-80.** In each the visceral was complimented by physical movement, there was a synchronicity between sight and body movement. The physicality differed, with etching there was a quick forcefulness when handling the ink, with 3-D hand scanning, my movements were slow, considered, and deliberate, my body took on a lightness, recalling the body-transparency I had felt in the darkroom.[109]

Ruth Pelzer- Montada writes of the "Apprehension around digital technology linked to a general concern [...] about a dematerialisation of experience".[110] The physical experience of the world generated in the digital space perhaps offers something other, a different type of materiality. Something I describe as a *virtual touch*.

The structures created in the studio environment took on what I describe as a heaviness; awkward to handle or touch. Once scanned, in the digital space the *handling* of the objects became less difficult, this *touch once removed* gave the objects a lightness, through the delicate touch of my fingers on the mouse pad of my laptop the synchronicity between hand, computer and eye allowed me to re- familiarise myself with each composite object. This description of touch, is perhaps more philosophical, describing the feel of something originating not in the physical world but somewhere elsewhere, of something other.

I began developing the work further using 3-D technology, working with photogrammetry and stereoscopic scanning techniques. Once scans were uploaded, working in the virtual space of the computer, the objects presented were removed from any trace of physical reality. In the void of the virtual they appear transformed, possessing a magical aura. I found working in this virtual space consoling; the quietness seemed to settle the objects, creating a space for contemplation, a resting point. By removing these things from any association with the outside world the longing exposed in real time, begins to diminish. This digital space presented an interior timelessness, a space with endless possibilities (fig.38).

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[109] See my description of the experience of the body of the artist in relation to thinking and making, in this volume 'Methodology Sketch 2: An Expedition from the Archive', 79-80.

[110] Ruth Pelzer-Montada, "Sensing Print: Reflections on the Materiality of the Contemporary Art Print," in *IMPACT 6 Multidisciplinary Printmaking Conference Proceedings* (Bristol: Impact Press, 2012), 53-59. https://www.research.ed.ac.uk/portal/files/15486195/Sensing_Print_R_PelzerMontada.pdf.

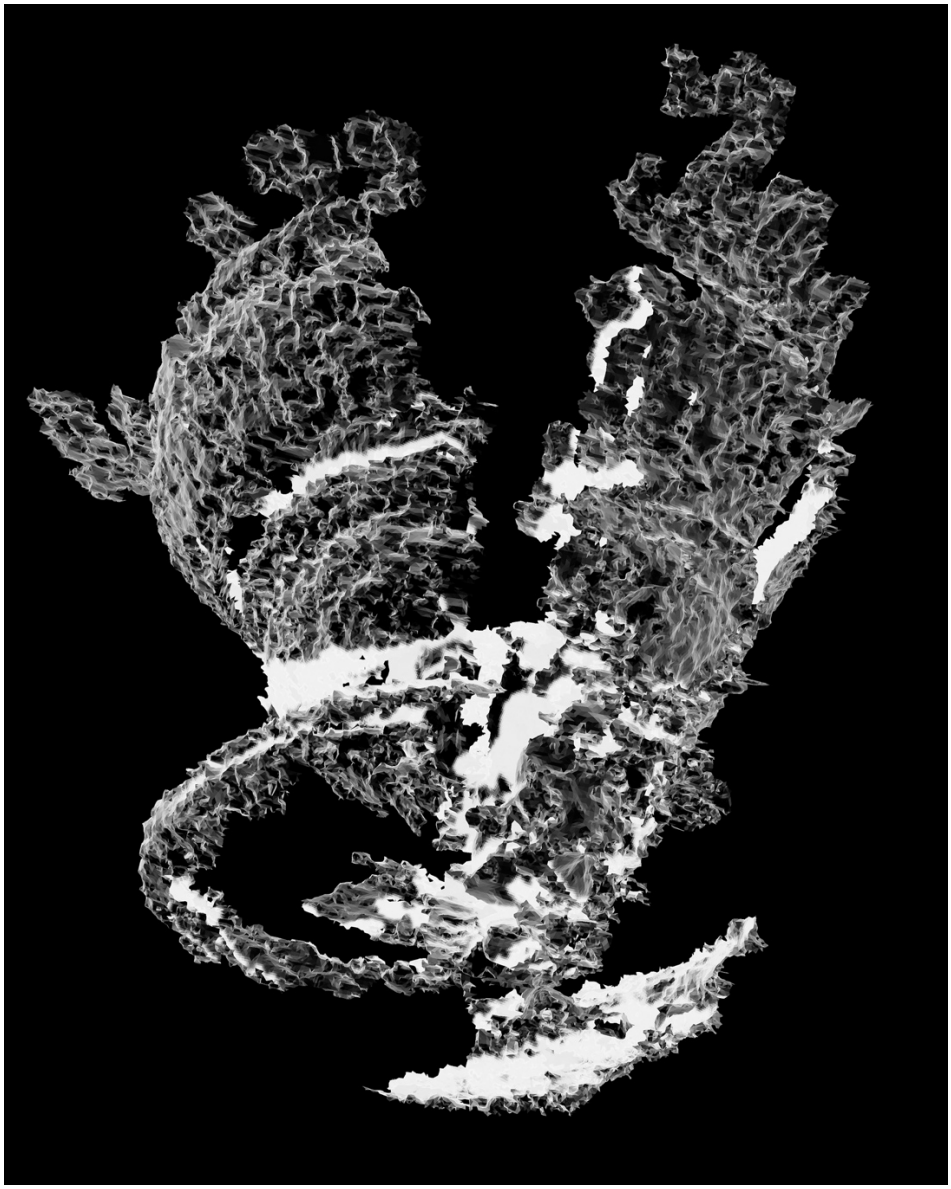

Figure 38. Jacqueline Butler. Scan of composite objects, 2017. ©Jacqueline Butler.

In many of the image scans I have made there is no longer a sense of solidity, the objects appear as if projected from a magic lantern, they become visible only as shadows. Drawing on the qualities of light and shade, my work is assembled through a combination of light projection, photography darkroom printing, traditional printmaking, and image manipulation. Working with low-resolution files using 3-D software, the work produced is rooted in a curiosity with the properties of light and shadow play. These playful art exercises in shadow capture lead to artefacts evoking something of an illusory landscape. The transposed data of the computer screen is transformed once more through the process of printing. The print, as mentioned before is intrinsic to my practice, the play between the material matter of the screen and the physicality of print fascinates me.

Ruth Pelzer- Montada suggests three concepts that "may further develop to address the changing materiality of the print: [these are] the 'screen' the 'skin' and the cast or imprint".[111] Considering the origin of the word film, this seems apt. The *skin* of a print, by its very nature alludes to something lying below the surface, the membrane of the image is seen, but we are aware that there is so much more that is unseen, beneath, beyond our grasp. The curator Marilyn Kuschner writes:

> one can wonder if the surface that we see on a printed image is actually the only surface of the object. The computer program affords the artist an opportunity to layer image upon image. What we are left with is a surface that may appear to be flat...which actually holds the key to a depth of layers that remain in the computer, but are these considered integral to the surface of the image? Is the entire work only the output of the printer?[112]

Figure 39. Jacqueline Butler, *View across the River Tay*, 2017. digital photograph, 30cm x 30cm. ©Jacqueline Butler.

[111] Pelzer-Montada, "Sensing Print: Reflections on the Materiality of the Contemporary Art Print,", 53-59.
[112] Kuschner, 2009, p.28 cited by Ruth Pelzer-Montada, "Sensing Print", 53-59.

4.4 Walking in Landscape

To begin with, during initial walks in the locality, as way of making a record of the places I journeyed through, I photographed the view in front of me. The photographs created present a pictorial representation of the landscape, but nothing of the sensation of *being* in the landscape. The resulting photographs such as *View across the River Tay* (fig.39) were visual representations of the landscapes I observed. Although pictorially satisfactory, the stasis of the viewpoint elicits disembodiment in the viewer and we (the viewer) take our position as spectator. This induces a psychological standing back; we look on as opposed to entering into the image. Through this disconnection the viewer has no sense of belonging. This visual stepping back removes any consideration of the body's connectivity to landscape. My ambition was to visually describe an experience of body sensations, of the body moving through space and the combination of senses generating an immersive visceral experience of place. Walking into the landscape the body's interaction with place affects how we register what is seen. The multi-sensory experience of the body influences how we memorise and recall place. There becomes an awareness of the edges of experience, of peripheral vision used to navigate terrain. The combined sensation of touch, smell, sound and three-dimensional vision acutely influences how place is perceived, processed and remembered. Thinking of landscape in this way creates the opportunity to represent a fuller sensory picture, drawing together a series of patches of sight through movement. Not always seen clearly, the view is at times hazy and indistinct. I have come to the conclusion that to capture the sensation of a body in movement we have to shift position. Rather than relying on the singular fixed viewpoint of the camera viewfinder multiple frames are required. The solid anchoring produced by a single viewpoint presents a rigidity to the image, removing the viewer from imagining a sensory experience of place. This negates any desire we may have of belonging *in* the picture and, as a consequence, our connecting to place. John Wylie writes of landscape:

> [...] as first and foremost a real, palpable, worldly presence, something to touch, observe, walk in. Landscape as the fields, mountains, roads, and

> buildings themselves, and not just as a picture of them, or as their dematerialised symbolic meaning.[113]

My desire, to evoke something of a "palpable" place, tracing an embodied experience of walking. I concluded that creating a multiplicity of concurrent images could bring one closer to an experience of walking into, and through, landscape. I resolved to change my methods of working. Shifting from conventional capture methods using the camera's viewfinder to frame the scene, I began to make images in a multi-sensory manner. This was initiated through the seditious use of the camera by working against the authority of the monocular viewfinder **Volume Two, Appendix: Experimental Work, pp.63-64.**

I started again, striving to develop a new methodology that would capture something of my experience of walking in the landscape. As mentioned earlier, I had discarded using the camera apparatus when creating *An Expedition* (2015-17) and was resistant to return to this convention. When I returned to using the camera, I decided to change my methods. I felt the viewfinder created a distance between *self* and *land*, looking with a single eye through the viewfinder of the camera apparatus separated me from fully engaging with the space in front of me. This encouraged a rigid stance in my body, and I held my breath whilst capturing the image. Rather than being part of the space, the conventional use of the camera removed the sensation of *being*. I began making images without looking through the viewfinder. This approach to photography released me and I began to immerse my thoughts in the places I walked.

The two approaches – to *capture* and to *make* – produce different image experiences for the viewer. Kenneth R. Olwig reflects on Tim Ingold's article *Against Space* (1993), writing of two senses of landscape:

> The first involves binocular vision, movement and knowledge gained from a coordinated use of the senses in carrying out various tasks. The second

[113] John Wylie, *Landscape* (Abingdon, England and NY USA: Routledge, 2007), 54.

> derives primarily from a monocular perspective that is fixed and distant from the body.[114]

These new methods of image-framing reflected my intent to visually represent "binocular vision". From individual framing through the single eye using viewfinder apparatus, I began to utilise the whole self by strapping the camera directly on to my body. This approach seemed more apt in my desire to capture a visceral response to place. As Ingold and Jo Lee Vegunst affirm when referring to Maxine Sheets-Johnstone interpretations of the notion of walking in The *Primacy of Movement* (1999): "Walking is not just what a body *does*; it is what a body *is*. And if the body is foundational to culture, then walking-or thinking in movement-is 'foundational to being a body'."[115]

By exploring the physical sense of "being", the images I produced became less recognisable as representations of landscape. The visual abstract form presents potential for alternative interpretations of the real. By stretching the possibilities of the medium, my intention became to challenge perceptions and understandings of reality. Jai McKenzie describes artists working in Photomedia as making "real a fantasy"; through digital technology artists "produce images of their own version of a 'possible' or 'phantasmagorical' reality"[116]. McKenzie's grounding of the reality of fantasy through the digital "to create an image without the need for a primary physical existence"[117] challenges our understanding of photography's link to the indexical. For McKenzie, it is the substance of light that draws us ever closer to a sensation of reality. Without light we cannot see, and from light photography was realised. Connecting the properties of light with photography and the referent shifts the continuing and exhaustive debates around the indexical and representational to something abstract that reflects an embodied perception of place. Referring to Tanizaki's description of dark-light, discussed in Chapter Three as embodied

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[114] Kenneth R. Olwig, "Performing on the Landscape versus Doing Landscape: Perambulatory Practice, Sight and the Sense of Belonging", in *Ways of Walking: Ethnography and Practice on Foot* (Surrey, England: Ashgate Publishing, 2016), 82.
[115] Tim Ingold and Jo Lee Vergunst, *Ways of Walking: Ethnography and Practice on Foot*. (Ashgate Publishing, 2016), 2- 3.
[116]Jai McKenzie *Light and Photomedia* (I.B. Tauris & Co Ltd., 2014), 80.
[117] McKenzie *Light and Photomedia*, 91-92.
[115] See the earlier discussion of Tanizaki's philosophy of the shadow and qualities of light in this volume, section 3.11 'Illumination', 69-70.
[117] Barthes, *Camera Lucida*, 77.

experience;[118] the synergy between external and internal, light and body, light and camera creates a myriad of sensations of a lived experience.

Our perception of the external world merges with a subjective view, as light travels through the retina of our eyes into the intimacy of the internal space of the body and mind. Photography presents us with a document of light from the past, whether McKenzie's simulation of place or as a trace of the existential qualities of photography described in *Camera Lucida*: the "*That-has-been*".[119] My philosophy rests between simulation and trace. To make a visual mark that simulate imaginings of phantasmagorical realities would be ineffectual without referencing something of the physical world we inhabit. The potency of the photographic image relies on a trace folding back to the referent. The practice-research *Glass Landscapes* (2014-15), discussed at the beginning of this volume[120], captivates us in this way, because even in its abstract form we fleetingly glimpse something of a place we recognise, something tangible. The awareness that a photograph captures a trace of a specific place and time through light gives it authority. Photography ever haunts us in its ability to capture histories of past light.

4.5 Abstraction and the "smudge of presence"

In Paris, in 1839, the announcement of the success of Louis-Jacques-Mandé Daguerre to permanently fix a photographic image through the daguerreotype proved to be a highly significant point in the history of visual representation. One must be mindful of the impact advances in optical science were already having on the understanding of perceptions of vision. By the 1840s new theories on the human senses, particularly visual perception, were evolving. Scientific studies began to challenge geometric optics established in the seventeenth century that had harnessed, and been legitimised, by the camera obscura. The physiological study of optics in the early nineteenth century placed emphasis on the study of the human eye. During the forty-year period between 1800-1840 the objective study of subjective vision took centre stage, creating what Jonathan Crary describes as a "rupture"

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[120] See earlier discussion of the foundational practice-research and the production of the artefact Glass Landscapes (2014-15), in this volume section 2.5 'Evocations: Interpretations of Landscape in Abstract Form', 27-28.

between the eighteenth and nineteenth centuries' understanding of vision. Crary writes of this rupture as "a moment when the visible escapes from the timeless order of the camera obscura and becomes lodged in another apparatus [...] the unstable physiology and temporality of the human body".[121]

Around the same time both Daguerre and the English landscape painter JMW Turner used the camera obscura to aid painting, and in Daguerre's case to progress photography. Later in life both modified this automated method of reproduction to a more sensory interaction. As the visual perception of the body was being recognised, the mechanical reproduction of photography was announced. Daguerre's *Boulevard du Temple* (1838) was presented to the world and the phenomenon of the daguerreotype began. The daguerreotype was acclaimed for its ability to capture accurate representations of the real world in finite detail. To fix the projected image from the camera obscura on to polished metal was truly phenomenal. Yet the flaws of the technology generated a representational veneer. Long exposures were required to produce a successful daguerreotype. Any movement of the subject in front of the camera resulted in blurring of the subject or at times disappearance.

Figure 40. Louis-Jacques-Mandé Daguerre, *Boulevard du Temple,* 1838, Daguerreotype.

[121] Crary, *Techniques of the Observer*, 70.

The *Boulevard du Temple* image (fig.40) documents the inability of photo-technology to capture the everyday life of Parisians as they strolled along the Boulevard. Instead of a hive of activity we are presented with resounding emptiness. The temporal nature of the simple act of walking quite literally took people out of the picture and consequently erased them from history. There is of course an exception. From two images taken of the Boulevard at eight o'clock in the morning and at noon: in the eight o'clock image there are impressions of two men, the first to be visually arrested through photography. The first man is partially captured in stasis as he halts to have his shoes shined. His appearance is altered through the limitations and flaws of the technology. His legs are sharply in focus, made visually distinct through the stillness of his actions. The rest of his body is fuzzy and ill-defined due to his movement. This phantom presence haunts the image; he is there but not, part present part absent, caught in a condition of in-betweenness. As David Bate writes: "Abstraction functions to signify the presence and absence of the human being in photography."[122] Bate considers how photography introduced a visualisation of time never before seen, creating a dichotomy that works in opposition to the fundamentals of being alive, movement. He surmises, in a photograph "stillness=presence, movement=absence".[123] The second figure is a shoe-shine worker. Due to the movement of his labour, he appears semi-transparent, his body dissolving into the fabric of the street. Bate reminds us that the 8am Boulevard daguerreotype was created at a point in history when the representational in painting was being challenged by the emergence of the Impressionist movement. Looking at *Boulevard du Temple* in this context loosens photography's connection from the representational towards abstraction. Within a single image we are presented with a reality that is in between. The dichotomy of the "presence/absence" discussed by Bate provokes a *view* of the real once removed. The limitations of mechanical automation in early photography, like painting offered alternative ways to visualise experiences of reality. The distinction of photography as a medium of stillness invokes consideration of its stilted nature when a *successful* image is attained. Introducing movement through long exposure, photographic time disrupts the visual representation of the world. Through the photograph an abstract sensibility of lived experience is introduced. The imprecise blurring and abstraction of a body in action breathes life into our imagination. The smeared abstract

[122] David Bate, "Daguerre's Abstraction", *Photographies*, 9, no. 2 (July 2016),139.
[123] Bate, "Daguerre's Abstraction", 139.

marks of humans in flux described aptly by Bate as a "smudge of presence" [124] brings life force to the image.

Daguerre was not solely interested in photography. There has to be a more holistic consideration of his creativity and his outputs beyond photography as an interdisciplinary artist. His interest in *chiaroscuro* was most effectively realised in his dioramas, paintings and drawings. Daguerre's enthrallment with the properties of light was incessant. His diorama theatre (opened in 1822) using large-scale paintings on transparent screens, with projected lighting effects and a rotating stage, created a truly immersive multi-media experience.

Throughout his life he also created dessins-fumée, which translates into English as smoke-drawings. Covering small pieces of glass with candle smoke and soot, the technique involved painting and scraping the blackened material away to reveal effects of light and shade. Painting on glass with carbon was a technique used to create negatives for printing reproductions prior to the invention of photography. There is no evidence that Daguerre ever chose to use his dessins-fumée as negatives, as no reproductions exist. Stephen C. Pinson describes these later works produced towards the end of Daguerre's life as painted photographs. At times, applying the carbon material with his fingers, the resulting imprints demarcate the artist's body. What is left is the indexical trace of the maker. Pinson describes these marks as "emphatically personal, direct, and embodied".[125] The painted photographs distort our understanding of photography, creating a *fuzziness* between the hand-made and the mechanical or technological. Pinson considers recent critical discourse around the close connection digital photography may have to painting, in that digital is malleable and paint-like through the ease to manipulate data. The creative impulse and actions of the painter prompts thoughts on the palpable character of paint and the hand-made gestural acts of the painter. I would argue that there cannot be a clear segregation between analogue and digital photographic materiality. Accepting the malleability of both creates space to contemplate the material relationship photography has with painting. The digital file's capacity to manipulate may compare well with the intent and actions of the

[124] Bate, "Daguerre's Abstraction", 144.
[125] Stephen C. Pinson, "Omphaloskeptical? On Daguerre, Smoke Drawing, Finger Painting and Photography", in *Photography and Its Origins*, ed. Tanya Sheehan and Andres Mario Zervigon (Abingdon, Oxon: Routledge, 2015), 42.

painter. But as with the work of Rossiter, the materiality of analogue photography – with its sticky, fluid mark-making chemistry – denotes the substantive qualities of paint. If we acknowledge that all photography, whether analogue or digital, involves an automated process (advances in photography's history are marked with the success of mechanical reproduction), this draws a closer examination of something fundamental: the haptic conundrum surrounding photography. As Pinson elaborates:

> [...] if all marks, including photographic ones, are digital, from whence came the opposition between the conventional and the photographic? What I'm trying to think through is the way in which the acheiropoietic mark has suppressed other marks that have now, ironically, resurfaced in digital pixels that we literally cannot get our hands on. I hope that a reconsideration of some of these practices will ultimately allow scholars to talk about a fracture of photography and to articulate its visible traces, impressions, and marks.[126]

The technology of photography from the point of inception to the present day was of mechanical reproduction; whether William Henry Fox Talbot's photogenic drawings of the 1830s or algorithmic solutions presented as digital print. Photography withdrew the direct physical experience of the hand-made, becoming a touch once removed.

Figure 41. Jacqueline Butler, *A Somewhere,* 2017. Photoetching, 9cm x 29cm. ©Jacqueline Butler.

During the residency, some of my earliest efforts to evoke an experience of moving through landscape resulted in photo etchings made from multi-exposed negatives (Fig.41). The etchings were converted into digital files, and laser-cut carbon prints were made **Volume Two, Appendix: Experimental Works, p.65**. The process uses an overlay of black

[126] Pinson, "Omphaloskeptical?", 41.

printmaking paper on white paper. Once the cut black paper is lifted a dust residue is left. Although I had not been aware of Daguerre's dessins-fumée at the time of making the carbon prints, the similarities now strike me. Rather than the clean graphic line of the laser-cut, we are presented with monochrome after-images evoking the phantasmagorical and recalling an indistinct somewhere (fig. 42).

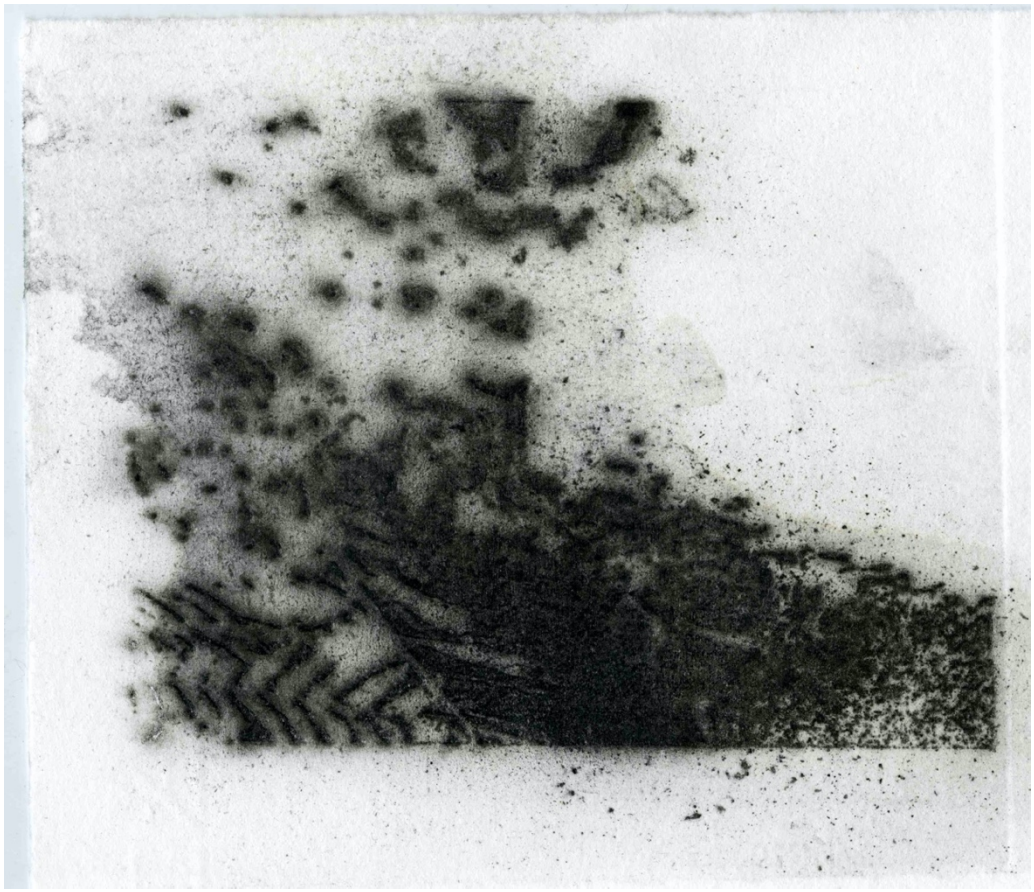

Figure 42. Jacqueline Butler, *Test*, 2017, Carbon print, 12cm x 15cm. ©Jacqueline Butler.

4.6 Abstract Embodiment

JMW Turner's interest in optical science and early photography is well documented. He owned a copy of Johann Wolfgang von Goethe's *Theory of Colour* (1810) from around 1830 when it was first published in England. His annotations written in the margins confirm an established knowledge of optical science theory. The afterimage emerged as a concept from Goethe's book. The section *Dazzling Colourless Objects* includes one brief paragraph that suspends the authority of the camera obscura, submitting an alternative perception of vision. Outlining one of a number of experiments, Goethe turns to the darkened room of the camera

obscura. Having intensely viewed the projected image over a period of time, the hole that radiates the external light is blocked. As Goethe describes: "The hole then closed, let him (the spectator) look towards the darkest part of the room; a circular image will now float before him (appearing) bright, colourless, or somewhat yellow."[127] He defines this "total dazzling of the retina" as "after-vision."[128]

Figure 43. J.M.W. Turner, *Coastal Terrain,* ca. 1830-1845. Watercolour on paper, 221 x 271 mm. © Tate, 2019.

It seems obvious to assume that Turner's later, less representational paintings were informed by the contemporaneous thinking around the anatomy of the eye (fig.43). Turner's painting, liberated from the disembodied view of the camera obscura, becomes less grounded in visual representation. When examining Turner's art, after the advent of photography, James Hamilton aptly describes the embodiment of vision as "orchestrated prismatic colours, the double image, the indistinct, the operatic".[129] Shifting closer to abstraction in

[127] Johann von Goethe, and Charles Lock Eastlake, *Theory of Colour* (Cambridge, Mass., MIT Press 1970), 16. First published in English in 1840 by James Murray (London).
[128] Goethe and Eastlake, *Theory of Colours,* 19.
[129]James Hamilton, *Turner: The Late Seascapes* (New Haven: Yale University Press, 2003), 59.

form, Turner's paintings visualise the sensation of light travelling through the eye and into the body. The internal visual composite projects the materiality of body outwards to coalesce with the external. Turner's "visionary abstraction"[130] is most prevalent in his late watercolours.

The watercolours produced towards the end of Turner's life were not intended for public consumption. The paintings present private contemplations of an artist working outside of the conventions and constraints of the art establishment. The many sketchbooks and watercolours produced by Turner during this period are testimony to a final visual turn by the artist towards a visual abstraction of place. The late watercolour studies draw on all of Turner's knowledge of optical science, distilling an experience of the natural world through his visual interpretations. They stand as phenomenal reflections of the body's reception, absorption and visual interpretation of the rays of the sun and the qualities of light through the multiplicity of their perspective.

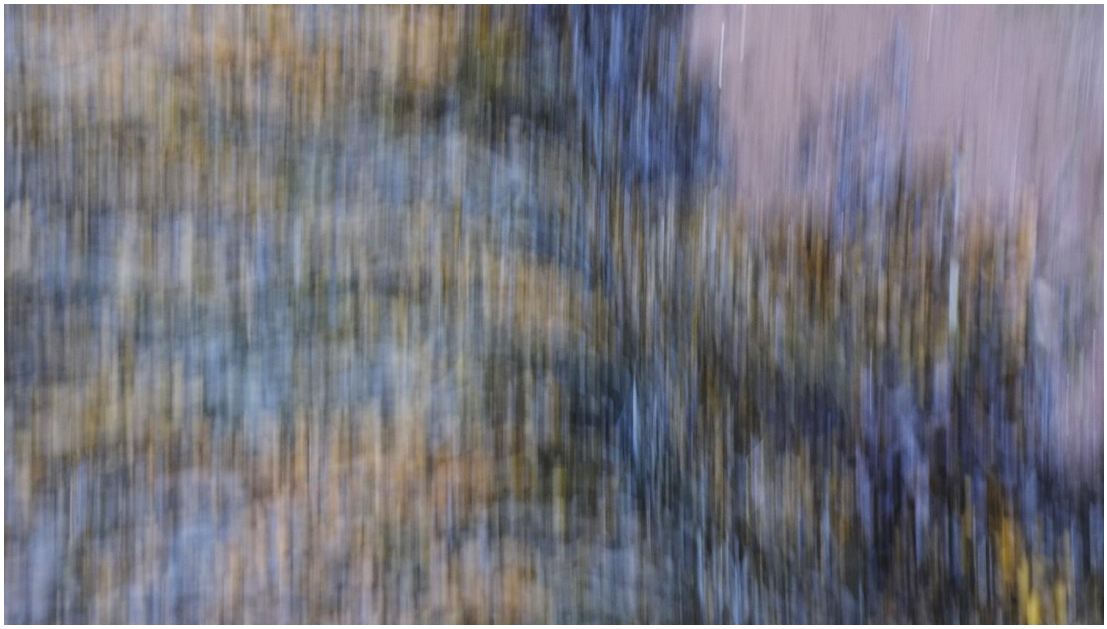

Figure 44. Jacqueline Butler, *Tayport Harbour* 2017. Digital photograph, ©Jacqueline Butler.

In works such as *Tayport Harbour* (2017) (fig.44), I also worked against the authority of the camera obscura. To move from a fixed viewpoint, I recognised I had to be less restrained. Working towards the principles of Turner's "visionary abstraction" I began to behave more

[130] Crary, *Techniques of the Observer*, 137.

recklessly and embrace serendipitous acts. I harnessed the camera to my body and walked sporadically, taking a succession of exposures without considering the resulting composition of each image. I altered the aperture and shutter speed settings; this enhanced vivid colour and blur effects, working against the digital camera's technology (and in the end breaking the apparatus) **Volume Two, Appendix: Experimental Works, pp. 62-64**. This approach to photography released me from obsessive looking, visually blending the imprint of the maker and the landscape captured, responded to my research question to reposition photography's connectivity to the index by presenting a record of maker's body in action immersed in landscape. As I walked my thoughts and actions became immersed in a sensibility of place, this became less about landscape and more about place. Tim Creswell describes landscape as "an intensely visual idea"[131], something to be looked at from the outside and expansively observed, whereas with place there is an internal human connectivity bringing significance to a "meaningful location".[132] Ingold likens place to a knot tied by "threads"[133] of pathways we take. We create our own pathways as we journey through landscape reflecting on an embodied experience. Pausing, presents us with opportune encounters to establish emotional connections to specific locations. A place of lived experience is less about a singular location, instead it is a summation of journeying from place to place. Ingold summarises: "[E]very 'somewhere' is on the way to somewhere else."[134] He describes these connections as meshes that map an experience of being by drawing from the journey between places. The conduit to each pathway made was at the forefront of my thoughts as I continued my work.

Whilst making photographs such as *Tayport Harbour* (2017) I steadily became absorbed in the pathways that lay underfoot and the land that surrounded me. Eventually leaving my camera behind, I began foraging from the pathways. My intention was to bring specimens from each walk into the studio to develop cameraless analogue prints from the detritus. After initial experiments using photogram and lumens techniques, I decided to scan the material gathered using 3-D scanning technology. Thinking of the free-flowing method I developed, in the later field trips I realised the camera had acted as a scanner, without

[131] Tim Creswell, *Place: A Short Introduction* (Malden, Mass: Blackwell Publishing, 2013), 10.
[132] Creswell, *Place: A Short Introductions,* 7.
[133] Ingold, *Being Alive: Essays on Movement, Knowledge and Description* (London; New York: Routledge, 2016),148-149.
[134] Ingold, *Being Alive,* 149.

looking my body rather than my eye framed the scene to be captured. It seemed pertinent to use technology that scanned the surface of the subject. There was also something more around dimensionality that had not been investigated.

Initial scans resulted in a pictorial fusing of the objects (fig. 45). The *success* of the scan, with its solid completeness dissatisfied me, stimulating nothing of my memory of journeys taken. The successful rendering of the 3-D scan did not visually reflect anything of the fragmentary nature of moving through the landscape. I decided to be less attentive, and through subversive behaviour disrupt the conventional scanning process **Volume Two, Appendix: Experimental Works, pp. 72-73.**

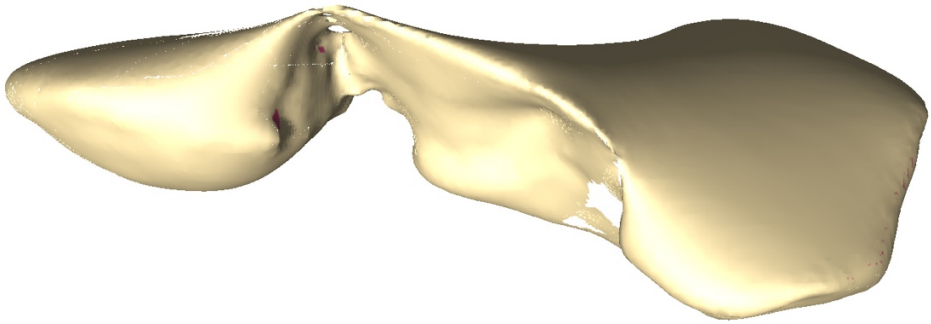

Figure 45. Jacqueline Butler. Early test 3-D scan of rock formations, 2017. ©Jacqueline Butler.

The materials comprised of a range of natural and man-made items such as rocks, shells, branches, plastic bottles, cigarette packets and fishing wire, I began creating structures made solely to be scanned and then dismantled on completion of the scan. Knowing that these little sculptures were not built to last meant they could be poorly constructed. The precarious forms were perpetually in danger of collapse. Their ephemerality added a potency.

Using a low-tech scanning device, I worked against all the software guidance outlined in the user manual. I knew tracking failure was inevitable as the structures were complex, fragile, and prone to movement. The basic, dated technology struggled to complete the task, resulting in scans that were incomplete. Like the figures in Daguerre's *Boulevard du Temple*, through incidental movements of the objects during capture and the limitations of photo-technology, the final results present a temporal abstraction of reality.

My intention to create images suggesting an experience of being in the landscape began and through successive scans strangely formed and fused fragments of the organic and man-made matter materialised. By disrupting conventional technical process, my intention was to explore the possibility of creating details from nature through disruptive scanning techniques, to successfully encapsulate the inherent qualities of walks made in the landscape. This approach to developing my practice began to resolve some of the imperatives of my PhD research. Searching for place through the photographic act gave way to new picture-making. Alternative evocations of walking in the landscape are presented through the particular properties of each technology. The abstracted landscape forms represent a reflective remembering of an embodied experience of place.

Capturing the relics of *lost tracking* directly from the screen using Screen Capture software tools, the digital slippage of colour and form become apparent through the combination of high pixilation with watery smearing of blurred colour **Volume Two, Section 3, pp. 26-34**. The flattened view of three-dimensional space into two-dimensional print present scraps of information. The images are incomplete and, through this process, become strange. (figs.46 & 47). The flawed scanning technique collapses the perspectival view, and distances them from a photographic aesthetic. Once printed the images appear as watercolours; it is only on closer inspection that the digitisation becomes apparent. The realisation that these are digital imitations of painterly gestural acts creates a connectivity between photography, the digital and painting. The pixel-in-disguise references the hand-made. Although the image is computer generated one cannot quite dislocate the digital marks on paper from the gesture using paint. The connection of the body to scanner to object brings the reflected light from the object and the gestural trace of a body in motion together to create virtual marks. The transcription to computer-generated algorithm offers a re-presentation, tracing the sensation of an artist at work in her studio.

Figures 46 & 47. Jacqueline Butler, *Little Phantoms*, 2019. Giclée prints on Hanemuhle watercolour paper, 20cm x 20cm.

©Jacqueline Butler.

4.7 Conclusion

Technology, when stretched and expanded through unconventional handling, can provide alternative perceptions of reality. The photographic visualisation of time first presented in Daguerre's Boulevard image transferred to my 3-D scanning methods and the *Little Phantoms* (2019) prints Volume Two Section 3 pp. 26-34.

The photographic smearing in both examples suggests the gestural and brings the hand-made closer. From the automation of camera and computer, a trace of the body of the artist lingers. Like the marks of Rossiter's *Pools* (2010-2017) and *Pours* (2009-2010), and Turner's late watercolours, the further we move into abstraction the closer we come to capturing sensations of the real. *Little Phantoms* (2019) skews the indexical nature of photography. The final series appears as abstract manifestation of the material world. In many ways it bestows a *present-ness,* blending the experiences of being in the landscape with the physicality of an artist making an image.

The hybrid methods I developed, discussed further in Methodology Sketch 3, come close to conveying a visual perception of the embodied experience of place. The detailed fragments originating from the materiality of land, mirror fleeting glances and something comparable to a vision-experience of a body walking, scrambling and moving across, through and into the landscape. The visualisation of an experience through pictorial abstraction

brings a visual clarity to the sensation of being *in* the world. Abstraction offers a reminder of the importance of the multisensory in human vision. The result is a visual record of inhabiting places. Mapping a journey that amalgamates the fleshy substance of body with the earth to the materiality of photo-technology.

Through the residency it was my intention to explore the impact of advancing technology on traditional printmaking and expand interdisciplinary practice. This began through an investigation of the imprint in both virtual and physical environment and through the hybrid methods developed to produce *Little Phantoms* (2019). Photography's connectivity to the referent is repositioned from pictorial representation to visualise the imprint of the maker enveloped in landscape.

Methodology Sketch 3: Sensing Landscape ends this chapter, charting my growing interest in capturing the multi-sensory sensation of walking through landscape by experimentation with 3-D software through subversive acts. Evaluating new methodologies formed using lost tracking techniques to refute Baudrillard's hypothesis on the absence of latency in the digital photographic process. Finally, drawing from Edwards deliberations on the performative qualities of photography, to understand how the potential performative nature of 3-D scanning can accomplish latency in the digital imaging process.

Chapter Five reflects on two series of the final practice-research **Volume Two Section 3 pp. 35-56,** stretching the limits of 3-D technology printing, creating a *flip-back* connectivity to the materiality of early and pre-history periods of photography. This PhD research has been deeply informed by the pre-history and history of photography and therefore it seems fitting that the completion of the final practice-research *LightSensitive* (2020) **Volume Two Section 3 pp 35-47** and *Photosculptural* (2020) **Volume Two, Section 3 pp. 48-56, Appendix: Experimental Works, pp. 81-83,** would be resolved through final reflections on Photomedia history.

PLATE SEVEN

Methodology Sketch 3

Sensing Landscape

Methodology Sketch 3 outlines the methodology of practice developed as the research approached the final stages. *Little Phantoms^* (2019) from the series *Neither Here nor There* (2017–2020) is the point of focus in this section.

Tim Ingold and Jo Lee Vergunst, in the introduction to *Ways of Walking: Ethnography and Practice on Foot,* write "we tend to forget that the body itself is grounded in movement."[135] Thinking in this way, movement *grounds* us to place, the acute sense of being is played out. The sensation of movement and the resulting impact this has on how we think and what we do seems in many ways obvious. If one thinks of walking at pace or meandering slowly, the speed of our thought process tends to marry with the pace of our movement. In the darkroom the low light encouraged a slowing of body movement, and as a result the atmosphere created by the low light was catalyst for a highly reflective space, encouraging a slow and considered thought process.

Thoughts I developed whilst walking became mixed, mapping the unfamiliar terrain by studying the history of each place walked, reflecting and retracing personal history, and through these processes I built a sense of belonging. Kenneth Olwig describes the "material depth of the proximate environment"[136] as something we experience through the effect on body sensations, the movement of *doing* whilst seeing gives us an immersive visceral experience of place. Multi-sensory experience has a direct influence on how we recall place. Walking into the landscape, mindful of the body's interaction with place effects how we register what is seen. There becomes an awareness of the edges of bodily experience, a sight-blur as one navigates terrain, shifting our understanding of the distance between things. Touch, smell, sound and our binocular three-dimensional vision most acutely effects how perspectives of space are seen, processed and remembered. Thinking of landscape in this way, to build the full picture, is like stitching together a series of patches of seeing

[135] Ingold and Vergunst, *Ways of Walking: Ethnography and Practice on Foot,* (Surrey, England: Ashgate Publishing, 2016), 2-3.
[136] Kenneth R. Olwig, "Performing on the Landscape versus doing landscape," in *Ways of Walking,* 84.

through movement. There is no singular fixed point of view, no solidly anchored position, only a collection of experiences that make up the sum total of walking into and through landscape.

Continuing using the digital SLR camera, I began researching and experimenting with photogrammetry. Photogrammetry is a digital process of mapping and measuring an object or place, through this process a 3-D digital file of the object is created. The first stage is capturing the object, a series of photographs of the object from a wide range of viewpoints are taken (fig.48), the images are then processed through 3-D software. The output can be a map, drawing or 3-D model. The key components of this process are:

Light - PHOTO

Drawing- GRAM

Measurement -METRY

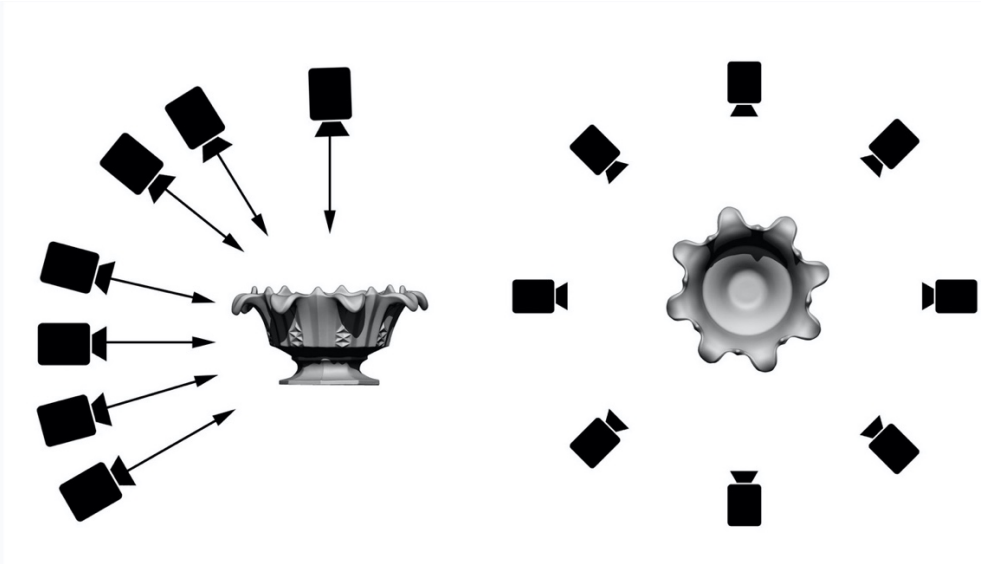

Figure 48. Illustration of the capture process in 3-D photogrammetry.

I decided to test this process using an object collected from one of my walks. On the road between Dundee and the seaside town of Broughty Ferry I collected a series of empty discarded cigarette packets. I had used most of the collection to make a series of etchings, placing cigarette packets on soft ground plate and running them through the etching press to draw onto the plate through the pressure of the object. The results of one etching (fig.49) reminded me of a sailing ship which seemed apt given Broughty Ferry's history (it had been a prosperous fishing village in the 19th century), and Strindberg's essay *On Chance in Artistic Creation* (1894). I decided to develop these strange forms further using

photogrammetry. Testing the process using a cigarette packet, I created 3-D stl. and obj. files using photogrammetry. (fig.50).

Figure 49. Jacqueline Butler. Soft ground etching, 2017 of 3-D file 9 cm x 23cm.
©Jacqueline Butler.

Figure 50 Jacqueline Butler. Screengrab image cigarette packet, 2017.

One of the by-products of the photogrammetry process when creating a 3-D file is a jpeg. The jpeg generates key fragments of the surface of the object extracted from the photographs. They are akin to jigsaw pieces and are part of the process to create the fully formed 3-D files. The jpeg in this derivative form resonated with me.

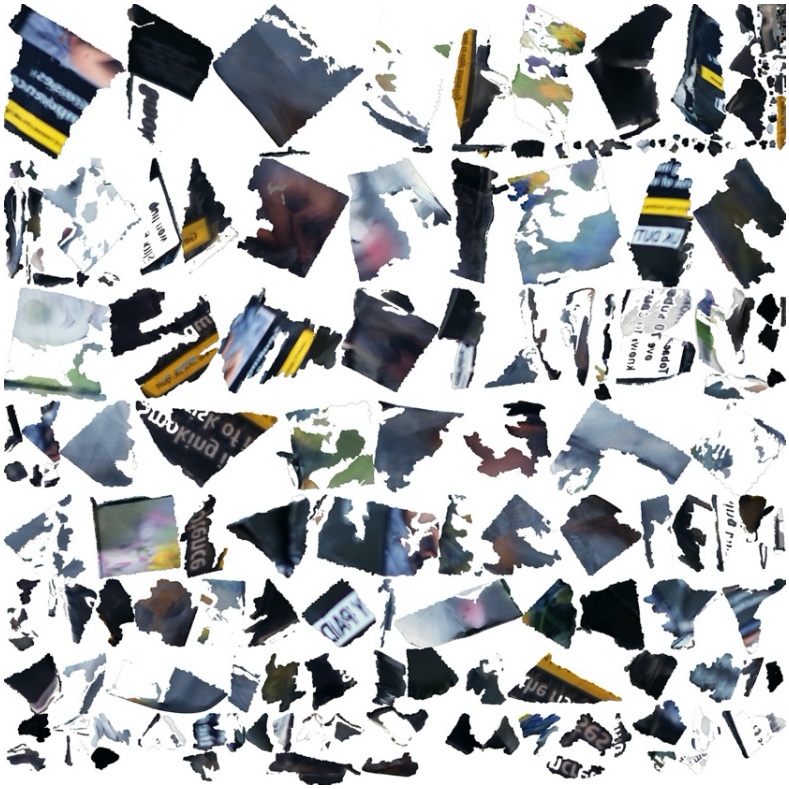

Figure 51. Jacqueline Butler, *jpeg cigarette packet fragments,* 2017, 90 x 90cm.
©Jacqueline Butler.

Looking at the resulting image (fig.51) **Volume Two, Appendix: Experimental Works, p. 74,** setting out pieces of this humble object, reveal an alternative sensation. I am reminded of Roland Barthes after the death of his mother, regularly writing notes of his ongoing grief on a supply of typing paper that he cut into quarters and lay on his desk. These small paper sheets, like the fragments in my images describe emotional ruptures and the sensation of loss. The distressed fragmentation of the object through this process led to further developments using scanning device and 3-D software.

2-D image capture of 3-D space in photography brings much of the medium's magical quality, emerging technology creates the ability to scan and capture space from a range of vantage points, one can move around things of the world with 3-D scanning devices and software.

On Track: Losing and the Lost

Losing track, is a thought that strays and takes us elsewhere, a holding space inside ourselves, an interior other that suggests alternative outsides, beyond the regular spatial temporal experience. As I walk into the landscape, I am at times there but not quite, my

mind strays. Tracks are there to be followed, but on occasions, lost in thought contemplating these places, I head off track. What do these new tracks mean to me? Although strange and unfamiliar, I am conscious they are a homeland of sorts. Wandering off track, creates space for new tracks to be established, remembered and retraced in the future. Through this process we tread a known history and through displaced behaviour, veering from an absolute inevitability, we create a void to rework and renew that history.

Lost tracking is also a term used when there is a failure in the process of scanning objects using 3-D scanning devices and software. To maximise successful scanning, the subject to be scanned should face the light; to minimise the shadows and enhance colour, surfaces should be of a certain scale and volume and not have a shiny surface. The subject should be static, the scan operator should work around the object in smooth steady actions, with no jerky fast movements. The technology has been predominantly developed for manufactured production design, creating infinite multiples to service mass culture with disposable replicates. Working with the *Sense* hand scanner; a low-tech scanning device, I subverted the guidance outlined in the *Sense* 3-D Scanner User Guide (2014) (fig.52).

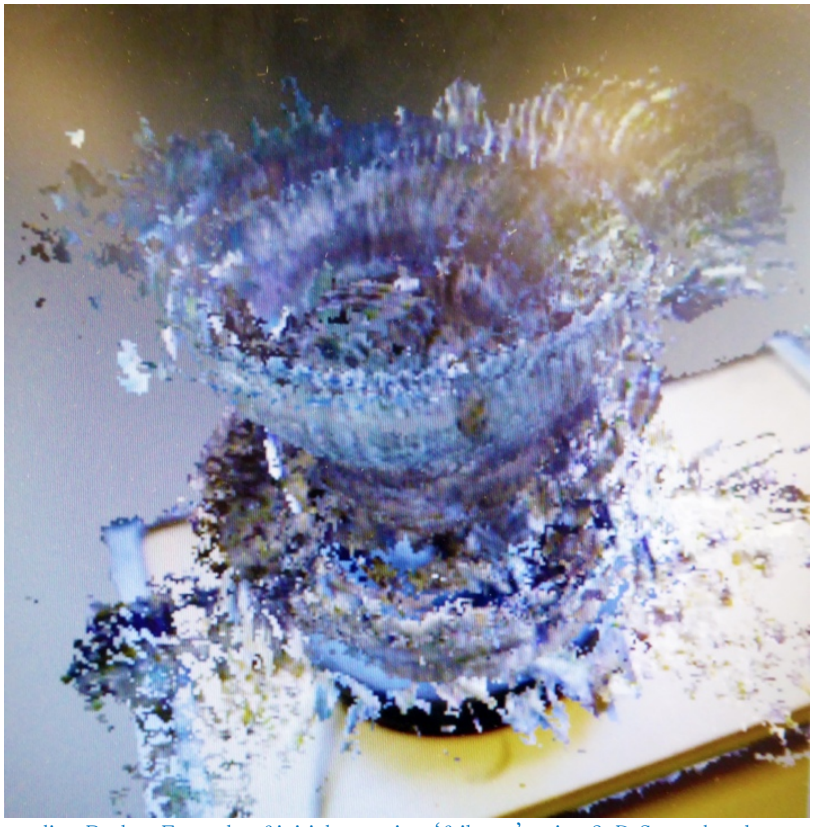

Figure 52. Jacqueline Butler. Example of initial scanning 'failures' using 3-D Sense hand scanner to produce *Little Phantoms,* 2019. ©Jacqueline Butler.

With 3-D scanning one has to move around objects slowly to capture, my approach had to be careful and considered. The experience of scanning in the printmaking studio in many ways differed from working in the darkroom. In the solitude of the darkroom, as mentioned earlier my body seemed to become transparent as if absorbed into the darkness of the space. In the printmaking studio I worked, with slow movements around the objects, the printmaking studio was busy, brighter, more public. Initially I felt exposed, I was accustomed to working in the privacy of the archive or darkroom. The performative element of my making became heightened when working with the 3-D scanner, moving slowly my body rigid, each movement had to be slow and steady. As the scan process progressed my actions were stilled through concentration, a steady rhythm materialised which appeared ritualistic.

The scan technology I used was basic and dated and the structure of the objects I constructed were complex, this meant they were prone to movement (and collapse). With the precarious nature of the objects and the limitations of the apparatus the resulting scans were always incomplete, the technological *failure* presented interesting results (fig.53). As with my experience of being in the landscape, a view was not desired, fragments of my experience of place began to materialise. The *Little Phantoms* (as they were later titled) seemed not of this world but of other worlds, their presentness evoking thoughts on temporality. The flawed scanning technique effected the perspective technology can give of the real, these approaches act as visual representations of an embodied experience of place.

Figure 53. Jacqueline Butler. Screenshot of 3-D scan test, 2017. ©Jacqueline Butler

Magical Space of Failure

The captured fragments of the details from the 3-D structures, mirrored fleeting glances, and something of my vision-experience of a body walking and moving across, through and into the landscape. The end results appear as abstract manifestation of the material world.

An empirical view of the *scape* in front of me was not my aim; to stand back and observe from a distance and present an objective framed view was alien to the desired effect. The odd *thingness* of these little phantoms, although abstract refer to a something, a somewhere, that is a hauntingly familiar yet unattainable, they are just out of our grasp in their abhorrent beauty. These fragmentary references to things from the real world, abstracted by capture-failure appear weightless and fluid, as if magically transformed. The failure of technology is the hook that draws the viewer in. Image fragmentation is realised

through subversive acts. Creating complex structures would prove difficult for the device to capture, the technology struggled and was only able to extract small sections from the original constructed objects (figs. 54 & 55). The images **Volume Two, Appendix: Experimental Works, pp.72–73,** are referent to an internalising of place, a memory, a notion, an evocation of personal experience.

Figures 54 & 55 Jacqueline Butler. Photographs of 3D structure and Screenshot, 2017.
©Jacqueline Butler.

The Stilled Silence of the Blank

This process of disruptive scanning presents wriggle room to represent an alternative experience of the real, working against Baudrillard's hypothesis that "with the virtual the referent disappears."[137] In *Why Hasn't Everything Already Disappeared?*(2007),Baudrillard draws predominantly on the significance of the "singular moment of the photographic act", when the camera shutter is released and light falls onto and inscribes the photographic film, thus creating the negative. He describes this moment and the resulting negative as a "blank between object and image".[138] He concludes the significance of lapsed time between the taking and the seeing of the image, brings us closer to a representation of the real, a

[137] Jean Baudrillard, Alain Willaume, and Chris Turner, *Why Hasn't Everything Already Disappeared?* (London: Seagull Books, 2007), 46.
[138] Baudrillard, *Why Hasn't Everything Already Disappeared?* , 37.

reminder of being in and of the world. The "blank" space created through the process of analogue photography fleetingly takes us away from the world, or as Baudrillard describes it "abolishes the world and the gaze" by stalling time and denying us a visceral experience. The temporal experience created through the latent image of analogue photography presents a stilled silence, a space between absence and presence, where we have time to imagine the image. The importance of latency, the delay, of *not seeing* by creating the "blank," allows a visual silence. This suspends thoughts and actions, it creates uncertainties and pronounces the fragility of the photographic image, emulating the act of feeling and being human.

Baudrillard fears the immediacy of digital photography derived directly from the screen. With continuous capture potential, image streaming and transformation through software applications taking us further from the essential qualities that analogue photography offers. He describes a desire to "see what the world looks like in our absences [...] to see beyond 'the horizon of disappearance'"[139] he determines that analogue photography brings us closest to this and that digital through its instantaneity, and lack of "the time of emergence" has extinguished its connectivity to the referent. This division between analogue and digital photography appears simplistic, focussing primarily on generic technical principles for each medium. My intention, to place onus on the user of the technology (the artist) and the impetus to blend technological methods, bringing new forms of image and from this determine new philosophical discourse to understanding our place in the world and how this is manifest in a digital photographic context. The photographic act that Baudrillard refers to denotes the performative qualities of photography.

Elizabeth Edwards questions where the performative qualities in photography may rest and touches upon the act of making as one of three forms of photographic performativity. Through the photographic ritual one finds oneself between the real world and illusion, an imagined place "dealing not only with a world of facts, but the world of possibilities".[140] As a researcher working across analogue and digital platforms my methodology is centred around the connectivity between technologies, bridging and merging the guiding

[139] Baudrillard, 21.
[140] Elizabeth Edwards, *Raw Histories: Photographs, Anthropology and Museums* (Oxford: Berg, 2001), 21.

photographic principles informed by the history of analogue process. An emerging understanding of the potential of digital process, not foregoing the inextricable link photography (whether analogue or digital) has to reflect back something of the material world we inhabit. What transpires from Baudrillard's reflections on the essential qualities of analogue photography, is a medium that through its process and resulting negative presents an illusory space, between the real and imagined. This suggests parallel places for us to virtually inhabit and contemplate, alluding to Edwards "world of possibilities" she writes "Photography brings the expectancy of the real, the truthful".[141] Although Edwards is referring to the chemical photographic process; she writes of photography's referent as "analogical", I would argue that photography's implicit capability to generate representations of the real world, Barthes's 'that-has-been', has created an indexical stickiness that resides in digital photography. Rather than photography and the referent being glued together, as described by Barthes when reflecting on the analogue, *stickiness* acknowledges a level of uncertainty, with concerns over the authenticity of digital. The generative and manipulative capabilities of digital technology overshadow the medium, one mistrusts its ability to create a legitimate representation of the material world. If one revisits Baudrillard's description of the essential qualities of analogue photography, it becomes apparent that there has always been a stickiness. Whether analogue or digital, the photographic referent slips and slides, creating opportunity for it to materialise in new forms. The illusive qualities of the medium arouse in the viewer thoughts that blend real experience with the imagined. The referent is fragmentary, reminding us of something half remembered, almost forgotten.

In a detail from a print from the series *Little Phantoms* (fig.56) the images appear abstract, unworldly. Looking closer the surface is crudely pixelated and slightly out of focus, but there are points when the surface and texture of the original raw material is revealed. The recognition of fragments from the original object reveals a fleeting glimpse of the materiality of landscape.

[141] Edwards, *Raw Histories*, 9.

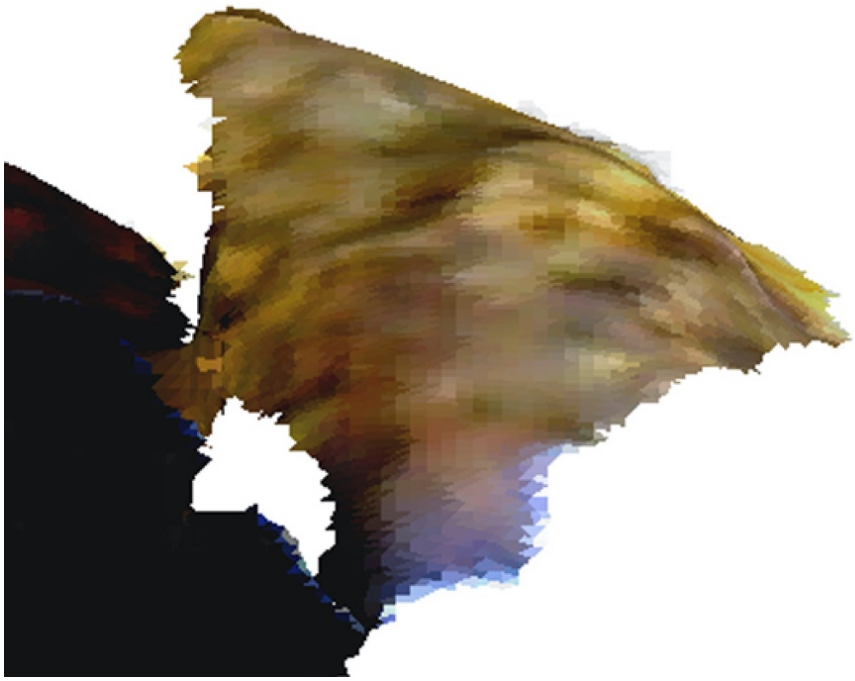

Figure 56. Jacqueline Butler. Detail of image from the series *Little Phantoms*, 2019. © Jacqueline Butler.

One has to be mindful of the volatility of digital if not grounded or harnessed, one has to handle the technology with care in order that its inexhaustible potential is controlled. Focussing on the magical qualities of image emergence by utilising a slowing of image production, warping software rules and enhancing the fault-lines of the digital process, bring us some way forward. When using the lost tracking method, I focus on my body, the camera apparatus and the object /subject to be captured. Movements are slow and deliberate, the image I see, not from screen or viewfinder, but from a direct visceral experience. Imaginative thinking becomes expansive, connecting my body: my eyes, my arms and my legs, to the object/subject in front of me remaining unframed through using the scanning device. The object captured by the sensors, data collected, then inscribed through algorithm rather than photochemistry. The latent image materialises only after processing software pieces together the fragmented data. Although there is no resulting negative the experience of this process draws analogies to early photographic practices. The optical technology whether, camera apparatus or scanning device, is reliant on the existence of light cast on objects of the real world being placed in front of each apparatus.

The scanning method demands a slowing of mind and action, a focus between body/operator and object/subject, the synergy creates space for the *latent* digital "blank" to materialise. These actions have connections to and refer back to the earliest photo-

technology; the earliest camera apparatus producing negatives (using paper, a precursor to glass plate and celluloid film), created by William Henry Fox Talbot in the 1830s. Fox Talbot used cameras that had no viewfinder, simple small boxes described as mousetraps due to their size (fig.57). This apparatus, free from the constraints of framing and the restrictive "act of choosing and eliminating, [...] forces a concentration on the picture's edge, the line that separates "in" from "out""[142] The 3-D scanning handset, similar to Talbot's camera has no viewfinder, giving way to an expansive exploration of the object in space. The photographer is freed from the apparatus to contemplate a more experiential understanding of place beyond the "line" of the frame that traditionally defined the resulting photograph.

Figure 57. One of William Henry Fox Talbot's early 'mousetrap' camera's ca. 1835.

Looking at the glass screen of the computer as my latest scan emerges, one is reminded of the box cameras of the mid nineteenth century, with the large ground-glass viewing screen. The image that appeared on the surface of the ground-glass is recognisable as the subject presented to the camera, and yet it is different, altered by the materiality of the technology; the properties of lens and glass. Seen upside down and the wrong way round, the object presented on the camera's ground glass is in limbo between the *reality* of the world we inhabit and the tangible materiality of the photograph. A little phantom not yet released, awaits further manipulation through the advancement of the photographic act, and the inscription onto the plate glass negative.

[142] Edwards *Raw Histories*, 18-19.

The latent images I produce may not at the stage of capture be inscribed onto paper, glass, or film, instead they lay dormant in the computer. The potency and magic of the unseen image created through the scanning process presents a hidden expression of the quintessence of being. The digital files potential continues from its analogue predecessor, through the digital expanding further the endlessness of photography.

PLATE EIGHT

Chapter Five

Material Histories

> If we want to frame our experience of birds within that of our ancestors', then we should say that for us all birds are what chickens were for them: beings that fly, but that do so precariously. Thus, such a modification of our attitude in relation to birds and to flight (provoked by aviation and astronauts) has a significant effect on our view of the world. We have lost the concrete aspect of the traditional vision of the "sublime."[143]

5.1 Introduction

This chapter will evaluate the final stages towards completion of this PhD through two new series of practice-research titled *LightSensitive* (2020) **Volume Two, Section 3 pp. 35-47**, and *Photosculptural* (2020) **Volume Two, Section 3 pp. 48-56**.

Returning to study proto and cameraless photography of the early nineteenth century, I developed methodologies to resolve the final research question of the PhD: How can technological convergence advance the field of cameraless photography? Deliberating on the haptic qualities of print in hybrid form and the photographic index as driver to investigating both the real and imaginal. Contemplation on Barthes 'that-has-been', and Baudrillard, and Heckerts positioning in relation to the latent image, I hypothesise on image permanence and the significance of ephemerality: the lost object, to reshape understanding of the photographic. The practice-research develops from the tacit rather than optical nature of photography. Through practice-research the conventions of pictorial representation in photographic practice are challenged, informing methods to experiment with the material substance of print: from paper to gypsum to resin, and from 2-D to 2.5-D to 3-D. Throughout, the advancing research is considered through the lens of the history of photography.

The history of photography gives testimony to the fluidity of a medium that has continuously evolved. Technological change and transformation are at the heart of the story of photography, from the period prior to and, of its invention and evolution. This is not a

[143] Flusser, *Natural:Mind,* 21.

medium where technologically stands still. Through the reflective process of this text there is no intent to relinquish the analogue, there is no end game. With digital technology developing at a phenomenal rate (and declarations of a post-digital, post-human era), it is essential that any appraisal of analogue creates space for artists to reposition and utilise the codes and philosophies consolidated over 200 years. To progress new methods of making photographs, ensuring a continuum of the media (I use the term photography in its broadest sense), my approach is through new hybrid interdisciplinary practise.

The resolution of *Little Phantoms* (2019) came from a decision to print on watercolour paper, this brought the series closer to painting and confronted the viewer with the dichotomy between the gestural mark of the maker: brush /hand or machine/computer. The practice-research also created further discourse on the objecthood of the print. When the viewer encounters *Little Phantoms* (2019) there is a provocation, a yearning to touch, and an understanding that through handling the fragility of the print is exposed. This line of enquiry builds on earlier observations of the viewer's experience of *Horizonflux* (2016) when exhibited in 2016.[144] The projected image in *Horizonflux* (2016) **Volume Two, Section 2 pp.10-15**, draws the viewer into an immersive space through its ephemerality, the image surface is untenable and illusive. In *Little Phantoms* (2019) the scale of the prints and the delicacy of the paper, exhibited unframed and precariously balanced on a narrow looking-shelf, reiterates the objecthood of the artefact **Volume Two, Section 3, p. 26.**

On encountering the *Little* Phantoms (2019) prints, one's movements are slow and deliberate. Engaging with each print by close scrutiny and concentration, there is an audible *quietening* of action where stillness reverberates. Although fragile, the thingness of each print dislocates the photographs' transparency, bearing an opacity that rouses a desire to touch the photograph as *object*. Drawing the viewer to look *at* the surface, and in doing so the magical trickery of photography's indexicality is unravelled. One questions the representational in the photograph, as something "of itself" rather than "of something."[145] Transposing the subject presented in front of the camera (the botanical detritus), to the

[144] See the immersive qualities evoked in Horizonflux, informed by Tanizaki's description of shadows in this volume, sections 3.11 Illumination' and 3.12 Conclusion, 69-72.
[145] Batchen, "'Photography': An Art of the Real", 47.

material process of the technology. The indexicality of the photograph in this research thus positions towards the act of making or maker in action.

Applying similar philosophy to my earlier approaches to the practice-research: stretching analogue into digital photographic print, my ambition was to move beyond paper-based c-type or giclee print as a final outcome. This required further consideration of the printing materials available to 3-D technology. Exploring further the haptic potential when working in hybrid form to further exploit the properties working across medium materiality. I felt that evoking a more sensual interplay between the viewer and the artwork could heighten a tender desire to touch and handle.

Figure 58. Jacqueline Butler. Test print using white filament and silver spray paint 2019. ©Jacqueline Butler.

5.2 Material Challenges

3-D printing technology allows for the use of a broad range of materials, metal and even glass can be used through specially constructed robotic printers.[146] 3-D printers predominantly use plastic or resin filament. Whilst developing *Neither Here nor There* (2017-20) **Volume Two, Section 3, pp. 25-56,** I experimented using a range of filaments, my attempt to paint directly onto the surface of the printed artifacts were unsatisfactory, the appearance of the material created a crude artificiality. (fig.58).

Continuing to work from the original 3-D files of the still life studies from the landscape, I explored a range of print-materials and printers as I began to plan *LightSensitive* (2020) and *Photosculptural* (2020).

Referring back to the foundational stages of this research, my imperative to study the traces of Charles Dodgson as a maker at work along with Peter Geimers writing on the image as trace,[147] expediated my exploration of the photogram through hybrid methodologies. Completing the body of practice-research *Neither Here Nor There* (2017-20) transpired through hybrid thinking to envision new interpretations of the photographic print through the lens of photography-histories.

[146] Glass Artist Stefanie Pender's developed 3-D glass printing using robotics during her Autodesk Pier 9 Residency in 2017 https://www.designboom.com/art/stefanie-pender-robot-glassmaking-autodesk-04-27-2017/

[147] Peter Geimer, "Image as Trace: Speculations about an Undead Paradigm," *Differences* 18, no. 1 (January 1, 2007): 7-28, https://doi.org/10.1215/10407391-2006-021.

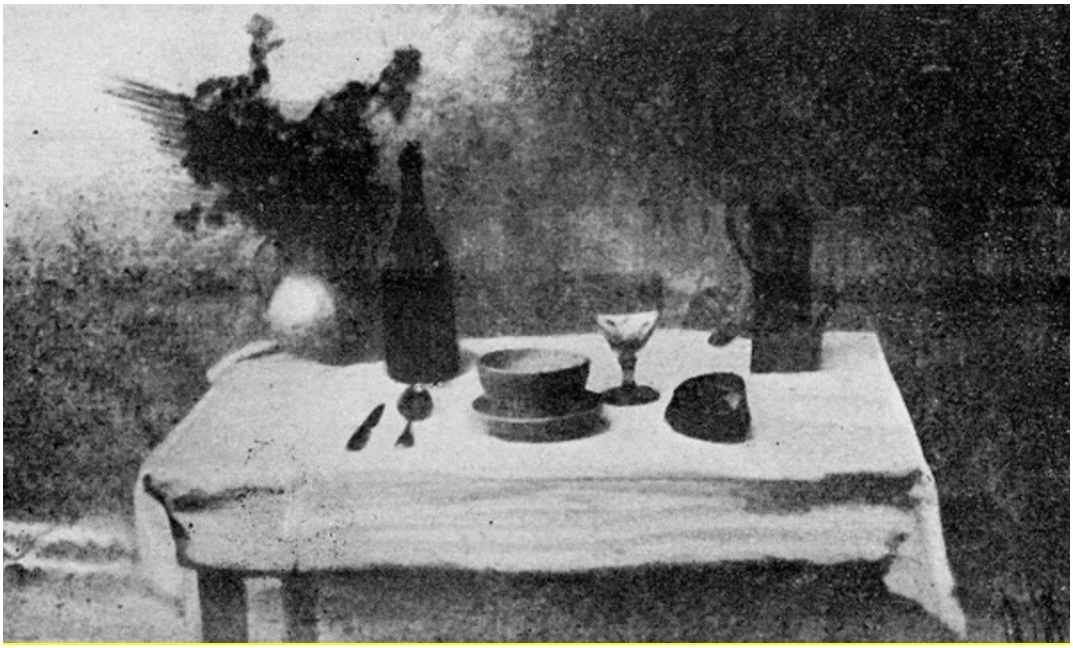

Figure 59. Niépce, Joseph Nicéphore, *The Dinner Table*, 1823‘the first photograph.’

5.3 On Firsts ... and Pre-Firsts

The abstract sensation of *Neither Here Nor There* (2017-20) reminds me of Barthes’s reflection on Niepce’s *The Dinner Table* (1823) (fig.59), described in *Camera Lucida* as the first photograph.[148] Contemplating the first encounter with a photograph (in this instance Niepce), the objects from the dinner table seen through the photograph Barthes describes as ‘ectoplasm of “what-had-been”: neither image nor reality, a new being [...] a reality one can no longer touch.’[149] Reconfigured in the contemporary context of my practice-research using 3-D technology: the digital and experiences of the virtual, as dark endless space beyond touch. Barthes photographic referent is brought full circle, or perhaps more in a loop the loop, the circle not fully closed but advancing into a new unknown territory. Ever advancing, digital technology rocks our concept of the real, we have multiple realities to experience and expand on, leaving us on unstable ground. The essence of photography, defined by Barthes, the ‘That-has-been’ originating in discourse around analogue photography still exudes into the digital, the residue although somewhat contaminated is still ever present.

[148] Barthes, *Camera Lucida*, 86.
[149] Barthes, *Camera Lucida*, 87.

Through exercising methods such as the lost tracking technique, working against prescribed methods of using technology, in *Neither Here nor There* (2017-20) **Volume Two, Section 3, pp. 25-56,** there is an intentional *agitation* of technological process. The use of the word agitation is specific and intentional. I draw on this term as a talisman to the defining moments of photography from 1826-1839 and its pre-history. Agitation is a recognised term in photographic practice, attributed to the chemical process of developing and fixing analogue negative and print, one must agitate the negative or paper print in photo- chemistry baths. In the process of scanning one can repeatedly return to the same area of the object, repeating the scanning to ensure effective data capture. This repeated action is similar to the rhythmic action of chemical agitation, through this process the image captured is more successfully developed and fixed as digital algorithm.

The narrative of the history of photography, to sustain a permanent photographic image, presented to the world in February 1839, is of course central to much of my thinking, but foundational to this research is my interest in the period prior to this, the "pre-invention"[150] of photography. Reading of the experimental images of the late eighteenth and early nineteenth century, the evanescent condition of the unfixed photograph fascinated me, directly impacting my methodology towards the final stage of this research, and influencing the production of the series *LightSensitive* (2020) **Volume Two, Section 3, pp. 35-47**, and *Photosculptural* (2020) **Volume Two, Section 3, pp. 48-56.**

Mike Wares sites this pre-photography period as beginning three hundred years prior to the date of photography's invention, and specifically between the years 1550 to 1553 when lenses were developed and began to be incorporated into camera obscura, a period when "we became a 'lens culture'".[151] He cites two pre-photography processes, one of the lens and camera/camera obscura, the other proto-photographic where the "quantum yield is one or less". In simple terms the proto-photography process generates an image which becomes visible to the human eye by exposure to sunlight, additional agitation using photochemistry may strengthen the visibility or make it permanent. This differs from the traditional analogue photography process where the exposed image on the negative is initially invisible. The subject imprinted on the negative becomes visible and materialises

[150] Mike Ware, "On Proto-Photography and the Shroud of Turin," *History of Photography* 21, no. 4 (December 1997): 261-69, https://doi.org/10.1080/03087298.1997.10443848, 261.
[151] Ware, "On Proto-Photography and the Shroud of Turin,"268.

through the photo-chemical process of agitation using developer and fixative. Proto-photography was used by pre-photography pioneers such as Thomas Wedgewood and Humphrey Davy, exploring the properties of light in the late eighteenth and early nineteenth centuries. No visual documents of Wedgewood and Davy's experiments survive, as they were never able to produce image permanence. The ephemeral nature of their experiments leaves one imagining images and contemplating the fleeting moments Wedgewood and Davy visually absorbed details of these temporary imprints of light on paper (or leather impregnated with silver salts). Each conscious that the period of viewing, even in diminished candlelight, came at the expense of the life of the inscribed image. Through the temporal experience of looking, the image was destined to fade and dematerialise. *Little Phantoms* (2019) draws from this, through blur, pixilation, and fragmentation we become conscious of the missing pieces, the lost, as much as what has been successfully fixed and can be seen. In the prints *LightSensitive* (2020) through technological transformation the image is resharpened through exploiting the material qualities of gypsum printing.

5.4 Tracing the Lost Object

Jordan Bear, writing on the photographic experiments of Humphrey Davy suggests a re-examination of the origins of photography, beyond the point when the photographic image was made permanent. The proto-photography of Davy's, and the "lost object" of his experimental images, a practice that "bridge the realms of ephemeral sensations and material objects,"[152] was denoted as failure because of the loss of the artefact. The inability to make public an individual experience of looking, Bear concludes "Whatever these investigators might have glimpsed momentarily remains locked in their individual sensory experiences, unavailable for the verification that might permit historians to anoint these ephemera as photographic."[153]

Reversing the emergence of the image, which is central to chemical photography, somewhat disrupts Baudrillard's hypothesis on the absence of the latent image in digital

[152] Jordan Bear, "Self-Reflections: The Nature of Sir Humphrey Davy's Photographic 'Failures'", in *Photography and Its Origins*, ed. Tanya Sheenan and Andres Mario Zervigón (Abingdon, Oxon and New York: Routledge, 2015), 189.
[153] Bear, "Self-Reflections", 192.

photography, creating a ripple of *what ifs*. With Baudrillard and Barthes, there is an absence of proto-photography in their discourse towards a philosophy of photography which has de-centred the field. This research project contributes to recent dialogue to redress the balance, accompanying writers such as Batchen and Bear in reviewing the idea of beginnings within a context of emerging expansions of photography through the digital. Drawing a hard line to the origin of the invention of photography based purely on the success to permanently fix an image is as problematic as the attempts to draw clear lines between where analogue ends and digital begins. Lines are best blurred, softening distinctions of the medium's origin and lineage. What lies inside or outside of the discrepancies of what a photography was, is and will be, can be open and continuous.

Thinking beyond the specifics of restrictive framing, Humphrey Davy's focus on individual sensory experience has importance as an examination of the experience of an early maker of photography in the late eighteenth century, where the disciplines of science and art were less distinctly separated. Davy's failed photographic experiences, placed centre-stage, and firmly embedded into the narrative of the history of photography, creates an opportunity to think beyond the singular drive to fix a permanent photographic image. To move from the particular to the indistinct, from seeking the essence of this thing we call photography, brings us to Geoffrey Batchen's analysis of the history of beginnings of the desire to photograph, to fill a gap, expanding and enhancing our understanding of the possibilities of photography.

In *Origins Without End* Geoffrey Batchen deliberates on the History of Photography's defining moment, where the origin of the medium is based on a singular; the technical process of production, a moment when the photograph was ably produced as a permanent thing in the world. He re-evaluates the beginnings (I emphasise the plural here) of photography, shifting the essence of origin beyond the constraints of technical production. Batchen determines Barthes concentration on the reception of photographs in *Camera Lucida* and his preoccupation with individual response to these talismans on viewing. When reflecting on Barthes definition of the *punctum* Batchen considers Barthes own subjective responses to encounters with specific photographs such as the Winter Garden image of his

mother “as the measure of photographic knowledge”.[154] Seen through this singular lens “the origin of a given photograph would be endlessly repeated, occurring whenever that photograph is seen”.[155]

It becomes apparent that by toppling the certainty of the point of origin, combining the chronology of technical process with the endless repetition of image reception creates a laceration on established conventions determining what photography is. This unsettling displacement provide an opportunity to reorder. By more fully engaging with photographic experience in the ever-expanding context of digital photography.

Disrupting the established order that determines the production of a *successful* image, by negating the technical rules, one dooms the final image to *failure*. We must bear in mind failure, in this instance, denotes the inability to produce a recognisable pictorial referent to the subject/thing captured from the real world. This practice- research renounces the shackles of a perceived order of the photo-technical process to visualising the indexical, submitting new ways to consider the digital, photography and the indexical through expanded photographic practice.

5.5 Light, Paper, Data: Reinventing Photography

Martin Barnes, Geoffrey Batchen and Virginia Heckert are curators fascinated by the history and materiality of photography, and through recent exhibitions each forefront current methods used by Photomedia artists. Two of the curators, Martin Barnes, and Virginia Heckert, are also keepers of significant historic photography collections as Heads of Photography at key institutions in the UK and USA. Four exhibitions and related publications have been foundational to much of this research; *Shadow Catchers* (2010/11), *What is a Photograph?* (2014), *Emanations: The Art of Cameraless Photography* (2015) and *Light, Paper, Process: Reinventing Photography* (2015). All four exhibitions reframe the history of photographic practice through contemporary discourse, medium materiality is at

[154] Batchen, “Origins Without End,”, 72.
[155] Batchen, “Origins Without End”, 71.

the forefront, whether reflecting on the history of cameraless photography or recent artists and photographers' work.

Within the first paragraph of the introduction to Virginia Heckert's publication *Light, Paper, Process: Reinventing Photography* she establishes the focus of the exhibition and resulting publication. "From its beginnings" and ending the paragraph describing the darkroom as "the arena" it becomes clear that Heckert's approach to 'Reinventing Photography' is to analyse the work of artists in the context of the history of analogue process, specifically the performative nature of working in a photography darkroom. Heckert connects artists through their shared "desire to celebrate the material essence of analogue photography"[156] by paper and chemical darkroom experiments. Heckert's use of the word "arena" suggests a public performance. The word may be misleading, perhaps Heckert is referring more to the private performance undertaken as part of the process of creating the photograph. For me the darkroom is a private space for making, where one is free from the public gaze, to quietly consider and contemplate one's actions, where *mistakes* and 'wrong-doing' are permissible and can be freely explored. What Heckert presents is the narrative of each artists creative process. A trace of methods of making; in the instances of the artists in the exhibition this includes folding, scoring, scratching and burning the surface of photographic paper. Each artist (most from educational backgrounds in painting and drawing) works blindly, the marks made on the photographic paper through the aforementioned methods are invisible to them at the point of making. Once the latent images are revealed through the chemical developer, the fixative making them permanent, these marks cannot be erased or altered easily. If this is done the change is clear to the viewer, as with James Welling's use of paint and ink in his series *Chemical Prints* (2010-2014). I believe the latency of the image prior to fixing provokes a body-connectivity to the work, if one cannot see visual marks at the point of making, the process becomes visceral. In the series *Little Phantoms* (2019), *LightSensitive* (2020) and *Photosculptural* (2020) Volume Two, Section 3 pp.25-56, the object scanned acts like a magnet to my body, I can see the object but not as the scanning apparatus *sees* it, I am once removed from the capture and oblivious to any *framing* of the object. My connection is therefore two-fold; firstly, to the

[156] Virginia Heckert, Marc Harnly, and Sarah Freeman, *Light, Paper, Process: Reinventing Photography* (Los Angeles (Ca): The J. Paul Getty Museum, 2015), 11.

technology and my knowledge of its *capture* potential, and secondly to the object being scanned and my desire to gather its substance. My concentration is bodily, not purely visual, I am fully enveloped with the objects to be captured.

This research project has gone through many iterations, some of the later works *Neither Here Nor There* (2017–2020), acknowledge the parallels between photography and painting. Core to my study is a preoccupation to understand the continuing potency of the index and the photographic referent. Beginning with a fascination for the photographic surface, bringing to the fore and making visible the impact the actions and disruptive behaviour of a maker at work can have on the photographic surface.

Working with 3-D print technology one becomes astutely aware of *building* an image through material layering. When printing the series *LightSensitive* (2020) (fig.60), an imprint is created when preparing the digital file for printing. An impression is made in the virtual space of the computer, continuing my thoughts around a touch once removed.

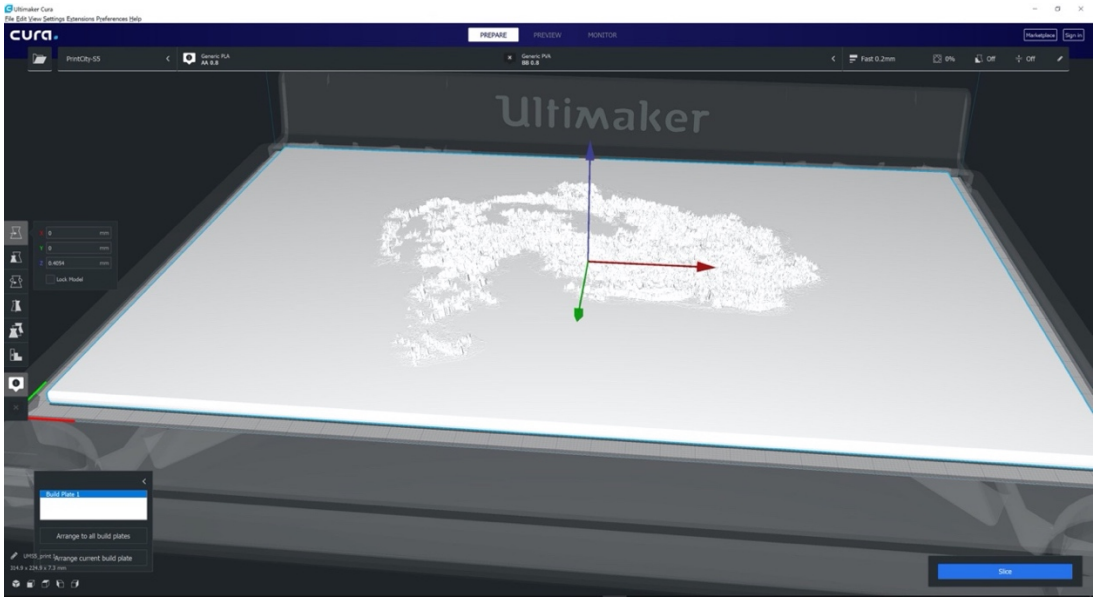

Figure 60. Jacqueline Butler. Photograph of printing process of *Light Sensitive,* 2020. ©Jacqueline Butler.

5.6 Image Print: Where is the Horizon?

LightSensitive (2020) **Volume Two, Section 3, pp. 35–47,** presents the dimensional qualities of the subject captured in an altered state, through this process new planes of

perspective are presented. Its abstract form encourages further investigations, to engage with the print combining senses of sight and touch. On first encounter, the natural quality of the gypsum material proves seductive, its appearance, a cool whiteness, is countered by the earthy natural warmth of the gypsum powder when handled. The impressed marks of the 2.5-D print through digital petrification appear as fossils. Although products of contemporary technology, what is presented is a historic document of the phenomena of nature.

LightSensitive (2020) shifts focus from the optics of the camera to the earliest experiments of Photomedia, the cameraless process of the photogram. The experimental photograms produced by proto-photographers such as Thomas Wedgwood and Fox Talbot parallel my approach to, and ambitions for *Light Sensitive* (2020) and *Photosculptural* (2020). Both historic and contemporary works offer an alternative understanding of pictorial representation, we *see* images of the world we inhabit by uncovering the experience of both sight and touch. As mentioned at the beginning of this chapter, photography is a technology that does not stand still, perhaps to make radical advances one needs to bring the narrative almost full circle, moving forward through gently touching upon the historic past.

Figure 61 William Henry Fox Talbot, *A Cascade of Spruce Needles*, 1839.

In the exhibition *Emanations* Batchen includes an image of spruce needles made by Talbot in 1839 (fig.61). Batchen writes of the sensational properties of the needles "tumbling" perfectly captured by the photogram process. This haptic view captured in the photogram, introduced a new approach to image making, creating a modern view that challenged the conventions of picture composition. As Batchen surmises:

> [...] we have to remember that this is a contact print, produced when Talbot scattered some needles across a horizontal sheet of prepared paper, so that they lay there statically in the sun long enough to leave an impression. Having given the play of chance full rein, he then fixed whatever image happened to result, thereby reproducing photographically the unpredictable operations of nature's own mode of reproduction [...] But a picture of this kind also collapses any distinction between figure and ground (as well as between up and down), and its edge becomes an arbitrary cut within a field of potentially infinite elements rather than a rationale frame surrounding a discrete object. It's a picture, in other works, that decisively breaks with all the received conventions of picture making.[157]

Batchen's explanation of the image caught through photogram collapsing and reconfiguring the perspectival plane, could as aptly be taken as a description of Carroll's Wonderland.

5.7 The Invisible and the Unnamed

The photogram is perhaps one of the most democratic of photographic processes, with simple methods that require minimal materials to set up. Often the first process introduced when learning analogue photography, through its simplicity and its magical results, turning humble everyday objects into fantastical shadow form. The subject matter of photograms often includes botanical specimens from nature and domestic items from the home. It would be natural to assume that in the nineteenth century many women of higher social status,

[157] Batchen, *Emanations,* 9.

predominantly confined to the family home, would have developed an interest in making photograms. Anna Atkins is perhaps the most celebrated, but many others remain anonymous. Batchen in his celebration of the scope and diversity of cameraless practice sites the work of only twenty women in his study of its history. This oversight, noted by Natalya Hughes [158] as criticism of Batchen's curation, I feel needs to be read in the historical context of the nineteenth century, and the invisibility of many women practitioners. To redress the "rather damning imbalance"[159] and bring women pioneers to the fore takes monumental efforts by expert historians, peppered with a level of luck.[160]

Struck by the loss of the history of these anonymous women, as with the lost photograms of Wedgewood and Davy, they evoke quiet whispers from the past, this resonated with me igniting my imagination.

Figure 62. Blanche Shelley, *Daffodil and Ferns,* 1854.

[158] Natalya Hughes, "Emanations: The Art of the Cameraless Photograph," CAA Review (CAA, -5, 2015), http://www.caareviews.org/reviews/3106#.XzFPdxco_kI.
[159] Hughes, "Emanations: The Art of the Cameraless Photograph".
[160] As in the example of the historian Larry Schaaf's discovery of the works of Sarah Anne Bright (1793-1866): Larry J. Schaaf, "Tempestuous Teacups and Enigmatic Leaves," The William Henry Fox Talbot Catalogue Raisonne, 19, 2015, https://talbot.bodleian.ox.ac.uk/2015/06/19/tempestuous-teacups-and-enigmatic-leaves/

In his introductory essay to *Emanations* Batchen writes of a small print by Blanche Shelley (a distant relative of Talbot's) made on 18th April 1854, describing Shelley as an "album maker" and the print as "delicate"[161] perfectly positions one's understanding of both the photographer and the print (fig.62). Viewing this print with its modest subject matter and unconventional awkward composition brings a naive lyricism to the image that I find alluring (I later discovered that Shelley was only age 13 when she made this print). Studying these early works by the unknown and the amateur is refreshing as the works are presented within a simple *quiet* framework of unknowingness. Through my practice-research my intent is to evoke the personal solitude I discovered in early prints by women such as Shelley. Through consideration of scale and the specific qualities of the materials used, the objects are small and handleable creating a sensual intimacy. Rather than artworks that engage multiple viewers in the expanse of the gallery space, my intent is to present small *displays* of nature for the viewer to engage with and experience individually.

Figures 63 & 64. Jacqueline Butler, *Light Sensitive*, 2020. Gypsum prints. © Jacqueline Butler.

The restriction of scale and tacit material qualities encourage a one-to-one viewing of each work. The stark white palate and subtle protrusions and inversions of the printed marks draw the viewer in to intently study the surface and dimensional qualities of the print (Fig.63 & 64). The viewer becomes caught up in the print, through intensive looking absorbed into the photographic space of the print. Referring back to my thoughts on Doane,[162] the blank whiteness of the gypsum acts a portal for the viewer to project their

[161] Batchen, *Emanations*, 13.
[162] See Doane's contemplations on medium materiality and the artist's skill to maximise the constraints and limitations of the materials used in making art in this volume, section 3.10 'Skewing the Index', 67.

individual imagining, to touch things from the past. As Doane reminds us "the index is never enough; it stops short of meaning, presenting only its rubric or possibility, and for that reason it is eminently exploitable - as is the fantasy of immateriality, the dream of the perfect archive, of digital media."[163] Through unruly acts I disrupt what we understand as implicit to photography, the pictorial framework: conventions of the shape, size and perspectival dimensions of the print, the visually abstract results give license to imagine. The imaginal is strengthened by sustaining the indexical, although altered, we have the double perspective of imprints of this world (maker and object).

[163] Doane, "The Indexical and the Concept of Medium Specificity," 148.

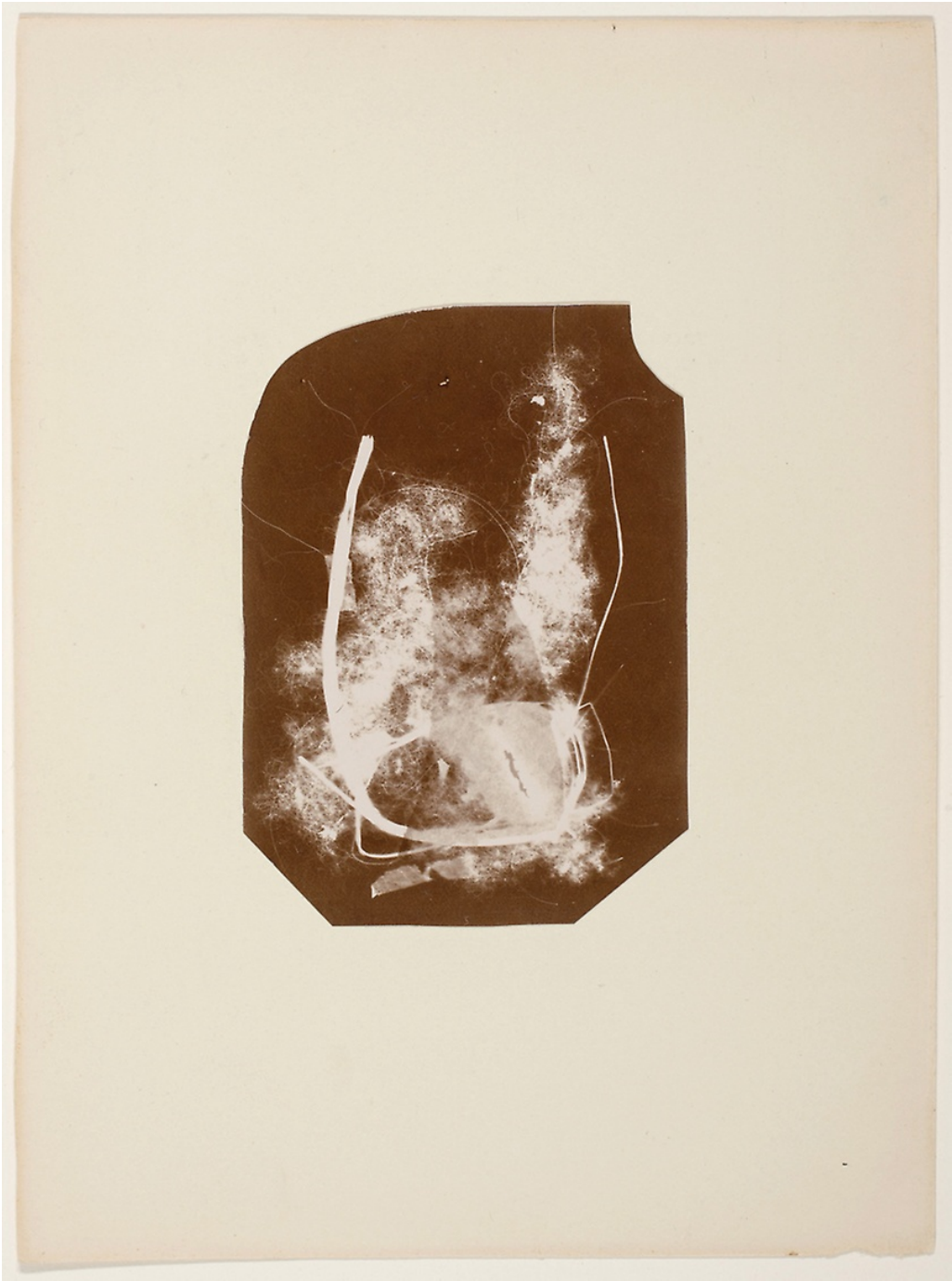

Figure 65. Christian Schad, *Schadograph No. 11*, 1918. Gelatine silver print on light-sensitive paper.

5.8 Photographic Seeing

During the early twentieth century modernist painter and relief sculptor Christian Schad produced abstract forms using cameraless photography made from the detritus of the everyday (fig.65). Schad challenged the established framing format of the photographic print by cutting into the resulting prints to create unconventional shapes and forms. Like Breuer and Wilson one hundred years later, the cutting and 'bruising' of the photographic surface

is understood as a radical and subversive act. Studying the Schadographs, the conventional rectangular format is disregarded through his cut-out technique, the abstract shapes within the image appear to project out as if a stereograph, mirroring my resolved to push the boundaries of and expand cameraless photography through this practice-research.

Photosculptural (2020) harnesses the philosophy, principles and history of cameraless photography through interdisciplinary practice. As the name of the work suggests this expansion crosses photography into sculptural form, but its 'photographicness' anchors it to the medium of photography. The abstract and haptic qualities of this work act as a golden thread, drawing from alternative approaches to picture-making by the proto-photographers. The work offers a new photographic seeing.

5.9 Conclusion

Reflecting on *LightSensitive* (2020) and *Photosculptural* (2020), I have questioned the scale and delicacy of the work which led to my decision to display the prints on tabletops rather than mounted on the wall. The scale and materiality of the work and the impetus to encourage delicate handling married well with my study of the early photography of Dodgson, Fox Talbot and the proto-photographers. Studying nineteenth century cameraless photography I better understood my relationship to capturing a sensation of landscape and my position within photographic practice. As a specimen collector, `I gathered small contemplative experiences of 'being' in the landscape. *Neither Here nor There* (2017-2020) **Volume Two, Section 3, pp. 25-56** is less about the awe-inspiring power of nature, and more about the sublime experience of taking mundane walks.

Creating *LightSensitive* (2020) **Volume Two, Section 3, pp. 35-47,** led to an interrogation of photography beyond the conventional photographic print. To fully expand and challenge the dimensional dynamic of the photographic print, I moved into 2.5-D and then 3-D printed images.

The series *Photosculptural* (2020) **Volume Two, Section 3, pp. 48-56**, brought this research to a conclusion, again by stepping back into the history of photography. The

practice-research produced during this period expand the photogram print and challenge notions of the dimensional and material qualities of photography.

These final reflections on the methodologies of proto and earlier photography bring forth new artefacts that expound how cameraless images when interrogated through digital form can shape new ways of representing landscape. I realised the importance of the *unknowingness* of the amateur photographer, informing my practice-research, encouraging new concepts to present alternative representations of place.

To conclude this chapter, *Methodology Sketch 4 Latency: The Almost of Intangibility and Transparency* investigates the latent image in digital form, to expand the capabilities of 3-D printing in this practice-research. A multi-sensory engagement with print is interrogated through the material and dimensional, exploiting the sensuality and tacit potential imparted through hybrid practices.

Chapter Six brings this research to completion, reflecting on each stage of practice-research and the resulting series of artefacts produced, documented in Volume 2 of this thesis. Drawing from the research questions foundational to this PhD to expound the building blocks towards new knowledge. Final deliberation on the photographic referent, the space of making and medium materiality, examined through hybrid methodologies to establish new ways to represent the sensation of the simple act of walking landscape.

PLATE NINE

Methodology Sketch 4

Latency: The Almost of Intangibility and Transparency

This Methodology Sketch examines the final practice-research of this PhD by project through the works *LightSensitive* (2020) and *Photosculptural* (2020).

One of the key claims of this research: the potential for indexical transformation through the advances of digital technology in its varying material conditions, runs through the core of this thesis. Kramer's understanding of the "Indexical Bracket" as discussed in Sketch 1[164] drew me to develop methods to blend the physical (analogue) with the virtual (digital). Instead of Kramer's indexical bracket, the artworks produced are testimony to a process of technological layering, capturing a double referent of things of and in the world, merged with the imprint of the image-maker. The environment of the analogue photography darkroom invokes a blending of memory-time of the maker at work with real time.[165]

Through photography my ambition has been to summarise a collection of experiences through hybrid printing, challenging Baudrillard's claim that the introduction of the virtual through digital photography has eradicated the referent. Baudrillard's hypothesis that the latent stage of analogue photography creates a closer representation of the world we inhabit, surmising that with the instantaneity of digital the referent collapses. My methodologies have progressively drawn from the principles of the latent image and the contribution of this practice-research to new knowledge demonstrates the capability to transfer latency inherent in analogue photographic processes to digital, through the development of subversive 3-D scanning techniques, expanding the capabilities of 3-D print.

[164] See Kramer's discussion of indexical technological transformation in the works of Thomas Ruff in this volume, section 'Sketch 1: Glass and Paper', 42.
[165] See this volume, section 'Sketch 2: An Expedition', 75-76.

Figure 66. W H Fox Talbot, *Portrait of Constance Talbot*, ca. 1840.

I am drawn to the latent stage of the photographic process – a stage of 'becoming'. In Talbot's early calotypes process, as in the early portrait of his wife Constance (fig. 66), one is aware of the materiality of the paper grain. As the shadow-image of Constance impregnate the fibres of the paper, she haunts the image and is *locked in* through her semi-transparent appearance. What is produced is a representation of *almost* presence, through the potency of the white space of the exposed paper.

The delicacy of light, and the particularities of whiteness has informed much of this practice-research. *Yearning for the Peaty Gleys*: *Between agricultural and ceremonial* (2017-18) (fig.67) **Volume Two, Appendix: Experimental Works, pp. 62-64,** evolved from the early untitled experiments using camera apparatus as discussed in Chapter Four. Open aperture, random exposure time and body movement, result in a bleaching out of the images. Revisiting this series whilst reflecting on Baudrillard's commentary on the betweeness of analogue, from object capture to image, the enigma of the temporal qualities of an image 'becoming' led to the resolution of *LightSensitive* (2020) and *Photosculptural* (2020).

Figure 67. Jacqueline Butler, *Yearning for the Peaty Gleys: between agricultural and ceremonial*, 2017–18. © Jacqueline Butler.

My experiments with two methods of carbon printing discussed in Chapter Four, alongside printmaking experiments to create embossed images informed the final process. Looking at both the embossed prints and *Yearning for the Peaty Gleys* (2017–18), **Volume Two, Appendix: Experimental Works, pp. 62–64, 78,** the delicacy of each image trace back to proto-photography and early processes such as the calotype. The delicate blankness evokes the experience of the solitude of my walks.

This drew me to develop 3-D prints bereft of colour. Without hue, one must look intently into the image, each image's blankness encourages a desire to touch. In *LightSensitive* (2020) the image does not present itself, it is elusive, to see the image one has to experience the print from multiple viewpoints, replicating the process of viewing a daguerreotype. This reminds me of my experience of viewing the original plate of *View from Le Gras* (ca.1826). Displayed within a specially constructed viewing booth at the Harry Ransom Center in Austin, Texas (fig.68), one must move around the booth to view the image. Displayed behind a glass screen, the desired handling is denied, and one must 'visually' agitate the plate, coaxing image-reveal through body connectivity.

Figure 68. Joseph Nicéphore Niépce. The original plate of *View from Le Gras* displayed in a special, oxygen-free case at the Harry Ransom Center, University of Texas, Austin.

LightSensitive (2020) is made using gypsum powder. Once printed, part of the curing process for these prints includes immersion in an adhesive substance to ensure that the print will not fall apart. The process dulls the white gypsum creating a grey appearance and removes the sensual earthy chalkiness of the surface. I felt this was comparable to fixing an image through chemical photographic process and decided to remove this final stage from the process. The *LightSensitive* (2020) prints are therefore unstable, vulnerable to handling, and in danger of image disappearance. This method brings one full circle, back to the proto-photography of Wedgewood and Davy.


Figure 69 & 70. Jacqueline Butler. 3-D print after clear resin curing process by UV laser, scaffolding still intact
2020. © Jacqueline Butler.

The final practice-research, *Photosculptural* (2020), presents a challenge to the dimensional perimeters of the print. Using the same files that had created *LightSensitive* (2020), I approached the research aligning to stereoscopic process. In *Photosculptural* (2020), Volume Two, Section 3, pp. 48-56, the subject of the print emerges surrounded by the detritus of the 3-D print process - the resin scaffold. In 3-D printing a scaffold is built to support the image/object during the printing process, preventing it from collapse (fig.69 & 70). The scaffold is normally discarded by cutting it away or dissolving the material after printing is complete. In *Photosculptural* (2020) I chose to marry process with subject/object, presenting a print that reveals a combination of the subject/object with the imprint of the artist/maker and software programming. This brings a collaboration between human and machine as maker together, enhancing the double index.

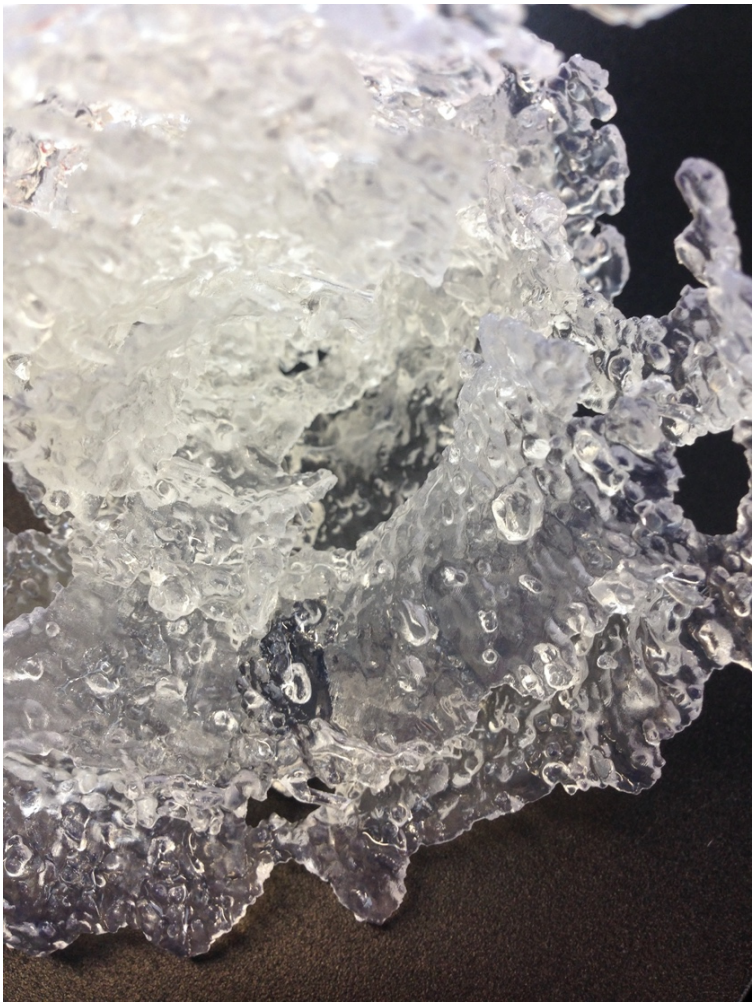

Figure 71. Jacqueline Butler. Detail of *Photosculptural,* test print using clear resin 2020. © Jacqueline Butler.

The decision to use the transparent resin material in these prints (fig.71) continues from earlier thoughts on the latent image and the process of images *becoming*. Through its transparency, the viewer is denied direct connection with the subject, instead one tentatively views its outline, partially trapped within the scaffold structure **Volume Two, Sections 3, pp, 49–55**. As with the impression of Constance in the paper print, the subject is entangled and embedded into the material process of its making.

Through the sensuality of the materials and the dimensional qualities of the print, *LightSensitive* (2020) and *Photosculptural* (2020), provoke the tacit potential of the photographic print. Each print is palpably desirable, yet through the nature of their material construction they are unattainable. At the same time as being drawn in, one is forced back, as with the stereoscopic image, we are trapped within the illusive space between object and image, a material illusion between representation of this world and an imaginal other.

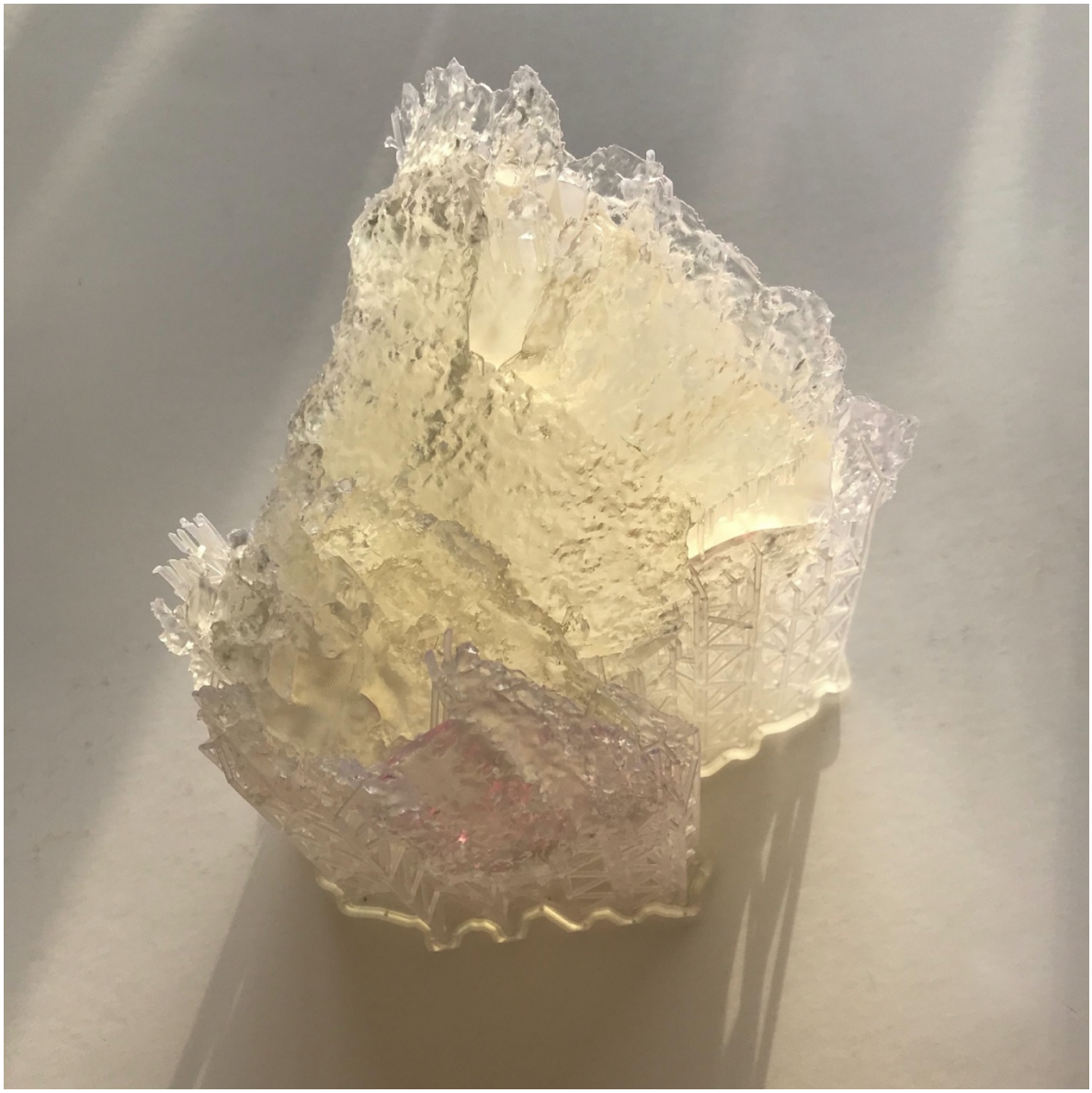

PLATE TEN

Chapter Six
Conclusion

The Photograph as Haptic and Virtual Object
An Emerging Visceral View

> We have taught machines (computers) to produce hallucinations – that we can lay bare the impulses of their submerged imaginative potential and bring to light their "technological unconscious," and that irrationalism and delirium can be induced where it once seemed that only logic and computation had a place[166]

6.1 Introduction

Throughout this research project, the practice element of study has led my thought process igniting a range of pathways to explore processes of visualising landscape through technological convergence. Set against progressive shifts in my methodology, the concluding results of the research expand and establish a new practical and philosophical understanding of hybrid printing. This has been informed by my obsession with and passion for the pre-history and histories of photography, a deepening curiosity in emerging digital technology, an untangling and re-imagining of the referent in relation to hybrid imaging, and a desire to demonstrate the vitality and energy produced by the synergy between old and new technologies presented in the resulting artefacts documented in Volume Two.

I have interrogated the photographic referent through the materiality of medium specificity and concepts of representation of landscape, examining a key research question of this PhD: How can the imprint of the maker reposition photography's connectivity to the referent?

To reposition photography's connectivity to the referent, a consideration of the imprint of the maker, has led to acts to subvert and blend technologies leading to a hybrid practice. As I walked the landscapes of Dundee, I modified my use of the digital camera apparatus.

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[166] Joan Fontcuberta and Geoffrey Batchen, *Joan Fontcuberta: Landscapes without Memory* (New York, Ny: Aperture, 2005), 6.

New disruptive methodologies were established to reposition the illusory qualities of photography through my practice-research, such as the lost tracking techniques developed using 3-D hand scanners to develop *Neither Here nor There* (2017-2020) **Volume Two, Section 3, pp.25-56**. Shifting from a desire to present a recognisable representation of landscape, I moved towards the abstract. Abstraction presents an opening to speculate on the *somewhere* of our imagining and is a provocation to embrace alternative ways of seeing the everyday. Making visible the hand of the maker exposes new narratives from the history of the photograph, enhancing an awareness of the *thingness* of photographs, consequently raising the potential for a double index to come into play. As Bernd Bernhard writes "A photograph is thus seen to carry a dual indexical relationship to the event it depicts, as a physical trace of a past event *and* as a performative gesture pointing towards it in a continuously re-affirmed present."[167] This duality is extended by the doubling or blending of technologies. The practice-research realised through this PhD study demonstrates a heightening of the potency of the hybrid, bringing new conditions to the photographic print that present new approaches to creating evocations of an experience of landscape, intensifying awareness of the haptic qualities of the print.

6.2 Maker's Space

Given the opportunity to present new knowledge through this project, Volume One of the thesis was written from the artist's perspective. Thoughts on the ineffable - the unknowable, the immaterial, the irreal, and the auratic, haunt this text. Progressively impacting the methodology of the practice-research, proactive disruptive behaviour advanced new creative pathways through *losing track.*

Disclosing the holistic behaviour as artist-researcher, by entwining theoretical and historical iterations within contemporary cultural debates, the narrative of my intuitive drive as a maker bestows on the reader what I describe as an uncut version, uncovering impulsive acts and imaginative sensibility.

[167] Bernd Behr, Photographic Indexicality: Once more, with feeling. Philosophy of Photography, Vol. 7 nos.1&2, 6.

The place of making, integral to this study, began with an examination of working in the physical archive-room. Evaluating the ambiance and particularities of this space, I came to realise that it was "a kind of Wonderland to me"[168]. The significance of an artist's studio in all its variations stimulated my thoughts, shifting from archive-room to photography darkrooms, I was ever conscious of being responsive to these spaces. This gave way to intuitive actions and an extensive immersion in process, the final results were becoming less fixed in my mind, and more speculative, I lived in the moment of making. This cleared the way to engage with and be responsive to the multi-sensory experience of making, leading to improvisational acts when working with digital technology. The incentive to instil bodily connectivity to place in my practice-research transferred to other places; physically in the landscape and in the printmaking studio. It also activated new approaches to employ digital technology. The embodied experience of place took hold, and the haptic potential of the photographic print was advanced through new approaches to blending of technologies.

6.3 Wonderland

Glass Landscapes (2014-15) **Volume Two Section 1, pp.3-9**, discussed in Chapter Two, was produced by direct interaction with photographic negatives made by Charles Dodgson. Having a rare opportunity to handle the historic material from Dodgson's oeuvre introduced me to thinking about the history of photography differently. Scrutinising this historic material so closely created a fortuitous experience of seeing and touching, greatly affecting my interpretations of the source material. Rather than examining the subject matter in his photographs, I began to develop a deeper interest in the photographic surface and the medium's technical processes, particularly the chemical materials of the negative or print. Unpicking Dodgson's methods of making inspired me to make visible the unseen, referent to marks left by Dodgson as he prepared his negatives. The sensory experience of touch brought to life new thoughts on the history of photography's beginnings informing the progressive research. Reflections on the earliest visualisations of photographic time by Niépce and Daguerre, along with contemplations on the haptic qualities of cameraless photography were inspirational and are laced throughout this volume of text.

[168] See this volume, 2.4 Wonderland of the Archive, 26.

From a drive to make images that alluded to representations of reality, my focus shifted to interpreting an experience of being in landscape presented through abstract form. This shift to abstraction sustained throughout the later works in this research, is evidenced in Volume Two. Influenced by Lyle Rexer's reflections on abstract photography and Geoffrey Batchen's writing on cameraless techniques advanced my understanding of how the material qualities of photography can introduce a new way of looking and thinking about the world that it reflects. Joan Fontcuberta's approach "Photographing ideas" released my thinking informing the progressive research.

6.4 Horizonflux

Chapter Three explored the phenomena of light in nature and photography. Through a study of *An Expedition* (2015-17) **Volume Two, Section 2, pp.10-24**, a search for place through the photographic act began to unfold by focusing on the impact light has on the material surface of the photograph (and negative). Responding to the Andrée Expedition Photography Collection through a study of August Strindberg's cameraless photography and his hypothesise on the role of chance in the creative act, I began making connections between the materials of the medium and the sense of a body being in and passing through landscape. Through a phenomenological lens, the materiality of the surface of photographs acts as metaphor for the body of the maker. Marco Breuer's photographs described by Batchen as "surrogate bodies"[169] like the Andrée negatives, the damaged condition akin to flesh ripped open, heightens the visibility of core material values of the photograph in all its rawness. This interest in the degradation of the surface of the photograph led me to consider the limitations and flaws of the medium. Studying the out of focus and the *fuzziness* of photographs, the loss of detail invoked an additional interior visual engagement. The abrasive behaviour of Breuer and the use of the out of focus by photographer Uta Barth, rupture the surface of the photograph, raising awareness of its objecthood. Earlier in photographic history, stereoscopic photography attempted to challenge the dimensional qualities of the medium. One becomes conscious of the virtual slicing apart of eye from body as consequence of an acute awareness of the mechanical device. Awareness of the mechanics of stereoscopic photography disrupts the visual illusion of the photograph. As a

[169] Batchen, *Emanations,* 46.

result, the space for the viewer to bring something of their own experience (and imagination) to complete the picture is lost.

I have come to realise that what I strive for is an endlessness, for my practice-research to never complete the circle. My ambitions are to create a loop of representations of a lived experience between landscape we recognise and imaginal place, arousing in the viewer a forever looking. The practice-research documented in Volume Two produces something lying between the subject and the process, through technological convergence between analogue and digital. The resulting artefacts present a strangeness that points towards something almost recognisable, 'twisted'. Through the technological collision I elicit, they become changed. These 'things' that materialise are new indices of betweenness, making visible the hand of the maker by hybrid practice, extending the visual and conceptual possibilities of evocations of landscape, through the new photographic methodologies developed.

Making the later works of *An Expedition: Horizonflux* (2016) **Volume Two, Section 2 pp.10-15,** I began to interrogate the second key question of the research project: How can the synthesis between analogue photography and digital image capture extend the visual and conceptual possibilities of evocations of landscape, both real and imagined?

Drawing from my studies into the dimensional and object qualities of the photograph, I began to experiment with moving stills. Made by merging cameraless darkroom experiments with 3-D digital software the haptic qualities of the virtual space came to the fore. I decided to make projections, to produce the effect of a *reaching out* at the same time as a *drawing in,* heightening in the viewer the unattainability of the object (similar to the experience of viewing a stereograph). One becomes immersed in an endless desire to touch the image projected, always denied and just out of reach. The luminosity envelops the viewer, touched by the phenomena of light. *Horizonflux* (2016) brought *An Expedition* (2015-18) to a successful conclusion. The hybrid form married technologies, histories and the temporal qualities of the medium. Although alluding to touch its focus was on the unreachable and unobtainable. As the practice-research developed my methods expanded across a range of

discipline, writing, performing artist talks and presenting academic papers at conferences influenced and expanded how I worked with images and understood the potency of stillness.

6.5 Phantoms

Out of the bodies of practice-research created throughout the PhD the most substantive and conclusive work was *Neither Here nor There* (2017-2020) **Volume Two, Section 3, *p*p.25-56,** presenting the greatest challenges, it also drew the final resolution to many concerns of this research.

Initially taken out of my comfort zone, moving from the private confines of archive room and darkroom to studio environments that were more public: DCA Printmaking Studio, and expansive: the surrounding landscape of Dundee and Angus. I was not only introduced to new environments but also unfamiliar processes, learning a range of traditional and digital printmaking techniques alongside 3-D digital scanning. As a result, two chapters have been apportioned to this final period of study.

Chapter Four introduced the first stages of the development of *Neither Here nor There* (2017-2020), outlining the context of the residency at DCA and focussing on walks in landscape to develop the work *Little Phantoms* (2019) **Volume Two, Sections 3, pp. 25-34.** Continuing from my findings in Chapter Three, the tacit nature and dimensional potential of the photographic print were further explored in Chapter Four through the experiences of stepping directly into the landscape for the first time and being introduced to the physical labours of the Printmaker's Studio. Both opportunities created a fuller understanding of the multi-sensory experience of *making* and *being*. Continuing my interests in creating abstract images, I was resolute to further suspend the illusion of the image by revealing the limitations of the medium. This was underpinned by my fascination for "the magical charm"[170] of the indexical.

[170] Bernd Behr, "Photographic Indexicality", 4.

Through a study of Alison Rossiter's exposed paper landscapes[171] and *Pools* (2010-2017) and *Pours* 2009-2010), denoting gestural acts referential to painting. Rossiter grounds the work in her philosophy of the essence of making photographs - the processes of darkroom printing. Both the haptic and objecthood of photography were explored through the work of Letha Wilson. This introduced concepts of what I described as *image print*, to challenge the print's dimensional qualities, whether flat (2-D), relief (2.5-D), or sculptural (3-D). Through walks in landscape I was determined to interpret an embodied experience of place. Initially producing etchings, I moved to 3-D scanning. This gave me ample opportunity to exploit the inadequacies and flaws of the technology. During this period the writing of humanist geographer John Wylie and Jonathan Crary's reflections on the history of optics supported ideas to expand notions of representing landscape. The anthropologist Tim Ingold's theory likening place to a knot tied by threads gave my final works a focus. I approached my *botanical* collecting with a discerning eye, and *Little Phantoms* brought new ways to generate images. This built on Fontcuberta's philosophy when working with 3-D landscape simulation programme *VistaPro:*

> I have tricked the computer program into performing transformations not envisaged in its design. In other words, it has been *forced* into a "transvestism" of signs that ask to be understood and are likely to be read as illuminating gestures of subversion.[172]

Through these acts I believe there is a fleshing out of technology and an unpeeling of image, revealing the intense power of medium materiality.

6.6 The Potency of Invisible Histories

Chapter Five concentrated on the final series: *LightSensitive* (2020) **Volume Two, Section 3, pp.35-47** and *Photosculptural* (2020) **Volume Two, Section 3, pp.48-56**. Each conceived and realised through final reflections on the histories of photography, concluding my understanding of the index in relation to my hybrid practice. Evocations of landscape

[171] Resonating with this PhDs foundational practice-research, *Glass Landscapes* (2014-15).
[172] Fontcuberta, *Joan Foncuberta: Landscape Without Memory*, 6.

were accomplished through a greater understanding of the unique qualities of photographic visualisation of place and time.

Producing the final practice-research by returning to photography history, the study of proto and early photography released me from the restrictions of photographic representational conventions. My work has become firmly positioned within the field of cameraless photography in both subject matter and method. Creating hybrid artefacts through new interdisciplinary methods and new technology.

By evaluating the lost works of the proto photographers and the significance of the latent image in my working methods, I placed greater value on the pioneering work of the amateur and the unknown makers. Following these pathways, I developed new methods (and subversive acts) to visualise an experiential view. This helped me understand the potential for new photographic seeing and refine my methodology to produce *LightSensitive* (2020) and *Photosculptural* (2020).

The Methodology Sketches conclude each chapter, acting as the golden thread between Volume One and Two of this thesis. Each sketch details the subtle nuances of an artist-researcher at work.

6.7 Conclusion

This research investigated hybrid interdisciplinary practise, progressing to original methodologies that expand the possibilities of photographic print. The objective of this research was to create a new understanding of the photograph's objecthood by evaluating the shift from photographic negative to digital file and querying the dimensional quality of the photographic print in all its facets. This revealed the impact materiality has on photography's association with printed matter. As the research progressed my methodology steadily shifted and altered. I have used photographic camera apparatus, digital scanner, and a variety of cameraless techniques. My studio space shifted from the interiors of museum archive rooms and photography darkroom, to the printmaking studio and the exterior landscape. Each space has had a profound impact on both my thinking and

making, and in turn led to new methodologies to practice-research as contribution to the field of fine art interdisciplinary practice.

Ingold's philosophy on the bodily experience of place connected my reflections on walks taken into and through landscape. In later practice-research I strove to capture the sensation of embodiment through multi-sensory engagement with the artefact. By collecting the detritus of landscape, these specimens map pathways of movement and embodiment, mindful of Ingold's knots of place and threads of pathways experienced. This method proved to be inexhaustive and drew the resulting works towards earlier experiences of developing practice-research through the interrogation of archives and institutional collections.

As the pictorial form of my images became more abstract, thoughts on the indexical and the referent consolidated my thinking. The disruption of out of focus and fuzziness in photography offered something beyond pictorial representation, leading to repeated contemplations on abstraction to determine alternatives to representing landscape. As a recognisable representation of the real world retreated, the artist's process became more apparent, placing emphasis to exploit the trace of the presence of artist in the process of making. Contemplating medium specificity, Doane's conclusion that the indexical offers a myriad of possibilities aptly reflect the philosophy that drives this practice-research.

Interrogating printmaking process led to evaluating the photograph through a printmaking context: the tactic in relation to the labours of the artist, realised through the later practice-research experimentation **Volume Two, Appendix: Experimental Works, pp 66-69, 75-79**. Peltz-Montada's writing on contemporary print encouraged me to embrace interdisciplinary methodologies to emphasise the sensational qualities of print. My desire became to encourage the viewer to be receptive to an immersive experience with the artefact through multisensory engagement. Initially investigated through the animated projection of *Horizonflux* (2016) **Volume Two, Section 2, p.14,** leading to final resolution through *LightSensitive* (2020) and *Photosculptural* (2020) **Volume Two, Section 3, pp.36-56.**

Journeying to explore the sensual qualities of the surface of print in all its variations released me from preconceptions of what a photograph is meant to be. This led me to investigate print beyond paper-material, to challenge 2-D dimensional form, by applying stereoscopic discourse to printmaking and 3-D scan methodologies. Working against the conventions of image capture technologies and challenging the material qualities of the photograph, led to subversion of the mechanism of camera apparatus and 3-D image scanners. An intent to *lose track* through technological failings impacted the practice-research. The loss of image through scan-tracking failure and image blankness created space for imaginings to unfold both for maker and viewer.

There is significance to the *quietness* of my methods to rupture the surface of the photograph and present its *unknowingness*. Rather than interrupt the surface of the photograph through direct physical abrasive acts, I introduced methods using folded shadows to gently reveal the sensuality of the imaginal. Researching the potency of the latent image through the object/subject *becoming* was resolved through *LightSensitive* (2020) and *Photosculptural* (2020). Using a range of technologies, my resistance to Baudrillard's theory on the disappearance of the photographic *blank* post-analogue materialised through digital subversive play.

This research proposes new concepts and approaches to expand fine art photographic practice through:

Presenting an experience of *being* by exploiting the limitations of media materiality and the synergy between the haptic and dimensional qualities of print.

Challenging the constraints of conventional photographic print to liberate the maker to enunciate experiences of place through print.

Exploiting these ideas and approaches new methodologies have surfaced to expand the medium's materiality. Contributing to the field of fine art, this research brings new philosophy of the latent image in digital form. The photographic referent is determined through the lens of the history of photography and hybrid practice that merges analogue photography with advancing digital technology. By transferring the potency of analogue principles to digital practice the indexical is transformed.

The methods generated through this research project have flattened and inflated, expanded, and collapsed the photographic image, inevitably leading to the production of original new artefacts. This criss-cross behaviour present traces of experiencing landscape. The ephemeral actions of making fused with the subject/object presented (detritus of landscape), splits open approaches to landscape photography, and through new methodologies make visible the unseen manifest imaginal space.

My reflections begin and end with Wonderland.

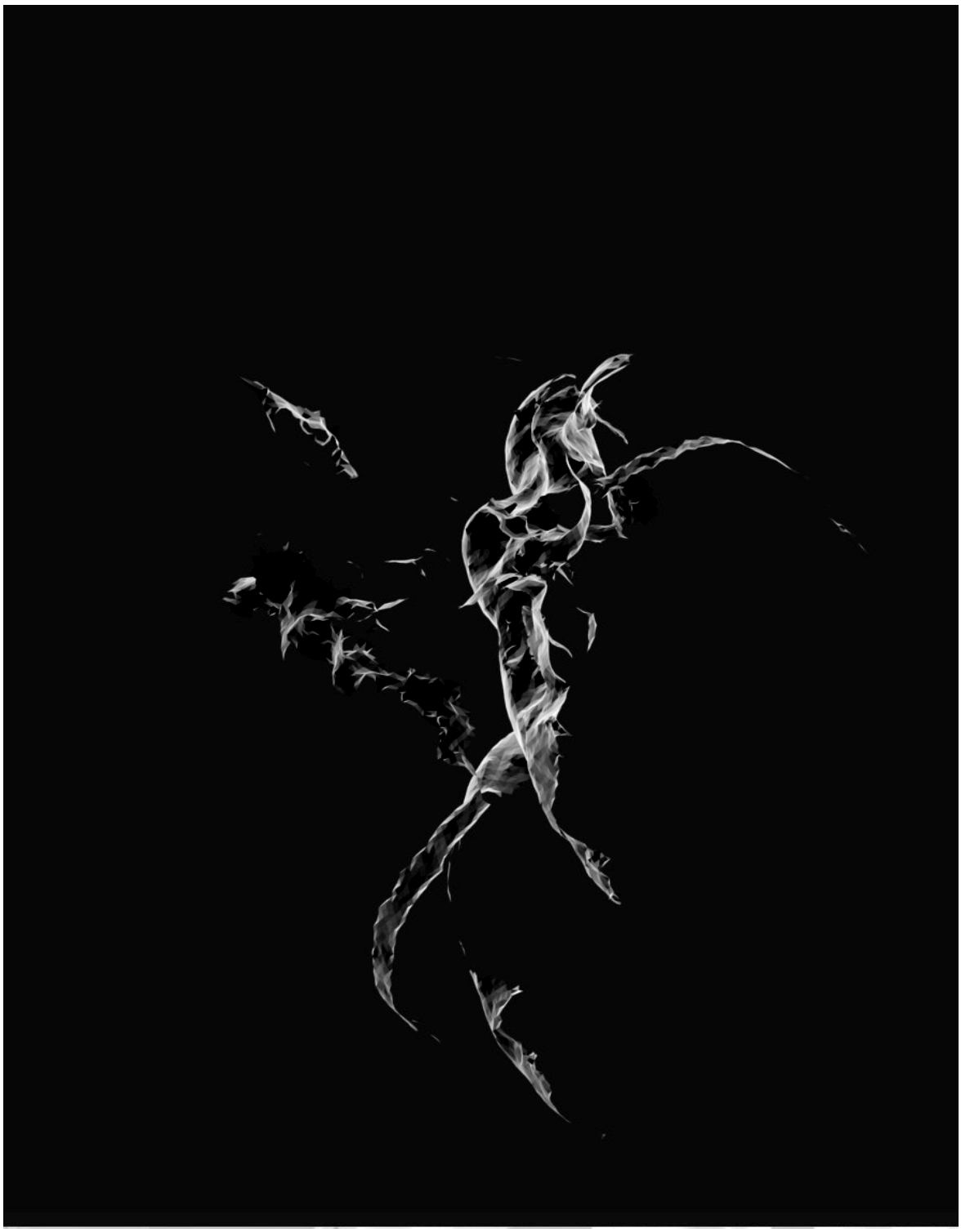

PLATE ELEVEN

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Appendix I
Research Dissemination

Figure 72. Impact10: Encuentro, International Multidisciplinary Printmaking Conference, Santander, Spain, 2017.

The process of exhibiting and delivering presentations at conferences and symposium has contributed to the development and regular dissemination of this research project. Below is a list of outputs of the developing PhD research Project from 2014–2020

Publication

2020 PhotographyDigitalPainting: Expanding Medium Interconnectivity in Contemporary Visual Art Practices, Cambridge Scholars Publishing
Contributed Chapter: The Success of Technological Failure
https://www.cambridgescholars.com/paintingdigitalphotography

2018 Northern Light: Landscape, Photography and the North. Robinson, A (Ed) Sheffield Hallam University
Contribution: Horizon Flux
https://shura.shu.ac.uk/21311/1/robinson_nl_book.pdf

2018 Archivo: Photography and Visual Studies (online publication)
https://www.archivoplatform.com/post/portfolio-jacquelinebutler

Conference and Symposium Presentations

2020 International Symposium: Mirror, Mirror: Perceptions, Deceptions and Reflections in Time
Paper: View through a solid looking glass, softened and dissolved
https://mirror.lcir.co.uk/

2020 International Conference: *Illuminations: Perspectives on the Way of* Light. London Centre for Interdisciplinary Research, Birkbeck University of London
Paper: Horizons of Kvitøya
https://illumination.lcir.co.uk/

2019 Symposium: *PhotographyDigitalPainting*, University of Derby
Paper: Of light and algorithm
https://carlrobinson2958.wixsite.com/photodigitalpainting/jaqueline-butler
https://formatfestival.com/whats-on/photography-digital-painting/

Guest Speaker: *Artists in Print, DCA20*. Part of Dundee Contemporary Arts 20th Birthday Festivities, Funded by Creative Scotland
https://www.dca.org.uk/whats-on/event/artists-in-print
https://familytiesnetwork.wordpress.com/2019/03/26/dca-20th-anniversary-artists-in-print/

Conference: *Impact10: Encuentro,* International Multidisciplinary Printmaking Conference,
Santander, Spain
Paper: The Chaos Printers: Intuitive behaviour in the print studio (joint paper with Annis Fitzhugh, Director of Fine Print Studio, DCA. (fig.72)
https://www.impact10.es/
https://www.impact10.es/ensayos-papers/panel-16/
https://www.dca.org.uk/stories/article/a-z-print-studio-k-is-for-knowledge

2018 Conference: *Northern Light: Critical Approaches to Proximity and Distance in Northern Landscape Photography*, Sheffield Hallam University.
Film Screening: White Island: Without Shadow
https://www4.shu.ac.uk/sia/events/event-listing.html?event=296

2017 Conference: *Eighth International Conference on the Image 2017*. San Serva University, Venice, Italy.
Paper: Neither Here nor There
https://ontheimage.com/about/history/2017-conference

Symposium: *Imagination: Diverse Approaches & Perspectives,* Leeds Becketts University.
Paper: To See the View I Close my Eyes.

2016 Conference: *Northern Light: Photography and Evocation of the North*, Sheffield Hallam University

Paper: Horizon flux on white Island
https://www4.shu.ac.uk/sia/events/event-listing.html?event=200

Conference: Helsinki *Photomedia: Photographic Agencies and Materialities.* The 3rd International Photography Research Conference, Aalto University, Helsinki, Finland.
Paper: The Solidness of the Fleeting and Momentary
http://2018.helsinkiphotomedia.aalto.fi/ocs/index.php/hpm/hpm2016
http://2018.helsinkiphotomedia.aalto.fi/ocs/index.php/hpm/hpm2016/paper/view/360

2015 International Conference: *Material Culture in Action: Practices of Making, Collection and re-enacting art and design.* (Panel 6c: Photographic Objects and Processes) Glasgow School of Art, Glasgow
Paper: As in a Dream, she is Palpable
http://radar.gsa.ac.uk/4462/2/programme-definitive-version1.pdf

Conference: Rethinking Photography, University of Lincoln, Lincoln
Paper: On White Island Kvitøya: Shadow play
http://www.rethinkingphotography.com/

Conference: 21st Century Photography: Art, Philosophy, Technique. Central St Martins, UAL, London
Paper: On White Island Kvitøya: The Horizon Flux
https://photoconference2015.files.wordpress.com/2015/04/conferenceprogramme-24.pdf

2014 Interdisciplinary Symposium: All About Imaging: Transactions, University of Westminster
Paper: The Photograph as Haptic and Virtual Object
https://www.westminster.ac.uk/events/all-about-imaging-transactions

Conference: Photomedia 2014, Helsinki Finland.
Paper: Narratives from the Archive
https://aaltodoc.aalto.fi/handle/123456789/18198

Exhibitions

2019 Falling Water - Water Falling. Video Installation, Bury Museum and Art Gallery.
https://www.artrabbit.com/events/falling-water

2018 Time and Movement of the Image. Centro de Artes das Caldas da Rainha, Portugal
https://timesmovementsimage.weebly.com/exhibition.html

Northern Light: proximity and Distance, Yorkshire Arts Space, Sheffield
http://www.northernlight.photos/
http://www.northernlight.photos/2018-artists

The Great Convergence: Natural and Artificial Intelligence, Media Arts Festival, Sala Extra MAXXI, Rome
https://www.mediaartfestival.org/en/

2016 Obsolete and Discontinued Exhibition, Revela-T Festival 2016, Barcelona, Spain and Schaelpic Gallery in Cologne.
https://obsolete-discontinued.com/exhibitions-of-obsolete-and-discontinued/
https://obsolete-discontinued.com/obsolete-item/jacqueline-butler/

Whereabouts you are? Exhibition, Reid Gallery, Glasgow School of Art
http://www.gsa.ac.uk/life/gsa-events/events/%E2%80%98/%E2%80%98whereabouts-you-are%E2%80%99/
http://eprints.hud.ac.uk/id/eprint/30876/2/Whereabouts_you_are-info_sheet%26photos.pdf
https://pure.hud.ac.uk/en/publications/imperceptibly

Northern Light: Contemporary Landscape Photography. Sheffield Institute of Arts (SIA)
Gallery, Sheffield
http://www.northernlight.photos/lightbox

2015 Media Materiality: Towards Critical Economies of 'New Media' Pop-Up Exhibition, Asterisk Gallery, San Francisco, USA

JHB Archive 23/1961 or 28/1961, Commissioned work, BOM (Birmingham Open Media)
https://www.bom.org.uk/event/preview-the-jhb-archive/

Lux Shifter, Actinic Alternative Photography Festival, Summerhall, Edinburgh
https://www.summerhall.co.uk/visual-arts/lux-shifter/

SFG Photo Open Exhibitors, Six Foot Gallery, Glasgow. As part of the Scottish Season of Photography 2015

How we quit the forest. Incubarte7 international Art Festival, Sala Lametro, Valencia, Spain

Residency

2017 Print Studio Residency at Dundee Contemporary Arts Centre (DCA), Dundee, Scotland
https://www.dca.org.uk/stories/article/print-studio-residency-a-qa-with-jacqueline-butler

Appendix II
Publishing Permission

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