

Both without and within: Cave Exploration as a Guide to Knowledge Making

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Submitted in accordance with the requirements for the degree of PhD,

University of London, 2021

Declaration of Authorship

I, Flora Parrott, hereby declare that this thesis and the work presented in it is entirely my own. Where I have consulted the work of others, this is always clearly stated.

Signed: ___Flora Parrott_____

Date: _____24th April 2021_____

Table of Contents

Declaration.....	2
Acknowledgements.....	5
Abstract.....	7
Index: Entrance Chamber	9
Introduction.....	11
-Practicing and writing caves.....	15
-Encountering caves; thesis themes.....	22
-An invitation.....	26
Index Page.....	28
Literature and Exhibition Review.....	29
-Introduction.....	30
-Going Underground.....	31
-1A Vertical and Volumetric: On Thinking with Underground Space.....	33
-1B The Elemental.....	41
-1C Contemporary Art: Thinking with the Horizontal, Vertical and Elemental.....	42
-2 Caves.....	48
-2A Caves and Embodiment.....	49
-2B The Imaginary Cave.....	56
-2C Caves and Darkness.....	64
-2D Caves and Interdisciplinarity.....	68
-Conclusion.....	69
Methodology.....	71
-Introduction.....	72
-1 Studio.....	78
-2 Fieldwork.....	85
-3 Digital.....	96
-4 Research Events.....	102
-5 Structure and Writing Style.....	105
- Conclusion.....	111
Cave 1: Mer de Glace.....	114
-Introduction.....	115
-The Monstrous Mer de Glace.....	120
-Grotte de Glace; tourism and selfies in the ice cave.....	131
-Gaps in the Ice: Artistic practice and formlessness in the field.....	139
-Conclusion.....	144
Tunnel 1: Aquarium.....	147

Cave 2: Invisible Fish: The Aach Spring Cave, Konstanz, Germany.....	154
-Introduction.....	155
-Loosening the Watertight.....	158
-Value and Access.....	170
-Touch Screen.....	179
-Conclusion.....	187
Tunnel 2: Darkness Retreat.....	191
-Introduction.....	192
-Light.....	193
-Dark.....	194
Tunnel 3: Interview with Artist and Curator Una Hamilton Helle.....	205
Cave 3: Mother Shipton's Cave: Setting in Stone.....	221
-Prologue.....	222
-Introduction: Mother Shipton's dense and complicated cave.....	225
-Part 1: Mother Shipton.....	228
-1A Time in Mother Shipton's Cave.....	231
-1B Crossing the Threshold: The Mouth of the Cave.....	235
-Part 2 Paul Daniels.....	241
-2A. Magic Making Money.....	245
-2B Bounded Undergrounds: Cavers and the right to roam.....	248
-Conclusion.....	252
Conclusion.....	255
-Introduction.....	256
-Section 1.....	258
-1A Permeability.....	259
-1B Non Fixity.....	263
-1C Material Encounter.....	267
-Section 2.....	272
-2A Practice in the thesis.....	272
-2B Interdisciplinarity.....	276
-2C Open endedness.....	278
-2D A burgeoning interest in the underground.....	280
List of Figures.....	281
Bibliography.....	282
Sketch Book 1: I'm In The Bath On All Fours.....	299
Sketch Book 2: Fieldwork.....	319
Sketch Book 3: Darkness Retreat.....	333
Sketch Book 4: Research Events.....	352

Acknowledgements

Firstly thank you to the Techne AHRC Doctoral Training Partnership for funding this research. I am extremely grateful to the forward thinking Geography Department at Royal Holloway, University London, who have a long history of embracing practice based researchers. It is difficult to overstate just how much I have gained from the experience of making artwork from within the department.

I would like to thank the field guides and caving experts who have so generously given me their time and knowledge throughout this process: Ulrika Asp, Luce Choules, Joachim Kraiselmaier, Jasminca Behrmann, Frank Pearson.

During the course of the PhD, I have shown artwork at Well Projects, Eastside Projects, MIMA and Legion Projects. Working with the communities in and around these galleries has been absolutely inspiring. I would also like to thank Limbo Projects Space in Margate for their continued support.

My practice is inherently collaborative, working with Lindiwe Matshikiza, Kelly Large and Una Hamilton Helle has been endlessly inspiring, thank you for the friendship, encouragement and most of all for being wonderful artists.

My sincere thanks goes to Rachael Squire and Jo Stockham, particularly the support in the early stages of the PhD process, in which you helped me to find my confidence in a new discipline.

To my family, Jonny, Marina, Ralph, Magnus and Caspar, thank you for putting up with all of this! I hope it will take us all to some interesting places. To my parents, Miranda and Steve

for the endless encouragement.

Above all, I would like to thank my supervisor, Harriet Hawkins. Harriet's enthusiasm and extraordinary vision has been the driving force behind this project. Her passion for geography and art is utterly inspiring, I feel very lucky to call her a collaborator and friend and am so delighted to be continuing our work together as part of her project Think Deep.

Abstract

Below our feet is a complex and shifting terrain that is often overlooked; there is still surprisingly little known about the subterranean landscape within the body of the earth. You can never get to the bottom of it. This practice based research project draws on encounters with three different types of cave in order to consider how to sit with the unknown and the unresolvable: The Ice Cave on the Mer de Glace, Chamonix; Aach Spring cave network near to Konstanz; and Mother Shipton's Cave in North Yorkshire. As starkly different as these sites are, they all engaged with three key themes: Permeability; reconsidering notions of boundary within the cave. Non-fixity; the cave as a site that is resistant to definition and certainty. Material Encounter; the sensory and embodied nature of engaging with cave spaces.

This thesis is designed in a format that represents a cave system, it is built up of connected but paradoxical caves that sit within the perimeter of the diagram that you will find at the entrance. There is no specific order in which the work should be encountered, like a cave system, you can take a number of routes through the research. Within the body of research you will find three main chapters that respond to each of the cave sites, you will find three shorter texts that are intended to be 'connecting tunnels', they are vignettes capturing significant moments within the period of study: an interview with artist Una Hamilton Helle discussing her work in the context of Live Action Role Play and Choose Your Own Adventure novels, an account of 60 hours spent at a Darkness Retreat in Germany, and a story about Boston Aquarium in the USA. There are original images at the start of each of the texts that have been produced during the course of the project, these are explored further in four sketchbooks documenting the exhibitions and supporting artwork produced alongside

the writing. The act of thinking with caves and sitting with the unknown correlates with the way in which the artwork for this project has been produced; the project uses practice based research to engage with cave spaces and considers how this approach intersects with the current creative turn in geography and the emerging field of the Geohumanities. Reading this thesis is intended to evoke the act of navigating a cave; the writing inhabits the form of the subterranean network.

Index: Entrance Chamber

As well as a table of contents, this thesis uses an index diagram as a way of navigating the project. After the introduction, you will find a page with the image below on it. This diagram is an Entrance Chamber, you will see a number of white oval shapes that are called Entrance Ways. 15 of the Entrance Ways will take you to a new location in the thesis. If you let your mouse hover each of the Entrance Ways a label will appear. You can navigate the chapters in whichever order you like. Click the Entrance Chamber symbol at the end of each section to return to this index page.

Please use a screen based interactive PDF as the preferred interface.





Fig. 1. Cathedral Cave 2018, Fieldwork experiments

Introduction

This thesis is a cave system. An underground network will appear as the reader follows the words and images. It materializes in the imaginary realm and describes some of the actual subterranean spaces that sit below the surface, so often overlooked. Below our feet is a complex, shifting terrain. After only a few meters of descent, one is presented with a fundamentally different experience from the surface. Reconsidering what is the baseline of the landscape and venturing below into a natural cave system shifts understanding both physically and conceptually. Robert Macfarlane describes the seismic shift from surface to subsurface in 'Underland', he says 'I have rarely felt as far from the human realm as when only ten yards below it' (2019:11) Ideas of solidity and 'grounded-ness' soon dissipate and a caver is immersed in a world of profound darkness, deep timescapes and shifting, dripping liquid earth (Macfarlane 2019); as Hawkins puts it, the thinking with the underground is to acknowledge 'a 'terra' that was never firm' (2019:2). Sitting underground and contemplating the idea of people walking above invites thought of what is yet still to be found further below. Modes of navigation, gauges of time and space that work logically on the surface seem questionable in the subterranean. The longer one is down there, with only limited light, damp and cold, often squeezing through small spaces, the more disconnected from the concerns of the surface one becomes. The edges of reality, memory and imagination become as fluid and blurred as the liquid rocks that go on and on into territory beyond human reach.

This arts practice based research project explores three caves: The Ice Cave on the Mer de Glace, Chamonix; Aach Spring cave network near to Konstanz; and Mother Shipton's Cave in North Yorkshire and connecting these sites 'tunnels' that explore encounters

squeezed between the fieldwork in caves. The art work and this written document, which together compose my thesis, draw on fieldwork at these three caves, interviews with a caver (Joachim Kreiselmair) and an artist (Una Hamilton Helle), existing arts practice, and on literature from visual arts, humanities and social sciences to build a picture of three specific subterranean sites. The three sites are not geographically connected but through the structure of this written document and the thesis more generally, correlations and passageways begin to open up. As the reader continues to ‘push’ the texts and artworks (a term used by cavers to describe the gradual chipping away at new openings) the research will explore themes and methods that contribute to scholarship on caves in both the Geography and Visual Arts. The cave system that emerges through the thesis is based on field notes from and encounters with real locations, however, these accounts are conjoined into a fictional network along with artworks that respond to the experiences of the caves; an imaginary cave network is conjured through the writing and is intended, in its design, to evoke the sense of non fixity that is central to both cave exploration and to artistic practice. Donna Haraway says of her cyborgs and monkeys and dogs: ‘the figures are at the same time creatures of imagined possibility and creatures of fierce and ordinary reality; the dimensions tangle and require response’ (2008:4). It is in this spirit that I approach caves, and the writing and artworks are intended to respond to this intersection of real and imagined: Generating an individual sensation of the network for each reader, a place, like in the profound darkness of a cave in which the edges of the place and the person dissolve. As with any cave system, this network can be navigated through multiple and varying configurations, the structure and orientation of the thesis will be discussed in more detail later in this introduction.

This thesis presents a Visual Arts practice based project that has been generated from within the geography department. Through slow scholarship and a practice-based project embedded within the Geography Department at Royal Holloway University, London and its research centre, The Centre for GeoHumanities, this thesis contributes to the rich intersection between geography, and arts and humanities scholarship and practice (Dixon 2015; Hawkins 2015; Hawkins 2018), and the increasing awareness of and experimentation with creative methods across the breadth of geography, including in discussions of geopolitics and the underground (Jackman, Squire, Bruun and Thornton 2020). Against this context, however, my thesis is most concerned with two things:

Firstly, I produced two original exhibitions of artwork ‘I’m In The Bath On All Fours’ and ‘Darkness Retreat’ as well as supporting material, as a practice based response to encounters with caves and the connecting sites. I will describe these two exhibitions later in this introduction and in more detail in the sketch book sections of the thesis.

The work uses these experiences and the emergent themes as a way to think through ideas of submersion, sensory deprivation and the indefinable. Fundamental to the project’s success is its ongoing relevance to the field of contemporary art, which exists primarily outside of the academy. Through exhibitions and thematic events, the work has encouraged cross collaboration and introduced experts in geography to arts audiences, reinforcing common ground. Documentation of these events has been included as part of this submission.

Secondly, my practice based research contributes into the burgeoning interest in the subterranean in geography, specifically to scholarship on cave exploration. There is a consensus across much of the literature that the underground is an understudied area (Bosworth 2016; Squire and Dodds 2020; Pearson 2018; Valdiva 2015); subterranean spaces have been ‘quite literally overlooked’ (Hawkins 2019). Mines, subsurface infrastructure and tunnels have been the subject of recent underground studies (Elden 2017; Squire 2016; Garrett 2011; R Williams; 2008) but caves feature less prominently. Caves are resistant, it seems, not only to comprehensive mapping and the ‘satellite eye’ (MacFarlane 2013) but also to deep human exploration and clear definition. This thesis centres around fieldwork undertaken at three cave sites: Mother Shipton’s Cave in North Yorkshire, UK, Aach Spring in Konstanz, Germany and the Ice Cave on the Mer de Glace, Chamonix, France. The research explores how my artistic practice offers a mode of knowledge making and thinking with my three underground sites.

The remainder of this introduction will be structured as follows: I will begin by discussing the evolution of my artistic practice and the relationship between this practice and this written document. I will then detail the artistic practice that is presented for you to explore through sketchbooks and documentation. I will then identify the three core themes that emerge from my practice-based research and that frame my contributions of the discussion of caves and the wider geographies of the underground.

Practicing and writing caves

This written document tries to make clear the processes of making and descriptions of fieldwork at the three sites, but I have tried to avoid interpretation of my visual work, which is intended to communicate in a different way and using a different type of language. My intention is that this written work and studio work exist alongside one another as independent responses of equal importance, one not subservient to the other. In this approach, I align with Jyrki Siukonen's essay 'Made in Silence? On Words and Bricolage' who says that: 'the manipulation of material has been deficient in philosophical backup, as if the work of the hands is not really a matter of fine art whereas reading, say, Deleuze, is' (2013:88). It may be useful however, to give a broad sense of how the artwork has been developed: What the practice is. Throughout the research project I have collected objects and images at each of the sites and in response to group research sessions and lectures (much in the same way as one might collect references for literature). It is not necessarily clear at the time, why these objects and images might be of significance, they accumulate in my studio and eventually they settle into groupings. Working in this way has been described as 'reflection-in-action' in the studio (Schon 1983:50). Unlike the writing, the art works seem to merge the cave sites together, I allow for example the experience of the Darkness Retreat to seep into Mother Shipton's Cave. As a result, my practice-based work is made with a more pronounced sense of permeability than my written work. Once the groupings are established I begin to refine the art works and installations; planning, finding sites for exhibition and thinking through how they might be experienced by an audience. Central to the practice is material encounter: Thinking through making, referring to the textures, weights and pressures of the subject and

responding with materials and processes. The process of making an artwork isn't mystical but it is difficult to describe in words, in the essay 'Creative Accounting: Not Knowing in Talking and Making' (2013) Fortnum and Fisher describes the importance of trying to frame artistic knowledge without limiting it or becoming reductive 'particularly in relation to practice-based PhD' (2013:70). Fortnum and Fisher quote artist Paula Rego describing her understanding of practice 'you are doing it to find out what the results will be' (Fortnum and Smith 2007), allowing time for, and attributing value to, lost-ness is key for many artists (Fortnum and Fisher 2013), a trust in the importance of not knowing. Ideas seem to sit subsurface and if they are excavated and discussed too overtly in the work, it loses something fundamental; clarity is not something I am aiming for in the studio, an evocative and possibly even confusing complexity is far preferable. It is, in part, for this reason that the underground cave network appeals: There are deep correlations between navigating a subterranean cave system and my ways of working in the studio: These tactile, slow and confusing spaces require a different type of navigation and knowledge making than surface exploration. Thinking with caves and knowledge making with caves as a way of exploring and presenting the contribution made by the type of thinking and knowledge making that can occur within practice based research.

The structure of this written document is intended to mirror a cave network, for this reason, it seemed important to attempt to evoke the experience of the subterranean in the way in which you might experience and navigate the project. The project is intended to be experienced through the screen using the interactive PDF format as a way to navigate the work, rather than in print. Ideally the artwork should be viewed in person, but documentation of the

practice present within the cave network. In order to reach this introduction, you must have come through a black and white diagram, which I will call the Entrance Chamber. Like Robert Macfarlane's *Underland* (2019), each of the sections of the thesis is positioned as a 'chamber', represented by a white oval on the map, I will call these ovals Entrance Ways: A hollow or cross section of a tunnel. Inspired by the 'Choose Your Own Adventure' novels discussed in the interview with Una Hamilton Helle (2019), the sections of writing are not organised into a linear order and can be read in whichever combination you choose, meaning that there are a number of possible experiences of the project. After each section, you should return to the Entrance Chamber, by clicking the link at the end of the final page. As you click through the chambers you will be performing the navigation of the imaginary cave network, there is no set route and it can be difficult to find a clear sense of ending or to be sure that you haven't missed anything. By experimenting with the structure in this way, the project 'thinks with caves', not only in its content but also through its navigation.

One of each of the Entrance Ways in the Entrance Chamber will lead you to three main chapters, each of which focuses on one of the three cave sites. Depending on which Entrance Way you select, you might encounter Mother Shipton's Cave. This cave is a tourist site in Knaresborough North Yorkshire. In this chapter I explore the cave, shop and the history of the site, once owned by magician Paul Daniels. I will explore how Mother Shipton's Cave asks us to sit with multiple, contradictory possible versions of its history. Within this cave we look at land ownership, tourism, magic tricks, prophecy and think through the correlations between the cave space and the studio. Clicking on another one of the Entrance Ways will take you to the ice caves and cracks in the glacier in the once monstrous Mer de Glace, in

Chamonix, France. The glacier was the landscape that inspired the writing of 'Frankenstein' and here I take up the ideas of the outcast and transformation from this novel as a way of thinking about the experience of the glacier. Stark signs of climate change on the glacier combined with the endless trail of tourists looking at ice sculptures in the dripping ice cave form the backdrop for these explorations. Another Entrance Way, takes you to my exploration of *Invisible Fish* which begins from a moment of encounter between a cave diver and a newly discovered species of cave fish in the Aach Spring, Germany. The fish, a Cave Loach, have adapted to the profoundly dark surroundings over 20,000 years. Very few divers are able to navigate this cave system, the diving club has a rare and specialised knowledge developed over several years. The writing discusses modes of navigation, adaptation, the use of equipment, material knowing, and expertise.

Between these chapters are short texts which function as 'connecting tunnels'. They are not intended to be contained or be analytically resolved within themselves, instead they open questions and reinforce ideas across the cave network. One such tunnel, entitled 'Aquarium' is a short essay about an observation in the Boston Aquarium whilst attending the American Association of Geographers Conference with my daughter in 2017. The trip was not a planned research trip, but the architecture of the tanks, location and surrounding circumstances presented a new lens through which to think about the key themes of the project. The writing focuses on ideas of containment, fluidity, edges, transmission and interconnectedness. A second tunnel focuses on a semi-structured and edited interview with Una Hamilton Helle, providing a transcription of a meeting with the artist, curator, and a key contributor and collaborator to this research. Helle's work encompasses LARP (Live Action

Role Play), coding and exploration of landscape. She has an interest in the underground and its influence on the design of early gaming and the internet structure. Her work deals with choice, consensus, infrastructure and ritual, all important themes in my work. A final tunnel, which you may of course, encounter first, explores an auto-phenomenological account of a short stay at the Spirit Balance Darkness Retreat in the Black Forest, Germany. Darkness retreats are a part of Buddhist practice, this retreat is a commercial enterprise and charges for the supervision of the darkness experience. The aim of the fieldwork was to explore an extended period of darkness and this is the primary subject of the writing. The context of the retreat, a Buddhist Ashram in Germany with an expensive list of retreats and services, has also become significant and opens questions about authenticity, the field guide, isolation and suspension of belief.

Accompanying this collection of writings, are four sketch books that document the practice in progress and two links to external sites documenting exhibitions of artwork that make up the practice based submission for this thesis. These can be accessed through an Entrance Way in the Entrance Chamber diagram and should be encountered in random order, as with the writing. As aforementioned, the artwork is not analysed in the writing but it is present in the sketchbooks and exhibition links, details of original photographs taken as part of the artistic research have also been used as a cover or introduction to each of the sections of writing. You will find these original images throughout the cave network, attached to relevant sites, they have a title and brief description at the bottom of the page. Each of the sketchbooks has been given a name based on the body of work it relates to.

The sketchbook 'I'm In The Bath on All Fours' describes the development of work that responds to the Cave Loach found in the Aach Spring. This project was made in collaboration with artist Lindiwe Matshikiza and first shown at Well Projects, Margate in 2019. This body of work has also been shown as part of Sonia Boyce's 'In The Castle of My Skin' at Eastside Projects (2019) and Middlesbrough Museum of Art (2021). Whilst the sketchbook titled 'Fieldwork' documents practice work in the field throughout the project. The images are from The Mer de Glace, workshops with Open School East in Margate, Cathedral Cave in the Lake District and a tour of the Shell Grotto commissioned by the Contemporary Arts Society. The sketchbook entitled 'Darkness Retreat' documents a 60-hour stay at Spirit Balance darkness retreat in the Black Forest in Germany. This corresponds to the 'connecting tunnel' text but also informs a body of artwork titled 'Darkness Retreat'. This work has drawn from elements of Mother Shipton's Cave and the Darkness Retreat to generate a bedroom space in which it becomes difficult to make a distinction between hallucination, dream and vision. This was shown at LIMBO project space in Margate and online as a digital exhibition in collaboration with Legion Projects. The sketch book titled, 'Research Events' documents an experimental presentation given in collaboration with Professor Harriet Hawkins at the AAG in Boston 2018; an artistic work space made in collaboration with artist Kelly Large; Expand and Contract; an experimental, interdisciplinary conference at Chisenhale Dance Space exploring undergrounds and experiences of darkness; a cave making workshop that took place as part of the GeoHumanities event at Tate Exchange.

The first of the two main bodies of artwork is called 'I'm In The Bath On Fours'. It is a collaborative work with Johannesburg based writer Lindiwe Matshikiza. The work responds

to an encounter between a cave fish and a cave diver, which is outlined in writing in the chapter titled 'Invisible Fish'. The exhibition of work uses ideas of weight and pressure as modes of navigation and considers the process of adaptation and evolution that the cave loach undergoes over thousands of years in order to survive its new underground surroundings. Matshikisa and I communicated over email and video call to make a call and respond to artwork in which objects, text and sound works are integrated into an installation that invites the viewer to imagine a shape shifting body in deep underground waters.

The work was first shown at Well Projects in Margate, 2019, and has since been included in Sonia Boyce's exhibition 'In The Castle Of My Skin' shown at Eastside Projects, 2020, and Middleborough Institute of Modern Art, 2021.

The second body of work is called 'Darkness Retreat', it is an exhibition of work about a collision of experiences of confined spaces. The work began as a direct response to fieldwork at a darkness retreat in Germany, a written account of which can be found in one of the connecting tunnels. The project went on to merge references from Mother Shipton's Cave, a hospice room, a hotel room and the experience of virtual meetings during the Covid-19 lockdown. The sculptural and textiles works are arranged as a bedroom but are intended to evoke the experience of space when navigated in deep darkness and explore the blurred state between reality, dream and hallucination triggered by prolonged time in the darkness retreat. The work is shown as a digital work on a website launched in 2021, it has been digitised by artist George Eksts, the website designed by Matt Woodham, Sound design by Mark Dicker and curated by Legion Projects.

Having discussed the practice and writing relationship, I will now turn to explore the core themes that track across the practice and that I will explore further in the chapters and tunnels.

Encountering caves; thesis themes.

This thesis offers an account of my route through the underground. In thinking with these places, I want to draw out three key themes of my encounters, themes that I think are importantly in dialogue with discussions of the underground specifically within geography, but across arts, humanities and social sciences more broadly.

The first theme I would like to draw out concerns *permeability*. Interestingly, the knowledge of caves itself could be considered disciplinarily permeable from the very start of speleological study, caves forced disciplines to spill over into one another (Cant 2006; Crane and Fletcher 2015; Hawkins 2020; Kuklick and Kohler 1997). At my three cave sites themselves however, I am more interested in drawing on feminist geophilosophical ideas about bodies, boundaries, perimeters and edges (Yusoff 2013, 2015; Bosworth, 2017, 2020). At Mother Shipton's Cave, for example, ideas of land ownership, the boundary and perimeter of the cave site define edges that are, in principle, non permeable. Here I draw upon the work of Bradley Garrett (2018) who explores legislation of underground ownership. The setting of Mother Shipton's Cave also prompts thought about permeability through the transformative waters of the petrifying well, the waters seeping into and changing the objects that sit within them.

Whilst, in my exploration of the cave loach in *Invisible Fish*, the ‘all seeing’ skin of the fish is presented as a way of navigating the dark waters of the cave, informed by hydro feminist writing by Neimanis, MacLoead and Chen (2013) as well as the geologic thinking of Yusoff (2013, 2015, 2016) and Bosworth (2016). In this chapter, I was interested in the ways of thinking about the intersections of bodies, creatures, water and rock. The encounters between these bodies with the confined cave tunnels offer a means to think about the perimeters of a body, not as individually defined but as permeable and porous.

The glacial ice acts as a backdrop for ideas about permeability in the *Mer de Glace* chapter, drawing on Macfarlane’s exploration of glacial caves (2019) and on literature that investigates the formation and perpetual movement of glacial ice (Cosgrove and Della Dora 2008). Inside the *Mer de Glace*, the heat of a hand touching the walls of the cave illustrates the impact of the skin on the body of ice, the fragility of the structure of the cave and reflection on the human body penetrating and leaving marks within the icy tunnels. Entangled with thinking about permeability across all of the chapters and ‘tunnels’ has been an awareness of the role that digital technologies have played in the explorations of all of these underground spaces. From Google searches to ‘selfies’, touch screens, to the uploading of images to ‘the cloud’, digital interfaces permeate this research at every point; even if through their inability to function in the depths of the underground. Digital technologies not only enable the research but the physical and conceptual interactions with phones, tablets and search engines informs the thinking.

These tools are used in the making of the studio work; but most present throughout has been the digital technologies through which information is sent and received. The smart phone, the laptop, the camera and their software and storage systems have emerged almost unintentionally in every investigation within the thesis. The idea of sending emails and storing in clouds in itself seems to sit at odds with the nature of the sensory, tactile, ancient and solid cave. But the cave is a paradox and being within the profound darkness of a cave is one of the least solid and certain experiences I have ever had. The writing explores the idea that the cave is a permeable space in which it is difficult to know the edges of your own form, to have a clear sense of time or direction, in which it can be difficult to distinguish the real from the virtual. Once we are able to sit with these uncertainties and unknowns that the caves present, entanglements with body and technology, with the screen and the mouth of the cave begin to make sense. These thoughts around digital technology, touch and permeability are explored in more depth in the methodology through writing by James Bridle (2018), Rosalind Krauss (2012) and Tacita Dean (2015).

The second theme *non fixity* derives from the repeated experience of my fieldwork of finding caves difficult to pin down. The labyrinthine nature of caving and the vast time spans that one is presented with underground (Yusoff 2015; MacFarlane 2019) can challenge the certainties and human time scales of the surface: Caves are paradoxical spaces (Della Dora 2016) that elude fixity both in terms of their ever-moving geology and in their unknowable and unconquerable nature (Cant 2006). In my exploration of the Mer de Glace this non-fixity takes form in the literal melting of the cave in front of our very eyes, the ice cave literally sliding down the valley. In my exploration of Invisible Fish I am interested in how the Cave

Loach's gradual shape shifting has slowly adapted to the deep, black waters of Aach Spring. Whilst, in encountering Mother Shipton's Cave I was fascinated by how the petrification in the dropping Well at Mother Shipton's Cave turns objects to stone, the ultimate fix. Yet, all around these dangling stone objects, untruths, myths and magic tricks slip and slide eluding fixity. Non fixity also speaks to elements of practice based research the thesis puts trust into not-knowing or fixing as a mode study and attempts to sit with these states within the caves, exploring the sites through process and practice (Fortnum and Fisher 2013).

The third theme running across my thesis is that of *material encounter*. Each of the sites in the thesis presented me with a set of unique sensory challenges. The investigation of all of these caves has drawn upon material knowledge and processes used in my practice, the translation of material encountered from each location is present in both the writing and the art work. Caves require an embodied engagement of the caver, this has been demonstrated in the work of Cant (2003, 2006) Pérez (2015) and Bosworth (2017, 2020). They are sites that can be difficult to describe in words and that present us with a vast imaginative force (Hawkins 2019). To think with caves is to sit with the material and the imaginary, it is to navigate an unfamiliar sensory realm in which the visual no longer dominates (Cant 2003) and in which we are required to attend to unfamiliar sensory encounters. 'The surface is scarcely thinkable' (MacFarlane 2019:4). The investigation of caves through a materials and process-driven practice responds to the call by Squire (2017) and Jackman et al (2020) for further exploration of the study of territory and the elemental through experimental, embodied and creative methods. At the Aach Spring I focused on the profound darkness and tight squeezes of the cave, as well as in the act of imagining the Cave Loach and its life in the

cave. In terms of the Mer de Glace, what was of course important was the ice that constituted the cave. I was very interested in how the ice behaved in unexpected ways. Whilst at Mother Shipton's Cave, my concern was with the petrification well, and the intersection of fast and slow geologies within the cave's confined space. Engaging with these three themes, I want, through the written text and the body of artistic practice to:

1. Advance geographical research on the underground, specifically caves.
2. Produce two original exhibitions of art work inspired by caves
3. Evolve the place of practice based research within geography.

An invitation:

I would now like to invite you to choose a route through the thesis via the Entrance Chamber. Each Entrance Way will lead you either, into one of the three cave sites, through four connecting tunnels, to four sketch books, the literature and practice review or to the methodology.

In the literature and practice review I will focus in more depth on the three key themes of the thesis, situating them in the context of geographical and wider discussion of the underground and of caves in particular. I will however also, in this section, offer a practice review that will discuss important artworks about the underground, as well as those that might not be directly about the underground but which relate to these three themes and have been key inspirations for me.

In the methodology I will discuss how the research sits within recent post phenomenological approaches in geography, the experience of making practice-based work within geography and the format and structure of the thesis. Four sketchbooks outline the practice outcomes of the research process, these include exhibition documentation, examples of fieldwork and research events.

At the end of each chapter you will find a link that will take you back to the Entrance Chamber where you can choose another Entrance Way.



Literature and Exhibition Review

Introduction

This review brings together academic literature with arts and exhibitions in order to explore the study of caves and caving in visual arts practice and Geography. The material has been compiled into a body of research, which enables study of the subterranean, not only as a space for scientific and practice-based research, but as a space for sitting with the unending, unknown and the uncertain.

The review has been divided into two sections. Firstly, 'Going Underground' which brings together literature and exhibitions that reflect on the growth of interest in the underground. In this section I will look to recent geographic scholarship on the 'Vertical and Volumetric', then turn towards 'The Elemental' and finally go on to draw parallels between key concerns drawn out from these themes and examples of visual arts in 'Contemporary Art: Thinking with the Horizontal, Vertical and Elemental'.

The second section of the review is titled 'Caves', here I collate literature and exhibitions that look specifically at the way in which cave environments have been featured and interpreted in contemporary geographic and visual arts research. The review starts with 'Caves and Embodiment' then goes on to 'The Imaginary Cave', then moves on to 'Caves and Darkness', and finally I look at material that explores 'Caves and Interdisciplinarity'.

1. Going Underground

In the Visual Arts and in both Cultural and Political Geography, there has been a surge in material dealing with undergrounds with, as I will argue, particular momentum building during the development of this research (2017 - 2020). In both of the following categories I will explore rationales for this increase in downwards and inwards looking. To bring together these bodies of research is to make a space (or a crack) in which physical and metaphorical undergrounds converge, extending the possibilities of practice based research in academia.

Cultural and political geography have seen a 're-enchantment with the underground' stating that, 'there is surely no nation-state that could not have its origin story and subsequent economic, political and cultural development told via its engagement with the subterranean' (Squire and Dodds 2019). As Squire and Dodds continue in their introduction to a special issue, they go so far as to declare a 'subterranean turn' in Political Geography and allied disciplines such as Anthropology and Architecture (Squire and Dodds 2019:2). The case for a 'subterranean turn' across Geography is further reinforced in Cultural Geography in which thought has extended in a downwards trajectory with ethnographic, sensual and embodied exploration of undergrounds (Cant 2003, 2006; Pérez 2012, 2013, 2015, 2016; Hawkins 2018, 2020; MacFarlane 2013, 2019) and feminist scholarship that considers entanglements between the geologic, the political and the bodily in the subterranean (Bosworth 2016, 2019; Yusoff 2013, 2014, 2015). Furthermore, resource geographies have long been engaged with the subsurface as a site of extraction, many of these themes can also be tracked in the art world, with much emphasis given to anthropocentric engagements with undergrounds.

There has been particular focus on extraction and the social and economic impact of mining industries through the work of Libita Clayton (Gasworks 2019 and Spike Island 2019), Otobong Nkanga (Tate St. Ives 2019 and MIMA 2020) Maria Fusco (Art Angel 2015), Laura Wilson (New Geographies at Norwich Castle Museum and Gallery 2019) and Amie Siegal (South London Gallery 2017). Further, in her publication 'Undermining' (2014) curator and activist Lucy Lippard, reflects on uranium mines and the 'subterranean economy', looking at land use and exploitation in New Mexico, through the lens of contemporary art. In addition to this direct referencing to the subterranean there have been numerous artworks attending to tunnels, tunnelling, bunkers, burial and immersion in darkness (Anthony Gormley 2019; Mike Nelson 2000; Mirosław Balka 2009; Ryan Gander 2011; Carsten Holler 2015; Sam Winston 2017). Installations that invite the viewer into a constructed environment as a way of instigating experiences of constriction, space in darkness and sensory deprivation. Other works examine the underground cave specifically, looking at its' inhabitants (Maeve Brennan at Jerwood, 2018) and at the human and mythological relationships with caves (Ben Rivers 2020; Amy Lay-Pettifer, in her writing and as part of curatorial duo Shell Like in collaboration with Jennfier Boyd 2012; MacFarlane 2013, 2019; Una Hamilton Helle 2016, 2019; Dorothy Cross 2013; Lavinia Greenlaw 2019; Werner Herzog 2010). This review will look at the core themes drawn out from these artworks and discuss them in relation to contemporary scholarship on caves taking place in the field of geography. Alongside this downwards thinking, or subterranean turn, is a re-investigation of definitions of territory and terrain (Jackman et al 2020; Hawkins 2020) stemming from the subterranean encounters within recent scholarship on the volumetric, vertical and elemental. I will discuss this literature in more detail in the following section of the review.

1A. Vertical and Volumetric: On Thinking with Underground Space

The turn towards the underground in geography has been influenced by scholarship in the social sciences exploring key themes including; the elemental (Squire 2016; Adey 2015; Engelmann 2018; McCormack 2016, 2018; Whatmore 2013), the volumetric (Elden 2013; Weizman 2002) and the vertical (Adey 2010, 2013; Bishop 2011). Geopolitical thinking has been particularly significant in its turn towards analysis of the underground. This new thinking in geopolitics has steered scholarship away from a sense of a flat, horizontal surface and instead drawn attention towards a dynamic and 3-dimensional mode of reading space. Over the following section of writing I will discuss the geopolitical scholarship that has influenced this thesis; much of this writing has acknowledged the subsurface and the geologic, giving consideration to the complexity that the subterranean adds to notions of terrain, boundary and security.

Thinking volumetrically has influenced the study of underground spaces in this thesis and enabled me to contextualise and articulate the three key themes of permeability, non-fixity and material encounter in caves. Later in this review I will explain how the foregrounding of volumetric, vertical and elemental thinking resonates with the innate exploration of space and material in the experience and analysis of sculpture and installation works. Before focusing on a small number related art exhibitions, I will explore key geopolitical texts that have helped me to understand and align my research with volumetric thinking. The volumetric describes the space in which boundary making considers both height and depth 'rather than simply 'across' the surface' (Squire 2016:4; Weizman 2002; Elden 2013). Elden refers to

Weizman's key understanding of 'the politics of verticality' and the notion that all dimensions of the West Bank must be grasped and acknowledged in the understanding of the conflict.

Weizman states that 'Geopolitics is a flat discourse. It largely ignores the vertical dimension and tends to look across rather than to cut through the landscape' (Weizman 2002). Elden's extending of these ideas refocuses thought towards 'reach, instability, force, incline, depth, and matter' (2013); he discusses these weights and directions in relation to underground tunnel systems in order to 'grapple with the complexities of territory, power and security' (Squire 2016).

I have found the dialogues between scholars, through which ideas around the volumetric have been extended, extremely informative. In particular Adey's comments on Elden's study of the volumetric (Adey 2013; Elden 2013). In this commentary, Adey shifts the discussion towards inhabiting and experiencing the volume. Adey opens by stating that:

'Stuart Elden's paper expertly delves into the volumetric spatiality of territory, which looks to extrude how we think surfaces, planes and areas into something more, something deeper. And we have to take notice as the ground shifts under our feet' (2013:52).

By bringing the body and the lived experience into the volume, Adey asks us to consider how it is that the layers and depths of a volume are 'open and plural imaginaries' (2013:52). Adey describes the complexity of intersecting volumes and boundaries within an infrastructure and defined volumetric territory; reminding the reader that the volume is far from inert. Adey also

proposes the theme of ‘the book’ as another plurality in the notion of the volume(n), here he discusses Jean-Luc Nancy’s doubling of the book (2009) as a both open and shut body, offering this duality as a complement to the ‘territorial political-technological register that Elden presents so compellingly’ (54:2013). Adey presents a view of the volumetric, that like pages of a book, is a series of layered planes and depths. Later in the review, I will pick up these themes around the ‘body in the volume’ in reference to a paper by Maria Pérez in which she explores the drawn line and the cartographic in cave exploration (2013).

As both Bridge (2013) and Adey (2013) point out, the volumetric is not a new concept, but what Elden does in his foregrounding of thinking with the volumetric and with the depths and pressures within it, is to invite the reader not only to think in 3D rather than in area alone (Bridge 2013) but also to consider the dynamism of a shifting spatial realm. This is then extended by Adey, who draws attention to the bodily and experienced volume and by Bridge who thinks through how the ideas presented by Elden ‘play out in the context of the political economy of natural resources and the territories of the mineral kingdom’(2013:57). I will now turn attention to how literature in this field considers the vantage point from which we view the volumetric.

Looking downwards: In the following paragraphs I will discuss *how* and from *which position* we think through the volumetric. Ryan Bishop, argues that a shift away from the flat surface requires a deeply connected relationship between the imaginary and the material in attempts to realize mastery of space, this thinking has intersected with the ‘jolt in perspective’ offered by vertical thinking (Bishop 2011). Despite the ‘jolt’ or shift away from the flat surface, much

of the recent geographic thinking has privileged an upward gaze (Hawkins 2020) looking away from earth to atmospheres (Adey 2010, 2013; Englemann 2015) for surface solutions. In her thinking about the underground imaginary, Hawkins says that ‘the underground was once central to the evolution of Western environmental imaginations. Yet, this has waned throughout the 20th century as eyes and minds turned up and out’ (2020:26). Among the literature on which Hawkins draws is Cosgrove’s tracing of the human imagination and visualization of the globe (2001). Cosgrove observes that seeing the globe seems to ‘induce desires of ordering and controlling the object of vision’ (2001:5). The idea of height as a position of awe and power is reinforced in a collection of essays edited by Cosgrove and Della Dora in which foreground revered and unique ‘High Places’ (2008). More recently, upwards exploration has taken the form of vertical and atmospheric investigations (Adey 2013; Englemann 2020; McCormack 2018). What follows is an explanation of how this research has engaged with the vertical in relation to the underground.

When vertical scholarship has explored the look downwards, it has often emphasised the enforcer in a position of power from the top looking downwards (Bishop 2011, Adey 2010, Cosgrove 2001). Adey, in his account of the helicopter in the mega city, describes this vertical perspective from above as ‘both distant and yet near, both abstract and yet visceral. Adey says that ‘both the ground and the air reside in vertical reciprocity’ (2010) but as Ryan Bishop asserts, this does not mean that the reciprocity is by any measure equal, nor does it diminish the human desire to use the latter to subdue or dominate the former’ (2011). Bishop explores the underground in relation to US military plans to ‘counter underground defensive moves’, the need to expose parts of that remain resistant to surveillance. As with the

aforementioned quote by Cosgrove on the downwards look on the globe, in these vertical observations, the downwards or underneath and the underground, become synonymous with the uncontrolled, the not yet organised. Bridge describes underground tunnels and mines as ‘surface’s colonial outpost’; because the ‘qualities of space above and below are so different’, sustaining surface conventions below ground requires supply chains reaching to the below (2013:55).

The eyes in the air are the select few, ‘the threat on the ground, as it historically has been, often comes from the sky, from its exposure to whoever can visually survey and control it from above’ (Bishop 2011: 271). Interestingly, Bishop presents another perspective on the position of power suggesting that there is a latent power to being underground which cannot be extrapolated from innate vulnerability:

‘The capacity of sappers and social resistance movements to proliferate horizontally unseen, to under-mine and bring down the (infra)structure of authority. At the same time the possibilities of this position cannot be separated from the fear of being unable to return to the surface, of permanent exile from the social realm, of becoming lost from the world’ (2013:55)

In addition to these voices analysing positions of power and the downwards gaze, there are geographers thinking about ways in which to engage other types of downwards perspectives; the underground disrupts surface modes of seeing and visualizing and invites alternative modes knowing through imaginining and sensing (Childs 2020; Hawkins 2020). In my

experience, when underground, the downwards view is limited, with the naked eye one cannot see much further than a few meters before the darkness absorbs the beam of a headlamp, there is an opting into the unknown for the caver, a certainty that the bottom will never be exposed. Looking down on the surface however, presents a different dynamic altogether. The ‘mastery from above’ (Bishop 2011) rendering visible through whatever technological means possible, is an act of control and of organisation. In his exploration of the ‘Transparent Earth’ project, an initiative by the Defence Advanced Research Projects Agency (DARPA), Bishop asserts that there are two types of invisibility; one, the invisible that can be rendered visible through technological intervention and operates with regard to the empirical realm of the visible and thus is potentially visible; the other is that which can never be rendered visible ‘the US military is investigating numerous strategies, including harnessing lightning (natural and artificial), radio signals and complex algorithms to ‘see’ through other sensorial means’ (272:2011).

As Childs discussed in his examination of deep sea mining, there is limited knowledge of the downwards, in this case, the deep seabed. Childs asserts that this ‘new frontier’ requires a new kind of geopolitics; moving beyond the ‘flatness’ or fixity’ of the state-centred geopolitical imagination (2020:190), and moving beyond a volumetric understanding of the subterranean; Childs proposes that it is necessary to include a fourth dimension: Time and the ‘spatio-temporal threshold’ that deep sea mining presents (2020:207) and its potential for new kind of attuning, knowing and communicating from these as yet unknown sites. In her studies of caving, Pérez claims that ‘there is no technology that can accurately map a cave from the surface. Even locating caves challenges existing technologies, one must enter a cave to

explore it and map it' Pérez describes the process of mapping caves as inherently embodied; blurring the lines between 'experience and representation'(2013:294). Pérez's cave maps made *in* the underground, rather than looking down on-to it, she describes the maps as 'not merely attempts at representing the works but material instantiations of ways we explore it, together, and change in the process (2013:305). Conversely, in Adey's aforementioned 'Vertical Security in the Megacity' (2010) he describes an imposing, authoritarian eye from a helicopter. The top down view simplifies form and organises space in such a way as to overwrite the complex or nebulous. 'The grid captures and classifies phenomena into commensurate and exchangeable commodities' (Adey 2010) Adey quotes (Berman 1982, Scott 1998):

'Shapes and geometric forms could be imposed upon the hidden and the obscure, the vulnerable and the displaced, and the colonized and the dispossessed, as villages, camps and new urban spaces forced abstract aerial vision upon concrete space and indigenous populations'(2010:54).

Pérez applies theories of the vertical to the underground cave network in her paper 'Exploring the vertical: science and sociality in the field among cavers in Venezuela' (2013). Negotiating and thinking with a cave network requires the caver to think not only in the vertical line but also through the volumetric and elemental. Pérez, however maintains that the contained or bounded nature of the term volumetric is at odds with the boundless and open ended nature of subterranean space, instead Pérez uses 'verticality' to describe cave spaces;

‘Volumes by definition, *contain* they are also bounded, precisely the quality that a multi-dimensional and dynamic approach to earth and its processes resists (see Adey, 2013 for a similar argument) Indeed, Elden’s own critiques of the concept of territory as a bounded space might apply to volumes (Elden 2010, 2013). Thus, despite the fact that a geography of volumes might better capture the multi-dimensionality of cave exploration, I retain the use of the term ‘verticality’ which resonates with a more ‘open-ended’ and boundless approach to space.’ (2013:230).

Although Pérez makes a compelling argument, I am still drawn back to thinking of underground spaces, particularly cave passages, in the volumetric: They are both bound and interconnected, any edges and boundaries do not preclude permeability.

This relationship between surface and below surface is outlined in Bosworth’s 2016 paper, which I will return to in more depth later in the review, Bosworth’s thinking with the underground as ‘permeable matter’ reinforces my idea of the subterranean as a paradoxical space that can be both a bound volume and an endless vertical. Pérez echoes the idea of the interconnection between surface and subsurface, describing a ‘textured world’ and proposing that ‘understanding karst, including how this environment’s features are formed and explored requires acknowledging the earth in constant interaction with the air above (and within) as dynamic system’ (Pérez 2015:228). A karst network is multidimensional and dynamic (Pérez 2013), it presents navigational, technological and conceptual problems that the surface does not. Cave exploration offers a valuable contribution to understanding and exploring with the volumetric and vertical, as Pérez, referencing Tim Ingold’s ‘weather worlds’ (Ingold 2011:96) says: Understanding karst, including how this environment’s features are

formed and explored, requires acknowledging the earth in constant interaction with the air above (and within) as a dynamic system (2015:228). Pérez refers to the emphasis on the multi-dimensional and its 'dynamic interfaces' in the context of her discussion of caves in Venezuela (2015). In Pérez's caves, the act of mapping and understanding the space is enmeshed with the embodied. To be in caves is to be muddy and damp and these descriptions of the dynamic forces at play are present in her scholarship. It is from here that I will now move on to look at other examples of geographic writing that thinks through the elemental.

1B. The Elemental

In the move from the flat into a vertical and volumetric field, thinking was drawn to the non-human forces at play. Scholarship on the elemental considers the 'stuff' (Adey 2015) in the spaces that were previously considered to be empty or benign. Rachael Squire places the intersection between the body and the elemental at the centre of an investigation of contested territories in Gibraltar (2016). Squire's elementalism suggests material vibrancy rather than 'inert backdrop'. This idea builds on the writing of McCormack (2015) who suggests that geography needs new modes of thinking about the body and the elemental, the elemental within the body and the body as elemental. Squire explores McCormack's principles that bodies immersed in an elemental field 'translate' the elemental into physical sensation of experience (2016). The vibrancy of the non human (Bennet 2009) has been applied to thinking with the elements, the forces imposed by Air (Adey 2013, 2015; Englemann 2015, Squire 2016) Water (Neimanis 2013; Steinberg and Peters 2014; Squire 2016; Whatmore 2013) Earth (Squire 2016; Pérez 2016; Yusoff 2013,2015) and Fire (Squire 2016) In Squire's

descriptions of sensory experiences within the underground tunnels in Gibraltar, it could be argued that the elemental dynamics become even more amplified when underground. In the ‘networks of pure volume’ as Macfarlane observes ‘If you spend enough time in limestone, you begin to understand how it is structured by absence as much as presence’ (MacFarlane 2013 unpaginated). Where the rock is absent, other matter is present. These new modes of thinking through the vertical, elemental and volumetric within geography have provoked calls for more creative modes of investigation (McCormack 2015; Jackman et al 2020; Squire 2016; Hawkins 2019; Englemann 2020).

I will now move on to describe an artwork titled ‘Suspension Point’ by Rivane Neishwander that I visited at South London Gallery in 2008; it is an experience of being in an installation that I have returned to repeatedly when thinking through scholarship on the vertical, volumetric and elemental within geography. The following description of work, although not a conventionally written review, is intended to contextualize my reading of the geographic literature and explain my understanding of the intricate study and reading of volumes within fine art practice.

1C. Contemporary Art: Thinking with the Horizontal, Vertical and Elemental

Before I begin to describe Neuenschwander’s ‘Suspension Point’ I would like to pause and reflect on the study of installation art in geography with a particular focus on the work by Harriet Hawkins; a geographer who studies art, works with artists and with whom I have collaborated on a number of projects.

In the 2010 paper 'The argument of the eye? The cultural geographies of installation art', Hawkins builds on scholarship engaging with embodied methods in geography, using her body as a 'research instrument' (2010:321) with which to experience installation art by Tomoko Takahasi at the Serpentine Gallery in London in 2005. Hawkins uses embodied writing to describe encounters with the artwork and combines this with a 'critical framework for the embodied-writing as style through which the four installation encounters are created and discussed' (2010:324).

Hawkins asserts in her writing that 'experiencing the installation involved installing my body and being installed as a body' within the artwork, it is from this point of engagement that she writes through the embodied experience of being in the installation (2010:324). What is so important about this paper for me, is that it helps to establish the fertile and common ground between installation art and geography. 'Installation art, with its twinning together of a spatial with an embodied visual politics has much to recommend it to the geographer' (2010:343) not only can installation art be inspiring to geographers, it is also recognised in Hawkins work as a parallel mode of investigation of similar themes and resources;

'installation's history is one of twinning of artistic practice with close readings of phenomenological texts and embodied arguments which mirror the methods and conceptual frameworks of many contemporary geographers. (2010:343)

In the following paragraphs I am interested in tracking some aspects of the volumetric, vertical and elemental as discussed in geography, into discussions around contemporary art.

I will begin from the ongoing discussions around the horizontal: In the paper ‘Introduction: The Use Value of Horizontality (n.d.) Leah defines and examines the term horizontality and how it is put to use in the extension of informe or formlessness of George Batiaille’s surrealist journal Documents (1929-30). Krauss and Bois introduced the term in that exhibition which paid homage to Documents at the Centre Pompidou in Paris in 1996. Leah’s practice –led study employs ‘horizontality’ and the stance against the upright as a mode of exploring interdisciplinary drawing practice and spatial and volumetric mapping:

‘Krauss’s essay explores how ‘horizontality’ uses the resistant force of Gravity as operative rather than static, and is in an active state of pulling down. The notion of weight, particularly in relation to the body gestalt, that is, the ‘assumption of an erect viewer whose perceptual apparatus depends on a cone of vision,’ is drawn down, altering visual and spatial alignments. Krauss refers to ‘horizontality’ as spatial mapping, which this study extends into a diagrammatic, mapping operation that aims to work as a spatial practice’. (Leah n.d:2)

I would argue that much of the discussion and thinking around the volumetric, vertical and elemental that has taken place in geography, is an inherent and fundamental presence in fine art training and practice. In order to discuss this further, I would like to use ‘Suspension Point’ as a model for sensing and thinking with; it’s important to state here that I could have used any number of contemporary installation works to explore these themes, this one that has been important to my practice and one of the exhibitions that has repeatedly come to mind with navigating geographic scholarship. Suspension Point (2008), was an architectural

installation in which thinking through and with space, weight and material takes the form of dynamic yet sensitive architectural intervention. In the gallery, attention is given to space in all directions and to the weights and pressures that one material imposes on another. To navigate the exhibition was a transformative experience of the body within the architecture of the work and the heightened sense of observation and attunement to detail as a result of the above-below structure. Walking into the South London Gallery, a space with which I am familiar, I was struck by the dimness of the space. The low ceilings, the feeling of being underneath. The gallery had been divided, split horizontally along the picture rail, the previously light and airy gallery. In the dimness of the downstairs space are two 16mm projections, one a never bursting, floating bubble, the other a cyclical tracking of day into night. The simplicity of the constant flow between two opposing states is present in every aspect of the work. Sawdust from timber frames form peaks of dust next to the holes from which they come. The upper floor of the structure, bright and light versus the low light of the lower floor. *'Suspension Point* is immediately an experiential exhibition: one that yields only to the physical navigation of its objects, surfaces, temporalities and narratives which continually exchange as they reveal themselves over time (Norwood 2008). Norwood describes walking through the gallery as a kind of human trespassing in the interplay between the non-human, unable to interpret the language that communicates between materials. This is different from Hawkins reflections on the Takahashi installation in which she writes from the perspective of a participant in the work - both however, acknowledge the force and agency of the materials and objects.

I want to pause here to reflect on how these influences from both geography and art have come together in the thinking for this thesis. Rethinking my experience of ‘Suspension Point’ through the new lens of the vertical, the volumetric and the elemental in geographic thinking, has offered me a new language through which to articulate the spatial, material and political forces at play within the installation, this in turn has helped me to make sense of the parallels that I instinctively understood between the act of art making and the act of caving: the embodied engagement with the space, the porosity and dynamics of the materials and the constant consideration and shifting of boundary. I return briefly to Adey’s reading of Elden’s volumetric spaces: Adey asks us to consider the inhabitation of the volume; the body-in-volume and the body-as-volume (2013:52) but he also asks us to consider the volumes as bodies; being in the volume as a cohabitation with a multilayered and complex series of depths, planes and elemental dynamics. Adey’s silhouettes in a car draws me back to thinking about a figure in ‘Suspension Point’ seen through the wooden framework of the staircase structure, the frame of the wood drawing attention to the perimeter of the body within it.

Hawkins describes the way in which the installation ‘brings the consciousness of one’s corporeality to the forefront of the art experience’ (2010:335). I felt this enhanced awareness of corporeality in ‘Suspension Point’ and with it an acute awareness of the fragility and complexity held together within the permeable boundary of the skin. The idea of the bound bodily volume is starkly interrupted by the post phenomenological writing of Jean Luc Nancy in *L’Intrus* (2002). *L’intrus* is a piece of writing referring to the experience of Nancy’s heart transplant, even the news of which provoked ‘the physical sensation of a void’. Nancy this new vision of the internal body as sensation like ‘one breath, now pushed across a cavern,

already imperceptibly half-open and strange' (2002:3) The cavern is a void left after the unearthing of the internal structures – the spaces in the body that are unseen and only imagined and felt, become exposed. This exposure and act of making visible turns dark internal spaces from imagined into real. I will explore these ideas further through geographies of darkness and the work of Veronica Della Dora (2016) and Tim Edensor (2013) and how the felt and seen experiences of landscape play out in the cave.



Fig. 3. Suspension Point Neuenschwander. South London Gallery (2008)

I should note here that the use of 'Suspension Point' is a very specific case study, and this is not a review about contemporary installation art as a whole; rather an example given for the purpose of explaining ways in which artists might deal with concerns found in contemporary geography; as a practice based artist in geography, I have met and navigated literature exploring the volumetric, vertical and elemental using my training as an artist.

Before moving on to the more specific underground environment of the cave, I want to reflect momentarily on the recent growth of interest in the subterranean in both contemporary art and geography. Although the types of underground sites are varied, what does seem to be a common thread is the asserting of the need to embrace new ways of investigating and knowing these underground spaces; including work on embodiment, senses and the use of practice based and creative methods. Exploration of how these methods have been used in the study of caves will be followed up in the next section.

2. Caves

In this second section of the literature and exhibition review I will shift the focus to scholarship and practice attending specifically to caves, looking across contemporary thinking in geography and art. It is important to state here that I am only attempting to review a very small and contemporary response to literature and exhibitions; this is a sample of the most recent set of intersections between art and caves, I am not attempting to survey the history of cave art or, for example the appearance of caves in religious art, although contemporary scholars exploring these histories have greatly informed this thesis, for example the works of David Lewis-Williams (2002), Veronica Della Dora (2016) and Christopher Tilley (2004).

What follows therefore, is a review of recent literature that tracks ways in which caves have been interpreted in both disciplines through the lens of a broad range of themes, from speleology and spelunking (Bosworth 2016, 2019; Cant 2003, 2006; Pérez 2013, 2016) to the biology of cave environments and study of troglodytes (Brennan 2018), the mythological, spiritual and metaphorical (Hawkins 2019; Della Dora 2016; Hamilton Helle Helle 2016;

Rivers 2020) to analysis of cave art as a vehicle for talking about human life and ‘geologic life’ in the Anthropocene (Yusoff 2013; Lewis-Williams 2002; Della Dora 2016; Tilley 2004; Herzog 2010). From these intersecting areas I want to draw out some key themes that I find compelling, namely; caves and embodiment, darkness and the unknown and caves and interdisciplinarity. In interrogating these groupings of literature and exhibitions I aim to frame the areas of scholarship that I hope to contribute to.

2A. Caves and Embodiment

This section of writing looks towards articles and art works that explore the relations between the body and the cave; how caves are defined in terms of the body (Crane and Fletcher 2015), geographies of cavers and caving clubs (Pérez 2016; Cant 2003, 2006) and geofeminist thought that explores permeability of human / non-human matter in the cave (Bosworth 2017, 2020; Yusoff 2013; 2015). I will also think through recent engagement with the cave in selected immersive artworks (Libita Clayton 2019; Hamilton Helle and Patrick Brady 2016, Open School East with Benedict Drew 2017, Ben Rivers 2020).

A concise definition of cave spaces forms the introduction to the Earth Series book titled ‘Cave’ (Crane and Fletcher 2015). The book explores the cave in relation to the human body and the human experience: A cave is a hollow large enough to permit or admit human entry (Palmer 2007). But the amount of the underground terrain humans have explored is so very limited (the deepest we have gone is the Kola Borehole in the Russian Arctic, which reaches 12.25km deep (Ganchin et al 1998) and a definition and claim to an understanding of these

spaces that are ‘measureless to man’ on human terms alone, seems insufficient (Coleridge 1909, quoted by Lewis Williams 2002:146) Bosworth (2020) argues that geography has, so far, positioned the human at the centre of caves and caving; the experience of tourism, mapping, referencing the work of Sarah Cant, (2006) Maria Pérez (2015) Jess Edwards (2017) What Bosworth proposes is a ‘new environmentalism’; that being in caves is a way of extending knowledge and generating a new approach to environmentalism (2020). Similarly, Hawkins proposes that underground exploration presents a so far overlooked resource; the imaginative force (2020). Bosworth (2020) and Hawkins suggest speculative conditions in which caves and caving, as a way of thinking, can present new approaches to knowledge making and contribute to new approaches in the tackling of the climate crisis. Hawkins says that undergrounds can generate transdisciplinary methods, which harness the imaginary forces and disruptive deep pasts, presents and futures at play in the underground (2020) and Bosworth says that:

‘caving might generate a novel environmental politics that flows beyond the activity of caving itself. I argue that the cramped, holey space of the cave offers what Jodi Dean (2016) has called an anamorphic environmental politics by showing us the incomplete construction of our own subject position and offering that gap or wound as the condition of possibility for political opposition to extractive industries’ (Bosworth 2020:49)

In order to understand how we can think with caves, it is important to gain an understanding of the groups that know them the best; caving clubs. In his writing about Jewel Cave and

Wind Cave in South Dakota Bosworth describes the cavers as having ‘an excitement and reverence for exploration’ (2020:9). Among much of the material on encounters with cavers, there is a resounding and perpetual sense of wonder about the cave environment, according to Crane and Fletcher, the study of caves is best ‘approached as a holistic pursuit of knowledge and understanding, which is kept alive as much by imagination and wonder as it is by the objective hunt for facts about the earth (2015:43).

The captivating experience of being in caves is foregrounded by Pérez in the ‘Yearnings for Guarcharo’ in which explorations of the cave in Venezuela in the 1950’s and 60’s become deeply embedded within the lives of the cavers and in which Pérez examines attachments with or ‘yearnings’ for these extraordinary places. (Pérez 2016; Cant 2006) outlines the emergence of caving as a leisure pursuit in Britain towards the end of the 19th Century (almost exclusively male). In an earlier paper Cant (2003), explores the magnetism of the pursuit of caving for cavers and quotes David Heap (1964:22) who explains the adventure of caving stands for ‘danger, fear, romance, curiosity, physical exaltation’. Recounting the narratives of cavers who tell stories of extreme environments and of masculine ‘heroics over nature’ (1964:68) The study reveals another caving paradox; disrupting the ‘toughness’ of the cavers is an intimacy with place that echoes the relationships with the caves described by Pérez: ‘closely acquainted, familiar, secret, innermost, deep.’ (2016)

Pérez in her study of cavers, calls for a deeper examination of how we create attachments to places that are not the sites of everyday engagement, and how analysis and experience of these places calls for a broader conception of materiality and temporality: The presence of

absence (2016). The ‘yearning’ for caves are one of many descriptions across scholarship looking at caves and caving that draws attention to the way in which the cave stays in the mind after the body has resurfaced; the experience has the power to preoccupy the caver until they are back in the cave (Lewis-Williams 2002; Crane and Fletcher 2015). The cave remains in and becomes entangled with, the imagination (Hawkins 2019) This entanglement is emphasised in the work of Kathryn Yusoff who asks us to consider the mineralogical dimension of the human and therefore a deep geological knowing that might enable to human to become a geomorphic agent in the Anthropocene (Yusoff 2015) . Yusoff uses the cave and geologic as a site for speculative thinking of deep time and future imaginaries of ‘geologic life within the Anthropocene’ (2013:779). In her paper about underground imaginations, Hawkins make the point that the underground has long been a site of rich encounters with lively matters and deep time though ‘account of sublime caves and caverns, as well as more recent ‘aesthetic geologies’ such as MacFarlane’s journeying into the deep time of multiple underlands’ (2020:27). Yusoff’s geo-philosophical thinking presents the body in the geologic, as the geologic and as impactful and in debt to the geologic. Consideration of the elemental has been extended by recent scholarship in geo-philosophy Bosworth argues that feminist geo-philosophy moves towards the ‘excess and untimeliness’ of the non human and away from ‘bounded human-sized objects and timescales’. This position, then, considers not only the immediate elemental entanglement with the body but thinks beyond the human encounter and into timescales and materialities that exceed the human. Bosworth goes on to propose that the permeability of the geologic might provoke thinking further towards an understanding of a ‘shared, inhuman geological matrix that forms the substratum of political objectives’ (2016:1) In his writing Bosworth explores the potential

of the exploration of caves and the underground – of being within the matter of the earth- as a way of knowledge making and as a way of re-understanding our extractive, indebted (Yusoff 2013:781) destructive relationship with the earth underfoot. Across writing by Bosworth, Hawkins and Yusoff, caving and being within a cave presents an opportunity to understand the geo within the body; the body as geologic. I have used this geo-feminist literature to help me to situate my practiced based research in geography; I have found that key considerations in the way that I make artwork align with the descriptions of touch, embodiment and thinking through ‘geologic life’ (Yusoff 2013).

The immersive experience of the underground is taken on by artist Libita Clayton in her work exploring extraction from the sacred sites: ‘Quantum Ghost’ (Shown at Gasworks and Spike Island in 2019). Clayton brought together sound, performance and photograms in an immersive, low-lit, cave-like installation in which archives and personal histories are unearthed. ‘her work examines the raw materials at the core of capitalist extraction, revealing how the echoes of colonialism and diasporic migration reverberate through the deep-time of geology and across the ruined landscapes of the Anthropocene’ (Clayton 2019). Literal and conceptual study of caves has also been used by artist and curator Una Hamilton Helle as a backdrop for a rethinking of societal infrastructure and consensus. Parallels between the labyrinthine passages of the subterranean and twisting and turning social framework form the basis for her collaborative LARP work with Francis Patrick Brady. A LARP (Live Action Role Play) is an inherently embodied medium in which players improvise within set parameters (Stenros and Montola 2010). In ‘Katabasis’ the underground is a backdrop for rethinking communications and reimagining histories and heritage (2016). The work starts

with a restaging of Plato's Cave. During the LARP the contributors immerse themselves into a mutual agreement of suspension of reality and an exchange for a new subterranean reality.

In her 2019 paper titled 'Underground Imaginations, Environmental Crisis and Subterranean Cultural Geographies', Harriet Hawkins describes three encounters with underground sites that Hawkins and I have investigated collaboratively. In the first of these, Hawkins discusses the 'Artificial Cave', a training apparatus hired from the British Caving Association as part of the Arts Council Funded Project 'Swallet' (2016). The 'cave' consists of a series of fibreglass tubes that bolt together in various configurations:

'As we explored and continually re-made our artificial caves, we tended to frame our reflections through what was lacking. As we slithered and grubbed our way through the beige plastic of our geologic forms we observed how whilst sometimes tight, and even a little panic inducing, it felt safe, it felt known, it was nothing, we agreed, like caving. Yet, in the imaginative space opened up between our caving in the Mendips and this artificial cave, what emerged was less a paucity of sensory experiences and rather a more attuned awareness of the geologies we had been exploring within then, and now, their differences, but also their similarities' (Hawkins 2019:8).

The Artificial Cave became an imaginative prompt, the cave as a space of imaginary potential will be extended further on in this review. In 2017, Open School East (an experimental and collaborative art school based in Margate) also used the Artificial Cave and took the Margate caves and tunnels as a starting point for the collaborative project titled 'Spelunking' led by

artist Benedict Drew. The ‘chapters’ (events) touched on themes including orifices, burial, silence and culminated in a video work using the British Caving Association artificial cave which arrives in large fibre glass sections and was the focus of an event at David Roberts Foundation in 2016 (Swallet, Flora Parrott).

The physical and sensory constraint of the cave can play ‘tricks’ on the body’ (Cant 2003:71) The enfolding within a landscape but not experiencing it visually requires a complex rereading of the body in place. John Wylie writes in on ‘Depths and Folds’ (2004) that ‘landscape’ not as something seen or as a way of seeing but rather as a name for the materialities and sensibilities with which we see. How does this apply in the cracks of earth, with a profound sense of the vastness and depth of the landscape that you are within but an inability to see much more than a meter ahead? It does not ‘recede into depth’, and when the headlamps are turned out there is an overwhelming sense of being in nothing, you have to know or believe that you are still in the cave. It can also mean that the experience of the cave exists with the experience of the darkness, a vast space opening out within the tight cracks in the rock (Della Dora 2016). Ash and Simpson offer an explanation of the way in which geography aligns with post-phenomenological philosophies. Post phenomenology centres the body but also places emphasis on material vibrancy (Ash and Simpson 2014; Bennett 2009), rather than a subject –object relationship, post phenomenology proposes non human forces and inter-subjectivity (Idhe 2003; Ash and Simpson 2014): A dynamic field in which the focus is on the relation themselves (Nancy 2000). This leads to a discussion from within the rock; deep dark and entangled, into a territory in which sitting with the unknown and the imaginary have to be considered as ways of knowledge making.

2B. The Imaginary Cave

Imagining the cave: For so many, the underworld instils a sense of fear and foreboding, who are the people that find caves compelling? What is it that draws them downwards, a ‘yearning’ (Pérez 2016) or a ‘tug’ (Cant 2003) to the underground? Most interestingly perhaps, how it is that the caver is able to explore karst networks in the knowledge that they will never get to the bottom of them, neither conceptually nor literally. However, although compelling to the caver, the cave presents a deeply unfamiliar and uncomfortable imaginary for many (Pearson 2018; MacFarlane 2019). Hawkins draws on the writing of Rosalind Williams (2008) in her description of a ‘decentring of the underground from our imaginations in the 20th Century’ (Hawkins 2020:1) and a shift towards the upwards, vertical gaze. This erasure from the imaginary of the subterranean has perhaps compounded the sense of unease that a cave space can provoke in contemporary western culture. The underground as a rich source of cultural imagination is further reinforced through reading of Bridge (2013) who references both classical mythologies and contemporary online games that employ the descent to the underground as a portal through which anything is possible; Crane and Fletcher go so far as to claim that ‘more than any other single landscape feature, caves play a significant role in mythologies and folklores from around the globe’ (2015:90). Caving expert and literary scholar, Frank Pearson offers insights into the reactions that caving can provoke. In his thesis, Pearson tracks journeys of decent and the influence of the exploration of the underground on the imagination of writers in the 18th Century, Frank Pearson writes;

‘Visitors to caves cannot be indifferent to the vertiginous darkness of these cracks

in the earth's surface and the apparent lifelessness of the enclosed space; they can be either repelled by the thought of crossing the subterranean threshold or equally, compelled by curiosity to enter and explore it' (Pearson 2018:9).

Here, I want to take a moment to refer back to Ryan Bishop and the description of the perceptive shift away from the flat in geopolitical thinking looking towards the 'invisible underground' as a space in which there is a 'deeply connected relationship between the imaginary and the material' (2011: 277). The underground cave is a site in which many have explored this relationship; the cave was central to the architecture of the imagination until the end of the 18th Century (Pearson 2018), representing the 'dark spots in the human psyche, both for the individual and collectively' (Crane and Fletcher 2015). Origin stories often emerge from caves and so in them fact and fiction become entangled (Yusoff 2016, MacFarlane 2019). The underground for many presents an imaginary of a 'space essentially associated with danger, risk, undermining and subterfuge' (Elden 2013). 'Going low' is counter intuitive (MacFarlane 2013, 2019) but paradoxically, the underground is still a place that people turn to in moments of threat (Hawkins 2019; Bridge 2013; Garrett 2020). It presents a space that both instils fear and offers sanctuary. This conflicting position in our psyche as a site of both threat and sanctuary presents openings that are yet to be understood, and in this lack of clarity and conflicting imaginations lies possibility (Hawkins 2019; Bosworth 2020).

In his 2020 film, artist Ben Rivers uses Wookey Hole in Somerset as a landscape with which to generate a narrative of an otherworldly future subterranean world in which few

species have evolved to survive. The possibilities presented when filming in the cavernous underground passages allows Rivers to imagine a future dramatically different from the present. The underground, for most, presents an alien space distant from surface ‘lifeworlds’ (Ash and Simpson 2014). To go deep into a cave is a jolt, a major conceptual disruption of our everyday experience (Greenlaw 2019) and within this rupture of our ‘lifeworlds’ is an opportunity to rethink and reimagine (Hawkins 2019). As caver and scholar Frank Pearson says: ‘Caves are as much a product of the imagination as they are of natural processes’ (Pearson 2018:2). To try to fathom the scale and conditions of the underground requires a rethinking of surface and upward rubrics. The unreachable and un-relatable gap deep underground that according to Bosworth proposes an ‘ecology of separation’ and a foundation on which to ‘articulate differences’ (2017), to sit with and explore these differences is the challenge set by the underground.

The cave and the cave network offer a framework within which to acknowledge the unseen, the unending and the unknown (Crane and Fletcher 2015; Hawkins 2020). Projects that aim to map and make transparent repeat colonial pasts of conquering and ownership: Unearthing, making visible the underground and shafting the earth will make it subservient and open to territorial struggle and commerce (Yusoff 2017; Hawkins 2019; Bishop 2011; Bridge 2013). Braun (2000) uses the ‘emerging discourse of ‘geology’ in the early 1800s’ in Canada to explore notions of governing of nature and ways in which the state devises methods by which ‘to compel inhabitants to optimize the use of the state’s territory’ resulting in new instruments and practices and enabling ‘landscapes to be visible in new ways (bringing into view the ‘verticality’ of the state’s territory)’ (Braun 2000:18). What Braun’s study draws to our

attention is that by bringing the underground into public consciousness, one does not change the underground, only our ability to recognize it.

Pérez describes a specific experience of mapping Venezuela's Cave environment (2013), as already discussed, she outlines the evasive nature of the underground and the difficulties that accurately mapping caves presents. For Pérez, the only way to map these spaces is to be within them, experiencing the shifting spaces and sitting with the endlessness of them; physically 'pushing passages' is the only way that humans can 'know' these landscapes; not only this but cavers work with 'no obvious end in sight' (Pérez 2013:294), an endless sitting with the incomplete. The caver can excavate tunnels for years to find dead ends, cracks too small for human form, cracks that go on and on and remain un-explorable. Sitting with the unknowable: Bosworth uses the setting of a cave network in Wind and Jewel Cave in South Dakota to propose a 'politics based on non-knowledge' (2020:2) or as Della Dora states in her study of the Byzantium: 'caves were metaphors only in the negative sense of language events; half of their content was to be found in what they did not say' (2016:202).

Pérez describes mapping caves as an emergent practice; as a 'process and emergence in a method that is relevant to both representation and experience' (Pérez 2013: 294). Unlike the mountain summit, the bottom of a cave is unreachable, the terrain can never be conquered (Cant 2003:71; Della Dora 2016) and therefore the focus shifts to the doing of it, the endless 'pushing'. For Hawkins the incomplete underground represents space for 'much needed new imaginations' (2019:1) and these would take place against a picture of instability, of cracks and gaps and voids, not the 'terra firma' on which territorial thinking is based. The idea of

literally and conceptually ‘ungrounding’ or an ungraspable territory is explored through the tracing of an appearing and disappearing land mass, an ‘ephemeral volcanic island’ named Ferdinandea. In doing so Hawkins harnessing the potential of the aesthetics of the subterranean to expose the drive to calculate the incalculable (2018) Gabrys and Yusoff also use a moving island ‘to signal and account for the deep orders of time that erode the possibilities of the permanence of site, and also the metaphoric qualities of how matter works on mind’ (2006). This study of Robert Smithson’s floating island sculptural work reminds us of the constant flux and flow of the continents and the ground underfoot which can lodge itself into a state of permanence in our psyche. In the case of both islands, the apparently solid falls short, instead we find uncertain and unmappable ground under foot.

What this scholarship points towards is a downwards looking and an exploration of the subterranean demands acknowledgement of how little we know about the ground underfoot; the spaces underneath the surface. Furthermore to examine the ways in which we ‘know’ and recognise the opportunity that the underground presents as a space in which to reimagine our modes of knowledge making. As Ryan Bishop says: ‘The backside of the image of aerial surveillance of the globe, the ground of the image, is the underground: the dark depths of unstable terra firma’ (2011:276).

To return more specifically to the cave; Irigaray famously used the cave as a space of deconstruction in ‘Dialogues’ (1985) searching for the presence of a female voice in the depths of Plato’s Cave. In her examination of ‘Dialogues’ in relation to the performance of Beckett’s ‘Not I’ (1973) Lay-Pettifer look at ‘parallel concerns of both Irigaray’s writing

and the movement of *Not I* in discussion of the connection of the female voice to notions of the body and disembodiment and to the creation or location of a radically other female subjectivity' (2012 unpaginated). Lay-Pettifer, like Hawkins, recognises the cave and the thinking that it introduces as a space of 'opening up ' and a space of possibility of discourse'.

'There is the possibility then of another kind of presence as yet undefined in this realm of opening - the possibility of another kind of speech, previously muffled and muted, partially concealed and emanating from a specific body whose lips, as Irigaray describes *speak together*.' (Lay- Pettifer 2012 unpaginated)

In a section of writing by Hawkins in a collaboratively written chapter titled 'Six Voids' (Parrott and Hawkins 2020) she explores Irigaray's 'morphological rereading' of Plato's Cave 'most masculine of cave tales' (2020:97) as an example of the privileging of knowledge forms; the dark and embodied being abandoned for the bright light. Hawkins goes on though, to reference Usinova's perspective on the cave in the Ancient Greek mind (2009) which foregrounds stories of the descent as a route to knowledge and divine truth. Hawkins highlights the paradox of the cave 'to think with caves or within caves is to be required to play with questions of knowing' (Parrott and Hawkins 2020).

Paradox, touch and the body are at the centre of Irigaray's thinking of the imaginary space of Plato's Cave, reorganizing and interpreting the architecture and emphasis is a way in which to disorientate and destabilise the allegory. Irigaray's rereading of the story presents us with post patriarchal possibilities. The blindness of the body of the cave not as ignorance to be escaped

but as a non linear knowledge, a knowledge that requires different types of understanding.

To think through the idea of the cave as a paradox further, I will turn back to an earlier observation in literature about caves; the paradox of a site used as both a point of fear and of refuge or sanctuary, the deep darkness of the cave, as with the unseen darkness of our internal body, also sits in this dichotomy (Nancy 2000). Della Dora describes the ‘impenetrable darkness of the cave’ in the introduction to her book about the Byzantium Landscape. The Cave is the chosen site for withdrawal and meditation, the book more broadly asks the reader to shift away from ‘the linear time of history to the cyclical time of the sacred- the time of eternal returns’ (2016:29). Della Dora explores the idea of wilderness in relation to holiness, in that both evoke ideas of separation from the ordinary against which they are defined (2016:118). Caves are both wild and holy or sacred, as different from the surface and as an unfathomable space for deep reflection and questioning. The Byzantium landscape presents the mountain and cave as poles apart: Total vision versus total lack of vision but the cave is innately paradoxical and in this place with no vision, visions of another sort are revealed. “visual prescience conceals spiritual absence; visual absence invites divine presence” (2016:176 -177). The profound darkness of the cave, paradoxically provides the setting for different types of vision and seeing.

Once experienced, the darkness of the cave sits within the body and unfolds itself into darkness wherever it is found. This experience of darkness is a reflection of the ‘Cave in the Mind’, the title of a book by David Lewis-Williams (2002) in which he explores the origins of human consciousness and image making through examination of cave art and environment

in Paleolithic cave art of Western Europe: The physical chambers of the cave and their significance in the formation of thoughts for their inhabitants. In my own encounters with cavers, as well as within the literature within this review, there is a sense that for a caver, thinking and experiencing become synonymous with particular caves (Pérez 2013, 2016; Cant 2003, 2006) . Opening and exploring a cave chamber becomes an opening of a thought and the two are then inextricably linked. Lavinia Greenlaw describes reopening of a ‘cave in the mind’ in her experience of being in a ‘cave that was a cinema watching a film about a cave that was a cinema’. reminiscent of the Magritte painting ‘La Condition Humain’ (1933) in which a canvas of a cave sits within the cave within the painting (Greenlaw 2019; Parrott and Hawkins Voids 2020). The cinema draws Greenlaw back to experiences of cave-darkness experienced in Slovenia and to reflections on darkness as a playful state of emptiness and the remnants of light that temporarily occupy darkness; dark light or visual noise.

The constraint and deprivation of some of the senses in a cave can heighten the experience of other sensory experiences (Bosworth 2017; Cant 2003, 2006; Della Dora 2016; Lewis Williams 2002). Sitting deep within a cave requires submitting to the uncontrollable darkness of the underground (only a headlamp to keep you from a visual abyss). Della Dora describes the experiences of Christian hermits who found the caves to be a space in which one could understand the importance of ‘being emptied’ (Lane 1998:166) in the caves understood ‘how well these habitats teach’ (2016:194).

2C. Caves and Darkness

MacFarlane describes looking down into a kind of mute darkness in his account of Hollow Land ‘The mouth of the chasm says nothing. The trees say nothing. Leaning over the edge of the sinkhole, I can see only darkness beneath me’ (2019:215). Crane and Fletcher describe the darkness of the cave ‘a darkness that is darker than any darkness humans normally encounter, a darkness to which our eyes cannot acclimate no matter how long one waits’ (2015:55).

When it comes to the deep darkness of a cave, it seems that we find it difficult to describe the extreme degree of unfamiliar and profound darkness with which we are presented.

Outside of the cave, Cultural Geographers have studied the darkness and our experiences of it (Della Dora 2011; Williams 2008). This writing, most notably by Edensor (2015) has informed the thesis; I have used this literature to help me to situate my experiences of darkness in the context of the research in both caves and at the darkness retreat. Darkness itself, like the underground, draws thought to creationist myth; a place from which something emerges; ‘All cosmologies begin in a formless darkness - a void from which creation appears, this definition of darkness remained the status quo for centuries’ (Elcott 2016). Darkness, as with the cave, is both a space of fear and refuge, Edensor describes the role of darkness in the escape from Imperial power (2017: 561). Darkness is also considered to be a subordinate state, a less-than-light, (Edensor 2015) or a state synonymous with ignorance (Crane and Fletcher 2015).

According to the 1977 essay ‘In Praise of Shadows’ written by Tanizaki, our experience of

darkness in contemporary Western culture is constructed; we are detached from the natural rise and fall of the dark and understand it only through experiences like the one in the darkness of the cinema described in Greenlaw's account. Elcott (2016) tracks the history of constructed and controlled darkness, artificial darkness, in the history of modern art, theatre and cinema. The book gives examples of shifting perceptions of the possibilities of darkness and the accompanying technologies that enable the increasing control of darkness within constructed environments. This constructed darkness can be illuminated at the flip of a switch and once visible, space can be organised and controlled. The underground still represents a space that resists technologically advanced mapping techniques (MacFarlane 2020; Pérez 2013). Della Dora (689:2013) looks to the work of Denis Cosgrove and others to examine the emphasis on 'geometry and measurement in mapping culture'. Which contributed to linear perspectives The spherical globe being 'reduced to a set of geometrical points', she states that 'linear perspective has often been considered a characteristic of, if not a metaphor for modernity' Della Dora notes the contemporary shift towards the nonlinear in geography, there has also been increasing traction around spatial concepts 'able to transcend the dichotomies of modernity' (690:2013).

Our relationship to darkness in contemporary culture much like the underground, has shifted from a central role in our experiences to a peripheral one in which darkness can be avoided and ignored. And much like caves, there is very little study of darkness in geography (Edensor 2015) 'it is difficult to imagine the pervasive darkness that formerly saturated most space after nightfall' but darkness presents a rich opportunity as a state in which to rethink our contemporary experience of material and space 'those who customarily navigated

through dark space could locate themselves by sound and smell, and an enhanced tactile sense allowed distinctive surfaces and gradients to become recognizable' (Edensor 2015:563) in this sense, once one becomes accustomed to navigating without vision, the dark cave is anything but 'data depleted darkness' (MacFarlane 2013) offering instead an opening for new ways of knowledge making (Hawkins 2020) and an opportunity - the literal and metaphorical crack - from which new types of activism can emerge (Bosworth 2019).

What I am going to do now is return to the technique of using a description of an artwork as a way to situate my understanding of studies of darkness back into practice. When reading about darkness I found myself returning time and again to a memory of visiting 'How It Is' by Mirosław Balka, 2009. The work is named after Beckett's 1961 novel in which the lead character Pim journeys into mud-dark. Balka installed a vast container into the Turbine Hall in Tate Modern, London. To walk into the entrance of the container was to transition from the light and reality into the deep dark, unseeing and velvety unknown. The work is built from layers of references and meaning, amongst the pages of the catalogue listing Malevich, black holes and significantly open graves and burial sites from Poland in the Second World War; one also finds numerous caves: Fingal's Cave, Lascaux, Carlsbad Caverns, Plato's Cave, Grotto of Pausilippo and the Ice Grotto of Surtshellir.

This is an example of an art work made with caves rather than about them. Caves played a central role in the thinking, imagining and experiencing of the work but are not literally represented in the work. The experience of being in the structure within the structure of the Turbine Hall felt like entering a void, like being within the gap. The darkness is the profound

darkness of the underground, Hernkenoff (2009) says of the work that 'darkness is Balka's language for what has been silenced or 'ill-heard'. It is a cut in reality. It acts as the vibrant signifier of the unsayable, of the socially obliterated, of what has been placed under a process of visual disappearance, of what lacks language' (2009:52).

To be in this artwork was to lose the edges of one's own form, to be aware of one's own interior and fragile mortality. This was a space both contained (or bound) and vastly open ended. Being in that dark space was a feeling of utter isolation whilst still self consciously aware of being alongside others; like a tourist in a show cave. 'How It Is' was a paradoxical experience of darkness, absolutely constructed but deeply evocative nonetheless. To cross the threshold into this installation, is to negotiate the moment of being outside looking in and move into the inside looking out (Sainsbury 2009), as with the work of Neushwander, 'How It Is', draws attention to the interior of one's own form, but here we are contained in a literal container, a cave in the middle of the Tate. Being in the dark in the most public of spaces makes edges feel as though they have dissolved: 'In darkness the body loses any representational property; you are darkness or the void in you. You are the hole' (Hernkenhoff 2009). This is an artwork that I return to when I think about what it is to 'think with caves'; it is not a literal representation of a cave or a rock formation but it draws upon the experiences of the underground and the material encounters, permeability and non fixity that one finds there. In this blurred state of the cave, disciplinary boundaries become less fixed, the cave is a space that requires us to think and work in new and collaborative ways.

2D. Caves and Interdisciplinarity

Why is it, with an interest for such a range of disciplines, that caves are understudied?

Despite the imaginary space these underground crevices occupy, they have been critically neglected (Pearson 2018). Until recently, the underground has been relatively ignored (Squire and Dodds, 2019) by contrast Hawkins argues that in contemporary scholarship a ‘new wave of going underground is beginning to swell’ (Hawkins 2020). Interdisciplinarity has been at the centre of the study of caves since Speleological records began in Western culture. Caves have consistently presented disciplinary confusion, they have proven difficult to define and classify and so inherently an interdisciplinary field: The study of caves has required new contentious and collaborative approaches (Cant 2005; Hawkins 2019; Kuklick and Kohler 1996), Pérez 2016). The cave as a site for interdisciplinary study is foregrounded in the work of Sarah Cant. Cant (2003, 2005) tracks the history of British Speleology between 1935 and 1953 and the formation of the British Speleological Society and the personalities and politics at play (2005). As Cant describes, Speleology gained a contested status as a ‘sporting-science’, the connotation being a sub or less than pure scientific pursuit. This was in part because of laboratory work and the inconsistencies of working on site within the uncontrolled cave environments (Kuklick and Kohler 1996) but as Cant observes, the ‘practice of caving’ is by its very nature a site specific and embodied research. Speleology is ‘a science defined by a natural site, not an exclusive set of scientific practices.’ Speleology required an ‘overlapping’ of disciplines including ‘geomorphology, geology, biology, geography and exploration, together with history, and focusing them on caves best represents speleology’ (2005:780; Shaw 1900).

Crane and Fletcher offer us a comprehensive survey of the scientific and cultural exploration of caves, and especially their 'symbolic roles' in human imagination (2015). The book succinctly moves through the study of cave painting, cave flora and fauna, tourism and mythology. The chapter called 'Speaking of Speleology' documents the emergence of the western study of Speleology in the mid to late 19th Century as a multidisciplinary intersection. The study of caves much precedes this era but Crane and Fletcher suggest that the forming of the 'collective identity for cave scientists' was marked by the publishing of William Boyd Dawkins's *Cave Hunting: Researches on the Evidence of Caves Respecting the Early Inhabitants of Europe* in 1874. What is made clear in the review of material by Crane and Fletcher is the broad range of lenses through which caves have been interpreted. This breadth and interdisciplinarity is extended in artistic investigations of caves and underground; projects draw on a number of mediums and disciplines in order to attempt engagement with a subject that is inherently open ended and slippery (See Jaramillo 2016; Parrott 2015, 2016, 2017, 2018, 2019; McCausland 2015; Rosling 2018; Hamilton Helle and Patrick Brady 2016; Clayton 2019; Fusco 2015).

Conclusion

This review has drawn on a wide range of material, reflecting the way in which the underground and specifically, the cave is a site of intersection for multiple themes and disciplines. Collating this literature has helped me to not only situate the written part of the thesis in geographic thinking but also to articulate ways in which practice and the immersive

and sensed way in which one might experience an artwork can be related progressive ways of knowing the underground and to the cave specifically.

Through their complex, difficult and evasive nature, caves require us to think differently; to study and make knowledge in unfamiliar and often collaborative ways.

As the literature and exhibitions have shown, we can never come to any fixed conclusion in our study of caves and what is unknown is as present as what has been discovered.

These exhibitions and bodies of literature have informed my understanding of the cave through the three key themes of permeability, non fixity and material encounter, the underground is increasingly a site to which scholars and artists are looking in order to understand the interconnection between the body and matter, to visualise deep pasts and imagine speculative futures; and to think through the constantly shifting and dynamic nature of our engagements with space.



Fig. 4. The Famous Goldfish that lives in the pool of water in Cathedral Cave, it is not known how it got there. 2018

Methodology

Introduction

By way of introduction to the methodological approach to this thesis, I would like to describe the series of visual arts projects exploring underground caves that led up to my proposal for a practice based PhD in the Geography Department at Royal Holloway University, London. Since 2010 I have been working on interdisciplinary projects concerned with experience of landscape. In 2013 I received a grant to travel to Brazil to visit the PETAR cave network and to study the work of Neo-Concretist artists, in particular Lygia Clark (1920-1988). I had been interested in caves and caving since visiting Sudwala Caves in South Africa in 2009 but caves did not feature directly in the work until this trip to Brazil. The proposal was to physically find the cave entrance that had appeared in my web browser when searching with keywords. The idea was that in doing so, I would establish some clear distinctions between real and virtual spaces (how this thesis defines these terms will be outlined in the section of this methodology titled 'Fieldwork Sites'). The result of the trip was much more confused than I had anticipated, once I entered into the darkness of the cave, ideas of the real and the virtual became blurred and even more difficult to distinguish from one another than before I had entered the cave. The project resulted in a publication and exhibition of sculptural works titled 'Fixed Position' in both London and Brazil. Following on from 'Fixed Position', I received Arts Council Funding for a residency at the Royal Geographical Society (RGS-IBG) in 2016. The aim of the residency was to search the archives for accounts of caving. These accounts gave me a metaphorical framework in which to explore ideas of lost-ness,

value and modes of navigation in artistic practice. The project was extended into a research group made up of artists and geographers including Professor Harriet Hawkins. The resulting series of workshops and publication titled 'Swallet' looked at types of knowledge making in studio practice and in particular tacit knowledge (Polyani 1966). The project was comprised of three events; a caving trip to the Mendips in which guide Alan Gray took the group into a little explored cave named Shute Shelve Cavern; a day working together at the David Roberts Foundation (at its then North London location) constructing an artificial cave on loan from the British Caving Association; and finally a trip to the Royal Geographical Society archives for a tour of the collection. These events became the basis for a publication published by Camberwell Press. 'Swallet' was also the basis for a successful Leverhulme Artist in residence proposal for a project within the Geography Department at Royal Holloway University, London in 2017. The residency used Gully Cave as a focal point, Gully Cave is a site of excavation in Ebbor Gorge, South West England, it has been a central part of Professor Danielle Schreve's (Professor of Quaternary Science, Centre for Quaternary Research) research since 2006. The Leverhulme residency involved working across the three research groups within the department (Geopolitics, Development, Security and Justice Research Group; Social, Cultural and Historical Geography Research Group; Centre for Quaternary Research) and finding within them geographers across the department for whom the themes of the project resonated with their own research. The culmination of the project was an interdisciplinary event titled 'These Pits and Abysses' at the CLF Arts Cafe, London.



Fig. 5. Detail of the Installation 'Fixed Position' at Atelier Fidalga, Brazil 2015.



Fig. 6. Detail of photograph of the group of participants in Arts Council Funded 'Swallet', caving expedition in the Mendips, 2016

Through working in the geography department at Royal Holloway University, London firstly, during the Leverhulme residency and then subsequently moving into PhD research, I was introduced to a burgeoning creative methods research culture in the geographic discipline. Over the last decade there has been a marked leaning towards the study of and experimentation with the 'creative' in geography (Crang 2010; Hawkins 2011; Last 2014; Madge 2014; Marston and De Leeuw 2013). As Hawkins marks out in the paper 'Geography's Creative (Re)Turn - Towards a Critical Framework' the Creative Return has

seen not only geographers becoming ‘makers and collaborators’ but has also meant creative practitioners entering into geography departments to undertake residencies and PhD projects (Hawkins 2018). The breadth of experimentation undertaken by geographers independently and in collaboration with creative practitioners is wide and ever expanding. In an article in which she reflects on the use of medium in creative methods Hawkins (2021) notes creative practices as geographical research methods that include ‘drawing, dancing, theater-making, singing and music-making, neon lighting and geo-graphics’ (2021:1). Hawkins goes on to observe that creative research methods are also reflected in research outputs, with work of geographers ‘finding form as exhibitions, poetry books, live art, walking tours, plays.’ (2021:1)

Although creative methods share many similar concerns and processes with practice based research, there also some important distinctions. What follows is a brief summary of these two ways of working; I will describe how I perceive them to intersect and to differ, here I aim to give a sense of the broader context in which my practice based research is situated in geography. In thinking through the meeting points of my particular practice based methods with creative methods, I found the analysis of Linda Candy and Ernest Edmonds to be very insightful. In ‘Practice-Based Research in the Creative Arts: Foundations and Futures from the Front Line’ (2018) Candy and Edmonds give their definitions of practice based research and practice led research:

‘If a creative artifact is the basis of the contribution to knowledge, the research is practice-

based. If the research leads primarily to new understandings about practice, it is practice-led' (2018: 64)

Although these definitions are potentially limiting, I find them to be useful in the methodological mapping of this particular research project. In geography, creative methods and practice based research share much common ground. My project has benefited enormously from the receptive space that experimentation with creative geographies provides. I have been inspired by the works of geographers who explore creative methods, who think through embodiment, who explore creative ways of knowing and sensing their surroundings. Some key examples of scholars that have influenced this research are Harriet Hawkins, John Wylie, Maria Pérez , Rachael Squire, Kathryn Yusoff and Kai Bosworth. Wylie makes a useful observation about the role that drawing plays in his practice led engagement with landscape, in collaboration with artist Catrin Webster; the drawings are focal points for 'conceptual writing and reflection' (2018:34), Wylie states that:

'The intention here was never to "become" a painter in the sense of acquiring a professional level of proficiency. Our collaboration was experimental in the basic sense that I tried out some key plein air mediums (specifically watercolour, ink and charcoal drawing). But at the same time, I did come to this work with proficiencies and interests of my own; with almost 20 years' experience of academic research on landscape' (Wylie and Webster 2018).

Here the focus is not on the drawings as outcomes in themselves but on how the process of drawing informs written scholarship on landscape. This is an example of the type of

important work in creative methods, leading to new ways of thinking about disciplinary methodologies and practice. This approach aligns with the Candy and Edmonds definitions of practice led research (2018). Intertwined with the development of creative methods in the geography department at Royal Holloway, there has been an increasing number of practice based PhDs in recent years (Hawkins 2018). Definitions of practice based research can be elusive and the methods and outputs diverse. It is perhaps because of this diversity that practice based is a ‘research approach that has yet to reach a settled status in terms of its definition and discourse despite its presence in academic contexts for over 35 years’ (Candy and Edmonds 2018:63).

When I turn to my own discipline, Fine Art, in order to think through how my particular arts practice might sit within academic scholarship I looked towards two practice based PhD projects that I admire, that of artists Elizabeth Price named ‘Sidekick’ completed in 1999, and Katrina Palmer’s thesis titled ‘Reality Flickers: Writing of Found Objects and Imagined Sculpture’ completed in 2000. Both of these PhD projects challenged and stretched the PhD format to accommodate practice as research in innovative ways. Palmer’s through its use of the written page as a sculptural object and Price’s as an embodiment of process. I will go on to describe both projects in more detail in the ‘Structure and Writing Style’ section of this methodology.

To summarise my thoughts on the distinctions between creative methods and practiced based projects in geography: The artwork that I have made during this research process draws primarily on the work of geographers. The practice based work presents artifacts

within exhibitions that are, themselves, research and represent my contribution to geographic scholarship that investigates caves and the underground. My hope is that through the sensed, embodied and material investigations used in the methodologies and outcomes of my practice, this thesis will make a contribution to the established intersection between art and geography. Furthermore, the work presents an argument that practice based research can offer new perspectives on human encounter with the unending and unknown spaces of the underground, and more specifically, the study of caves. Against the background of my previous field and studio engagement with caves; and taking into consideration the evolving field of creative methods and practice based research within geography, I would like to outline my research methods for this thesis in the following five geographies: Studio, in which I will discuss the development processes of the two key bodies of artwork in the thesis; Fieldwork which touches upon the ways in which sites were selected, thinks through how I approach practice in the field and then goes on to describe the encounters at each of the key sites within the research; Digital frames the use of digital technologies in the making and thinking of the thesis; Research Events describes the importance of key interdisciplinary events and project spaces that have taken place during the research period, and finally, an exploration of the Structure and Writing Style of the thesis.

Studio

In this first of the five geographies of the methodology I will present my approach to practice. Here I hope to schematize the way in which I work in the studio, tracking back to the start of the two major practice projects that make up a substantial part of this thesis. I will now

outline a first hand account of the experience of developing the two bodies of artwork.

The works are called 'Invisible Fish' and 'Darkness Retreat', you can find images in the sketchbooks which can be accessed through the Entrance Way index.

Before beginning, I will reflect briefly on ways in which the studio work might contribute to some ideas raised in recent geography scholarship attending to undergrounds. When writing about experiences of the subterranean, Kai Bosworth (2017) speaks of the importance of thinking with the fractured and permeable geologic materials on their own terms, Bosworth says that 'problems posed by materials are not just posed in order to be solved, which would lead too directly back to instrumental rationality as an easy solution' (2017:23). The way in which this project has approached studio practice, is by responding to materials and dynamics at the cave field sites by selecting other materials evocative of the sensations and embodied experience of the cave. By manipulating and combining materials until they find new meaning, it is my hope that the artworks communicate to the audience through the non rational.

In their 2021 paper 'Forging Volumetric Methods', Jackman and Squire reflect on the 'limited methodological toolkit' used to explore the 'voluminous complexities in the air, oceans, ice, mountains and undergrounds' (492:2021). The paper goes on to think through the 'opportunity and need to communicate volume research in novel ways' (496:2021), the practice based investigations that have been carried out as part of this research project have explored the volumetric through practice based investigation and presented both physical and digital sculptural installations. What follows is a description of the development processes of

the practice.

‘Invisible Fish’ is a body of work developed in response to the Cave Loach found in the underground water system near to Konstanz, Germany. The development of the artwork took the moment of encounter between the diver and the fish as its point of departure. After a long and full day in Konstanz, firstly at the Limnology Department and then on to the cave system at the Aach Spring, I sat in a cafe late at night and thought of friend and writer, Johannesburg based Lindiwe Matshikiza. Matshikiza and I have spoken of the common ground between our practices for many years and often thought about finding ways to collaborate, we found the right project in an investigation of the tiny, and almost transparent cave fish. I wrote a long account of the day to Lindiwe in an email, to which she replied promptly, saying that many of the ideas resonated and outlining a short text she had written about ultrasound scanning in a recent writing workshop. Although this synchronicity seems unlikely, it is the result of a long correspondence between Matshikiza and I resulting in a slow and consistent tuning it to one another’s’ practice. After our email exchange, we continued to correspond, feeling our way through a collaborative process in which sculptural works and writing became intertwined. On returning to the UK, I began working through some of the key ideas from the trip in the studio. Normally I have hundreds of photographs to work through as a way of beginning but in this case I had very few. I couldn’t take my camera into the caves, in the laboratories the fish were tiny and kept in a darkened lab. I did have audio footage from the lectures by limnologist Dr. Behrmann and diver Joachim Kreiselmaier. From these lectures I learnt much about the evolution of the fish, how their bodies and ways of navigating had changed to suit the depths of the dark caves. I also had links to YouTube videos of the divers entering the

caves and negotiating the heavily sedimented waters until an orange gloved finger points to the ghostly forms of the fish. Online correspondence and meetings with Matshikiza were regular and began thinking through each element of the cave: The water, the fish, the rock, the sediment, the diver. In the studio, this meant thinking about the materials that were found in the cave; the neoprene of the diving suit versus the bare, thin, almost transparent skin of the fish. I began to think about how these combinations might translate into objects and from amongst the collection of influences that had accumulated on my studio walls came the word 'feelers'. In response to the idea of the 'feeler' I made a number of objects from vellum that were fringed to give the sense of multiple, complex surfaces with which to encounter the world. I also made two large fans from fabrics on which were images taken from the YouTube clips of the cave with bubbles from the divers tanks. The fans were intended to be used to move the air around the room of the exhibition, drawing attention to non-visual modes of understanding the space around you. Importantly the sculptural works were made in conversation with Matshikiza, we would talk online and send each other samples of work in progress. I would read or listen to her words, then make a response and so on. As a result of this correspondence, our ideas permeated each others; contributions and the words and objects became porous. The work was first shown at Well Projects in Margate 2019 and was given the title 'I'm In The Bath On All Fours' taken from one of Matshikiza's texts, which is experienced as a voice over to the show and describes an experience of imaging the evolution of a human body back into a web-footed creature. The porosity of the work has been further emphasised by its inclusion in Sonia Boyce's exhibition 'In The Castle of My Skin' (2020, 2021) in which the project becomes embedded within a large crystalline structure housing the work of numerous artists in a kaleidoscopic expression of interior and

exterior worlds. The ideas first encountered within the cave of the unending, the sensed, the permeable, have found form in the artwork but also in the process of making, which continues to evolve and shapeshift with each new iteration.

Darkness Retreat is a more complicated piece of work to track. The original influence for the thinking at the heart of the artworks comes from the experience of 60 hours spent in a darkness retreat in the Black Forest in Germany. The main motivation for the visit was to experience a prolonged period in the dark and this was without doubt, of great significance to the work. There is a detailed account of this experience of darkness in one of the ‘tunnels’, found through the Entrance Way and images can be seen in the Darkness Retreat sketchbook. Here, I will attempt to describe some of the decisions in the making processes for the artworks and then discuss the conditions that contributed to the digital exhibition of the work. Central to the project was the tension between the physical surroundings and experiences at the retreat. I came away from the darkness retreat in Sasbachwalden, with photographic documentation that presented a stark contrast to images that appeared in the darkness. The room was an ordinary looking hostel room, clean but faded bed linen, mismatched curtains against a backdrop of new age signposts all around the building; rose quartz blocks, flower garlands, tibetan prayer flags. Most unexpected and influential however, was the rudimentary methods of blacking out the rooms; gaffer tape, bin liners. This contrast in imagery and materials interested me and became central to the making processes: trying to capture an uneasiness between an enclosed space and a profound if unsettling experience within it through a mismatch in materials. I began by trying to recall my perception of the geography of the room in the dark state; how the darkness changed the forms and configurations in the

space. This imagined layout of a room forms the basis of the exhibition. Each of the works is loosely based in ordinary hostel bedroom furniture: curtains, a sink, a circular table top, a bed. However, the objects have been extruded from their original state to represent the way in which I perceived them in the dark; in a state of between sleep and wakefulness, lucidity and hallucination. The objects have been developed with communication of this between-state in mind, extending, making heavier, changing the shape of, adding and repeating imagery. Partly because of the laborious making processes involved in the development of this show (which includes hand embroidery, multiple hand cut vellum shapes among others), the making of the work has occurred over a number of years. During this time the ideas born in the darkness retreat have collided with a number of other experiences in small enclosed spaces; a blank hotel room, a hospice room, Mother Shipton's Cave. In all of these 'rooms', unsettling and extraordinary events occurred. The work contains aesthetic and material influences from all of these spaces; soap, a photograph of a salt lamp, a quartz crystal, objects hanging on strings as in the petrifying well at Mother Shipton's Cave. Through a process of sitting with images and materials in the studio, combinations emerge, resonate and settle into forms. These decision making processes are not straightforward but they are practiced and can be aligned with the work of other artists, for example, whilst developing the Darkness Retreat sculptural works I referred to the unsettling dream like the surrealist paintings of Leonora Carrington.

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Fig. 7. Leonora Carrington (1953). And Then We Saw The Daughter of The Minotaur. Oil on Canvas, 60 x 70 cm. MOMA Collection (Cropped).

During the final stages of making this artwork in Spring of 2020, the UK went into lockdown. Before the lockdown occurred, a digital presentation of the work had been part of an ongoing discussion with Legion Projects (curatorial duo hosting the exhibition, they work peripatetically; moving location with each new exhibition). The case for a virtual exhibition was that the digital would offer the possibility of making an uncertain and dreamlike space online in which objects could be animated and the lines between what is certain and uncertain blurred further. The case for a physical exhibition was that in the ‘real’ encounter with the artworks in the experiential resonance of the materials, the large scale of the works and the strangeness of stepping into the space and encountering the objects. The lockdown made this decision for us in the short term, I worked with digital artists George Eskst and Matt Woodham and musician Mark Dicker to build a virtual environment through which the

work can be experienced. The process of digitizing an exhibition was new to me, and so an important part of the process has been to think through how the digital display impacts on the project, there is a detailed reflection written across the Darkness Retreat sketch book and in the thesis conclusion. I will give a more detailed description of how this project and more broadly, the thesis, has engaged with digital technologies further on in the methodology.

2. Fieldwork

Before turning to reflections on each of the five field sites in this project, I would like to discuss my approach to working in the field. One of the things I have found most inspiring when reading contemporary accounts of fieldwork by cultural geographers, is the auto-ethnographic and the writing through of embodied engagements with landscape and the elemental. Here I will briefly foreground three examples of auto-ethnographic descriptions of engagement with sites by John Wylie, Maria Pérez and Rachael Squire that have influenced my methodology and that demonstrate the long and established tradition of embodied and sensed experience of landscape in cultural geography scholarship.

John Wylie often writes in a descriptive, narrative style, he explains first hand his experiences of landscape and material process but the work is also rooted in cultural geography theory and explanations of ways in which geography engages with philosophical approaches such as phenomenology and post-phenomenology. An example of this is the 2017 paper ‘The Distant: thinking towards renewed senses of landscape and distance. Environment, Space and Place’, the methodological approach of which helped me to situate my own practice within

geographic scholarship. In the aforementioned 2018 collaboration with artist Catrin Webster, Wylie describes his first person writing and sensing of landscape as a form of ‘practice’ and goes on to say that it should therefore be encountered on its own terms as the practices of drawing and painting were. Within this collaboration, Wylie says that all of the practices were ‘discussed and explored from the start in terms of other practices, writing especially, and in the context of theories of landscape, visibility and phenomenology’ (2018:34).

Rachael Squire is a geographer whose geopolitical writing on the submarine and elemental have greatly informed the methodologies used in this project. Her work contributes to the established field of phenomenological and post-phenomenological scholarship in geography. I find her positioning of this type of thinking within her research about the submarine and the elemental (2016, 2017) particularly helpful in working through my own methodological approach and study of the body underground. Squire explains that ‘auto-ethnography and auto-phenomenology are two methods that seek to incorporate lived, embodied experience into the research process’ (2017: 85) In an auto-ethnographic account one analyses one’s own experience phenomenological study extends this qualitative research methods by seeking to engage with the researchers ‘own experience of a phenomenon’ (Squire 2017:87) Squire’s writing considers the nature of the materials encountered during field work and also describes the body within these environments.

The use of autoethnography in practice based research is usefully explained in the introduction to ‘Creative Practice Research in the Age of Neoliberal Hopelessness’ (Piotrowska 2020) in which Piotrowska explains the need to defend autoethnography in

practice based PhD's stating that students should be allowed to 'establish the position from which they speak' (10:2020). The autoethnographic methodology of this thesis, draws most directly on the work of Maria Pérez, I have found that Pérez's emotional and entangled approach to scholarship offers a entry point for conversation between my practice about caves and caving and geographic scholarship that describes the visceral and embodied experience of the cave. In 'Yearnings for Guácharo Cave: affect, absence, and science in Venezuelan speleology' Pérez describes her own 'positionality within this web of relatedness whose binding substances include love, blood, mud, and/in space' (23:2016), this is the approach with which I have attempted to engage with site, writing and studio practice.

As a practice based researcher, I found that my fine art training and approach aligned with auto-ethnographic, auto-phenomenological research. The challenge has been to interrogate the way in which I approach landscape as an artist and think about how and where it might fit within and contribute to, geographic thinking. In the introduction to this methodology, I mentioned a trip to Brazil to study the work of artist Lygia Clark. Clark's practice has had a fundamental influence on my own and when I read about auto phenomenology in the study of geography, I immediately returned to what it was that I understand Clark to have been trying to achieve in her work. The similarities in the ambition in the work of Clark and the observations made by Rachael Squire help me to position the research methods undertaken in this thesis within both fine art and geography. In a review of the 2014 exhibition of Clark's work at MOMA: The Abandonment of Art, 1948-1988 Frizzell says that 'Clark surpassed the subject/ object dialect, the autonomous object, aiming to put the body back at the centre of an art experiment' (2014:52).



Fig. 8. Lygia Clark Diálogos: Óculos 1968

This thesis has put the body at the centre of the research and used practice based material encounter and process to think beyond the body; extend the boundaries of the skin and sit with the uncertainty that is introduced when edges are no longer clearly defined. Thinking with caves is to sit with this uncertainty. It is the uncertain nature of the experience of being in caves that makes auto-phenomenological methods the most symbiotic fit for this research project: Finlay describes the uncertain and controversial nature of phenomenological research methods:

‘We aim for fresh, complex, rich descriptions of a phenomenon as it is concretely lived. As Wertz (2005) puts it: “Phenomenology is a low hovering, in-dwelling, meditative philosophy that glories in the concreteness of person world relations and accords lived experience, with all its indeterminacy and ambiguity, primacy over the known” (2005: 175). There is a general

consensus that we need phenomenological research methods that are responsive to both the phenomenon and the subjective interconnection between the researcher and the researched.’

(Finlay 2009)

Finally I want to refer to descriptions of the underground by Maria Pérez , who uses the term ‘yearnings’ to describe a connection with the environment of underground caves in Venezuela (2016). In this article, Pérez describes being moved by the experience of caves and the stories of the Cavers; as she untangled the narratives and connections of the Cavers with the caves. To Pérez , yearning is ‘desire on the move’, a yearner strives ‘even when facing futility’ (2016: 694). In her first hand accounts of being in the caves, Pérez explores human attachment to place and expresses the constant folding, emergent process of living and remembering (2016).

All three of these first hand accounts of writing have influenced the methods that I have employed to describe and document field site experiences during the development of this research. I will now go on to describe the time at each of the three locations that the work centres on, these are brief accounts of the practical experiences of the fieldwork, a more detailed picture of the environments and experiences within them is given in each of the corresponding chapters. I would like to preface these descriptions with a reflection on what it was like to think through practice based research in the context of geography. In an in-conversation paper published by Leonardo in 2021, I discuss some of these experiences with Professor Harriet Hawkins, with whom much of the research was undertaken.

‘The fieldwork has been very interesting for me; I think I was mimicking a scientific approach to collecting data, which felt more authentic at the time, but actually the results were disastrous artistically: forced and didactic. On reflection, the value in the fieldwork was in being in the place and observing how an expert or guide navigates and understands that environment. Just the observation requires concentration and focus, and everything else I was doing in the landscape felt like a distraction’ (Unpaginated:2021).

This observation about my practice based fieldwork is a critique of self imposed pressure to be actively making in the field; to be producing and practicing artistically. Actually, most of the artistic experiments in the field were of little use, what did provide the material with which to work later, were the observations made and materials and photographs collected. From this I have learned that I would, in future, take less with me to a site, both in terms of artistic materials and in terms of plans for artistic practice in the field and spend more time absorbing the environment.

Mer de Glace, Chamonix, France. September 2017, 4 days.

This trip was instigated through conversation with Artist and member of The Centre for GeoHumanities, Luce Choules, who has extensive knowledge of the region. Professor Harriet Hawkins was also present and we spent the time working in Chamonix together with Choules. Choules was able to suggest some sites to visit, a particular focus was the Ice Cave, a tourist attraction on the Mer de Glace. In preparation for the trip I gathered a basic kit of

artistic materials from the studio including paper and printed fabrics. Across the four days the activities that we undertook as a group included; a visit to the tourist site of the Mer de Glace. I collected the information made available to visitors and took photographic documentation of the site; a walk on the Mer de Glace led by field guide Ulrika Asp, a contact of Choules with many years of experience on the glacier. This trip involved a risk assessed climb down on to the glacier and walk on the ice. I took photographic documentation, field notes from conversations with Ulrika about the glaciological history of the site and a number of auto-ethnographic notes giving an experiential account of being on the glacier. In addition, I made some artistic explorations using found objects and a number of pre-fabricated art objects (printed fabrics) brought with me from the UK that responded conceptually to the glacier. These were organised and arranged and then documented photographically for later analysis in the studio.

Aach Spring Cave Network, Konstanz, Germany. May 2018, 4 Days.

This trip was prompted by a news article detailing the discovery of a new species of cave fish in Germany in 2017. After a short correspondence with the researcher in charge of the project, Doctor Jasminca Behrmann Godel, I travelled to Konstanz to meet with Behrmann Godel and cave diver Joachim Kreiselmaier. In order to be able to access the cave system, I completed a license application which was submitted to the local council in Konstanz. Research activities included: Visit to the Limnology Department, University of Konstanz; an audio recording of the lectures given by Behrmann Godel and cave diver Joachim Kreiselmaier which I later transcribed; with permission, I took a small number of photographs of the fish in the

artwork experiments, informal interview, auto-phenomenological account: Cathedral Cavern, The Lake District, 2017; the AAG in Boston and trip to Ape Cave, Washington State, 2017; Spirit Balance Darkness Retreat, Germany 2018. Throughout the period of study, I have been supported by a number of field guides, often highly experienced cavers. Because of the physical nature of the activity and the conditions under which caving is practiced, it is difficult to collect accurate, primary data such as audio recordings, the work relies heavily on conversations and accounts of the experience of cavers, in particular of Joachim Kreiselmier about whom I write about in the chapter 'Invisible Fish'. My personal experiences of time spent in caves and the extended conversations with collaborators on these trips have been of enormous and accumulative value. I have maintained ongoing relationships with many of the guides and am able to seek advice over email. This approach has been informed by Rachael Squire's work on immersive research techniques and building relationships with her informants and 'learning the 'language' and haptic feel of diving' emphasises thinks through not only importance of the relationships with guides but also the importance of negotiating the experiencing of the body in the field of study (Squire 2017) and in the work on embodied engagement with environment undertaken by Elizabeth Straughan, who in her paper on the practice of scuba diving, thinks through not only experiences of touch and immersion in bodies of water; but also the significance of immersion in a field 'inhabited by diving professionals' (2010:20). Like diving, an exploration of caving requires the expertise of the professionals in the field, without their support collaboration the work would not be possible.

Squire and Straughan both contribute to a widening field of embodied engagement in geography, Hawkins and Straughan describe an expansion of 'methodological engagements'

that takes embodied and sensory experiences into account (2016:8). Embodied engagement with the field sites has been part of a methodological approach, immersing myself in the environments and then thinking through how to convey these experiences through practice. However, when I reflect on the process of selecting key sites that have informed the research, I find there to be some interesting inconsistencies in the ways in which they came to feature in the project. In the following paragraphs, I will draw together thoughts on how the locations came into focus.

The three main sites in the cave network of this thesis are: Mother Shipton's Cave, North Yorkshire; the Mer de Glace, Chamonix, France; the Aach Spring, Konstanz, Germany. In the case of all three of the sites, there is an ambiguity about how they came to be of significance to the project; they were not exactly chosen intuitively, but nor were they sought out specifically. In addition to these three main cave sites there is also; The Boston Aquarium, the significance of which I only recognised retrospectively; The Darkness Retreat which I was told about by a colleague at an art school that I was working in. None of these sites are what I had set out to study or what I had envisioned the thesis becoming about. In fact, the early fieldwork in the research were to more dramatic and adventurous sites, the Mendips, the Peak District and interviews with the Imperial Caving Club about their trips to Slovenia; these are the more romantic underground worlds of Robert MacFarlane (2013, 2019) and Frank Pearson (2018). The three caves that have become the focus of the work may appear to be disparate but all have something crucial in common; they slip out of any straight-forward definition (outlined by Crane and Fletcher 2015) of what a cave should be: 'A natural void beneath the land surface that is large enough to admit humans' (2015:9).

laboratories; tour of Aach Spring Cave network, I was guided in a small party of cavers into the dry entrance of the Spring. The environment was not suitable for cameras and so I made a number of notes from memory once we returned from the trip. In addition I was given a tour of local tourist caves by Joachim Kreiselmaier. I made photographic documentation of the sites and conducted an unstructured interview with with Kreiselmaier, I will go into more detail about interview technique later in the methodology

Mother Shipton's Cave, UK. A single day visit to Knaresborough, North Yorkshire. March 2019

This is the most difficult cave to reflect on in methodological terms. This is a tourist site and the whole experience of working in the field here was extremely unassuming; essentially you buy a ticket and walk through a signposted park to the caves and then leave through a museum and gift shop. For me, being in this site was about witnessing Mother Shipton's Cave; thinking through how it differed to my expectations, to what I had seen on the website. To summarize, I visited this tourist site with Professor Harriet Hawkins, I collected printed materials from the site, branded merchandise from the shop and took a number of photographs, audio recordings and notes documenting the tourist experience of the cave.

Other trips were made during the course of PhD study and have been included in a more marginal capacity. Research from these trips forms the sub-texts and imagery in the written submission is present in studio support work. These have been formative field trips and data collection for all of them includes methods listed above; audio and photographic recordings,

The act of engaging with these sites was a case of following a lead and trying to remain responsive and open minded about how the research should be carved out, even if it meant letting go of an initial ideal of what I imagined the project to be. I can draw parallels here with the process driven way in which I work in the studio; even if an exhibition has an imagined form at the start of the making process, without fail, the work ends up taking its own path. In that sense, the method of site selection has been process led: working in a wide and speculative manner from which a route and points of focus have emerged. In turn, the writing has spilled over into the practice and in the overlap, the two have informed one another. In the final section of this methodology, I will explain the structure of the written part of the thesis. I see the ways in which the sites for fieldwork have emerged to be central to the shape of that structure. The spaces in the cave network that forms this thesis have come together much in the way I recognise sculptural works emerging from a project space, I align this way of working with ideas of intuition or inner rationale, on which I will now expand.

I am going to refer here to an essay by Rebecca Fortnum and Fisher (2013) in which she discusses the potentially problematic nature of the use of the word ‘intuition’ in describing arts practice. Fortnum and Fisher interviews a number of artists about how they ‘negotiate their own knowledge’ (2013:70). Fortnum and Fisher observes that the word ‘intuition’ arises multiple times in conversations with artists when discussing practice and knowledge making. It appears both in association with a critique of the non-committal but also, and more importantly, as part of a balance in which intuition and spontaneity play a significant role; alongside rigorous preparation, practice and critical thinking. For me, the term ‘inner

rationale’ (Fortnum and Fisher 2006:135) encompasses the balance between the intuitive and the critical embedded within practice. Fortnum and Fisher says that the ‘intuitive comes into play only when the conditions are right, it works alongside (rather than competes with) ‘critical thinking’ and crucially, allows them to access the valued terra incognita’ (2013:77). I relate this method of working with an ‘inner rationale’ to the processes employed in the development of this thesis, it also speaks to the act of cave exploration; an urge that drives towards both the conceptual and literal unknown.

I will now move on to a reflection on the significance of the digital in the selection of the sites in the research that have appeared and, or been understood through digital technologies. In the case of ‘Invisible Fish’ the story on my newsfeed literally appeared in front of my eyes through the screen of my iphone. This digital lens was not an intentional methodological focus, but it is undeniably present and significant to the research. What follows are some reflections on the role that digital technologies have played in the research methods and practice used in the making of this project.

3. Digital

As one descends into a cave network, the signal on a phone disappears. As Maria Pérez observes ‘there is no technology that can accurately map a cave from the surface’ (2013:294). Yet ironically, the digital, both as a way of making and a way of thinking, has emerged as a key theme of this research about caves and the experience of caving. The inclusion of the digital as a themes is more than just a symptom of contemporary life and research practice,

the framing of digital hardware and software has influenced the way in which I have thought about the key themes of this project: Permeability, non-fixity and material encounter. In order to try to reconcile the role of the digital within a body of research that is primarily concerned with materiality and embodiment, I will turn to the work of Jacob Gaboury (2015). Gaboury discusses that the computer is not a visual medium, rather that it is ‘primarily mathematical, or perhaps electrical, but it is not in the first instance concerned with questions of vision or image’ (2015:12) but as the investigation unfolds, Gaboury goes on to reframe the digital image, or the screen image, as a ‘material object in its own right’ (2015:13).

Throughout the project the screen based image has been a way into thinking, whether through a cracked phone screen or endless trawling through image searches on a laptop. The ‘materiality of digital media’ (2015:13) has become woven into the work; I think this is of interest to the project for two fundamental reasons. Firstly, that the material objects are so unsuited to the underground, they crack, break, get wet, lose signal; the underground requires us to work in new ways; MacFarlane has called for a ‘new vernacular’ in order to respond to caves (2013: Unpaginated). Secondly, digital, virtual space, has become a way for me to explain and access the liminal conceptual spaces that I have experienced in my research underground, but that I find difficult to explain. I will go on to expand on these ideas of the real and virtual but before I do, I will briefly acknowledge some of the problematic frameworks encountered when working in the digital and think about how both digital space and devices have been used in the methods of this project.

I have predominantly used devices and software made by Apple. I have also regularly used

Google, Adobe, Autodesk and VR program called A Frame. These are giant corporations and the ‘hyperbolic assertions by those who are caught up in the investor - and industry -generated excitement’ (Murray 2020:12) have to be taken into account when making artwork through and with these digital platforms. As Murray states ‘the cumulative effect of so many unexpected technological changes arriving so rapidly over the past three decades - the internet, smart phones, GPS in cars, video conferencing at our fingertips - has made it hard to distinguish realistic claims about the future from technological fantasies’ (Murray 2020:13). Murray invites us to be critical of technological advancement and its limitations; the environment of the underground gives us a stark and immediate reminder of the limitations of all of the digital technologies listed above.

As outlined in the introduction, and in the ‘Fieldwork’ section above, digital technologies have played an important role in the finding and establishing of sites in this research. They have also played an important role in the developing and making of artworks, however, in its methods, the work retains a strong sense of the limitations of digital technology which I will elaborate on in the conclusion and sketchbooks later in the thesis.

At the start of this methodology I used the term ‘real’ and ‘virtual’ to describe cave sites, here I want to pause for a moment to reflect on these terms and explain how this research defines them. I will then go on to explain the role of the digital in both bodies of studio work and how it is woven as an underlying theme throughout the writing.

Definitions of real, virtual, digital and actual are complex and wide ranging. For the purposes

of this methodology I will think through how I have used the terms in the work that forms the backdrop to this PhD project and then what the terms have come to mean in the context of the research. When reflecting on how I make a distinction between the real and virtual I find myself returning to touch and material. It's not that a surface needs to be touched in order for it to be real, but that it is possible to touch it; it is not seen through a screen or as an image in a dream, this is where the distinction lies for me. The hand can be laid on the 'real' cave entrance and it cannot on the 'virtual' cave entrance seen through the screen or in a representation. During the development of the practice of this PhD, I have made or used a number of representations of caves; printed onto fabric, or paper, or the use of a fiber glass or cardboard 'cave' in a workshop. This is where the conversation in my studio practice becomes interestingly complex and where the lines between the real and virtual are blurred. In this research, the virtual refers predominantly to the digital virtual space, there are moments however, in which non digital spaces present the immaterial attributes of a virtual experience, for example; in the deep darkness of a cave; in the imagined description of the Cave Loach; in the prophecies of Mother Shipton and in the 'visions' and dreams experienced at the Darkness Retreat. These are the experiences that upset any clear distinctions I am able to establish between the real and the virtual.

In order to explore these slippages further, I turn to the work of artist Tacita Dean and her reflections on the material of film. In Dean's work 'The Green Ray' (2001), the artist uses celluloid film to capture an elusive phenomena seen as the sunsets off the coast of Madagascar. The Green Ray is a flash of light that cannot be seen with the human eye, nor caught with the digital cameras also there to witness the event. When Dean developed

the film, the Green Ray was captured there in the material of the frames. Rosalind Krauss describes the way in which these images are made within the chemical of the film as like 'fingerprints or footprints' (2012). Dean describes the stuff of film; masking, tinting, cutting, splicing. These are material, analogue processes that create works specific to the medium. Dean says of the work FILM that 'Failure would be if people said: 'She could have just done that on digital.' (2012). Krauss says that Dean's works are too elusive for the pixelation of the digital world which flattens out the differences between individual mediums (2012); homogenizing through the screen.

I perceive my artwork to be stubbornly material, combining and making with a range of mediums. Touch, weight, volume and pressure are central to the processes involved in the practice. These are the attributes by which I understand the works to be 'real'; Claire Bishop observes that the digital is at its base a 'linguistic model' reducing images down to letters and numbers (2012) she also makes the point that 'mainstream contemporary art simultaneously disavows and depends on the digital revolution'. All of the 'real' objects that I have made have come to be in some way through a digital virtual space. The digital virtual space on which I so heavily rely is also the method through which I have come to experience deep darkness, visions and near encounters with cave fish, none of which have had any weight, pressure or volume, nor can they be touched. Questions around the definition of real, virtual and digital virtual remain an unanswered point of tension in my practice and their unresolved nature continues to inform the studio work, both consciously and subconsciously.

In both exhibitions there are examples of a feedback loop between the digitally printed, flat

image and the real. In this Darkness Retreat, this can be found in the dried honesty plants in the textiles print and the dried flowers on the circular copper sculpture; or in the digital images of snakes on a road found on Google Image printed on to fabric and embroidered with 'blue flashes' experienced in the deep darkness. Real snake skins bought on ebay are woven into the sculptures that are exhibited as 3D digital models. The digital runs deeply through every aspect of this body of artwork. One of the 'visions' seen by Mother Shipton predicts the internet, according to myth, she has the ability to slip between past, present and future all within the deep time of the heavy rock walls of the cave. In 'Invisible Fish' the ongoing project has been developed through digital correspondence from its start in 2018. Work has been shared and made in a virtual space, images harvested from YouTube stills, audio files uploaded from across the world. Even Matshikiza's performance of her audio work was performed over Skype. The lack of physical encounter in a body of work that deals with touch and vibration has been a constant point of discussion and presents attention in the absence of bodies in the work that both Matshikiza and I have decided, has become an important feature of the project. The Cave Loaches appeared on a news feed on my Iphone and only became 'real' in the limnology laboratory at Konstanz University. These entangled threads between 'real' and 'virtual' run throughout the research. In this sense the practice work is made with the digital virtual as referring to the digital virtual. The digital is partly medium, partly subject.

4. Research Events

Throughout the research I have used events as a way of thinking through experiences in

caves. In the context of this thesis, the term ‘research event’ refers to: Workshops, artists project spaces and experimental conferences. You can see evidence of these events in the sketchbooks named ‘Research Events’, accessed through the Entrance Chamber. Although these events do not feature directly in the written part of the thesis, it feels important to include them as they have been a formative part of the methodology; they have helped me develop the idea of ‘thinking with caves’ and more specifically have informed the exhibitions and the structure of this written thesis. Central to all of the following events has been the space in which they have taken place; empty project spaces and galleries; or as with the presentation American Association of Geographers, 2017, a space that I found to resist practice based methods. Physically moving around the space and thinking within the volume of the room has been a pivotal method in this research process. I will now briefly describe the four key events:

‘Basecamp’ was a project at V22 in London with artist Kelly Large in 2017. During this 3 day event we used a large empty studio space to set up a number of areas in which to think with images and objects, it was essentially an expanded version of a diagram that we had collaboratively drawn up to establish the cross overs in our research interests. In the designing of the project space we were aiming to work through the tension of waiting and anticipation; a sense of being before an expedition. The space was open to the public who were invited to help us to discuss questions that arose through the construction and reconstruction of the layout of the project space. What was interesting for me about this event was its fluidity. The connections between the stations arose through time spent together in the space, there was no specific moment of completion and in fact, the conversation with Kelly

Large is ongoing and has resulted in a number of collaborative endeavors.

The next event I will discuss was called 'Expand and Contract', this was a one day event that took place at the Chisenhale Dance Space in 2018. Co-organised with Professor Harriet Hawkins, the idea was to play with the conference format, inviting contributions on the theme of darkness and the underground from specialists from a range of backgrounds. The contributions ranged from presentations, to drumming exercise by Dr. William Rowlandson (University of Kent), to a talk about the 'Choose Your Own Adventure' series and LARP workshop by Una Hamilton Helle, there were presentation by archaeologist Professor Clive Gamble (University of Southampton) and engineer Loretta Van Der Tann (Think Deep, UK), the day finished with a curated sound performance by Shell Like (Amy Pettifer and Jennifer Boyd).

Many of the participants are mentioned as references throughout the thesis, their work is embedded in the fabric of this thinking. The connections that have been formed continue to scrape away in narrow and interconnecting tunnels. The continuity and shorthand that comes with these long term interdisciplinary relationships generates a space in which it can be difficult to specifically define both end point and authorship. This event helped me to extend and understand the parallels between arts practice and the work of cavers, who often work collaboratively on projects that will only be completed long after they are no longer pushing the cave themselves.

During the course of the research for the thesis, there have also been smaller workshop

events (documented in the corresponding sketchbook, see the Tate Exchange and Landscape Surgery workshops) in which caves have been constructed from cardboard, paper and other basic d materials. These events have been energetic and physical, they require the participants to engage with the space and think architecturally about cave spaces and what it is to be inside and outside of them. They have informed the work in the sense that the dynamism and material that they generate punctuate both physical and thinking. In a literal sense they made caves for thinking, in a conceptual sense the participants enacted thinking with caves; making messy, strange, unfinished, collaborative spaces in which new rules applied.

Finally I will discuss a contribution to a conference at The American Association of Geographers in Boston, 2017. This event has been extremely generative for the thesis but it sits as something of an anomaly in this section: This event was not in a project space or gallery but instead in a formal and decorated hotel conference space. Part of what was so interesting about this event was the resistance of the surroundings; we could not fix things to the walls nor hang things from the ceiling. These restrictions are more significant than they might seem. An inability to transform the space, reduced the transformative abilities of the practice. Below I will briefly describe what was attempted during the event. The idea was to accompany a talk by Professor Harriet Hawkins in which she described a number of conceptual cave sites. During the talk, the audience would be covered by a printed silk canopy depicting the entrance to an artificial cave. They would be asked to view the cave through a mirror that was passed along the rows of seating. Hawkins was filmed from above and projected as a live stream on the screen at the front of the darkened room. In addition to this film were instructions asking the audience members to film themselves on their phones. All of these elements combined were intended to generate a vertiginous sensation and a

backdrop to the talk that would open discussion about the artificial cave and notions of the void. What actually resulted was a much less impactful experience than was intended, the sense of the surreal and of being engulfed was much reduced by the limitations of the room, by the lack of clarity in my instructions and the time constraints. What was interesting about this event was the opportunity to reflect on the importance of the type of space in which these events take place and the freedom within them to physically transform the shell in which you are working; to feel uninhibited in one's actions within the architecture. Thinking through this event and how the space in which it took place was of significance was a useful way to gauge the importance of the type of environment and context most conducive to presentation of practice based research.

To summarise: In many ways, these research events are the spaces in which much of the thinking for this project has taken place. The acting out of caves in a project space has expanded my understanding of the parallels between artistic practice and the practice of caving. It has reinforced the significance of slow scholarship and collaborative working in this practice based research project. Importantly, I also relate the ways of working in a project space to the way in which the written thesis has been collated. When I imagined the writing taking shape, it began to take on physical forms and therefore to take up space and shapes. Pulling these shapes together into a spatial diagram was the beginnings of a plan for the written work. From very early on in the process of development, this thesis became a place. I am now going to move on to the structure and style of the thesis writing in which I will expand on this rationale.

5. Structure and Writing Style

Here I will begin by describing the structure of the work, then the style of writing and the relationship between writing and practice, finally I will move on to explore examples of practice based PhDs that have experimented with the boundaries of the thesis format.

The formatting of the work is intended to mirror both a physical cave network and the written content of the thesis, this is reminiscent of the titles of the ‘chambers’ in the sections of writing in Robert MacFarlane’s ‘Underland’ (2019). Each section in this thesis is represented by a white dot in the index diagram, not in a list but as a cluster. The order in which the work is encountered, or the route taken through the work is open to interpretation, meaning that readers may have a different experience of the order of the work from one another. The use of inserts, interviews, original imagery and creative writing offer interruptions to the three central texts and connections are intended to retain looseness and ambiguity. This approach reflects themes of darkness, blurriness and lack of clarity experienced in caving and in the conceptual spaces, which they present. Three sub-sections of writing are designed to support an open ended approach to research; connections are present without being made explicit. Although unconventional as an approach, this is supported by the content of the work, which argues that there is great value in a certain lack of fixity. The work is intended to be encountered and navigated as a place; a cave network with narrow passages and wide open chambers. Sections of conceptual space and sections of conceptual awkwardness and tight-squeeze. Within the writing I have attempted to develop a sense of materiality, using directional force and pressure as a way of explaining an embodied approach to research and

a practiced based approach to investigation and interpretation of the site. Part of the intention of the project is to demonstrate the value of lost-ness and the unquantifiable in studio practice and to present this type of working as a valuable and viable contribution to geographic scholarship.

When looking for the right style or voice for the writing of each section, I found myself being led by the forms, materials and dynamics of each site. For example, in Mother Shipton's Cave the amount of conflicting material was, at times, overwhelming. The volume of conflicting stories of fame and fortune that sit on top of the geology makes for a dizzying cocktail of themes. I have tried to reflect this density in the writing; rather than streamline Mother Shipton's Cave the most appropriate response seemed to try to embrace the complexity of this cave in the writing. In Mer de Glace there were two key influences; firstly, mirroring the letter format used in 'Frankenstein' and secondly, writing with the movement of the glacier in mind; both downwards and back upwards in motion, this manifests as looping and repetition in the writing. In the Invisible Fish chapter, which explores a moment of encounter at the Aach Spring, the writing is intended to respond to the multiple voices and modes of transmission that occur in the research; the idea that there are a number of frequencies that can be tuned in and tuned at any one time.

In parts of the writing I have used unstructured and semi structured interview techniques (Dunn 2005) I have drawn upon two interviews conducted during the research. One with artist Una Hamilton Helle, this was conducted in a semi structured style recorded with prewritten questions. The interview took place in the seating area at the Royal Festival Hall in

and approach to studio practice.

Aquarium and Darkness Retreat are sections of creative writing inspired by first hand accounts of experiences that have directly influenced both the writing in the chapters and the practice.

It has been integral to the project to maintain equilibrium between the interpretation of research material in the studio and in the form of written text. From the beginning of the project, both the visual and material language fostered in the studio and the written work have been given equal emphasis and have produced different but intersecting results. In the context of this project, I intended the two forms of communication to run in parallel rather than becoming an explanation of one another, it is for this reason that I have not written about the art works in the chapters and that the artworks do not explicitly illustrate the writing. The cave network is intended to be explored in any order, from any direction. Some of the places will be passed through at pace, others will be lingered in and assessed in more detail. The intention is to mirror the rhythms and choreography of a cave network both in the inclusion of spatial and directional terminology in the writing and in the open-ended-ness of the format. A sense of incompleteness and lost-ness.

In the introduction to this methodology I refer to the PhD projects of artists Elizabeth Price and Katrina Palmer. Elizabeth Price PhD is named 'Sidekick' and was completed in 1999, Price blurs the line between analytical and writing as practice. The writing is understood through the making of a 'boulder' from rolls of manufactured tape; in a perpetual state of

unfinished development (Macleod 2007).

Katrina Palmer's thesis titled 'Reality Flickers: Writing of Imaged Objects' completed in 2000. Palmer's describes her written work as though it occupies physical space:

'I started to see the page as a really interesting space on which to explore....ideas about contingent materials. So I started to think about how sculpture could be a language-based enquiry. The way that objects are produced in writing is elusive, almost covert. I still really love things and I still use found objects, so it's not an entirely dematerialised practice, but it's more about arranging spaces and being immersed in a struggle for material presence' (Interview with Jamie Sutcliffe 2015, White Review).

Palmer approaches her writing practice in the same way as she might if she were dealing with an empty studio space: A spatial and material approach to text that needs to be negotiated and navigated by the reader as if they were physically moving through it. I have attempted to approach this thesis in a similar way; through its structure and content the reader is invited underground into a series of texts that invite inhabitation of space and an engagement with descriptions of materials processes that exist in the writing and in the studio work.

Much work has been done in the field of framing practice based PhD, most notably for this research by Rebecca Fortnum and Fisher who hopes that 'we understand more about the kinds of 'space' we need for 'not knowing' within the creative process we might make them more visible in our accounts of practice and so resist the superficiality of our current systems,

as well as the instrumentalization of notions of knowledge' (Fortnum and Fisher 2013: 85). Outside the PhD format, writing by and about artists has long attempted to resist linear structure, some key examples that I have found inspiring are Brian Dillon's 'I Am Sitting In A Room' part of the Cabinet 24 Hour book series (2012), and 'Formless: A User's Guide', the experimental catalogue by Rosalind Krauss and Yve Alain Bois accompanying the exhibition at the Centre Pompidou in 1996, the Formless Dictionary was written in response to George Bataille's 'informe' (1929) and was designed as a 'provocative operation to 'undo' and alter established high modernism and its hegemony' (Hanru 1996). And importantly the Neo Concrete manifesto, texts and poems, a movement of which Lygia Clark was at the heart. The manifesto written by Ferreira Gullar in 1959 and which declared that Neo Concrete art should be: 'Something which amounts to more than the sum of its constituent elements; something which analysis may break down into various elements but which can only be understood phenomenologically' (1959). This project has drawn on these examples of the blurring between practice in physical space and the imaged spaces conjured by writing on the page.

Conclusion

This methodology has presented five geographies of my working practice. These methodological approaches have allowed me to draw parallels between the spaces generated by the research and the caves spaces that the work studies. Furthermore, the processes involved in the development of both the studio work and writing have been inherently collaborative and interdisciplinary in their methods. What is evident from material across a range of disciplines is that part of the process of exploring caves and the underground, is

acknowledging that it is a space in which surface approaches and methodologies don't sit comfortably. 'Our flat perspectives' feel increasingly inadequate to the deep worlds we inhabit, and to the deep time legacies we are leaving' (Macfarlane 2019:13). These are spaces in which new vernacular is required (MacFarlane 2013) and scholars use words that evoke a physical reaction, like the 'yearnings' of Pérez (2016). One of the contributions that I hope that this research makes is methodological. It is not a thesis about practice as such, it is about caves, but hopefully the accounts here strengthen the case for the types of methods used in practice is useful for looking at the unknown and unending spaces of the underground which are difficult to capture.

The process of writing this methodology has made me contemplate my practice based methods through a new lens and recognise patterns and parallels that I have never previously had to concretely articulate. When thinking through how the work has taken shape, I recognise the importance of organising ideas and materials in physical space; moving things around in 3-dimensional diagrams. Using a project space has always been central to my making practice but it has also featured heavily in the thinking for the writing and is also present in the structure and style of the thesis.

This PhD will contribute to a growing number of examples of artists working in geography and exploring what is possible in this interdisciplinary nexus within the PhD framework. In 2018 Hawkins documented that there were approximately 30 practice based PhD's registered in Geography departments globally and significant growth in the number of geographers producing research using creative methods. But 'despite wide-spread support for the creative

turn within geography, acceptance, or even understanding, especially of alternative outputs is very varied and by no means universal.' (Hawkins 2018:10) Geographers are taking on the immersive challenge of engaging with the processes and critical frameworks of creative methods, the 'language' of practice to use Squire's term again (2017). Through its methods this thesis exploring caves aims to contribute to a deepening of understanding at this

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Fig.8. The entrance to the Grotte de Glace, 2017

Cave 1: Mer de Glace

Introduction

The Mer de Glace (the Sea of Ice) is a glacier set within the Mont Blanc Massif, it is the longest glacier in the Alps and sits on the French side of Mont Blanc near Chamonix, France. At the time of writing the length of the rapidly retreating glacier is reported to be 5.6km (Britannica Academic) but it once stretched down almost to the town of Les Tines in the Chamonix Valley. In 1909 Swiss aviation pioneer Eduard Spelterini (Baxter 2017) flew a balloon over the Alps and captured images of the Mer De Glace on glass plates. Comparisons to today's images of the glacier show the 'staggering reduction in the ice surface' (Baxter 2017). The once monstrous and jagged peaks of the 'sea of ice' drew many artists to the Alps to work in the field in the late 18th and early 19th Century; Wordsworth, Ruskin and Turner. Famously, the hotel Terminal Neige Refuge de Montenvers is where Mary Shelley wrote much of the gothic novel 'Frankenstein' (1818), overlooking the sublime landscape of the Mer de Glace, which influenced and mirrored the core themes of alienation and the borderline within the writing (Brannstrom 2006). There is a long and heavy legacy of artists working in the field on the Mer de Glace. What drew me to the glacier was the idea of the ice cave: The Grotte de Glace that sits within the body of the glacier. On the invitation of artist Luce Choules, who lived in Chamonix for a number of years, I visited the site in 2017 with professor of Geography Harriet Hawkins.

On the first day in Chamonix we went to view the glacier from the platform at the top of

the Montenvers train line. It was dramatically different from the image that I had built from the composite of material on Google. Arriving at the Mer de Glace was a disconcerting experience, the sea of frozen spikes depicted in many of the images on the internet is a flat stream of ice sitting close to the bottom of the valley, a shadow of its former glory and yet still being photographed and marched across. Glaciers do retreat, they are not static, but the pace and severity of the retreat over the past fifteen years is unprecedented (Fouquet 2015). The Glacier is balanced between the snow accumulation and ablation. The crevasses and seracs are formed as a result of the terrain over which the glacier is moving (Moreau, no date given on author website). This is a site of drama but not of the gothic and the sublime that I had expected, but as a dramatic embodiment of a state of crisis as a result of climate change. Today, the Mer de Glace is still one of the most popular sites in the Chamonix Valley, it has a significant impact on tourism, alpinism and research (Nistor 2014:67), and all of these activities, in turn, have a significant impact on the glacier. The tongue of the glacier registers about 5km in length (Nistor 2014:67). It is a compound valley glacier, it flows North, North West and is the largest Glacier in the French Alps (Berthier et al 2004). The maximum thickness is 400m (Vivian 2001). Studies using Satellite optical images conclude that the Mer de Glace is thinning rapidly as a result of climate change (Berthier et al 2004; Nistor 2014). The tongue of the Mer de Glace is particularly vulnerable as it is spread over a low altitude.

Within the glacier is the Grotte de Glace, a tourist cave in a U-shape tunnel of about 100m, which has been dug into the ice every year for over fifty years. Each year the cave is carved out anew as the glacier moves downwards approximately 90m annually¹.

What becomes clear, even from the viewing platform looking down at the current and

1 <https://www.seechamonix.com/lifts/summer/montenvers--mer-de-glace-cog-railway-train-40000>

previous cave entrances carved into the tongue of the glacier, is that the ice cave is a different kind of cave. Other than two antiquarian books (Swift Balch 1900; Browne 1865) buried deep within the Royal Geographical Society library and one of Robert MacFarlane's 'chambers' (Underland 2019) it has been difficult to find much material about the ice cave, outside of scientific analysis; they have not been included in the current surge in human geography exploring the cave (Hawkins 2019; Bosworth 2016, 2019; Cant 2003, 2006; Pérez 2012, 2013, 2016). The ice cave is a difficult cave to fix and define. Being inside the ice was a compelling experience, but not one that was easy to align with what has been written about caves and caving. The ice caves on the Mer de Glace are not dark, solid, or deep, but they are caves nonetheless.

In this chapter I will write through the experience of the Mer de Glace and describe encounters with three types of ice cave that I found there. The writing is structured around three emails with the following subject headings: Firstly, 'The Monstrous Mer de Glace' describes the expectation of the Glacier and the Ice Cave as seen through representations, versus the experience of the first physical encounter. The writing goes on to describe the disconcerting reality of the Grotte de Glace and the way in which it unsettles much of what could be described as the definition of cave. This section of text sets up the ice cave as a paradoxical and disconcerting cave. Secondly, I turn to 'The Grotte de Glace', the tourist cave dug out of the ice every year. The Chamonix.com website claims that the cave 'takes visitors to very heart of the glacier' (Chamonix.com) Through an account of this much visited and photographed show cave I will draw out themes of capture and fixity and use thinking with this cave as a way of articulating the importance of process and non fixity in studio

practice.

Thirdly, in the email with the subject heading 'Holes in the Ice', I look at the cracks and drops and the openings in the glacier. If a cave is 'a natural void beneath the land surface that is large enough to admit humans' (Crane and Fletcher 2015:9) then this is what we found on the second day on the glacier during a climb and walk with mountain guide Ulrika Asp; on this day I took with me a range of materials and equipment and carried out a version of artistic fieldwork on the ice. Through the writing of this experimentation against the backdrop of a challenging and slippery landscape, I will explore the formless nature of fieldwork in my artistic practice.

Each of the encounters with ice caves on the glacier was different. The sites, only a few hundred meters apart, demanded different equipment, physicality and levels of engagement. As stated, the sections of writing are prefaced by an email, this format mimics that of Mary Shelley's *Frankenstein*, in which letters from the central character Polar explorer Robert Walton to his sister Margaret Saville tell the story of the monster through his meeting with Victor Frankenstein. The effect of the letters in the book gives the reader a sense of being 'palpably *within*' the multiple layering of narrative (Newman 1986:4). Inspired by this format, this chapter sends emails to a sister back in the UK giving my personal account of the experiences on the Mer de Glace. As stated in the introduction, the emails at the start of each section refer to the Mary Shelley book 'Frankenstein', written looking over the Mer de Glace. The letters in *Frankenstein* allow the author to set the scene and to present the inner narratives and conflicts of the characters. Although I approach the motif of *Frankenstein* with caution,

once I knew the connection with the once fearsome glacier it was difficult to disentangle it from the monster, made up of mismatching body parts, fragmented but stitched together into something new. Although tempting to avoid the potent motif of Frankenstein, the glacier keeps reemerging through the writing as a composite of body parts; tongue, mouth, heart, once perceived as monstrous and then as a creature in mourning. My emails are intended to set the scene for the reader, and to offer observations about the experience; in doing so I aim to convey the sense of conflict in being both a tourist and a researcher critically observing the effects of tourism on the Mer de Glace and the Grotte de Glace.

According to the Chamonix.com website, the glacier is formed by the confluence of the Leschaux and Geant glaciers; it is France's largest glacier at 7km long, 200m thick on average (up to twice as deep as this at its thickest points) and at an altitude of 1913m. However these figures are in a state of constant and rapid flux causing accelerated thinning' (Berthier and Vincent 2012).

Central to the thinking in this chapter, has been the formation and perpetual movement of the glacier itself. The dynamics of the glacier have long been a focus for artists; Turner, Ravillious, Ruskin and Burra to name but a few. In his depictions of the glacier, Turner follows the monstrous and tumbling downward waves of the ice with a series of works in the early 1800's. Today, there is still the downwards motion of the ice, but the formations are considerably more subdued and now also accompanied by a retreat back up the valley as the ice melts away. This double movement in the ice, has inspired the model for thought that has influenced the formatting of this writing and has also filtered down into my practice

based work. Being on the ice and attempting to describe the states of slippage, tension and paradox that I found there has become a fascinating wrangle that has informed artistic experimentation, some of which is documented in the sketchbooks within this thesis. Each of my experiences of thinking with the ice caves has contributed to a layered and complex imaginary of the cave in flux, this writing has been inspired by the embodied research techniques of geographers writing through encounters with the underground such as Maria Pérez (2013) and her work on embodied mapping of caves, Rachael Squire on the elemental (2016). Squire engages with the elemental through her investigation of Gibraltar. She thinks, not only through the elements but also through questions of scale and ways in which the body meets and intersects with the elemental. Particularly inspiring is Squire's engagement with rock, of course in this chapter, I am dealing with ice, but her descriptions of being with the lively and solid matter of the rock have informed my thinking. Squire carefully considers the matter of the limestone forming underground tunnels and how the body in the tunnel changes the dynamics of the space. Pérez is also not looking at ice tunnels but what both of the scholars speak to, is the idea of the body within a material. Pérez understands these relationships as 'dynamic flows of substances and materials in a constant state of becoming, change and grow into each other' (2013:4). The like the cave tunnels of which Pérez speaks, the ice cave is in a 'constant state of emergence' (2013:4): A new tunnel dug out each year, each tourist that walks around it is a new body in the space, a space that is both sliding down the glacier at a rate of 90m per year and being retracted back up as the ice melts.

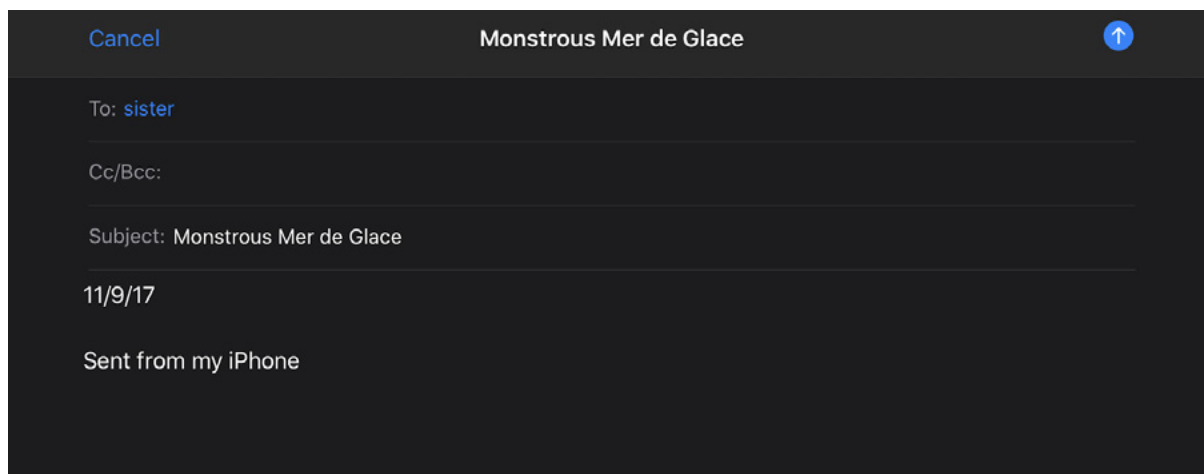
The Monstrous Mer de Glace



Fig. 10. Gletscher Mer de Glace, Mont-Blanc-Gruppe - Eduard Spelterini 1909

Descriptions of the Mer de Glace set up an image of a wild and monstrous mass of ice (Shelley 1816; Coxe 1777; Rousillon-Constanty 2008), the images on a Google search are primarily of 18th and 19th century artistic depictions of waves and peaks falling down a mountain valley. It was not only the ice that was perceived to be monstrous, until the eighteenth century, The Alps were widely believed to be infested with devils, monsters and dragons' (Nardin 1999:441). This letter describes the impression of the Mer de Glace and the Grotte de Glace before we arrive there. What we find on arrival is disconcerting, not at all what was expected. A cave not only very different from the images on the internet but also different from any other cave that I had visited. The Grotte de Glace sitting within the Mer de Glace presented a cave that sits at odds with many of the certainties that I had previously held

about the cave. It is a paradoxical cave, and in the following chapter I will draw out four of these paradoxes: How this cave is light and dark, above and below, inside and outside, solid and liquid.



Dear Sister,

I am writing to tell you about a recent trip to Chamonix, Mont Blanc. The opportunity to visit the area came about through an invitation from artist and alpine guide, Luce Choules who lived in the region for a number of years. Professor of Geography Harriet Hawkins and I travelled to Argentierre and planned a schedule over 3 days with Luce that would focus primarily on the Mer de Glace. In 2016 I came across a seldom-borrowed book in the Royal Geographical Society collection offering an account of the 'Ice Caves of France and Switzerland'. The book, written by G.F. Browne in 1865, describes prisms and glorious columns of ice at the opening of portals. An unspoilt interior space, separate from the rest of the world. When Luce suggested that we visit Chamonix and the surrounding glaciers, I wanted to go looking for the ice caves described in 1865. Have you seen a glacier before? I'll try to set the scene.

The Mer de Glace sits on the Mont Blanc massif in the French Alps. At the turn of the twentieth century the glacier was considered monstrous, looming over the village below with sharp wave-like peaks that were captured by photographers, artists and writers, amongst them Mary Shelley who wrote 'Frankenstein' from a hotel overlooking the glacier. Historically, the glacier has been described as a dragon, a snake, as monstrous. It's peaks and waves inspired awe, fear and wonder. Reynolds's Miscellany of Romance states that Description is tame and treacherous 'to acquire an idea of the Mer de Glace it must be seen' (1854). Of course, now it is possible to 'see' the glacier before visiting. On Google searching 'The Mer de Glace' one is presented with a series of majestic images from personal collections with people gazing misty eyed over low clouds on the gleaming white and blue ice, to tourist shots of adventure and magical grottos. There are a few paintings in the grid, the spiked waves of the 'Mer' confirming the descriptions.

Before arriving at the glacier I had an image forming in my mind. The form of the image is fairly flat like a deck of playing cards laid out on a Google image grid. As you know, my work over the last eight years has focused on cave systems. Not only do these ice caves contradict much of what I understood to be cave-like, they also present contradictions within themselves. High up on mountain range, but deep within the earth (up but down), a space much darker than the exterior but with walls that let light pass through them (dark but light) and so on. All sitting within the Mer de Glace, flowing down the mountain-side while retreating and thinning at an astonishing rate (forth but back).

The glacier snakes up the valley, murky, dusty, grey moraine with a look of a gritted

road. This is not how I had imagined it. Not a spiked wave in sight. I am struck by the disappointment of the image in front of me, and by the frailty of the ice. The scale of the glacier is difficult to gauge from the viewing platform, there is something about the appearance of the vista, flattened out like an optical illusion. On inspection through a set of binoculars one can see climbers and mountain walkers heading up the glacier, marching over the Forbes bands marking seasons over decades and stretching up into the mountains. There is something serious about their movement, a purpose entirely different from the milling about on the viewing platform. A stairway leads down to the glacier, it has to be extended each year to stretch out to the body of ice. The ice is both thinning and retreating, disappearing visibly each year, experts use GIS satellite imagery transmitted to their desktops to produce visualizations of the movement. As I understand it, the lower part of a glacier is called a 'tongue', the tongue of the Mer de Glace is about 5km in length and thinning rapidly as the planet gets hotter. When I read that the glacier is widely described as a 'tongue' by glaciologists, I couldn't shake the image. It's useful to find a form to organise thoughts into, it tidies things up don't you think? But it can be hard to thaw the shape once it's set in.

F.P.

What we then actually saw from the viewing platform on the first day (and then in more detail from within on day two) was in stark contrast to what I had imagined. A greying and flat body of ice, teeming with people, a digger with a tabard and hazard tape strewn over it sitting near to the mouth of the ice cave. On first sight of the Grotte de Glace from the viewing platform,

in the flesh, the image that I had generated from the internet was upturned. A romantic, dramatic cavern of pure ice, embedded within glacial solitude, perhaps I was even imagining being inside the painted form? The image of the Grotte de Glace had germinated into something surprisingly fixed prior to arrival on the viewing platform.

Once abandoned, the previous ice cave entrances move down the ice with the glacial flow derelict and greying. These sit against the backdrop of the Forbes bands (also known as ogives) on the glacier; a grey and white banding pattern visible on the surface of the ice. By studying them, glaciologists can map the flow and renewal of the ice; like the rings of a tree, the time is carried in the matter of the ice.

In an anonymous correspondence with *The Journal of Glaciology* (1951, published in 2017 by Joel E. Fisher) the author responds to a study of the bands by glaciologist Professor Haefeli with an anecdote from the Mer de Glace: ‘Haefeli is correct when he says that the number of such bands is a measure of the number of years for flow of ice over the interval. I checked that on the Mer de Glace last summer; a specially large boulder, which I had noted in 1912, and in 1950, had travelled just 38 bands in 38 years’ (Fisher 1951). Over 50 Ice Caves, one per year abandoned and moving down the ice with the Forbes bands. What the Grotte de Glace represents is not straightforward, in spite of the somewhat depressing scene from the viewing platform, the Mer de Glace and the Grotte de Glace still takes my breath away. Ethereally beautiful yet utterly banal, like a busy building site. It is this ability to exist in a state of paradox that struck me about the Grotte de Glace, its fabric and dynamics undermine so many of the defining attributes of ‘cave’ and challenges the certainties that I

had previously held about the cave space.

The Ice Cave is both light and dark; the deep darkness of a cave is a consistent and potent theme in writing about these underground spaces, yet, the Grotte de Glace offered something different. In his writing on the geographies of darkness, Tim Edensor says that interior experiences of darkness offer intensified and alternative sensory and social experiences' (2015:562). Although I agree of course that the darkness intensifies other senses, the light through the ice enlivened and focused the other senses, making the experience of the cold air collide with the chalky blue seems like a synesthetic collision: as much as taste as it was a shape. In the Grotte de Glace is an ethereal and all pervading light permeating the ice and making the walls glow with a milky pale blue Robert MacFarlane describes a blue in the ice caves as the colour of the memory of the ice (2019). The experience is of a kind of dimness but with an extraordinary brightness deep in the walls, an untouchable light that makes flecks and stones suspended close to the face of the ice walls of the cave visible. It was not dark but it was an intensified sensory experience within a cave nonetheless. The deep darkness of the cave is a consistent and potent theme in the key writing that I have drawn upon for this thesis. Crane and Fletcher state that to 'enter a cave is to move towards utter darkness' (2015:19). MacFarlane describes the 'data depleted darkness of the cave' (2013 unpaginated), there are Della Dora's 'dark recesses' of the cave (2016:176) and Pérez uses a description by Prussian explorer Alexander von Humboldt of 'a place where darkness does not offer even the charm of silence and tranquility' to describe the conditions of Guácharo Cave in Venezuela (Pérez 2016:136).

Unlike the remote ice caves in Greenland that MacFarlane visits, this is a popular tourist cave. The natural luminescence of the ice has been superseded by the type of artificial illumination often found in show caves, purple, orange and blue lights up lighting ice sculptures and interrupting the mesmeric quality of the dim ice glow. Hawkins gives an account of an artificial cave, neither dark, nor natural with its man made interior (2020) that plays with ‘deep time through bodies of geology, plastic and flesh’ (2020:10). Like the artificial cave, the ice cave is not a pure site of the sublime, but the sublime experience is still present. This is a site in which I could stand looking deep into the ice and thinking about what it means to be in the heart of the glacier, all the while, just to my left and right, are lurid ice sculptures and colourful illuminations.

I’m now going to move on to describe ways in which the Ice Cave is a space which is both inside and outside; the illuminated ice sculptures that had been carved into the cave in the year of our visit were of oddly domestic scenes. The tourist attraction has been dug out every year, for over fifty years and according to the Refuge de Montanvers website, it has attracted up to 400,000 tourists per season. Tourists flock to the once in a lifetime experience of entering a glacier, only to be confronted with a double bed, a fireplace and a bar made of ice but maybe they wanted this? Wearing coats and gloves we trail around the U-shaped path of the ice cave looking at the sculptures of familiar interiors on our left and right. Compounding the oddness of this experience is the view out of the cave mouth as you turn the bend at the back of the ice, out through the doorway, following the narrow blue carpet and out onto the glacier sloping down the valley. The blue runner carpet underfoot has stayed with me, as soon as I imagine the Grotte de Glace I think of the sodden carpet underfoot. This is a

cave made to accommodate humans. Much of the writing about caves describes the counter intuitive nature of entering into this dangerous and inhospitable environment (MacFarlane 2013, 2019; Pearson 2018). To enter the cave is to engage with a sense of danger and adventure, that by crossing over the threshold in a space ‘within’ somehow the rules are different. In his writing about underground volumes, Bridge describes the ‘idea of the hole as a portal to another world reflect the profoundly disorienting experience of descending into the earth’ (Bridge 2013:55). The Grotte de Glace is not dangerous because of how it has to be navigated, instead it represents a much more profound and monstrous danger; the visible manifestation of an Anthropological threat: ‘Glacier fluctuations are sensitive indicators of climate variability’ (Kuhn 2006). The Grotte de Glace is a cave embedded within the terrain of a glacier which under normal circumstances is a difficult and extreme place to navigate. But the experience of the Grotte de Glace is one of ease, there are steps and pathways and once you enter through the mouth of the cave into the ice, there is the kind carpet and furniture that you might find in a familiar interior. You are outside on the tongue of a glacier being dripped onto by the ancient waters of the depths of the ice, looking at a double bed.

As well as being both inside and outside, my experience of the ice cave was also one of both above and below. High up in the mountains at altitude and yet below the roof of ice within the glacier. The Cave is synonymous with the subterranean Hawkins explores cave sites in the context of ‘Underground Imaginations’ (2020), the ‘fantasy of a hidden subterranean world’ was at the center of the 19th Western fascination with speleology (Crane and Fletcher 2015: 31), MacFarlane’s ‘Underland’ is full of ‘depths’ and ‘burials’ and ‘beneaths’ (2019).

So to go into a cave is to go down? Veronica Della Dora describes the paradoxical ‘anti-landscape’ of the cave in ‘Landscape, Nature and the Sacred in Byzantium’ (2016:177) in which the sacred site of the cave, often embedded within the height of a mountain ‘functions as the settings and metaphors for supernatural ‘paradoxical wonders’ (2016:195). The Grotte de Glace too is a cave both above and below, it sits at 1913 meters elevation (Fouquet 2015) in the heart of the glacier and yet my experience of being within it was not a feeling of being at height, but rather of being underneath and within the ice.

The Grotte de Glace requires ascent, dizzyingly so, an upwards that seems its never going to end. Even when crossing the threshold of the cave, one stays level, there is no going down.

The ice, however, stretches on above, and so the Grotte de Glace is a cave that is below; underneath heavy downwards moving ice. Not only is the ice cave both above and below, it is also engaged in the tension of moving river-like down the valley with its low plastic flow and high brittle flow – as well forth the glacier disappears back retreating back up the valley, melting and dripping at an unprecedented rate.

In her underground imaginations, Hawkins cites the ‘inherited stories’ (Hawkins 2020) of Clark and Yusoff who describe ‘a planet so slow moving it could just about be ignored-give or take an occasional, inopportune shudder.’ (Clark and Yusoff 2017: 20) We know that the glacier is moving, and moving both up and down at a considerable pace. As ‘liquid’ as the landscape of the stone cave might appear (MacFarlane 2019) it is more solid and stable in form than the glacial ice. MacFarlane sees the glacier in his account as an ‘underland of ice’, understood ‘less as structure, than as hue’ (MacFarlane 2019:346). In the introduction to

‘High Places: Cultural Geographies of Mountains, Ice and Science’ (2008) Cosgrove & Della Dora describe the physical and emotional that negotiating the unstable surfaces of ice and snow at altitude can have:

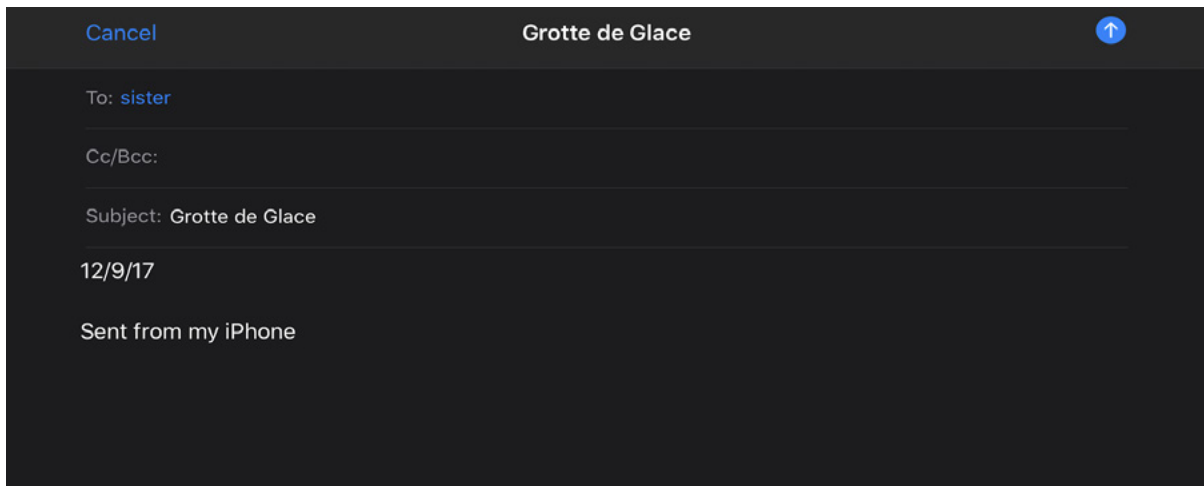
‘The presence of snow and ice as landscape elements in themselves and in their capacity to blanket and mask more durable landforms, the obscurity and evanescence of mist and cloud, together with the disorientation these can produce, and the physical rigours of ascent and traverse for those whose technologies of movement have been shaped in different environments, all reinforce associations of high places with physical and moral demands, with moral purification, eschatology and transcendence.’
(2009:5)

Writing about the geology of caves, Bosworth tells us that the rock is not an impenetrable container but part of an interconnected body of matter through which other materials can seep and flow (Bosworth 2016). The effect of the environment and the human body of the visitor on the ice, however, can be seen with the naked eye and measured in meters and months: Changing state as you touch it. Fragile, permeable and partly transparent; not only can you see in this cave you can see through this cave, only a few centimeters admittedly, but if you put your face close to the ice (breath making a slick gloss on the ice’s surface, the cool glow beaming back onto your skin) you can see flecks of grit suspended within; the ice cave seemed to me to be both liquid and solid.

When we visit the Grotte de Glace it is in fact clear that the cave is becoming more liquid by the minute; glacial water dripping from the ever deepening cracks in the ceiling. Because this is a liquid cave, it is also an unstable cave. The blue carpet is sodden, drenched in water, it's presence is to prevent people from slipping on the ice, but the way in which it signals to the domestic seems even more absurd as it gathers puddles of water and squelches as we walk on it. Just as the ice cave is both solid and liquid, it is also both fearsome and fragile, collapse in the ice would engulf tourists in minutes into an irretrievable and icy abyss. It may be melting as a result of the behaviours of the Anthropocene and the ice may no longer tumble down the valley in waves, but the Mer de Glace and the caves within it could still swallow us whole. The Grotte de Glace is an unstable cave.

Grotte de Glace; tourism and selfies in the ice cave

On the second day on the Mer de Glace, we climbed down the annually extending metal staircase on the glacier and into The Grotte de Glace. Visiting the ice cave and descending the metal steps from the viewing platform to on to the glacier presents a stark confrontation with the shrinking ice as a result of climate change. In the following writing, I will use the Grotte de Glace as a way to think through the actions of the tourists (among which I count myself) and the implication of capturing moments in selfies and photographs on a melting glacier.



Dear Sister,

Dressed in sensible clothes we boarded the Montenvers train from the valley up to the viewing platform over the Mer de Glace. The train was familiar to me, I had been on something similar as a child and as we sat on the wooden benches moving upwards at a steep angle, the heater below our feet from, I remembered images of standing on a Swiss station in the sun with my grandmother. There was a group of men standing by the doors on the train, clearly climbers, wearing well-used equipment and holding themselves with a sort of confidence and nonchalance that suggested that they were familiar with the trip. I felt suddenly self-conscious about taking photographs from the train, a trip so clearly so familiar to them, and of the informative leaflets in several languages that I had clutched in my hand. We move smoothly from the train to the train platform and then around a corner on the same level is the viewing platform. The crowd that was sitting inside the train has now reformed within the curved boundary at the edge of the concrete, photographs are being taken and automatically uploaded to the cloud. We were visiting the Grotte de Glace, a famous tourist attraction first dug into the ice. The Ice Cave or Ice Grotto on the Mer de Glace was first dug

out in 1946 and a new cave is hollowed out of the ice every year, the glacial shift down the valley is marked by the relics of past grottos that puncture the glacier like drain tube holes in the skin after surgery.

This was not the ice cave that I had been expecting. On reflection, I was looking for the 'real' experience I had read about in the book by Browne. The Mer de Glace, used by Shelley to represent isolation and the anti-human is now an alarm call. Covered in people and disappearing by the minute because of the environmental changes imposed upon it by global human activity. And here we are, to compound the problem. The tunnel that forms the ice cave is dug anew every year, leaving the unused ghostly tunnels like scars next to it. The grotto is in the shape of a horse-shoe, with an entry and exit point. There was a considerable sequence of metal steps (480 steps according to the Chamonix.net website) to get down to the ice cave. On each platform on the stairwell is a plaque marking the date at which the glacier was at that level: downwards, backwards. Each step down goes further into a ghost of the monstrous sea of ice.

Just a few meters from the entrance to the ice cave was a digger with an orange tabard resting on the seat, for ongoing maintenance perhaps? The path to the ice cave and the entire interior was covered with a soggy blue carpet. The carpet was soaked but made the surface easy to walk on and made the tunnel accessible without crampons or snow boots. Visitors were walking around it in trainers and loafers, ankle boots. Mostly visitors were in groups, laughing and moving relatively quickly but often stopping to take selfies. Pausing and blocking the pathways to pose or to capture the image of others in the group. Off the pathway

were photographs set into the walls of ice, there were ice sculptures up lit with purple and orange. The ice sculptures I can remember were a bar, fireplace, a polar bear and a double bed. The lighting and incongruous forms combined with information boards and mannequins acting out the grottos of the past give the place a house of horrors feel. Take a selfie anyway, we're here now. Stomping about on a soggy carpet inside the dripping, dying beast. Deeper into the ice caves was the hay stuffed into cracks in the roof of the structure. Our visit was towards the end of the season and we were reassured that this was normal and that the ice was melting, water dripping at an alarming rate and the crack produced needed to be stuffed to prevent debris from falling to the tunnels. Most show caves are expanded natural caves, in this sense the ice cave doesn't qualify as a cave, it's more like a mine. Visitors flow in and out of the vascular system that has been excavated, taking selfies with them as their haul. After exiting the U-shaped tunnel I climb back up the steps without the great sense of awe or transcendence that I had been anticipating. Back to the train platform after browsing expressionlessly in the shop and then in a queue for the train back down to the valley. On the train with steamed up windows, I sit and look through the photographs that I have taken. This was the final year of the Ice Cave, the glacier is now considered too vulnerable to dig out a new model in 2018.

F.P.

Benjamin Claret, the manager of the family run Grotte de Glace business started by his Grandfather says that “Visitors are now coming here to witness climate change. It’s sad, but it’s necessary” (Fouquet 2015). This statement prompts reflection on what the motivations for a visit to the Grotte de Glace might be. Perhaps I had been looking for a ‘natural’ experience, the kind that could sit under the umbrella of ‘ecotourism’ (Fletcher 2019), I had been looking for an isolated, icy wonderland inside the ice. Fletcher writes about the emergence of ‘Anthropocene tourism’ in which visitors will flock to see melting glaciers in a ‘post nature’ world that continues to ‘market social and environmental awareness and action’ (Fletcher 2019:1) in a demonstration of the capitalist capacity to adapt and survive. Although we did not intend to take part in this evolving wave of Anthropocene tourism, that is in fact what we contributed to. Arguably, the act of taking photographs throughout the trip sits in an equally uncomfortable alignment with a consumerist mentality; the grabbing and fixing of images in an act of owning and collecting memories. Or as Sontag describes taking photographs (in an age before digital portability and social media platforms) ‘Photographs are a way of imprisoning reality...One can’t possess reality, one can possess images – one can’t possess the present but one can possess the past’ (Sontag 1977: 185) As a visitor in the Grotte de Glace, I felt like an intruder in the ice. Momentarily absorbed into the glacier, both entities leaving traces on one another before I extract myself again, documentation in tow.

Yusoff describes the agency of the rock in the coming to being of the Lascaux cave paintings: ‘Always there is the presumption that it is ‘Man’ who touches rock, but is it not the rock that touches Not-Man into being? Is it not the rock that lures the waiting imagination to find something that subtends it?’ (Yusoff 2014:387). The lure to touch the walls of the Grotte de

Glacé or to slide a hand down into the cracks on the surface of the Mer de Glacé is to feel immediate effect, an almost unbearable burn, cold transferring through the skin, heat from the skin into the glacier. What Yusoff draws attention to is not only the agency of the rock but the complexity making the distinction between the human body, the animals and human bodies depicted on the wall and the rock itself. Yusoff recognizes that the human is made through negotiation between non-human and inhuman forces, rather than opposition and boundary (2014). Yusoff works against human exceptionalism by drawing attention to the microbiological makeup of the body and the constant shifting and exchanging of matter, both biological and geological, that blur the edges of bodies, ice and rock. The Anthropocene, like the ice cave, is ‘a paradoxical state’ (Yusoff 2016:24). To visit the Grotte de Glacé as a tourist in the Anthropocene is to participate as an ‘author of the end’ (Yusoff 2016:2), paradoxical in that it ‘is something we can diagnose in the present it is also something that is ceasing to be’, she explains that ‘It is both continuous with, and a tear in, the fabric of time’(2016:24).

To be there is to be complicit and to take photographs further compounds participation in the need to witness and possess. The hope of an authentic and unspoilt experience, by which we usually mean; it is as we have imagined it to have been in some distant past (Massey 1995) reveals a type of exceptionalism, wanting the Grotte de Glacé all to oneself, experiencing the long melted icy peaks of Shelley and Ruskin – you can only see those on google image search now. When I look at images of the ice cave and of the Mer de Glacé on instagram using the hashtag ‘merdeglacé’ (at the time of writing there are 50.4k posts with this tag) I scroll through photograph after photograph of a single person or two people against a vast backdrop without any other people in it; photographs that construct a sense of isolation and wilderness,

that seem to offer that the photographer was there in this place alone, or with very few others.

Susan Sontag describes the anxiety to collect proof (1978) and this is in an era of data collection before the digital, before the easily portable. I feel the pull of this anxiety within the ice cave – a place the likes of which I have never experienced before: I have travelled a long way, spent a lot of money, I don't know when I will be able to see it again, I cannot trust myself to remember. If *thoughts are things* (Bessant, Leadbeater 1901) then they are both malleable and hard to shift. Memories can stick in snapshots, associating themselves with new thoughts. Multiplying and reforming but with anchors that just won't disappear. In their reading of Deleuze, Bonta and Protevi (2004) describes short-term memory as disordered, flashing up at random as if from a warehouse, the long term ones organised into a linear structure and much less malleable. Images building up and compressing, like new snowfall on the ancient moving tongue of the glacier.

In the U-shaped tunnel in the centre of the Grotte de Glace, there was a queue of people waiting to take photographs ahead. I stood and waited on the soggy blue carpet and watched a tourist in a lunge position trying to frame a shot on his camera, I took a photograph of him. 'To take a photograph is to participate in another person's (or thing's) mortality, vulnerability, mutability... All photographs testify to time's relentless melt' (Sontag 1977:22).

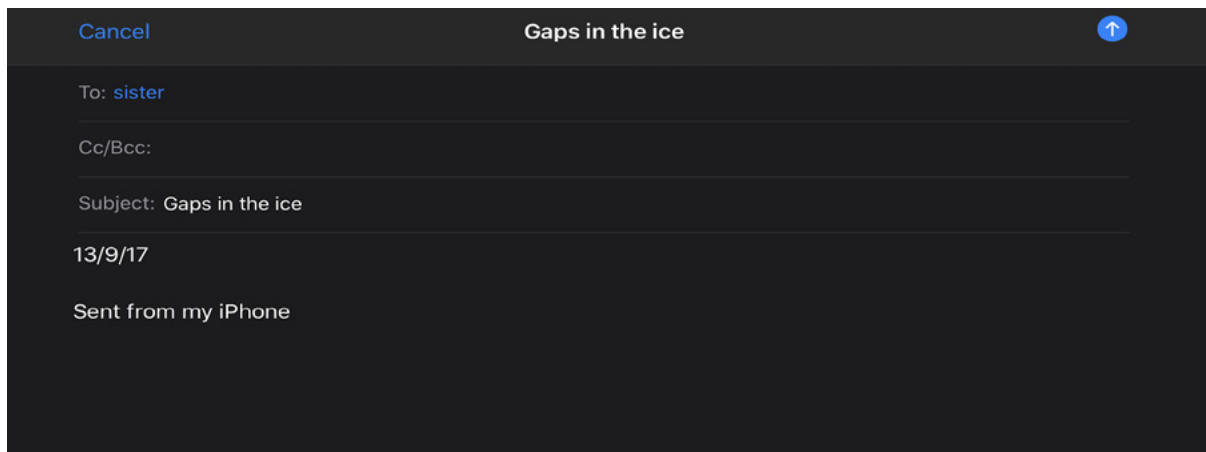
Sontag's image of a failed attempt to freeze time that is melting away seems even more poignant in the case of the Grotte de Glace; a literally melting body of ice, that we know was once monstrous from early glass plate photographs; and the glass plates themselves are now crumbling

and fading. The other cause of congestion in the U-shaped corridor is the selfie, individually or in groups, tourists lean backwards, one arm outstretched to take portraits of themselves. Part of the motivation for taking a 'selfie' is self-presentation (Sung et al 2016) providing evidence for an experience and controlling the photographers position within it: Visiting a glacier, with flattering blue light shining through the walls perhaps presents an adventurous and carefree soul, tuned-in to nature? Self-presentation, proof, and possibly self-possession. The word 'selfie' was added to the Oxford English dictionary in 2013: A photograph that one has taken of oneself, typically one taken with a smartphone or webcam and shared via social media. Diefenbach and Christoforakos (2017) say that selfies are a 'double-edged phenomenon' (2017 unpaginated), a daily habit for many but also an activity that evokes negative feelings and associations with non authenticity. The authors draw attention to the possibility to select and edit images to be posted online, making selfies a much more controlled presentation than presentation in an offline environment (Diefenbach and Christoforakos 2017). Control in this context is tied up with self image but also importantly with 'creating a superficial illusionary world' (2017 unpaginated). In the case of the Grotte de Glace, I imagine these selfies are presented as an experience of a winter wonderland, quite different to the dripping and shrinking surroundings of the glacier that I remember.

Over the last few decades there has been an unprecedented pace of glacial retreat and thinning, new sections of metal steps had been added at the bottom of the structure to compensate for the lack of glacier, a desperate life support mechanism for the tourist industry. I took an image of the old, abandoned ice cave entrance. I noticed that Luce and Harriet had taken the same image and that it was sitting like a hole in our screens as we

travelled down on the train from the glacier. I uploaded mine to Instagram and gave it a hashtag, sending it into a stream of traffic that could contribute to future google searches.

Gaps in the Ice: Artistic practice and formlessness in the field



Dear Sister,

On the second day of our trip Luce organized guide Ulrika Asp, to take us on to the glacier. The day started early and the meeting point was a mountain equipment shop in which we would hire crampons, boots, helmets. The equipment made the endeavour seem entirely more serious than the tourist trap of the day before. Ulrika, originally from Sweden, has been a mountain guide in the region for decades and it became clear very quickly that our ambition (which seemed pretty daring to me) to walk on the Mer de Glace was actually pretty unambitious. Ulrika was curious about the intentions of the trip and I was unable to give her a straight-forward answer. There is something about being an artist, and wanting to carry out artistic experimentation, that I find highly uncomfortable, as though perhaps it seems

whimsical, not serious or legitimate enough. No real data. I am very serious about it but often find myself in a position of defence when I can't define exactly what it is I hope to achieve from the development phases of my work. Maybe it would be easier to devise a strategy and stick to a rational plan but the fear that this will produce logical artworks that in their logic, lose their...I don't know how to describe what they'd lose.

We travelled up the mountain on the same train as we had used the day before but with a different sense of purpose. There were others on the train with ropes around their shoulders and we had joined their ranks. A new sense of authority - and I suppose a look of authenticity to those travelling on the train as tourists. Of course the wear and tear on the boots was from previous hires, but the trappings of a 'real' climber made me hold my posture slightly differently. The equipment made the activity seem more meaningful, and the role more convincing. They confirm the difficulty or seriousness of the job in hand. The physical risk. I am not great with heights. I had admitted this to Ulrika and she accommodated by planning a less intense schedule of exploration on the ice. Once disembarked from the train, we retraced our steps over the viewing platform and past the cable car leading down to the Grotte de Glace.

We were tied together about 4 meters apart on a single climbing rope. Organised in order of confidence and ability. Me the least of both closest to Ulrika and sandwiched protected in the middle two of the four. The climb down to the glacier involves navigation of a series of metal ladders which are embedded into the vertical rock face. As the glacier has retreated, the length of the climb down has increased. The ladders seemed narrow and the rungs cold

and slippery from the friction of use. Feigning some confidence I followed the instruction to use the carabinas to clip the rope in and out of the track down the side of the ladders. This is not a difficult climb, in fact I believe that many residents of the area climb up and down un-roped. But to me it was immense. Each of the ladders was approximately 50 meters in length. Working in a line of four meant that occasionally someone was left behind or too far out in front and the line would tighten. There was shouting up and down the line to pass on messages to re-regulate the pace and distance. Ulrika, aware of my tension (perhaps it was being transmitted through the rope, or was just evident on my face, my silence, and posture), tried kindly to distract me with questions about my work. Eventually, after 200m of ladders we reached the moraine. Actually, because the surface of the glacier was so covered in the grey moraine Ulrika decided that we didn't really need the crampons for this level of difficulty.

There was a moment to stop and look around. We were down on the glacier, in the place that I had viewed from a distance through the binoculars the day before. The pale blue, sometimes piercing, sometimes chalky surface of the ice was breathtaking. We walked carefully a little way up the glacier, struggling not to fall over or turn an ankle. Ulrika strode confidently using her knowledge of the surface and the makeup of the ice to navigate. She had her hands in her pockets for much of the walk. Ahead is a small crevasse, an opening in the ice that Ulrika thought must be about 20m deep. Tiny in comparison to the depths in the crevasses further up the glacier, which can be ten times this depth. The definition of a cave is somewhat contentious 'proper' and 'non-proper' caves (Curl 1964), surrounded by but not filled with rock, not a tube or a pocket; Curl lists numerous conflicting attributes. A human body

could fit in these icy gaps (Crane and Fletcher 2015) and be entirely surrounded by ice, submerged within it, no rock in sight, it's as cave-like as any 'proper cave' that I've come across. We reach a point on the glacier that we had spotted from the viewing platform the day before from a great distance, the ice underneath the rock has a small depression within it, a miniature ice cave. I decided to use this spot as a place to test out some of the ideas that I have brought with me to the glacier. As a response to the show cave of the day before, I had brought with me a roll of blue sugar paper. I roll some of it out in front of the rock and use white gaffer tape to mimic the white lines (presumably for health and safety: visibility) in the show cave. Out in this exposed part of the glacier, a few hundred meters up from the grotto, the carpet looks incongruous. Ulrika gave us some ginger tea in a flask and we ate some quite synthetic crisps that I had brought with us in a red plastic pack with orange dust that stained the fingers. Something that I remain struck by is my inability to 'perform' on the day. I felt utterly self-conscious trying to make some sort of sense of the glacier with my 'art props'. The wrong tools for the wrong role had been transplanted onto the ice. I self-consciously laid out objects and bits of paper and fabric feeling as though I didn't really know what I was trying to do, and certainly wanted to resist really having to explain any of this to Ulrika, who was extremely generous and receptive about working with us. I felt exposed, inauthentic. An intruder on the ice.

It began to rain slightly and we decided to head back off the glacier. A trio of climbers from the UK approached us and asked us how far it was to the seracs and crevasses higher up on the glacier, Ulrika directed them up the ice and they walked beyond us purposefully. The climb back up was more difficult than the descent. The rain made the rungs slippery and there was a slight wind that made me feel unstable. We were tired and the anticipation of the glacier was behind us.

We reached the top and were un-roped.

F.P.

This letter describes the oddness of working on the ice, of trying to fill the shoes of the romantic legacy of artists working within this landscape and the feeling of precarity provoked not only by the act of the fieldwork but by the gaps and cracks in the slippery ice underfoot. The work felt formless and at times even aimless.

Since returning from the ice caves however, the processes that took place on the ice have proved to be of great value; rich material that has been rethought and reworked in both artistic workshops and in the studio. This formless and aimless way of working became the beginnings of a complex body of visual art work. Formlessness or *informe* was a term coined by philosopher George Bataille in 1929 in the surrealist journal 'Documents' 1929-30².

Bataille himself refuses to explain the meaning of 'informe' 'It is not an adjective having a given meaning, but a term that serves to bring things down in the world. Rather than trying to define the formless, the curators aim to put the word to work claiming that 'formless is an operation'. Formlessness is described as an unstable motif (1997: 18) and the 'Documents dictionary' remains one of the most effective of Bataille's acts of sabotage against the academic world and the spirit of the system' (1997:16) Throughout the formless dictionary there is reference to the operation of slippage (1997:15) the sliding downwards into the formless, which has an inevitability about it, like the glacier. To work with materials on a

shifting surface is to embrace this motion of slippage.

When I reflect on the process of trying to make artistic work on the glacier, I can see that working on an ice form that is moving and shifting influenced the thinking and making in my practice. Pérez describes the enmeshing of the body and the cave in the process of cave mapping, the resulting maps ‘are not merely attempts at representing the world but material instantiations of ways we explore it, together, and change in the process’ (2013:305). Being in and on the glacier and thinking with the ice cave has filtered into my studio practice in ways that are difficult to define specifically.

Conclusion

The Ice Caves in the Mer de Glace are slippery, there are many moving components at play. The romantic expectation of the image of the ice cave was so far from the photographs that I now look at on my laptop. The different sites drew out a range of movements and behaviors; some passive, some active. Each role that was assumed, climber, tourist, artist, required different types of equipment and choreographies that informed the experience and understanding of what it was to be there. The overwhelming experience of this glacier was one of conflict, to be complicit in the destruction of the site and yet unable to bring myself to not participate. To be carrying out a tenuous sort of ‘fieldwork’ without any kind of solid results or data at the end of it. But the ice cave is a paradoxical cave and these feelings of conflict mirror the form as it slips down the valley whilst receding back up it.

Working artistically on the glacier has shown me that the results of this type of research may be slow, uncomfortable, uncertain, but they can nevertheless contribute to a rich and formless way of thinking and working. What I now understand about my version of artistic fieldwork is that it requires me to trust in material agency and in the unknown; to sit with the discomfort of that and resist the urge to come to a solid conclusion. What this research can contribute to existing material and practice-based experimentation in geography, is this case for sitting with non-fixity. In this chapter, I have attempted to write with the movement of the ice. By adopting a narrative style in the letter and allowing the content to sit in conflict, the more analytical writing, the intention has been to mirror and so explore the paradoxes of the glacier in its' form. The idea has been to adopt a state of flow with moments of fragmentation, an acceptance of a never ending-ness, an unbinding stream that constantly feeds the unsettled assemblage.

In trying to contextualise these methods within geography, I found the writing of Wylie and Anderson (2009) very helpful. In their descriptions of materiality, Wylie and Anderson draw on the work of Serres who describes turbulence as an intermediary state and an aggregate mix (1995:109); a state *in between* which Serres describes as 'difficult to conceive, difficult to study scientifically' (1995:109) but one which is universal and exquisite. Visualising a 'turbulent' state in which both order and disorder can be found is a way of understanding the paradoxical glacier and its ice caves as space of ongoing exchange, process and force: As a body of matter that is moving both up and down.

Finally, I want to think through the theme of the ‘monstrous’ in this chapter. The monster has been present from the start, implied in the formatting reference to the Gothic novel, Frankenstein. The letters are inspired by Shelley who uses them to add complex narratives to her novel about the man made monster in the mountains.

The setting for the novel is against a ‘sea of ice’ with monstrous peaks, now the peaks are flattened and the scene of the glacier is strikingly forlorn; the glacier is no longer monstrous but melting and retreating. Even the creatures carved into the ice in the ice caves were dripping and fragile. The monster on the Mer de Glace now takes the form of the tourism and ecotourism of which I was a part, and which in itself is indicative of behaviours contributing to our climatic crisis. To end I want to turn to the work of Hawkins, who in her paper exploring underground imaginaries and environmental crisis (2020) claims that part of our current emergency is a crisis of the imagination. Using the underground and in this the ice cave, as a space in which to rethink; an opportunity to stretch our creative imaginations and explore non-human imaginations; reversing the dread felt by Shelley’s reader of the glacier and the man made monster roaming the ice and instead thinking through and with the flow of the ice.



Fig.11. Boston Aquarium, a diver cleaning the tank. 2017

Tunnel 1:

Aquarium

The following writing is drawn from observations of a series of encounters on a day in April 2017, fanning out from a moment during an outing to an aquarium in Boston with my young daughter.

We were travelling to a Geography conference and balanced our time between tourist sites in the city and the sessions taking place in the huge network of anonymous hotels in the center of town. It was a sort of compromise, a way to alleviate my guilt for making her sit through presentation after presentation. We would explore the city in the morning and then attend the conference in the afternoon. She would sit through sessions next to me or on my lap watching cartoons on the ipad with her headphones on. Together, but not together. Her weight on me, our breathing tuned in, but our attention in different worlds. It was raining heavily, and we decided to forget the conference for the morning. I searched: 'Indoors Boston Children' on the ipad. The aquarium is famous for the vast cylindrical tank at its core. During our visit to the aquarium, there was a particular moment at which my daughter saw a diver within the main tank. The way in which she followed the diver drifting upwards with her hands on the glass and the complexity of the way in which we continued to encounter the image after the event has opened up questions about encounter, containment, contact and interface that I would like to explore in this submission. The architecture of the vertical tank and upward motion of the diver versus the spiraling of the viewer seems to offer an opportunity to structure thinking. This story is a spatial diagram of that moment, a cross section of the sequence of containments. Icloud as

an extension of memory. Perception through frames.

The Ipad screen, the curved tank, the oxygen tank, the wetsuit, the air pockets, the diving mask, body in water, water as mass, the view of the sea, the windows, the temperature, the photographs, the Iphone, the puddles, surface tension, her weight on my lap, the memory of pregnancy, the closeness, the Icloud, the swipe, the live aquarium webcam.

Aquarium

The Boston Aquarium has a cylindrical central tank so vast in scale that the rest of the building was constructed around it, according to the website the tank is 40 feet wide and holds 200,000 gallons of saltwater, a concrete viewing platform spirals around the tank from the ground to the third floor.

The lights in the tank are dim, omitting a blue-green glow. There is a low hum from the filter and heating system. It's warm inside the building and we have wet hair from the rain outside.

My daughter was two, almost three but could run fast and darted up the spiral quickly, not stopping. She needed to get a sense of the limits of the thing I think. Once at the top of the spiral she agreed to walk down it more slowly and stop every few meters to look at the fish.

We moved down and around clockwise, other people passing us on the way up. Inside the tank some of the fish were static, some rising slowly upwards, occasionally darting. Schools of fish moved smoothly across the cylinder, following the curve and then becoming distorted by the

glass as they cut a cross section through the circle.

Walking down the spiral, initially, hand in hand but she soon tugged away. My pace was consistent, she would dart to and from me, moving up and down like a satellite.

Her pace changed a little, slowing as she came nearer to the tank and eventually, tentatively resting both hands, still cold from outside, on the warm glass. The water is heated to be between 22-23 degrees Celsius, suitable for the tropical exhibits.

I could see her face tilted downwards, reflected in the curved glass, her expression didn't change but her gaze followed a pair of black rubber flipper as they floated diagonally upwards across the frame of glass in front of which she was standing.

The diver was attending to the coral structure at the core of the cylinder, it wasn't exactly clear what they were doing but it was difficult to focus on the action. The mat blackness of the scuba fabric within the curved tank made it difficult to gauge the distance or the volume of the diver.

I looked at the diver, now hanging slightly above our heads, there must only have been a meter between us. My head level with the bottom of the flippers, my daughters head tilted backwards looking up at the diver, level with my waist. All facing in the same direction, the one in front unaware of the one behind.

The glass between us and the diver, the glass of the diving mask between the diver and the water. The lungs inhaling and exhaling within the suit, within the tank reverberating - shifting

the volumes within the water.

I didn't ask my daughter what she thought of the diver, she was so transfixed I didn't want to interrupt. Instead I reached into my stuffed handbag for the smooth familiar glass of my phone and watched the final moments of the encounter through the camera before taking a photograph.

We went to the cafeteria on the top floor of the aquarium, bright and loud. We sat by large windows overlooking the harbor leading out into Massachusetts Bay, the sea. The surface of the body of water disrupted by heavy rain. The average water temperature for Boston in April is approximately 4 degrees Celsius. The steam from my cup of coffee made a patch of condensation on the window.

She curled up on my lap and I could feel her weight and warmth connecting to my body almost in the place that she had grown. Now outside.

When I was pregnant I used to swim three times a week. As she grew I became less athletic and the water became more about feeling than exercise. Floating and moving, and understanding my changing volume within the body of water.

We get out into the rain, it was torrential and freezing. The streets were empty, I rushed my daughter into a shop doorway and struggled to connect with my touchscreen through the droplets of water. Eventually I ordered a taxi and watched it on the tracking screen drawing closer as rainwater seeped through our shoes into our socks.

We get into the taxi, the windows steam up immediately, the driver takes us to the one of the hotels in which the conference that I was attending was taking place. My daughter and I struggle out into the hotel lobby, soaking, overloaded. It is only after the taxi has pulled away that I realise I no longer have my phone. A wave of panic rises up in me, I was in another country, another time zone with a small child and no phone, no way to connect. Despite my best efforts and the efforts of the taxi company I cannot locate the phone. I imagine it lying level with the surface tension of a cold puddle outside the aquarium, drops hitting the solid screen.

I take notes in a notebook and spend the afternoon endlessly reaching for an extension of my memory that is no longer there. I lament the loss of all of the photographs we have taken on the trip so far and doubt my ability to remember and retain the imagery.

At the end of the day we get back to the apartment that we are staying in, it's on the 5th floor. The rain has stopped and I look out over rooftops at the clean, bright, tight sheen of the puddles.

My daughter is flipping through the ipad, she has such an ease with it. A total affinity with the actions, scrolling, swiping and pinching with an ease that makes me dizzy.

She is flipping through the photographs. I see her swipe across an image of the aquarium, the photographs from the morning are there. They must have connected to the I cloud while I was using the wifi in the café at the aquarium.

My daughter slowly moves her finger across the screen, behind which is the image of the back of her head, looking up at the diver.

When I get back to the UK I get a new phone, a brand new screen. Perfect, crack free, ripple free glass.

Note:

Since beginning work on this text, I have been browsing the New England Aquarium website, there is a place on the site which connects to a webcam. The page on the site says ‘The exhibit is only lit during open hours and goes dark when the Aquarium closes for the night.’

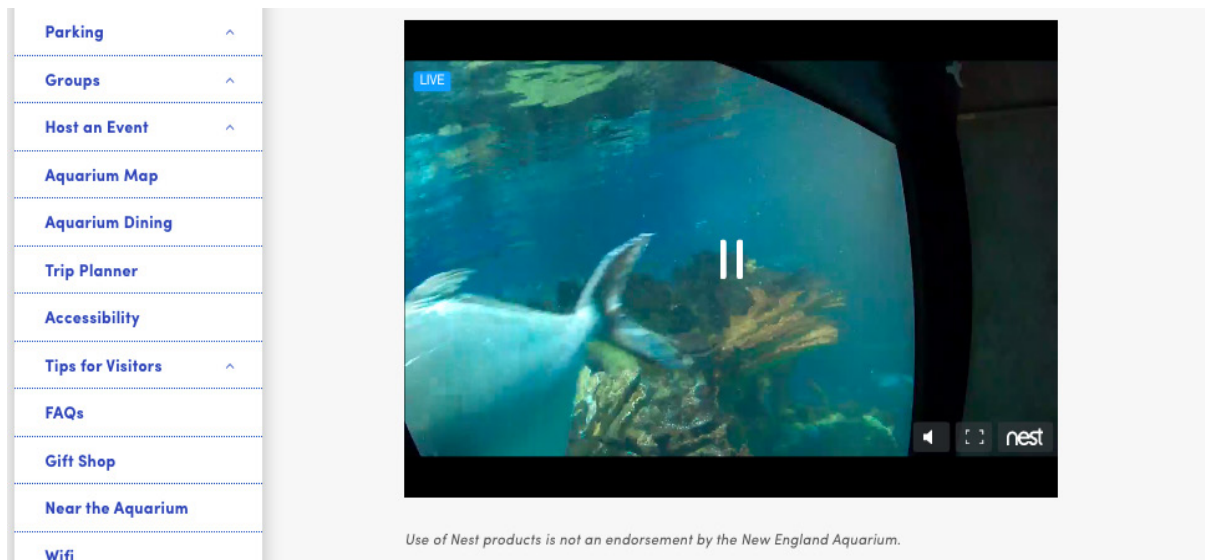


Fig.12. A screenshot of the live webcam in the main tank of the Boston Aquarium (New England Aquarium)



Fig. 13. Cave Fish Collage, 2018

Cave 2:

Invisible Fish: The Aach Spring Cave, Konstanz, Germany

Introduction

In 2015 a new species of fish was discovered in the Danube Aach River in Germany. The first sighting of the Cave Loach was by the experienced cave diver Joachim Kreiselmeier, evolutionary biologist Dr. Jasminca Behrmann confirmed the uniqueness of the fish. A few of the fish were filmed in the cave and subsequently captured by Kreisselmeier, a small colony of the Cave Loaches are now in the laboratories of the Limnology Department at the University of Konstanz, Germany. Dr. Behrmann believes that there is a large school of fish living in the sections of the network that are not accessible to humans.

This chapter focuses on a case study: The moment of encounter between a Cave Loach and a cave diver in the underwater network accessed via the Danube Aach Spring near the Germany-Swiss border. The writing draws on recent hydro-feminist literature (Chen, MacLeod and Neimanis, 2013) and feminist geophilosophy (Bosworth 2017; Yusoff 2013, 2015, 2016; Grozs, 1994) to discuss ways of knowing in these dark, subterranean waters. By thinking with this moment of encounter the writing will explore human reliance on visual and linear types of knowing, and suggests that through physical practice and material attunement, we might be able to access and present less easily definable and more bodily ways of understanding. The writing looks at the moment of encounter through three lenses:

‘Loosening the Watertight’ thinks about the boundaries within the cave; the rock, the water,

the wetsuit, the skin. The writing explores permeability in this underground landscape and how one might sense beyond boundaries into the unreachable and the imperceptible. The discussion goes on to suggest ways in which sustained artistic practice and making through repetition, might be used to study and respond to sensed information. Thinking with the moment of encounter in the Aach Spring is an invitation to acknowledge alternative frequencies, previously invisible and in doing so highlights the impossibility of notion of border and reinforces the idea of interconnection and the inevitable seepage between membranes.

‘Value and Access’ focuses on how the materials, inhabitants and visitors to the cave give and receive information. The writing reflects on the information given during presentations about the Cave Loach by Dr. Jasminca Behrmann and Joachim Kreisselmeir. The discovery of the fish by humans adds to the picture of the Last Glacial Maximum and evolutionary possibilities of life in water flowing under the permafrost of the Alpine Glaciers. They hold information about a young species isolated from their surface relatives; a model for genetic adaptation over 20,000 years. In these difficult to reach and dangerous waters, the writing looks at the dynamics of the environment of the cave, who can gain access and how the might shift the balance in the deep waters.

‘Touch Screen’ explores the sensory depths of the subterranean waters of the Aach Spring, an ancient and relatively untouched space. In this cave the distinction between the real and virtual becomes blurred. The divers’ go-pro videos found on Youtube have embedded themselves so deeply in my imagination that I almost believe I have physically experienced

the waters of the cave system, that I have pushed my hand through the liquid 2D screen on which I watch them breath compressed air from metal tanks. This section of the chapter reflects on the entanglement of the elemental, bodily and the technological in the encounter in the cave. 'Touch Screen' draws out understanding of the cave through sensory encounters and suggests that arts practice, slow making and mastery of equipment can help to study the imperceptible and generate knowledge.

The chapter is written from European perspective and contributes to a growing body of scholarship that aims to offer alternatives to Western anthropocentrism. It is with this in mind that I acknowledge from the start that my speculation about the experiences of all of the elements in the chapter are inevitably flawed. I cannot possibly speak for the rock, the water or the fish and although I can interview the diver, I cannot know what it is to be in these highly dangerous passages of water. The ambition in the act of attempting to find these voices is not to know or reveal but to extend one's own perception; to stretch it into sometimes uncomfortable shapes and in doing so, move a step closer to registering modes of transmission that are less widely defined as research. As Haraway puts in in 'When Species Meet' (2008):

'Once again we are in a knot of species coshaping one another in layers of reciprocating complexity all the way down. Response and respect are possible only in those knots, with actual animals and people looking back at each other, sticky with all their muddled histories.'

In this spirit, the writing will be interrupted by short descriptive texts that set the scene and invite consideration of the many types of transmission, communication and physical encounter, the pushing in and pushing out that the dynamics of the underwater cave present. These short speculative sections of writing, engage with the material experience of the research for this chapter; the ‘stuff’ of the research. The writing style is inspired by works that sit between creative writing and analysis by Maria Fusco (2015), John Wylie (2005), Katrina Palmer (2015), Ian Sinclair (1997, 2003) Richard Long (1995) Astrida Neimanis, Janine MacLeod and Cecilia Chen (2013) The aim of the texts that intersperse the body of the writing is to recognise the non verbal communications, the material language, repetitive practice and attunement that form the physical experience of researching. To include these material memories is to reposition myself and to think through the dynamics of the moment of encounter in the underwater cave network from a number of perspectives, although inevitably limited, it is a contribution to the stretching of existing study techniques.

Before it becomes wet, a wetsuit is light, spongy and springs back to the touch. Once under the water, a thin layer of water sits between the skin and neoprene, staying warm and so creating insulation. Another layer, this time brightly coloured; high visibility goes on top. Clips, goggles, tanks, bags of equipment, spare tanks. A signal to the others in the group that you are going to wade out into the shallow green, still waters of the spring. Then down underneath the water until your face almost touches the soft, mossy rocks.

Loosening the Watertight



Fig.14. Still from Youtube video made by the divers of the Aach Spring Caving Club

The moment of encounter between the diver and the fish is set within the perimeter of the cave, the walls are solid rock and the water within them heavy with sediment. The diver has a thick, spongy skin of neoprene covering almost every inch of flesh and the fish has a thin transparent skin through which its internal structure can be seen. But in the depths of the cave of course, nothing can be seen. How the cave fish navigates without vision is not fully understood. There have been studies on navigation of cave fish in China (Ma & Zhao 2012) and Mexico (Sovrano, Potrich, Foa & Bertolucci 2018) that have produced theories about their elongated barbels, orientation via geometric cues, electromagnetism, altered bone structure, most captivating is the possibility that it feels through pressure change to the skin (Preston, 2014).

So far, most of the boundaries found in the cave, the wetsuit, the rock, the skin can be seen and touched, they contain and protect. On first glance this appears to be an enclosed

cave chamber, a volume of water within the rock. In her exploration of karst networks in Venezuela, Pérez investigates the volumetric thinking (Elden 2013) that has emerged in recent geopolitical scholarship (Pérez 2014). As Pérez observes, ‘volumes by definition contain’ (2014: 230), even though the volumetric might better describe the multi dimensionality of the cave Pérez chooses to return to the use the term ‘verticality’ (which Elden moved away from in ‘Securing the Volume’ 2013) for its ‘open ended and boundless approach to space’ (2014: 230). Thinking with the cave fish presents a boundlessness. An experience of boundary not through sight or touch, but sensed and sensed beyond; one set of vibrations and densities sitting within another, not contained but connected. The exercise of imagining boundaries into a series of layered vibrations aligns with the ‘boundary breaking’ (2020:2) feminist approach to territory and terrain outlined in ‘Unearthing feminist territory and terrain’ (Jackman, Squire, Bruun, Thornton, 2020) in which experimental approaches to rethinking definitions of territory and terrain re imagined. Hawkins also uses undergrounds and unearthing to challenge notions of terrain ‘acknowledging that ‘terra’ was never firm has had far reaching consequences for ideas like territory’ (2019:2). Both Hawkins (2019) and Jackman et al (2020) suggest that alternative modes of study should be employed in this questioning of how a space is bound.

The fish cannot see the boundaries around it and instead understands through distance and density. As a human, trying shift register and imagine understanding space in this way brings to life theories of vibrancy and interconnection, Jane Bennett’s ‘vibrant matter asks us to recognize the vital materialism, agency and vitality running through human and non human

bodies alike (2009), and in doing so open up new approaches to environmentalism. The exercise of trying to imagine the volume of Aach Spring as understood by the Cave Loach; penetrating the water, the rock walls and thinking about the transmission reaching deep into the earth brings the chamber within the rock out of isolation and into a mass of matter. In his examination of a uranium mine in South Dakota, Kai Bosworth describes the permeability of human bodies, ecological systems and political events (Bosworth 2017). By products of our human lives seep beyond perceived boundaries, out of containment and into the streams and strata beneath our feet; a territory in which the borders of the surface seem totally abstract. In the subterranean, only a few meters down, the clear distinctions that humans have imposed on surface territories seem temporary and ideas of interconnectedness and seepages of life, much easier to believe in.

When thinking about the fish in the labs, I keep returning to the corners of a tank, from the complex, curved, ridged shapes of a cave to the rectangular and consistent shape of a tank. In the cave, most of the ridges run in a horizontal line, following the direction of the flow of water. In the tank the lines corner lines run vertically housing still water, the force of the stillness must exude immense pressure.

We pass through a fish stage as embryos (Ohno, 1995 , quoting Ernst Haeckel's 'ontogeny recapitulates phylogeny') our eyes start on the side of our head. The top lip along with the jaw and palate started life as gill-like structures on your neck. Your nostrils and the middle part of your lip come down from the top of your head. In most bodies, there is no trace of a scar; the plates of tissue and muscle fuse seamlessly. But there is, however, a little remnant of

all this activity in the middle of your top lip - your philtrum. Perhaps if we saw this process during a literal gestation as an avenue passed in evolution: A labyrinth of possibilities rather than as rung on a linear upward tilted ladder towards becoming human.³ As I write this I am pregnant. I am awaiting the results of an MRI Scan (Magnetic Resonance Imaging, developed in the 1970's: Uses strong magnetic fields to generate images of organs - or foetus- in the body). The fetal development team at St. Thomas' and QEQM Margate are able to read the images and from them, see too much fluid on the baby's brain. I watch the email inbox on my phone anxiously for results, swiping and sliding the touch screen incessantly in an action that has only become meaningful in the last decade. We have adapted to the swipe and slide. A machine that fits in the palm of my hand, a machine that I fit inside, neither of which I entirely understand but both of which I accept. Actually, the consultancy team have told me that they have only been able to achieve such a high quality of image in the last few years and the studies haven't caught up with the technological evolution as yet. It could mean something or nothing.

A few extra milliliters of fluid; I wish I didn't know. I wish I hadn't seen.

Within the landscape, under it. I can hear my own pulse, the inside of my own body seems accessible in a new way now that I am encased in this rock. No edges clearly defined, I start to imagine my own interior and try to transmit my pulse through the rock around me. The rock seems suddenly penetrable, a field of material just like the flesh under this boiler suit.

Water within, fluid body, fluid thought. Fluid, folding rock. I struggle to describe it, but I'd know it if I felt it again.

3 I was introduced to this idea when my daughter was born in 2014. Not visible during ultrasound, but immediately obvious at birth, was a cervical cleft on her neck. A small red opening that remained unidentifiable for some weeks. Eventually a pediatric ear nose and throat surgeon at Great Ormond Street Hospital was able to give a diagnosis, he explained the cleft as a remnant from the folding through the central line that happens again and again as an embryo develops. This type of cleft, he explained, was like a leftover gill from our fish phase. Two small and successful surgeries removed the cervical cleft.

In a chapter titled 'Water and Gestationality: What Flows beneath Ethics' Chandler and Neimanis set the scene with a descriptive creative text taking us deep into the bowels of the Gulf of Mexico and the oil disaster of 2010. The seepage of our consumption, as described by Kai Bosworth in the Dakota geology, is this time flowing into the waters and drifting beyond borders. The writing goes on to explore the circulation of water, we 'As beings composed mostly of water, we all - each of us within this more-than-human community of watery bodies - carry this capacity for facilitative responsivity, for nourishing an other, for proliferating life in the plural, in our own aqueous flesh.' (2013:62) In circumstances of visible and obvious pollution and crisis, our interconnectedness becomes immediately and acutely obvious. And just as abruptly as a crisis appears on the news, it disappears from our consciousness once more, particularly of course, if it is at a comfortable distance, oceans away. But with a real tuning in to the dissolving 'I' and the understanding that 'water infuses us' (2013:77) the idea of interconnection, of the thinness of our skins becomes more difficult to tune out. Neimanis asks us to recall Irigaray's call in 1991 to 'remember the liquid ground' and goes on to describe her as a post-human phenomenologist 'avant la lettre'. For me, thinking of Irigaray in this way gives her writing a new focus, not only of embodiment but an understanding of the stuff that we embody, with which we are surrounded, that sits within us. Literally of amniotic fluid and also as Neimanis argues, a queer reading of gestationality, a 'posthuman gestationality' that 'asks questions of us, in all of our common wateriness' (2019)

How could we as a species, even if only in an imaginary realm, benefit from a thinning of our skin? The practicing of sensing from all over the body, closing our eyes, tuning into the forces and pressure around us and feeling our own pulses and pressures driving out into the world.

A physical training undertaken over and over again until we adapt entirely. Evolve.

If we carried on practicing, perhaps this would become our primary mode of navigation, or sensing. Perhaps we would become expert at feeling sound and movement, judging surfaces and density through vibration. Understanding not only that we are entangled with our surroundings, but that our perimeter is so fragile that we are both inside and outside of it at the same time.

New Cave Loaches have been born in the lab, never having encountered the deep waters of the Aach Spring, instead they only know the smooth still waters of a tank. I find myself wondering how their experience of space might differ from the Cave Loaches in their natural habitat, what would happen if this new generation were released into the cave, only having sensed glass, lines and corners; not the twists and turns of ancient rock. Would the exposure to light in the dim lab impact on their sensory navigation? Would they have seen the headlamps of the divers before they felt their vibrations? Is this New Knowledge? Or loss of Old Knowledge? This is a sort of fishy Molyneux's Problem. Molyneux's Problem dates back to 1688, it asks whether a blind person who became sighted would be able to identify a cube and sphere by sight having only known them through touch (Zalta revised 2017). It is difficult, as a sighted person, to imagine this different type of knowing a form and to detach the visual from the shape. The image so strongly overwhelms other ways of knowing and encountering the form. Tim Edensor says that 'darkness usually foregrounds usually subservient non visual sensation' (2013: 446-65) and goes on, in his geographies of darkness (Edensor 2015) to quote Tallmadge's assertion that the 'ubiquity and pervasiveness of light makes everything stand out in hard edged clarity' but that vision 'allows us to know things only by their

surfaces'(2008:142.) Knowing without the visual offers the possibility of not only knowing beyond its surface, it is to understand how that form sits within space and alongside other forms.

The caver or cave diver spends long periods of time in spaces in which vision is limited; visual knowing is not the only or optimum way of navigating. 'one cannot see a cave. A caver can see only a small section of passage at any one time. Without mapping, cavers must depend on memory and have no way to accurately display the layout of the cave or to share their discoveries with others'(White 2007:15). Learning about space without sight or with limited vision might offer us an experience of our surroundings much more conducive to ideas of interconnection. Kreiselmaier speaking to a video of a low visibility dive in the Aach Spring: 'This is now where I dropped my first stage tanks. So I am taking only 4 to the end and 2, I am leaving on the way.And it's not so spacey, so after the second time the bag was already torn...and this is the tightest place; where you feel the rock on your belly and the rocks with the tanks on the back.'

Up and down for a few minutes, in a between state. A liminal state between above and below. The surface of the water from below is a rippling mirror, (disturbed by the bubbles from scuba mouthpiece) reflecting back a faceless collection of textures, yellow tanks, red suit, black torches, shiny smooth silver clips. Headlamps on. Another diver enters the shallows, weighed down with equipment, both of you find the entrance-way on the floor of the spring and enter the dark underneath.

How best to represent these sensed and felt understandings as research? Polyani, in his book 'The Tacit Dimension' asserts that 'we know more than we can tell' (1966:4) meaning that much of the knowledge that we hold cannot be written down or spoken in words, it is sensed or felt and transmitted in other ways. Practice as research has something to offer here: Interconnection and boundlessness in arts practice. In a chapter titled 'Maker Bodies' Hawkins and Price discuss recent entanglements between geography and creative practice, the writing foregrounds the type of understandings that emerge from practice based engagement: 'bodies that sense and are becoming skilled at sensing, through complex intersections of embodiment, materiality, matter, identity and skill, memory and habit' (2018:9).

Speaking from my own experience, a training in fine art encourages and develops a sensitivity to combinations of weight, pressure, temperature and cultural currency inherent in material language is instilled through repetition over many years of study. Of course, there is much attention given to the visual but not exclusively and the visual is not detached from the material. Over time, we find ways to articulate ideas, not through words but through configurations of the stuff around us. This understanding of material becomes shorthand and transcends the associations of the material with the flesh, the solid or the stuff – instead it becomes a way of thinking. This process involves a trust in the new register that emerges– a type of communication that may initially appear irrational but over time accumulates and begins to set up a logic in which the artist can have confidence.

As an example of how this material language builds, I would like to introduce the work of

Brazilian artist Lygia Clark to the story. In a series she titled 'relational objects' made in the late 1960's. Radical in their time, these works rely on the participation of the audience and a shared suspension of existing knowledge of these common objects is replaced by a focus on how they are interacting with each other and with the body through pressure, texture and volume. As simple as this encounter looks, the nuances of the combination took time and dedication to develop – the labour is not in the object or the moment -but in their re-framing.

Cut a strip of paper about 50cm long and 4 cm wide, I have joined two strips with blue masking tape to make the length. loop the strip around in a figure of 8, an infinity loop. Place one hand through the loop on the left, the other through the loop on the right. Cross the hands as though in handcuffs. Citation ?

“Within artistic practice, the possibility of producing something new is not always about the conversion of the not known towards new knowledge, but rather involves the aspiration to retain something of the unknown within what is produced. In these terms, the new is that which exceeds existing knowledge, not by extending its limits but by failing to be fully comprehended within its terms.” (Cocker 2013:127)

In this statement, Emma Cocker explains the importance of acknowledging and being at ease with the unknown in studio practice. A rational, crystal clarity in research can often result in a too easily digestible body of artwork. As well as communicating visually, works of art communicate in a 'tacit dimension' (Polyani 1966); through touch and resonance; and the kind of vibrancy described by Bennett (2009) that material can transmit.

The too difficult to articulate. The felt.

Back to the dark cave waters and to the apparent lack of sensory stimulus in such an environment. What can there be to know in a place without light? The Cave Loach seems to have adapted to navigate through enlarged barbels (Behrmann et al 2017) and, as I understood it, although experiments were still being undertaken, pressure sensors over its body. It has no scales, instead a thin skin and increased sensitivity and ability to read its surroundings (Behrmann et al 2017). In some aspects of adaptation the fish has ‘regressed’ and in others it has progressed. Study into cave life is relatively new and major progress has been made in the last decade with the study of the Mexican Cave Fish *Astyanax Mexicanus*, the model of which has been used to ‘understand the evolution of cave animals in a developmental and genetic context’ (Jeffrey 2009:2). Although the cave dwellers are still poorly understood, the notion of regressive evolution is well studied and refers to the loss of useless characteristics over time (Jeffrey 2009). In the case of Cave Loach we notice first what we recognise as lost and fail to notice what has been gained, the highly developed sensory perception that is not relatable to human’s anatomy or experience do we fail to notice? Who fails to notice? This apparently primitive creature has evolved to tune in to the new environment and has knowledge of a place in which we humans can see very little in the way of potential for knowledge making. With all of our technological sophistication, it is difficult to imagine what we might be able to learn from a fish, but they are more complex and adaptable than we might imagine:

‘Whilst there is no doubt that fishes are the most ancient form of vertebrates, they are only ‘primitive’ in the sense that they have been on earth for in excess of 500 million

years and that all other vertebrates evolved from some common fish-like ancestors (around 360 million years ago). However, it is important to note that fishes have not been stuck in an evolutionary quagmire during this time. Their form and function have not remained stagnant over the ages. On the contrary, within this time frame they have diversified immensely to the point where there are more species of fish than all other vertebrates combined (currently over 32000 described species) occupying nearly every imaginable aquatic niche.’ (Laland, Brown and Krause 2006:1)

The Cave Loach has adapted to the dark waters of the Aach Spring, to spaces in which most humans would see only as a ‘data depleted darkness’ (MacFarlane 2013). This ability, found through regressive evolution, could be understood as a progressive mode of navigating and knowledge making. The Cave Loach also serves as a reminder that sensory perception is malleable and more importantly that tools can be lost if not used. What might be lost in our increased privileging of the visual over other ways of encountering the world? Although the analysis of visual culture and its encounter through the screen are becoming an essential part of arts education (Heise 2004), it is important not to abandon the training and focus on broader sensory and bodily types of knowing (Eisner 2002).



Fig.15. Cave Loach by Joachim Kreiselmaier

Value and Access

After an estimated 20,000 years of evolution, the Cave Loach was first sighted by humans in 2016. Initially unsure of what she was looking at from video footage, biologist Jasminca Behrmann-Godel asked expert cave diver Joachim Kreisselmeir (who had taken the video) to bring her a specimen of the fish from the caves. On seeing the fish in the flesh Behrmann-Godel instantly knew that it was something unusual. *“Then he brought me a live specimen and that was like the bang. That was the moment we realised that this was something really new!”* It took a few trials to find suitable conditions for the Cave Loach, most of the first set of specimens died possibly due to decompression sickness, the second specimens were kept in a lab with some exposure to light and their pigmentation returned, not mirroring the pattern of the surface loach but in an all-over coverage of mottled brown. From Dr. Behrmann-Godel research, I understand the following:

The specimens from the underground are extremely close to the stone loaches in the Danube

river above them, the surface fish must have dropped-down rather than swum-into the caves in the entrance below because the loaches in the spring have been observed swimming up-to and then away-from the shadow lines of the cave entrance. The cave network is not a space to which they have a natural attraction, instinct tells them to swim away from the darkness. The underwater caves have sinking water from the Danube which not only brings a source of nutrients but also means that it retains temperatures close to the surface water, this may also provide a sense of time and season for the loaches which Behrman suggests have been living there for 20,000 years. Over generations the fish have come to perceive space and navigate in a way that they could not before. They have tuned into a different register, one that suits a different type of environment. Of the many surface loaches that dropped down and did not survive, some did. For those that did, there must have been generations of struggle, of attempting to tune in to and function in a new way, with a new bodily language. Behrman explained that the fish are blind, and although the eyes are still in place, their eyesight has degenerated over time. They have lost pigmentation because there are no UV rays in the caves and so no purpose for markings to visually attract a mate or to hide from prey. The surface loaches are nocturnal and so if they did survive the 20m-drop, they are predisposed to the dark environment below. An adaptive change is the increase of pressure sensors all over the surface of the fish's body and Dr. Behrman is currently running experiments to understand more about how they navigate using these sensors. *"The eyes are still there, only about half the size of the surface fish population. If you put a light on them they don't react so we are not sure if they are still functioning. There is a change going on from the optical sense to some other perception capabilities."*

Finally, that the loaches have a slower metabolic rate, slower rate of reproduction, a longer life span, and elongated form (although smaller in size than the surface loaches) *They slow and they elongate as they move deeper and darker.*

The fish were first sighted by diver Joachim Kreiselmaier, I was fortunate enough to meet with Kreiselmaier and to hear both Jasminca Behrmann-Godel and give a presentation about the discovery of the fish and his experience of diving in the Aach Spring system. Kreiselmaier is part of a small group of divers regularly exploring and excavating these passages over decades, the club had previously understood them to be uninhabited. The caves that Joachim dives are a labyrinth of passages, the club grants access to a very limited number of other divers, not to those that they perceive to be simply on the hunt for new diving locations to add to a list of achievements. There has to be a specific reason for wanting to dive these caves. I interpret this club rule on access as a way of filtering the intentions of the visitors. This is not the space of the extreme sports hunter of caves, of the cave as another human conquest explored in literature by Cant (2003, 2006) or Edwards (2017). Instead the Aach Spring caves are protected by Kreiselmaier and the caving club as a space of deep learning, the pace required in approach is slow and contemplative rather than fast and adrenalin driven. It is about physically being in the place rather than rushing through in the act of adding to a list of achievements. *“No more than 30 divers have ever reached the place where the fish have been found,”* Kreiselmaier said. *“Due to the usually bad visibility, strong current, cold temperature, and a labyrinth at the entrance, most divers do not come back again for diving.”* The cave fish were invisible to the other divers until noticed by Kreiselmaier and established to be significant. Now they see them all the time and recognize that they may have seen

them before. Kreiselmaier has a deep attunement to the Aach Spring that resonates with the ‘yearnings’ described by Pérez in her study of caver, Ramón Alberto Hernández and his attachment to the extreme environment of Guácharo Cave, Venezuela (2016). Pérez describes the unmeasurable ‘yearnings’ :

‘to want, long, and strive despite or even because of those challenges and constraints – an aging/gendered body, politics, or maybe even a slippery path in a partially lit cave. In the case of the entangled story in Guácharo Cave I have presented, yearnings for knowledge, for recognition, for communion, reveal beings moving in ways that cut across and collapse distinctions among the intimate and the political, presence and absence, the material and the transcendental, the past and the present’ (2016:709).

Kreiselmaier is compelled to return to the underwater caves at Aach Spring, he admits to thinking about the environment when he is not there and takes it upon himself to protect it from divers that might not approach it with due consideration.

When I am underwater, I find it easy to understand that I am contained in a field of substance. The substance surrounds me and imposes a force on my form. If I am underwater my arm movements cut through the substance and there is a reverberation from my movement. The force my arm has made flows through the water in the shape of my movement. I can also see that my body not only has a definitive outline but conversely a connection with the substance around me. We are solidly together in the contained space. I am set in my own outline, into the water, as well as dissolved into the water.

The low visibility, tight squeezes and a strong current make this a particularly difficult dive. The preparation for a dive can take up to six hours of organizing, checking and positioning equipment. It requires accuracy, intense focus and a methodical approach. Although Kreiselmaier spoke of the importance of diving in pairs initially, he later told me that he prefers taking the measured risk of diving alone. He described his experience of underwater wall (cliff) diving before moving into cave diving – it is a sport in which you descent and follow a rock face in sea or lake, he was drawn to the feeling of nothingness below him and to the idea of only having one fixed surface and the rest a sense of unknown. While the diver was looking for ‘nothing’ he was in a place full of ‘something’ – perhaps what he was actually looking for then was a place in which he could feel or imagine a sort of nothing. A place free from regular frameworks and distractions. A place in which visibility is limited - and other modes of navigation begin to emerge and take over. Clarity in low visibility. A place in which focus becomes so attuned that you see a tiny, transparent fish. A fish that may have felt you coming hours ago.

Perhaps rather than looking for the experience of ‘nothing’ it is a desire to be engulfed in a space beyond human time frames. The ‘Deep Time’ referred to by MacFarlane that ‘is measured in units that humble the human instant’ (2019:15). Visually free from the clutter of human infrastructure. Greenlaw writes about memories of playing complicated games, with made up rules in a wood at night, swallowed by the dark as a child and reflects; ‘even as adults this is how we furnish our lives – with denials and permissions, procedures and codes. We accustom our eyes through expectation and experience, as if learning our way around a dark wood’ (Greenlaw 2019). For the cave divers, routine, repetition and precision are key:

Each time they undertake the same preparations, the same movements, the same twists and turns of the cave shafts, decompression times. In this confined and challenging environment, perhaps it is the practice of the routine that opens up a different type of space, a perceptive space, an opportunity to tune in to the environment in a way that one cannot without the confidence and rhythm that comes from physically doing something over and over again.

A re-tracing.

Meters in, the light disappears. You can see only what the circle from the head lamp illuminates in a yellow glow. Loose rocks on the bottom, ridged walls. A thin white guideline which you hold in your right hand, it is neither slack nor taught. The sediment coming towards you in the current catches the light.

Kreiselmaier says of the experience of emerging from the dive: “*After each dive you have to do the decompression stops. And then you back to the shallow water to drop all your tanks and then it starts the reverse procedure, carrying the tanks back to the car. And you always have a smile leaving*”. Expertise provides space, an ability to conduct an operation smoothly whilst still being able to give some attention to one’s surroundings. A diver with less experience, less certainty and skill would not have had the space that provides the acute attunement necessary to notice the Cave Loach. In this sense the diver has a sort of affinity with the fish; through adaptation to the surroundings, the diver has been able to tune in to a degree that he could not have before. Through repetition and physically knowing the surroundings, he has begun to sense differently.

In a dark pool, an edge begins to sharpen. A kick from the inside. The form remains invisible but it defines itself in another way. The movement and force from underneath pushes upwards on my body and realise suddenly that these forms have been here long before me, they speak in language that I used to know, sending and receiving in 360 degrees. Feeling from the inside out.

As I write this, a small camera is pointing at a spring near to the German- Swiss border. The camera's transmission is monitored by members of a caving diving club, some of whom live a two hour drive from the site. The divers watch for rare ideal conditions to enter the opening in the spring: below 6 cubic meters.

How to Setup a Webcam and Access it From Anywhere: make sure that you aren't invading anyone's privacy or, breaking any of these laws.

Buy a webcam.

Place your camera where you would like it.

Set up a dynamic IP

Create an account from the homepage.

After you fill out your credentials and receive your account verification email, login to your new No-IP account. Create a username. Click the "Hosts/Redirects" tab. Create a new host, leave all of the information that is already clicked the same. You will have to forward your ports if behind a router or firewall. Devices that include No-IP for Dynamic DNS can be Routers or Camera systems. Login to your camera via the host you created.

When the moment arrives, the divers pack substantial equipment into the boots of their cars and make their way to the car park near to the Spring. Next to the spring is a small café and a picturesque bridge, families enjoy cakes and ice cream while the divers begin the lengthy process of unpacking, putting on wetsuits and checking and rechecking the equipment. A routine with which they are totally familiar, one that has been repeated over and over again. The group of divers have been frequenting this particular spring for over a decade. Each time they dive, the checks must be carried out.

The Cave Loach would be easy to miss. It is small, only a few centimetres long and without a close up lens, it takes on the colour of its surroundings, only noticeable through the shifting water around it. These tiny fish would probably fall under the category of ‘uncharismatic’ in terms of their ability to draw attention or capture human hearts and so be granted any kind of protection (Krauss and Robinson 2017). They are highly unlikely to make the front of a campaign t-shirt, they do not look human or cute, but then, these sight-less cave fish do not ‘look’ at all. Having only seen an enlarged photograph in the news article, I have to admit a sense of disappointment when I saw the Cave Loaches in the laboratory tanks. At the time of my visit a small number of fish captured from the cave were in the darkened labs, since then a generation has been bred in the labs.

Now a colony have been bred that only know the labs and have never experienced the subterranean passages. How could they ever imagine the contours and vibrations of the deep dark spaces of previous generations?

I cannot know how a fish thinks, and I don’t want to attempt the imposition of trying to.

Instead, this has become an exercise in translation: Being inspired by the evolutionary story

of the Cave Loach and its' ability to find new ways of navigating a terrain that it did not choose to enter and it now finds to be a natural habitat rather than an extreme and desolate resting place. Thinking this way presents a precarious balance of empathy and invasion. This study is not a 'Being a Beast' style re-enactment of perceived behaviour (Foster, 2016). On the other hand it has relied on the capture and subsequent death of several Cave Loach specimens. Their bringing into deathly light for our enlightenment.

This section is tinged with a backdrop of not only the temporary colonising of the cave system, the capture of the fish but also with the appropriation of knowledge made by the fish. In trying to 'think with' other species, we acknowledge the messy intersections between beings and the blurring of the boundaries between categories (Haraway 2008). Rachael Squire looks at fish and dolphins in her study of the US Navy Sea Lab project (1957-69) and the agency of the animals involved (Squire 2017) Squire quotes Hodgetts and Lorimer (2015:286) who suggest that matter 'as political and ethical subjects and that attending to the 'spatial behaviours of all animals (and other nonhumans) provides what Lulka terms, a 'thicker' sense of the Earth', this 'thickness' draws thought back to Elden's volumes (2013). Thinking with the cave fish, not only in their movement but their modes of navigation makes this 'thick', defying of human boundary (Squire 2017: 67) come to life. In the same breath, I acknowledge that one cannot ever understand how the fish thinks, but instead an attempt to transpose and mimic some of the behaviours through practice based research may open up new possible frequencies to which we are able to tune in. Inherent in this ambition must be an admission that our current understanding is limited and so to make comparisons only on that basis is to miss bandwidths.

'The study of animal cognition has been largely confined to birds and mammals, particularly non-human primates. This bias in the literature is in part due to the approach taken in the 1950's when cognitive psychologists began to compare known human mental processes with other closely related species. This bias was reinforced by an underlying misconception that learning played little or no role in the development of behaviour in reptiles and fishes.' (Laland, Brown and Krause 2006:1)

Touch Screen

The discovery of the Cave Loaches first came to my attention via the news feed in the frame of the menu bar of my iPhone.

Scrolling through the news app on my iPhone, my index fingers moves downwards across a small piece of greasy reinforced glass, I have become so used to this feeling, touching this screen, that is no longer a conscious part of the engagement. I forget about the window through which I am looking and think only about the content. I forget about the filter system of a widget feeding me the news that I like to read and think only about the content. Directing the flow. "The stories you really care about: The more you read, the better Apple News gets an understanding of your interests. And now it's even more personalised. Apple News recommends stories that are relevant to you, while the Today widget in iOS keeps you up to date throughout the day. Apple News also adapts to your reading preferences while always respecting your privacy.

A captivating experience: Stories in Apple News feature bold photography and beautiful type

that reflect the style of their publications. Enjoy engaging, interactive stories, rich with photo galleries and animation. Watch the day's best videos on an immersive full screen. Articles are optimised for iPhone, iPad and Mac, so you'll have a great reading experience no matter which device you're using."

I have very little understanding of how the device on which the fish was delivered to me works, rather than trying to understand in any depth, I simply accept that it works and don't question how. As James Bridle observes in *The New Dark Age* 'The ability to think without claiming, or even seeking, to fully understand is key to survival in a New Dark Age because...it is often impossible to understand' (2018: 6). Although the workings of the device might be abstract, the impact that it has on my reality is sizeable. Things happen because of the technology I use everyday - the 'meaningful worlds' made through an iPhone (Rosenberger and Verbeek 2015:13). Further to this point, Haraway quotes Idhe on the entanglement of bodies and technologies in 'When Species Meet' (2008): 'Insofar as I use or employ a technology, I am used by and imply that technology as well....We are bodies in Technologies' (Idhe 2002:249). As much as this writing is an attempt to think with the cave fish and in doing so move beyond visual boundaries into new understandings of space, it is an acknowledgement of the blurring of boundaries that occurs between the actual and virtual worlds that occur through the everyday use of a digital device.

After a series of emails with Dr. Behrmann Godel, in 2016 I visited the University of Konstanz. In the Limnology department Dr. Behrmann Godel showed me a hand drawn map that she had been given by a member of the Aach Spring Caving Club. The map shows a

natural cave entrance through a spring on the right of the drawing and, as the gradient rises on the left, a straight shaft down through the land to the water level below. Between the two paths is a blockage and near to the blockage is where the fish were discovered. When the water is below 6 cubic meters you can dive, only a matter of days or weeks in a year when the window is open. There are both cavers and cave divers working on the dig and although much progress has been made, the work is painstaking. It is likely that the members currently working in the club will not see the breakthrough in their lifetimes. As Cant says, the end of a cave passage may not be 'it' (2003:71). The pursuit of caving seems to be about much more than this singular ambition, it is about a continued ambition to know a place, to be there, to spend time experiencing it over and over again, despite the fact that the task at hand will never neatly conclude or achieve a sense of finality. 'What appears to be the end is not always the end, underground' (Cant 2003:72).

I had the opportunity to climb down the hand dug shaft that you can see on the left hand side of the map– the divers can enter the cave through the spring on the other side – there is a blockage here (show on map) that the club admit will not be worked through during their lifetimes.

Signal on phone, encased in a plastic bag, is diminished then lost.

I have stood a matter of meters from where the fish were seen but the truth is, that I have not been to the underwater chambers - I have not encountered it materially, not in terms of the stuff of it.

I have not been there and yet I have spent hours in the imaginary space that the caves opened up for me, in that moment of encounter between the diver and cave loach, trying to imagine it from different angles and perspectives. Imposing and interrupting and pushing my way in without leaving a physical trace. Trying to materially and spatially understand the dynamics of the place and moment of meeting. Hawkins reflects on the ways in which the ‘embrace of creative practices within geographical research might expand the possibilities of geographical engagements with underground imaginations’ (2020:15) and the moment of encounter has done just this for me; become a creative focus that has expanded my understanding of surface through imaginings of the subsurface.

I propose that the study of material language, like the study of fine art practice for example, in which one focuses on materials and processes as a mode of communicating over a number of years, gives a particular register through which to imagine. It is not a special gift, it is a result of practice and fluency that can be lost again through lack of time and attention. This training gives a different type of understanding of space, weight and depth. Practical not theoretical. In some ways, this sustained, material practice is of more use to me in the study of this underwater encounter than an isolated experience of diving would have been.

Signal on phone returns as I surface.

The level of experience of the diver takes decades to develop. The affinity with the environment, the ability to work with speed and accuracy. A dive in this environment gives

little insight into the experience of the diver that knows this place. One can take useful steps towards understanding the geography by going to the place, but not enough of an attempt towards the physical knowing – the adaptations made by the diver – this takes years of physical study. Repetition, doing something over and over again until you know the material language of the thing.

I am definitely an amateur caver, if I had been to the cave chamber where the fish were sighted it is highly unlikely that I would have seen them, I would have been panicked and tense and utterly reliant on experienced divers. I would have had an introduction to the experience but I would not have been tuned in. I certainly would not have seen the fish. It is not my intention to undermine the importance of embodied or immersive research techniques – as Dr. Rachael Squire outlines in her paper ‘Do You Dive’ physical visiting of the places that are the sites of study is important not only to gain experiences and insights of the process but also to open dialogues with the community with which you are working. ‘A grounding of a discussion in an experience’ (Ingold 2013:9) I am tripping and stumbling my way as a novice through a new discipline as well as through caving clubs and basic cave networks. What I am trying to highlight is the importance of material investigation that comes from repetition and practice – a type of tuning in of the senses that might open up different perspectives and modes of investigation. A dedicated material study as a way into material thinking and a distinction between what a short experience that offers insight can offer versus a sustained expertise.

In his book 'The Craftsman' Richard Sennet describes the patterns and boredom of physical repetition. 'Skill opens up in this way only because the rhythm of solving and opening up occurs again and again'. In this sense it is possible that the diver has been underground since he put the air tanks in the boot of his car and began the two hour drive to the cave opening in the spring. It is routine, repetition and action. The checking, tightening, lifting, strapping and clipping and within this sequence a space opens up. Through action and repetition – thinking through doing or thinking through making – a subtle transition begins to occur and through a material process - one's' mind is gradually detached from the physical surroundings. Perhaps this is the 'material thinking' that Anderson and Wylie describe in their paper 'On Geography and Materiality' (2009) which I find incredibly useful as a set of ideas – but what I missed was an acknowledgment of the necessity to develop material understand and a proposition as to how material thinking should be developed and sustained in training. In my experiences of teaching in art school – and indeed of being a student of art myself – I know that strength in the subtlety of material shift can be improved through practice and lost through lack of practice; as with the learning of a musical instrument or training for sports. What is to me, an imaginary and virtual space has challenged my capacity to think about materiality. I cannot go there so I am using every trick I can think of in the studio to launch a material investigation of an immaterial space in which fish navigate through pressure.

'We seek to articulate a new conceptual starting point – one that flows beneath the human'
(Neimanis et al 2013:65)

The fish may have felt the divers enter the water, the pressure shift, the volume of the bodies

and tanks displacing the water, the pulses, fluids, breathing beats moving through the water.

The fish stays low to the ground, resting in the settled sediment that wisps and curls in tune with every minute movement.

The sense of pressure builds as the divers approach, noise as force on skin. Intense vibrations accompanied by an unfamiliar change in atmosphere, the light from thousands of years ago, that the body has almost but not entirely forgotten changes the tone and pitch of the surroundings. A sharp single object moved towards the fish and although not touching, the force vibrates against the body with intensity.

It is thought that touch is the first of the senses to develop (Fulkerson 2020, Stanford Encyclopaedia), notoriously difficult to define and position within the perceptual experience. Active or haptic touch refers to touch in which movement is involved – either voluntary movement of the body or an object moving against the body (Fulkerson 2020). Touch mediated entirely through the skin is described as ‘cutaneous touch’. One might instantly think of touch as being associated with movement / action, reaching out to touch an object or brushing past an object to touch the skin. The sensory system within the skin can detect and process many different types of sensory experience: Itching and pain for example, which would be less immediately classified as a form of touching. One could argue that sound waves hitting the body could be classified as a kind of touching. (Gibson 1966; Craig, 2002; Fulkerson 2012). Perhaps the lack of philosophical conclusion around definitions of touch is partly down to an attempt to rationalize a physical experience in a non-physical language. Perhaps this type of knowledge requires another mode of study?

This encounter in the cave and the way in which I imagine (imposing but expanding my limited perspective) the Cave Loach might touch, presents touch as an exchange. A two way set of signals from body to environment and from environment to body. I imagine the skin as a casing for a sensory network and as a thin membrane between the waters inside and the waters outside; the pulses inside, the pulses outside.

“The first thing you see is that they are pale, they appear a bit rose, or pinkish, because you can see the blood vessels through the skin,” said Dr Behrmann-Godel. *A skin so thin that the fish is almost a part of its surroundings. Like a vibrating skin of a drum pulsating inwards and outwards in a constant engagement with send and receive.* Tiny vibrations imperceptible to the eye but that, with the correct tuning could become felt even to a human being; A kind of whole-body seeing.

In his book ‘Touching the Rock’ John M. Hull documents his journey into blindness, describing the shift from reliance on a fading visual memory to other ways of navigating. On 9th September 1983 in an entry titled ‘Rain’, he writes about a moment of understanding on opening his front door and walking out into the rain:

“Rain has a way of bringing out the contours of everything; it throws a coloured blanket over previously invisible things; instead of an intermittent and thus fragmented world, the steadily falling rain creates continuity of acoustic experience.”

As the rain falls, Hull is able to determine distance, scale, density all through the sound and pressure of the water hitting surface; the interruptions in the pattern of the rain water as a

whole entity to which he can connect, not just the fragmented and remembered space that the garden otherwise presents: 'The rain presents the fullness of an entire situation all at once, not merely remembered, not in anticipation, but actually and now. '*Not exactly touched, but felt.*

Interestingly, Lavinia Greenlaw refers to this same excerpt by Hull in her description of the experience of caves 'The Vast Extent: One Seeing and Not Seeing Further' (2019). Greenlaw describes the 'unexpected rupture' of a cave; the disturbance to everyday experience, everyday ways of knowing. Being plunged into profound darkness and suddenly, having to adapt to world of sound and pressure. Greenlaw says 'if you are blind, hearing becomes a way of reading the visual world' (unpaginated) , I would add to this that in Hull's description there is a transition, from trying to navigate through memory of sight, to navigation through a spatial perception found through sound and vibration. Hull describes a place of intricacy and harmony and says "*As I listen to the rain, I am the image of the rain, I am at one with it*" (Hull 1990:29-31) This experience does not suggest the imposing of force on a situation, but Hull within a set of dynamics all of which are a harmonious sending and receiving force. A space in which one recognizes one's own force and so, the importance of maintaining harmony and a continuity rather than an interruption. This type of study replaces rationality and clarity with something less defined, more fluid and ultimately not best communicated in words.

Conclusion

“I am suspicious of sedimented logics of “beneath” - what is less than, lower than, subservience or inadequacy.

Water has its own logic we are still trying to learn.

“Beneath” is neither inferiority, nor foundation. “Beneath” is not solid and delineated bedrock whose density and strength we can measure, calculate, know. “Beneath” is the well of potential from which new possibilities spring. “Beneath” is the precondition of what is, what will be, what will become.”

(Chandler and Neimanis 2013:64)

To conclude I will return to Lygia Clark and her relational objects. In a video shot in 1973 Clark is working with a participant who is blindfolded, surrounding him with the objects, made from everyday and familiar materials as he lies still. When the session ends the man declares “it was as if I was all surface, the place where we meet the world”. The experience of Clark’s work seems to offer a sensory blurring with the surroundings; a new understanding of how permeable and sensitive our skin might be. Skin as meeting point rather than barrier.

Human beings consistently demonstrate an ability to adapt to new circumstances and technologies. If the focus of new directions in learning was in an ability to tune in to and act on connectedness with our surroundings, then we might be more open to a less defined and more fluid form of knowledge making.

Downwards and permeable versus upwards and contained.

Dropping 20 feet down into a completely black cave with little nutrition.

We seem able to sit comfortably in ignorance when it comes to a conclusive understanding of the workings of an iPhone; conjuring up information from an infinity of knowledge whilst sitting on a bus; but unable to sit with the unknown in our places of study. *Holding the illuminated screen and peering into a 2D / 3D world is a pulsing, fluid being.* Quoting Luce Irigaray, Fortnum and Fisher describes the essential lostness or lack of classification required in studio practice: ‘The as-yet-unknown is here aligned with that which we have ‘not yet encoded’ not yet translated into the conceptual and symbolic frameworks we use to make sense of the world; at the same time, the passage hints at an entirely different way of coming to know someone or something, involving an attunement of the senses to that which is other and irreducible to those frameworks’ (2009:19)

Practice based study could better prepare us for material investigation of these conceptually unreachable places. The slow, dedicated, repetitive material experimentation is under threat in our curriculums; the seemingly dispensable creative subjects that underpin a focused and complex material thinking. A tuning in to and a stretching of our tacit capabilities that might equip us with tools that function outside of language in a different register. Not more important – but equally as important as other ways of understanding.

Having visited Konstanz University and met with Jasminca Behrmann- Godel and Joachim

Kreiselmaier, I feel certain that these levels of observation are in practice across disciplines and interests. People making careful, slow studies of spaces, things, matter, in which many others fail to recognise the significance of, the value of. As light of touch as possible, as open minded as possible. Kreiselmaier is one of the few people on the earth that has given time and dedication to this particular stretch of underground passage, trying to know every part of it. I have never been in the cave chamber, and I cannot accurately conceive of navigating through pressure sensors, but I can endeavour to practice prioritising senses other than sight and being receptive to other frameworks for thought. Try to transpose these ideas and actions to surface level.



Fig. 16. The inside of the bedroom before lights out in the Spirit Balance darkness retreat 2018

Tunnel 2: Darkness Retreat

The Darkness Retreat is a service offered by Spiritbalance Sadhana Ashram ‘Source of Power’ in Sasbachwalden, Germany, in which guests pay for accommodation, food and a range of supported spiritual experiences based on traditional Buddhist practices.

Bharati Corinna Glanert, the founder of the Ashram, gives an introduction to her experiences on the Spiritbalance⁴ website:

‘As a child I came into contact with supernatural, paranormal experiences and spiritual forces. For a long time I was unable to assess and understand many spiritual experiences. Only now - after many years of studying - the circle of questions and answers comes full circle. At the age of 17, the inner call to want to understand more became so loud that I began a regular seminar and training marathon. I attended workshops, lectures and seminars on healthy eating, body detoxification, fasting, raw food, reflexology, pranic healing and much more.’

In a booklet accompanying the Darkness Retreat experience I found the following statement:

‘Darkness is a primal force aiding us in our personal and spiritual development. Darkness Retreats are also known as Darkness Yoga or Darkness Meditation. A darkness experience is a very effective way to reach powerful energetic and spiritual experiences and activates

4 <https://spiritbalance.de/>

self-awareness. Retreating into darkness, be it in caves, kivas or closed chambers, is a custom found in all traditional cultures, particularly in Japan, India and Tibet. Pythagoras even built an underground chamber beneath his house in Italy, where he spent a lot of time in the dark. In the pre-Buddhist Bon religion of Tibet, the Darkness Retreat is called the “golden road to meditation”. Using the night as a tool for sensory deprivation and de-conditioning is a self-discovery procedure known across many cultures and religions. A longer stay in darkness is also often called Darkness Therapy, because the time with no distractions, only with oneself, is extremely healing. In contrast to conventional therapeutic approaches, Darkness Therapy doesn’t focus on individual problems, but instead recognises the person as a unit. Initially, it’s all about being with oneself and connecting with the universe. When we are deeply connected to our own soul we often experience amazing things through our own being.’

Light

After several hours and modes of transport I found myself sitting at a table outside a cafe at an underwhelming, low rise suburban train station building. I had a coffee in a polystyrene cup and sheltered from the heat bouncing off the yellow hued brick work. I changed out of a pair of black trainers into a pair of purple flip flops.

The shelter outside of the cafe was made from panes of some kind of blue plastic sheeting. The reflections of the blue rectangles spread themselves across the ground and I moved my feet in and out of the blue light and smoked a cigarette. I rarely smoke these days, really only to mark the occasion of being outside of my normal life. I don’t think I look particularly natural smoking cigarettes anymore, it has become self conscious.

After half an hour or so, the bus I was waiting for arrived and I was on my way through an orderly looking town in the Black Forest . Out of the town the road began to climb and I sat, alert, looking for any signs and signals that I might be heading in the right direction. I distractedly take off and put back on sunglasses.

Maria was waiting for me at the bus stop, she had no shoes on and those trousers with a low crotch. I could feel my cynicism rising against my will. She was welcoming, softly spoken and kind with a slightly distant gaze and eyes that looked as though they wanted to close. I would later find out that she had been fasting for a week - which might have made me feel even less certain about getting in a car with her driving with bare feet.

We drove the remainder of the way to the commune, it is a traditional looking German/ Swiss chalet surrounded by a small number of other houses and goats and cows. The feeling was one of conservatism, the houses are all neat and affluent looking. Traditional architecture and abundant, orderly gardens. Once we have parked I begin to notice small signals of what might have been inside the house. The hanging wind chimes, crystals, prayer flags.

A wrack of flyers directing visitors to the services provided, a shop, various groups, therapies and retreats.

Shoes were to be left outside of the commune. I was left standing in the lobby for a few minutes and glanced over the visitors book - mostly in German but I could gather the tone which was uniformly gushing, thanking profusely for the life changing experience. I began immediately to feel closed, resistant, cagey.

Maria suggested that I sit outside and relax, she'd come and find me in an hour or so and take me to the room. I really had no sense of what the place might be like, it was hard to see from the online videos and website.

I unpacked carefully, trying to organise things in a way that would be easily navigated in the dark. I bought my own food with me, all vegan as requested by the Ashram. I had stopped at the mini market in the airport and picked up energy bars, fruit, crisps, things that I didn't think would make a mess. It was only going to be 60 hours and would hardly be moving.

The initial figure I had received by email for a 3 day stay at the retreat had taken me aback, 600 Euros. I had written back immediately to say that I was working within a small research budget and asked if there was any way that the price could be shaved? I agreed to bring my own food and concede the raw food diet that I was unaware was built in to the price. I also decided to forego the initial aura cleansing session, bringing the total down to 433.50 Euros. I would receive herbal tea and water for 7.50 Euros per day and a final and obligatory aura cleansing session at 35 Euros.

I was tired from travel and hoped that I might be able to gather myself in the evening and then start the retreat the next day - but Maria suggested that I start that night and took me up some wooden stairs (the whole thing had the feel of something once refurbished in the 70s). We reached a landing with an office on one side, a curtain on the right and private quarters of Corina (the Guru) ahead. I was taken into the office and through a registration process - phone numbers, disclaimers.

Maria then took me over to the curtain in the lobby and pulled it back to reveal a door. She twisted around and took my hand placing it on her shoulder and signalled to me to be quiet, there were 4 other people on the darkness retreat. We went through the door, shutting it behind us before opening another, then another curtain - I could see the dim edge of a corridor - and then we were in full darkness, Maria showed me where the handrail was and we walked along following it. I felt a total sense of lostness, no idea where to put my feet, gripping on to the railing and with no sense of depth or length of stride. Maria placed her hand on mine and showed me how to follow the wall along, past one door on the left, then another and then eventually to the end of the corridor. She opened the third door on the left which was to be my room, and the daylight flooded out. There was a red velvet curtain ahead with presumably a door behind it. We went in quickly and Maria closed the door behind us. It was a bright pleasant room with wood panelling and mismatched, well worn but clean towels and linen. A small table in the corner, a sofa, chair bed and sink.

A small door to a bathroom with a sloped roof, a little shower and toilet in there. The window was wide open and square, hinged at the side like a door. I noticed the tape on the window first. Gaffer tape all around the edge, holding on black board. Making tape over all of the light switches, gaffer tape over the keyhole.

I later discovered that behind the red curtain was the front door of the house - which had the wrack of leaflets on it that I had noticed on the way in. I found this completely disorientating, the dark corridor seemed to be much lower down than the entrance way of the house.

Maria explained that when we agreed a time she would seal up the room and leave me in there to begin to retreat after a small ceremony. For now she would leave me to think , it was about 7 o'clock and there would be chanting downstairs at 8. I could start after that if I liked. The idea of chanting filled me with horror, I am not a Buddhist and felt uncomfortable and fraudulent. I was reminded of the email from a family friend, originally South African but a practicing Buddhist for the best part of 50 years, I had written to him about my intention to visit the Ashram and undertake the retreat and he wrote back in capital letters warning me against the idea. "WHO ARE THESE PEOPLE?" he asked me, the darkness retreat should only be considered by highly experienced Buddhists as a serious meditation.

Alone in the room, I felt very suddenly that I'd like to start and to get the thing over with as quickly as possible.

I have no idea what I was expecting really but the mundanely decorated room surprised me, it all felt so deeply un-mystical, un-cave like to look at.

Maria took a lot of time and trouble explaining what I should expect, we discussed the idea of choice or opting in to the experience, the light switches would be taped over as a tactile aid, preventing me from turning them on by accident but easily switched on but should I choose to do so. The windows too are closed and sealed but not locked and easy to open. I could re-illuminate the room at any time.

I was shown out into the dark corridor again, feeling along the hand rail and guided up to a phone on the wall. Maria said to pick it up if I was feeling at all distressed, she would then

come and spend some time with me in the dark and talk me through the feeling. Should I decide to take her up on this offer I should expect another 90 Euros on the bill.

I was left to explore the room in the light, I paced out the distance from the bed to the bathroom, carefully laid out clean clothes and the food I had bought with me. Put out a pencil and paper on the small table by the door. Took some photographs.

I called my daughter and then turned my phone off and put it inside a sock in the drawer. I was offline but had been assured that should my partner need to get hold of me on the Ashram telephone number that they would alert me immediately. Not entirely off line.

At about 10pm Maria came and knocked on the door, it was dark outside. She was holding a candle in a candle holder in the shape of a lotus flower, the same one that they used on the front of the book for sale at reception. Coherent branding. Once the window was closed the candle was the only light in the room, Maria came to sit on the bed. She began to chant, which I found totally uncomfortable and although I'm sure that discomfort was palpable, she continued to the end. She invited me to blow out the candle and she left the room.

60 hours later Maria came to get me, consistent in her kindness and patience she softly asked if I would like to be taken outside now to watch the sun go down. Although a lovely sentiment, I felt really as though what I wanted to do was to just open the window and be on my own. I was led down some steps wearing light blocking goggles and the combination of the embarrassing sincerity and handing over control of my movement to someone else made me feel incredibly vulnerable. I stopped and just took the mask off on the path. I started crying.

Uncomfortable with the transaction, with the shop, with the price, with the expectation. But on the other hand they are trying to survive and there is a good sentiment and the people that work here seem sincere.

I felt upset, hungry and not at all in a state of transcendental bliss. But maybe this is what transcendental bliss is like? I had a headache in the back of my eyes like nothing I had ever experienced, it built over the course of the evening and remained when I work in the morning. It felt like muscles I had never been specifically aware of before had relaxed, I wonder if they had ever really done this before?

I sat for a while on white plastic garden furniture with a blanket over my knee feeling totally embarrassed at my tears. There was a giant rose quartz crystal propped up in a moulded white plastic garden pot at my feet.

I went upstairs and watched a film on Netflix on my phone. The chest of drawers in the room was littered with empty flasks, half full of tea.

The next day, I went for a walk, eager to get out into the world again. I walked down the hill in the incredibly fecund landscape of the black forest, heading for the small town in the valley. Aspirin, hot food, maybe junk food. A sort of denial of the world I had just come from. I couldn't take it all too seriously.

I saw a squashed snake, run over by a car on the hot road.

On the way back up the hill I went into the forest to look for a stream and sat with legs in the water up to my knees.

Dark

I woke up in the dark, I put my hand up to my face to see if there was an outline. I lay there for some time just checking the edges of my body.

Total darkness, no difference between having the eyes open or closed.

I had no idea what time it was and no way of finding out. Well actually, that's not true, I could have fumbled my way over to the drawer with my phone in it and turned it on. I had chosen to be here, to see what would happen in the darkness. I lay on my bed for a while, falling in and out of sleep. At some point I heard the gentle ringing of a bell in the corridor, signalling that the thermos of herbal tea, which would be delivered in the morning and the evening, was waiting outside for me. I waited a while, listening to hear for the other darkness retreat guests making their moves. Some of them were here on a 10 day retreat. I wondered what that would be like to be in there for that long. I had already lost the sense of time, I wasn't totally confident that this was the morning, not the evening tea delivery.

I heard the guest opposite me moving in the corridor, I didn't want to go out there and bump into them. I felt sure I didn't want to have an embarrassing encounter in the dark in a language that I can't speak. An encounter without eye contact.

I sat up in bed and shuffled to the end of it closest to the door. I stood up and moved around until I felt I was facing the door and began to walk slowly with hands outstretched. I hit a wall quite quickly and felt my way to the corner, realising that I must have turned too acute an angle initially. I found the door and put one hand against it and one on the handle. I felt the adrenaline in my body, I was fearful about going out into the corridor. I pushed the handle downwards, it felt heavy, resistant as though I was pushing a hydraulic door faster than it wanted to move.

I felt my way out into the narrow corridor, I could touch both sides at once. Just across from my door was a table at above knee height. I reached out gently to find a smooth surface with a moulded pattern, which seemed to spiral around the form. I picked it up but it felt light, empty. I felt around again and found a similar form but this time warm and heavy when I picked it up. The other guest had returned the empty flasks to the table. I remember now that Maria had suggested that I do this too to avoid collecting up clutter in the room.

I quickly returned to the room and put the flask down on the chest of drawers next to the, closed the door and felt a surge of nerves, I was pleased to be back in the safety of the space, even though I could not see the edges of it.

The flask was in the shape of a jug, I picked it up by the handle and found the mug that was on the chest of drawers and then went to sit on the floor. The tiles felt cool, I was trying to remember what they looked like, a sort of varnished cork I think, each one around a foot squared in size.

I lifted the flask and guided it to the edge of the cup slowly, I put my finger inside the mug and pressed it against the side to try to gauge how much liquid I was pouring in. I poured and felt the steam rising up towards my face. Stop to check it's not overflowing but feel only a centimetre or so of tea in there. I continue this until the mug is about half full, which seems to take some time.

After drinking the tea on the floor I get back into bed and drift back into sleep. The drifting continues for what seems like hours but when I get up again the tea in the flask is still hot.

Later a much longer sleep was to come and then a state of mind which I find hard to describe; a state in which it became difficult to discern whether I was awake or asleep. I felt sure I was awake, lying on the bed face down but every time I turned my head into the pillow I would see the same thing: A moving train track below, lit by synthetic orange outdoor lights. Shooting past about 5 foot beneath me. Each time I saw it I could feel my stomach drop, I'd turn my head back to the side and it would disappear.

Some time later I got up again and decided to change my clothes, I felt my way over to the sofa and began to navigate undressing and redressing. Distances and depths surprising me at every move. I sat on the sofa and tried to collect myself. I had been warned that I might experience blue flashing lights. Sort of residual light I suppose. These began to dance about in front of me but I couldn't be sure if they were real or an expectation playing out in front of me. My eyes felt like they were moving in and out of focus, as though I was twisting a camera lens with the lens cap on, with this twisting came a searing headache. I wondered when the last time I was in total darkness had been? In a cave I suppose and only for a few

minutes at a time. Before then? I've read that a foetus can register light change from within the womb at 16 weeks.

I felt on the edge of an experience that I was afraid of, a sense that my mind might enter a space over which I had little control. I actively withheld, maintaining a kind of stoic resistance and a 'wait it out' attitude. I must have already been in there for close to 24 hours. The tea bell rang again after waiting for the noises in the corridor to subside, I ventured out to collect a fresh flask.

Another period of sleep, I wasn't sure for how long and then unstoppable tears, I felt drenched in them, The wettest and most profuse tears I had ever cried. I thought about water, about swimming with my parents, about the fear of people I love dying, of those that have already died, being alone without them and cried and cried.

The feeling of loss became so overwhelming that I felt I needed to make it stop, I felt my way over to the window and up the frame to the handle. I lifted it and slowly pulled open a crack. It was night time, bright night. The light was both dark and brilliant and I seemed to be able to see every black shape in the forest outside clearly. I breathed in deeply and felt the tears on my cheeks dry in the breeze.

After a few minutes I closed the window again and felt my way back over to the bed and fell asleep.

The next time I heard the tea bell I realised that I must have slept through the previous one.

I sat on the bed with a cup of hot tea, breathing in the steam. I felt numb but soon this turned to boredom and restlessness. I couldn't gather myself to try to write anything, my mind was darting around too much.

There was one final vision before I was collected from the room by Maria. I say vision as I feel I was awake when I saw it, like watching a film. A dark street lit scene again, this time driving along a country road at night, the trees and bushes blurring into the darkness beyond the headlamps. Snakes slithered on to the road one after the other, the car bumped over them until the mass of snakes became so great that the car could no longer plough over the top.

The picture stopped abruptly.

Maria knocked on the door and whispered to me gently. She came in and placed a black out mask over my eyes and asked if I was ready to go out and see the sun set.

She put my hands on her shoulders and began to walk out of the room.



Fig. 17. Still from 'Colossal Cave Adventure' developed between 1975 - 1977, image circa 1980

Tunnel 3:

A semi- structured and edited interview with Artist and

Curator Una Hamilton Helle

Southbank, London. 12th April 2019.

Una Hamilton Helle (b.1985, based in London/Oslo) is an artist and curator who works with multidisciplinary art projects. Outcomes can take the form of sound installations, collaborative workshops, publications and films. Her practice concerns itself with where and how we locate and create meaning for ourselves, and is inspired by periphery belief systems and subcultures where concepts of the real and imaginary are often intermingled. A substantial theme in her practice is that of place and the non-human; landscapes and topographies, geographical and fantastical, and how they shape identities whilst simultaneously and consciously being used as a way to further ideological purposes. Recent exhibitions include 'All Flesh is Grass' at KIM Contemporary Art Centre, Riga, 'Becoming the Forest' commissioned for Waltham Forest Borough of Culture, London, and 'Alan Kane's 4 Bed Detached Home of Metal' at New Art Gallery Walsall.

Una and I met via Instagram, I wrote to her to enquire about a post she had made that documented an incarnation of the Katabasis Larp in 2017. Una then attended Open School East in Margate, an unaccredited, experimental Masters program with which I have a professional relationship.

Una was one of the presenters at 'Expand and Contract' and experimental conference

organised by Harriet Hawkins and I at Chisenhale Dance Space in 2018.

F: When I came across your work it was on Instagram, you made a post about the Katabasis Larp. Would you be able to tell me a bit about that and how it came about?

U: The Katabasis Larp came from a shared Dropbox folder that I had with another artist: Francis Patrick Brady. We'd both been doing quite a lot of research about the subterranean with links to gaming, as a space it gives a sense of unlimited possibility. The underground has been present as a theme for quite a while, I have a tradition that every birthday, I've got all my friends to go to a different cave with me to explore - a public cave, a tourist cave in which we've booked a tour. It's normally close to London; Royston Cave, Hellfire caves, I guess to try to see a different topography. There's always been an allure there that's linked academically. I invited Francis to come and we started a role playing game where we did I guess mainly dungeons and dragons campaigns.

F: How did you find out that you both liked that?

U: We knew that we had a lot of similar interests. He's into geek culture and gaming, the internet and virtual networks. That's how both of us got into each other's work but for me it was always pretty much always been about trying to explore landscape and our surroundings. The subterranean space I guess was a place that could be explored in a fictional setting but always has a sort of truth about how we relate to things..out of the cave into 'real life'. We started talking about our explorations in this RPG group.

F: RPG?

U: That's role playing. The biggest difference between role playing and larping is that with RPG you sit around a table with a certain number of players, usually a handful. You have what you call a Dungeon Master or a Game Master who leads you through the world.

There is a pre written script / world / book that you work through the whole way - you know explore it to its fullest. Or they might have made their own world, campaign and lead you as players through this fictional place. But there's no visuals necessarily, so you sit around and come up with imaginary responses, it's like an improv game almost. The DM will have made some parameters in the world, usually they've got hidden from the players like a map. The dungeon was chosen by the makers in the 70's as a place that was quite easily explorable, its limited in its architectural scope, so you choose left or choose right and that brings about consequences for the players and they then have to choose what to do, so the DM might have huge map and the players might just completely get lost in the East Wing and never explore the rest of it. That's how an RPG works, and a larp is more of an embodiment of this fictional world that a Game Masters or a Facilitator puts forward to you.

An RPG is a slightly different set up because as a player you already know the rules to a certain extent and combats are decided by dice, people often know those rules already so they're ready to go when you meet up.

Whereas with LARPing, there are no set rules for how it works. You need to workshop a little bit what your LARP is going to be and also how you are going to respond to situations that might come up.

F: So it's a much more fluid event essentially? Would you say less predictable?

With the RPG there are many outcomes, probably many thousands but there are no more than that. There's a limitation on what potentially could happen, even if it's quite expansive, but with a Larp there's no way of predicting, so you set out the framework but it could go anywhere?

U: You do have tradition or fantasy LARP which follows much more of a narrative structure like an RPG. But the kind of LARPS that I'm interested in, that me and Francis have designed games in, was a Nordic LARP which is more experimental, it's its own genre in a sense.

F: The talk at Open School East?

U: Yes, Nina, Nina Runa Essendrop. Nordic Larp tends to be a day event. One hour to six say and you don't necessarily need props and so on, whereas a more traditional LARP will have a full costume and might take place or you know a pre built set. There are huge LARPS that happen in Russia and Canada that are held on grounds that have been built as a fantasy set and are on like weekend after weekend.

F: It's really interesting because these events become their own reality and they are a little cosmos of their own. I think that one of the attractions to the underground is this idea of a parallel - and literally a parallel. It's a totally other sort of space with different navigations,

a cosmos, a sense of separation - or of alternative existence. Maybe that's to do with a discontent with the reality within which you live, I don't know if that's exactly it but it's definitely a looking for another type of experience, or maybe its a space a distance space from which to understand or reflect on reality? A break from reality to understand it better.

U: It's such a difference in the perceptual qualities that you would have down there - you have to use your senses and your body in such a different way. Which presents the possibility for a more imaginative - you know as soon as your sight goes then the brain kicks in to action and you start 'seeing' things as just this idea of creative imagination as the ruling force.

What I find quite interesting about the underground is that even in a defined space, one that's mapped out - once you enter it, it seems suddenly as though it's endless. You have to put in the cosmos that you will survive - that you will come out of the other end again.

F: And time is really different; getting from one side of a room from the other, just a few meters can take a really long time.

So the RPG with Francis Patrick Brady then led to the conversations with Dropbox and something began to emerge

U: He moved to Sweden. He'd started to get really interested in LARP. LARP is quite a well organised phenomenon, they take it in turns in all of the Nordic countries. There's a conference basically, they talk about what's happening in the community; are there any problems? New design solutions? Ethical solutions? During the conference, we drafted a pre-written LARP in an art context with a collaborator Sarah Drury in her space and started to try

to work out how to actually do this. I got into a program for a LARP writing Summer School. A week long summer school with people from the community to hear their experiences from the last 20 years, it's sponsored by the Norwegian Foreign Ministry and people from all over the world come to learn about LARP - you get blasted with information. And then a follow up session in September where you are invited to propose a LARP and that's where we wrote Katabasis.

F: Did you go to the Summer School with a sense that you wanted to write Katabasis?

U: Yeah definitely. I gathered all the items from the Dropbox before we went to the Summer School, I invited Francis along to write this LARP with me and we took all the research we'd done and the ideas about the underground and an artist Called Susan Plötz was also part of the writing team. It's a 48 hour writing process and you test it on the 3rd day, so it's pretty intense. I guess I've gone full circle personally, we had the Dropbox, then we had this idea for an installation we took to the LARP scenario which obviously changed the intention of the work quite a bit. It was still the same atmosphere and scenario but it changed the way that people were expected to play. It was very different from what me and Francis had originally envisioned. From that, I've gone back into personally using some of the content of the Dropbox to create a text based adventure game; a single player playing on the laptop or the screen.

We've played the LARP quite a few times now - five or so - and it changes every time depending on how the players respond to it. I think probably the last time we played it in

Norway was probably the most successful. What we'd do is get this black box with very simple scenography, string and tape, outline a cave system that the players would inhabit as their characters. You have the players; so you, the person, 'Flora', in the world and then the character is the character that you'll embody during the larp and you can tailor that yourself, the game masters will tell you how much freedom you have in embodying this character. Sometimes you get a pre written person but with ours it's very open, it's very abstract. It's more about a feeling, a drive or an instinct that you might follow in the play.

In the larp you are separated into two groups that live in this cave systems but that can't see each other and they're not aware - well they're sort of aware - of each others' presence. Shadows flickering on the wall, symbols that are left in passageways. They are symbols that you might recognise because in the workshop you'll have done a symbol making exercise in pairs, then we split all of those pairings off. So everyone that had a connection is actually in a separate group. So you have this connection with someone else that is just out there but. You might see your symbol drawn on the wall or you might feel the presence of your partner but we workshop a method for you not to physically see them.

The two different groups have different home bases and they often stay in those different parts of the cave but they can explore the tunnels. There's a soundscape and there's low light and there's usually a bit of theatre light and so it becomes quite atmospheric and theatrical and tries to not recreate a cave but maybe emulate it somehow. Everybody agrees that this is the narrative that we are all in. In LARPing they call it the magic circle:

We have all stepped in this magic circle for say 2 hours and we have all agreed that this is our scenario. People obviously respond to it in very different ways and there's no particular

narrative that you have to follow.

F: Trust is really implicit? You have to feel that everybody is invested at the same level?

U: Definitely. If somebody breaks that trust then it can become quite problematic but I think because of the length of the workshop you sort of work that up, the idea is that you are comfortable within the narrative and within your character and the movement and also with each other. You built a group language, what we call the origin story of the group.

We've had one person who stepped out of the game saying 'this is not for me' and it's really important that people feel the door is open to leave.

F: How long does the Katabasis larp last and how does it come to a close?

U: That's something we've experimented with quite a few times. Depending on what timing we are given, we try and do it for 4- 5 hours actual playtime usually about 2. As players they are playing out 3 days 2 nights, they have a very abstract aim during the day and often that is a coming together and performing of a ritual together , and you know that after the 3rd day during the 3rd act (because at night time everybody is asleep) you know that you will be able to see the other group, you are told that in the workshop: As a player you know that but as a character you don't. People are given the tools to react to that moment and can plan for it.

There is a string that represents a wall in the cave which is also the ritual space, the space where people gather and perform the origin myth. That string gets cut and that's the first time that you see the other group and your partner from the workshop, this has tended to become

quite strong experiences for people.

F: There's a moment of recognition? Or re-recognition?

U: Yes and because the larp is non verbal. Communication is based on movement and symbol making and ritualised movement and then the sound scape. So you can make noises but not speech.

We use the lighting to indicate nighttime and daytime and we also use it to indicate when the game is over, we judge that by trying to gauge when the game has reached a climax. Then we debrief as players at the end and give people time to share experiences and to express how they feel about it and get back into their normal selves.

F: How do people react to the game?

U: Very differently because it's non verbal, and maybe there's not enough guidelines for some people. Some people are looking for more narrative direction, perhaps people who are used to playing the narrative LARPS. I think a lot of people find it hard not communicating verbally. But hopefully if you've got a good design then people really get into it.

You know you can watch someone through the LARP and think 'oh no they're having the worst time ever' and maybe they are but that also might be what they had planned at the start of the LARP and they take responsibility for that, that's the character that they had developed and it's an experience that they've chosen.

F: But also it doesn't necessarily mean it's bad: Uncomfortable can actually be the beginning

of a really positive experience longer term. It's difficult to rethink isn't it? I know when I did the mini version of the LARP I didn't find it easy but it was very valuable for me, it was a rich experience even if it was uncomfortable. An experience can impact on the way that you understand really quite quickly. There can be a dramatic shift in perception in a short space of time.

U: It can give you tools to respond to real life situations as well.

F: Absolutely, and also recognising the behaviours in a constructed space and recognising how quickly they become real, that makes transparent how many of those constructed spaces we have agreed to in our reality.

There's something interesting about the idea of breaking a rule - particular when the rule is a bit arbitrary or you just haven't questioned them in a long time.

It's revealing isn't it?

U: That's definitely part of the LARP, quite quickly producing a group history which is supposedly important for you during play and that goes back many generations. You begin to believe that you have lived in this cave for your whole life and the only reason that you know for you being there is this remnant of an origin myth that you create but you don't quite know what it means.

F: Was Plato's cave considered in the design?

U: Yes influential in the sense that we were very aware of it, as well as the Greek mythologies of descent into the underworld, going underground with a very symbolic intent. We were aware of the mythological as well as the philosophical complications of the underground space. It's definitely there but it wasn't the guiding influence. Also the non verbal communication is added to by the symbol making - there's chalk everywhere and everyone is given paper that they can use to draw which is obviously a reference to cave painting.

F: It's an important way of making a record I guess - leaving trace - recordings oneself as well as communicating

U: Yeah I mean in many caves the cave paintings are so far, so deep into the caves and obviously not in spaces that you could get that many people at a time, it's a private, spiritual experience.

F: From the Katabasis Larp, the research seemed to develop in the direction of the RPG or instructional game in digital space. Can you talk a little bit about that work?

U: I think so many things came out of the Katabasis LARP, we did one other LARP called 'The Virtual Restoration Project' and that was all about this imaginary space in the virtual world in the future where the players are essentially playing avatars and they are excavating a digital field, mining the old internet. You've got all of these objects that you are trying to interpret with limited information from a broken internet surface that has become defunct. All the physical architecture has died or is dying, collapsed.

This came from Francis' interest in the internet platform - there were many conversations about the links between the internet and the underground and the architecture. Many of the architects of the internet were front runners in the text based adventure game development. The structure at the start of the internet was very similar to the adventure games. Me and Francis were looking very superficially into this, we'd never had a chance before to get properly into it. We started to think about the physical link, the aesthetic link between internet technologies and a cave.

F: That's not an abstract connection because a lot of the people that were involved in designing the early stages of the internet were cavers, is that right?

U: Yes, William Crowther was the first person to create a text based adventure game it was called 'Colossal Cave Adventure', there were lots of versions but he was the original architect and also a caver. So it seems like it was a natural progression, mapping out an imagined space that you have to map out so that you can translate into computer architecture, data architecture and I think having knowledge of mapping out caves as a spelunker.

For him (William Crowther) it was a real space - he was part of a team mapping out Mammoth Cave in Kentucky and mapping out unknown passage ways and that is what he based his game on when he wrote it. We were aware of the connection but hadn't really done anything about it, then we just decided to take that one step further.

F: And that resulted in an instructional game that you developed and could play online?

U: Yes and more recently I've developed this further using an interactive fiction interface - so it's slightly different from what Crowther did with text based adventure is that you can type in words. So it would ask you 'what way do you go?' And you would have to type in 'North' 'East' 'South' or 'West' - and that's really limited and super complex at the same time.

F: There's a huge range of possibilities

U: Yeah and you can get stuck really easily.

Whereas the interface that I use there is a multiple choice option - you give people choices and they don't have to write anything in to make it slightly easier but it also takes something away from the experience.

I based my game on Margate caves, which have been closed for ages but I think are reopening this Summer?

F: It's nice because it's got a smugglers history as well - and the Shell Grotto.

U: With the new game, you open it in a browser and play it. What I was thinking when I started designing it was ok what would the starting point be and not knowing quite what the attraction to the subterranean was and all these different links that were emerging, so I decided to think about the cave as my database. The name of our original Dropbox folder was 'Katabasis Database'. I brought some things in from that and credit Francis as a collaborator and use that as my starting point and then begin to build it up with a new mish mash of references.

A big inspiration for when I was looking at it was the symposium that you did because when I was in Margate I began thinking about enclosures and the history of property rites and looked and during the symposium obviously Loretta was thinking about property rites below and above and I found that so interesting.

F: Yeah it's a very unclear picture isn't it?

U: Yeah it seems like if there's minerals then they are definitely not yours but if there's not there it's kind of yours and kind of not.

The starting point of the game is 2519, 500 years in the future and you are searching for a hideout that you know a group of people went into before the great heat- and all changing and consuming event. The group thought that everybody owns everything above ground, so we go below and make this utopia underground; as a player you are finding traces of this lost society. The game tries to imagine what people would be doing down there, how are they getting fed, are they growing things? And there are lots of references; to doomsday cults, mineral digging...but because a player enters it and doesn't know where they are going, they only get parts of the story.

F: So you'll lose a lot.

U: yeah and that's part of the Katabasis larp experience too.

There's the whole that's a collective experience but everybody has their own individual experience of the cave

F: That's really important, acknowledging all of the things that we don't know, the routes we haven't taken. What's really interesting about all of the projects that you are developing is that you have this built in understanding from the start that you are going to have a very particular pathway but that actually is a very narrow experience in relation to the possible whole - not a singular truth. A player can't know the entirety, their knowledge is not complete.



Fig.18. Objects hanging from the Dropping Well, Mother Shipton's Cave. Taken from Mothershipton.co.uk

Cave 3:

Mother Shipton's Cave: Setting In Stone

Prologue

When I began my research into caves I was asked more than once if I had visited Mother Shipton's Cave. I would answer that I knew of it, and think I might have been there on a school trip, but couldn't exactly remember it. I had a hazy recollection of the cave but couldn't be confident that I hadn't adopted the image from television or that it had been merged into my memories from someone else's childhood story.

Mother Shipton's Cave is a tourist attraction that lies within the Dropping Well Estate, Knaresborough, North Yorkshire. The cave is famous for its petrifying well; waters rich in minerals appear to transform dangling teddy bears, kettles, a plastic lobster, into stone. There is a shop in which one can buy bottles of wishing well water, souvenir stationary and ornaments. The site, a popular destination for school trips, was once swathed in mystery and its inhabitant, a prophetess, was revered, even feared. It is said that Mother Shipton could predict the future, it is also said that she may not have existed at all (Kellet 2002; Wilson 2004; Warner 2006). The shallow cave by the River Nidd was the space in which Mother Shipton was born and then returned to seek refuge. It was also, as the story goes, an environment in which she was able to mould her surroundings and conjure visions of the future.

On deciding to visit, the first port of call is the website: mothershipton.co.uk. Typing the address into the browser opens a portal, looping, animated text spells out her name, a glossy photograph of the leafy entrance to the cave is overlaid with large letters: *'Behold the mystical powers of the magical waters that turn all it touches into stone'*. You can click on the tabs to 'plan your visit', or explore the 'education' section and 'our shop'. In the education section, there are worksheets that can be downloaded and that have been designed to contribute to the National Curriculum up to and including Key Stage 3. In the shop you can buy small colourful bottles of wishing well water with a label printed to look like an original scroll from the 1600's for £3 (plus £4 postage). Tickets can be booked and a shopping trolley icon in the top right hand side of the screen can be filled. Mother Shipton's Cave is a business, an attraction and an educational facility. Come out of the Mother Shipton website and scroll a little further down the web browser search results, and newspaper archives begin to appear; history blogs, newspaper articles, travel advice websites and witching websites of the type described by artist and curator Una Hamilton Helle; 'filled with spinning moon gifs and repetitive cauldron wallpaper' (2019).

Visiting the actual site presents much of the same witchy aesthetic, the cave itself is set within a bucolic town centre with winding paths leading down to the River Nidd. Once through the ticket barrier of the Mother Shipton Estate, the walk along the river is peppered with signs featuring a cartoonish old hag. It is a confusing place, there are Christmas decorations stored to the side but in view along the pathway, there are geological labels, plaques giving historical context and of course and along the way a witch's finger points to the dropping well and cave. After a few minutes of walking, we arrive at the cave and enter through a

gaudy, constructed gateway that reminds me of a funfair. On the other side, the rocks are very beautiful and the small, unassuming cave sits peacefully next to the slow moving river. It is a confusing and messy site at the heart of which is a small mineral rich well and a hollow in the rock.

Standing facing outwards in the mouth of Mother Shipton's Cave on a warm but overcast day every nook and cranny of the rock was visible. At the back of the small cave was a concrete cast witch, designed to look like a rock formation. On the right was a small speaker at shoulder height on top of a shiny metal pole coming up from the ground, it had a button on it which, when pressed, tells the story of Mother Shipton in an authoritative male voice, perhaps a Historian. Just behind it, lower down and further into the shallow cave is a speaker for child visitors which tells the story from the point of view of Mother Shipton, the voice is an actress mimicking a fairy tale witches voice. To the right of the cave is a narrow set of steps with a handrail and a large arrow pointing to the wishing well. There is a set of rules about how to use the well. You are instructed to crouch down and use your right hand to drop in the coins, make a wish with the hand submerged and then bring it out and let it dry in the air. There were only two other sets of visitors at the site on the day we visited and so only a small queue to use the wishing well.

Visitors have been paying to enter the site since 1630 and bringing with them objects to petrify in the well. The most popular item to be submerged in the water by today's visitors is a teddy bear, which takes between three to five months to turn to stone. At the back of the petrifying well there is a wishing well fed by the 'same magical waters as the petrifying well'

So popular is the wishing well that the estate has ‘even received phone calls from visitors wanting to pay by credit card and send cheques for a member of staff to make a wish on their behalf!’⁵ Just by the exit is a museum and gift shop in a small single story building. The museum contains photographs of celebrities with objects that they have donated for petrification next to the object itself - a cowboy hat, a number of Coronation Street characters. There are also two antique fortune telling machines which give you a message from the future if you place your hand on to a glass panel at the front of the machine. Past a desk the museum turns into a gift shop selling a range of Mother Shipton merchandise including stationary, the petrified bears, tea towels, books and postcards. You can also buy toys and gifts that are not specifically related to Mother Shipton but which have a woodland or mystical theme; glass fairies and snow globes sitting on a Lord of the Rings style china base. I bought some postcards, a pencil, a rubber and two bottles of wishing well water and left to catch a train.

Perhaps inevitably, the visit to Mother Shipton’s Cave was something of a disappointment. I had imagined her sitting in the depths of darkness conjuring visions, but instead I found a light and shallow cave. The cartoonish signage leading to the dropping well didn’t align with the image I held of the prophetess and her powers. But Mother Shipton’s is a complicated cave, it is many apparent contradictions all at once: It is a mystic, ancient site and a tourist attraction; an educational facility, with a museum full of knick knacks and celebrities posing with petrified objects; a site of ancient rocks and fast geologic transformation; the home of a prophetess who some feared and some did not believe existed at all.

Introduction: Mother Shipton's dense and complicated cave.

Within the relatively small footprint of Mother Shipton's Cave, there sits a dizzying range of conflicting themes. To visit this cave requires that we hold all of this disparate materials together in an unresolved state. It is hard to accurately define where Mother Shipton's Cave sits in relation to other caves, it is not purely a show cave or the touristic caving experience written about by Jess Edwards (2017) but nor is it the type of sacred or mystical cave that Veronica Della Dora writes through in the *Byzantium Landscape* (2016). Cave tourism can be tracked back to the sixteenth century, when people began to visit caves in Slovenia (Crane and Fletcher 2015:159). A show cave charges a fee for entry, the owner of the Vilencia jama (the Count of Petac) was charging an admission fee (2015:159). Show caves continued to grow in popularity globally, in Britain Cheddar Caves claim to be the first tourist caves, opening in the early nineteenth Century. Show caves often use colourful illuminations, invite parties of tourists to walk along constructed walkways and pause to spot figures and forms in the rock formations. This is not the experience that one finds in the small cave beyond the ticket office of Mother Shipton's Estate. Mother Shipton's is a shallow, hollow of a cave, the light hits every surface, there is nothing of the romance of the unknown or unmapped cave here (Pearson 2018). This is not a dramatic cave in which a dangerous caving adventure can be carried out. One cannot crawl or 'Udge' in Mother Shipton's Cave (MacFarlane 2013). It is not a space in which a caving club can form attachments and dynamics (Pérez 2015; Cant, 2003;2006) and it is not of any great environmental significance like the caves written about by Kai Bosworth. (2017; 2019). What Mother Shipton's Cave presents is a messy collection of unresolved ideas, it is an uncertain cave that trades on the characters and myths that have

surrounded it for centuries. One does not come away from Mother Shipton's Cave with a clear sense of what the experience of being in the cave meant. This chapter requires that we sit with all these uncertainties and think through what it means to be unable to resolve Mother Shipton's Cave.

Maria Pérez discusses the idea of sitting with the unresolved in her descriptions of mapping caves in Venezuela (2013). Pérez describes the literal and elemental messiness of the underground passages and moves on to talk about the act of 'pushing passages' with no obvious end in sight' Pérez uses cave exploration as a way of illustrating the idea that 'humans are always already in and part of this world, so the analytic emphasis shifts towards the processes by which they are enmeshed and changing, *emergent*' (2013:294). Veronica Della Dora describes a small empty space of the Patmian cave depicted in the Byzantium 'suddenly filled with the uncontainable and the unspeakable' (2016:176). Both Pérez and Della Dora's caves are settings in which the confusion and complexity are foregrounded. In this chapter, I am going to look at some of the key themes held within the cave through two of the site's central figures, Mother Shipton; the Prophetess said to inhabit the cave and Paul Daniels; the once part-owner of the cave, and popular magician of the 1980's.

Part of the challenge of the writing through of Mother Shipton's Cave is in knowing that there is no clear way of untangling the themes into a clear order, nor should that be the objective. What can be done, however, is to look at how the cave forms a boundary for the themes to sit within. In order to describe Mother Shipton's Cave, I have divided the chapter into two sections each of which focuses on a character:

Firstly, Mother Shipton. After introducing Mother Shipton, I will explore ideas of transformation and the speeding up and slowing down of time through the lens of the cave in a section titled: 'Time in Mother Shipton's Cave'. Then I will move on to 'Crossing the Threshold: The Mouth of the Cave' here I will look at the importance of entering into the interior space of the cave. Secondly, I will introduce the magician Paul Daniels, who only part-owned the cave for a short period of time. In spite of his short involvement with the site, I have been captivated by the complexity brought to the story of Mother Shipton's Cave and in particular by the correlations between his career in magic and that of the mythical soothsayer. Through the introduction of Paul Daniels, I will discuss the commodification of the myth of Mother Shipton in 'Magic Making Money' and then move on to land ownership and how the right to roam might apply to a cave exploration in a section titled 'Bounded Undergrounds: Cavers and right to roam'.

Part 1: Mother Shipton

It is said that in 1488 Ursula Sontheil was born to a young mother in a cave by the River Nidd during a thunderstorm. As the story goes, she was an illegitimate child, she was an outcast from birth and was said to have witch-like looks and a strange manner 'the silhouette of the humpbacked, beak-nosed crone and her wavering wheedling speech bring instant recognition that magic reversals lie ahead' (Warner, 2006). Ursula married becoming Shipton but was soon widowed. She retreated to the cave in which she was born, made herbal remedies and potions and began to see visions. The story of Mother Shipton is an uncertain one, her biography discordant (Hawkins 2020:14). There are a number of theories about her life and

work, Arnold Kellet's account of her life is described on the cover as 'The first ever serious study of Mother Shipton by a historian. The fascinating facts behind the fiction' (2002). Regardless of this claim to cement the tale, it is a slippery story, and it's entirely possible that there was never a Mother Shipton at all. She may have been a figure of folklore, a composite of a number of local women, or invented as a means of capital gain; a tourist trap of the time (Kellet 2002; Wilson 2004). Even [mothershipton.co.uk](https://www.mothershipton.co.uk) adds a disclaimer: 'Although we cannot be sure how much of the legend is true, what must be certain is that 500 years ago a woman called Mistress Shipton lived here in Knaresborough and that when she spoke people believed her and passed her words on'. According to legend Mother Shipton predicted several important events and was said to have conjured the petrifying well. Soon she was known as Knaresborough's Prophetess, a witch. She made her living telling the future and warning those who asked of what was to come. After a long life, she died in 1561, aged 73⁶. Mother Shipton was a figure of commercial opportunity, organisation, monetary value and of commodification and her entanglement with commerce has been in place since accounts of Mother Shipton began (Kellet 2002; Wilson 2004; Warner 2006) but Mother Shipton is a densely layered character. Whether real or not, her prophecies were of great influence and caused sensation far beyond her lifespan, if indeed she was ever alive at all. In 'The Myth of Mother Shipton: Profit-Making and Profit-Taking' (Crane, Raiswell and Reeves 2004) David A. Wilson gives an account of a pamphlet printed in 1641 (supposedly a reprint from 1448 although there is no record of this document). The 1641 reprint confirmed the prediction of the death of Cardinal Wolsey and 'established Mother Shipton's prophetic credentials beyond any reasonable doubt' (Wilson 2004:310). What is clear from Wilson's writing is that regardless of Mother Shipton's authenticity, the prophecies have been taken seriously over

6 <https://www.mothershipton.co.uk/>

the centuries since her death and her powers revered. The words she is said to have spoken about her visions of the future have been interpreted as truth and aligned with actual events. Perhaps something that has shifted is the way in which visitors approach the site. Today the site is an attraction of historical interest and of tongue-in-cheek kitsch and amusement.

As the stories go (Kellet 2002; Wilson 2004; Warner 2006), people would visit Mother Shipton and the magic Dropping Well to seek advice and to hear her prophecies. People went to Mother Shipton for answers, to literally and metaphorically, set a vision of their future in stone. However, in looking for answers one had to approach the cave, and approach the prophetess; entering into this space was to enter into the unknown. Mother Shipton has been called a witch, Una Hamilton Helle, describes the figure of the witch as a ‘composite figure’ and the description continues: ‘A nebulous shape that has shifted in tandem with public attitudes throughout the centuries, both feared and respected, seen as both threat and resource to the community’ (Hamilton Helle 2019:1). We know now that there is a logical scientific explanation for the transformative waters of the petrifying well; the water in the well has a high concentration of tufa, a limestone formed in precipitation. The mineral coats the objects submerged in the water and gradually replaces the cells of organic matter leaving a stone and solid version of the form. Or in the case of a plastic lobster, a stone patina gradually encases the shape (King 1889). The aim of this writing is not to prove that Mother Shipton existed, nor that she had magical powers, instead I want to explore how the figure of Mother Shipton, asks you to sit with uncertainty. In other words, as a figure she asks you to hold together both the idea that she did and did not exist at the same time: She was both a fabrication invented as a lure for tourists and a real prophetess with powers that allowed her to manipulate

her surroundings and see visions of the future. It asks you to view the collisions and contradictions in the accounts of Mother Shipton's life and work from within the boundary of the small shallow cave and to resist the urge to logically disentangle the fact from fiction.

1A. Time in Mother Shipton's Cave

The hanging plastic lobster, kettle and numerous encrusted teddy bears tell us that the waters at the Dropping Well do indeed give objects a coating of stone. Imagine for a moment coming to this water without that knowledge, and believing that the transformative powers of the pool had been conjured by the witch. This rapid fossilisation would set the scene for the manipulation of time; a process that should take tens of thousands of years, happening within a matter of weeks. With petrification as a backdrop, one could question the certainties of one's own reality; and with every moment of submersion in the silence and the rock, the lines between dreams, visions and hallucination could become blurred. Images begin to build, like layers of minerals, slowly settling on the inside of the imagination.

Mother Shipton was, like other witches, a 'dweller in the margins, whether living on the edge of a town, or traversing the liminal boundaries between worlds, the witch has for centuries been an outsider, shunned for her independence and knowledge' (Hamilton Helle 2019). The cave has long been the setting for isolation, hermitage and vision. The cave is also a site of hermitage and restriction (Della Dora 2016) a site of hallucination from mind in the cave (Lewis-Williams 2002). These conditions, even in a shallow cave, could set the scene for the

inhabitant to experience hallucination; to make it difficult to distinguish between reality and illusion. The Mother Shipton website claims that her premonitions started small 'but as she practised, she became confident and her powers grew'. Left in the isolation of a cave, perhaps an idea could find form; strengthen and grow and 'mingle with the shadows of the external objects to create a multi-dimensional panorama' (Lewis-Williams 2002:204). In his study of human behaviour in Upper Paleolithic cavern David Lewis Williams describes a concern 'not only with the human mind in the cave' but also with 'the neurological cave in the mind' Lewis-Williams describes the sensory deprivation of the caves, and the altered states of consciousness that this deprivation may induce (2002:204).

'Amongst those states is, as we have seen, the sensation of entering a constricting vortex and coming out on the far side into a hallucinatory realm with its own conditions of causality and transformation. This is the cave in the mind.....Then too, there is the projection of mental imagery onto surfaces. In the absence of anyone who had the kind of understanding of altered states that we have today, Upper Palaeolithic people must have believed, Like Socrates's prisoners, that those images and experiences were part and parcel of 'reality' as they conceive it (Lewis-Williams 2002:204)

In this description, the physical environment is a key part of the imaginary realm; the cave is a site for the stretching and bending of reality. Experiments have proven that time spent in the depths of a cave interrupts circadian rhythm (Siffre, 2008) Mother Shipton's Cave is not

dark or deep, but the environment of this cave was the backdrop for the pulling and extending of time by the Prophetess. Perhaps enough time spent in isolation within the push and pull of the fast and slow geology of Mother Shipton's Cave was enough to make time liquid for Mother Shipton? Perhaps time in the cave is slippery, not quite liquid, not quite solid. MacFarlane describes the movement of underground time as materials that thickens, pools, flows, rushes, slows.' (MacFarlane 2019:4). I imagine that Mother Shipton was conjuring, not specific visions of the future, but a patchwork of chopped up time all held together in the cave. The cave gives form and movement to time, it makes time seem malleable. Doreen Massey said that 'we don't think of time as being material, time is ethereal and virtual and without materiality. Whereas space is material: it is the land out there. But there's a dimension of space that is equally abstract and just a dimension, so that's the way in which I want to think about it' (Massey 2013:3). Mother Shipton's Cave makes time material. The petrification process defies what we believe to be possible in a short period of time, in front of our eyes, time is measured in the matter of the cave, the rock and the mineral heavy water, and the objects are frozen in a matter of weeks. If time is represented in matter, rocks and water, then it can be rearranged and manipulated. In the following paragraphs I am going to draw on the work of Anthropologist Nadia Seremetakis, who in her book 'The Senses Still' brought together the work of five scholars concerned with the senses and anthropologies of the everyday (1996). I have been particularly influenced by Seremetakis's own contribution to this volume, 'Memory of the Senses (Part II)' in which she so vividly describes the stuff of time, held together in non-linear patterns, through her memories of sitting on her Grandmothers' lap listening to fairy tales and finding the words enmeshed with sensory memories of the surroundings (1996:30).

Seremetakis describes the stories told to her by her grandmother, in which the narratives themselves and the way in which the narratives were performed would recombine and mobilize the body into a 'patchwork' (1996:31) presenting her childhood self with the possibility of flexible and shifting time and embedding surreal vignettes in her subconscious ready to be awakened when one of the sensory switches is flipped. For example, telling a story about a particular type of food whilst preparing and eating the food. The Grandmother holds the mystical power that can transform and 'chop up' landscape.

'A narrative that extracts and liberates, disassembles and reassembles the substance and fragments of myth in order to create passageways between times and spaces. Just as she chops up the landscape of the countryside and rearranging its parts in order to convey her tales, the infiltration of the child's present by these narratives chops into pieces its world picture, undermining surface coherence with foreign elements. (Seremetakis, 1996:31)

Like the Grandmother in Seremetakis's writing, I imagine Mother Shipton to have this ability to patchwork time. I encounter the image of the figure of Mother Shipton in her cave surrounded by the fast and slow geologies; it is in this context of different paces of time, of deep liquid time, that I am able to sit with and believe in Mother Shipton's ability to see into the future: If time can be fast and slow, could it not also be backwards and forwards? This image of Mother Shipton in her cave requires me to hold past, present and future within the boundary of the rock at the same time. Seremetakis describes narratives and times spans that are as malleable as the matter of the landscape; the storyteller has the ability to move and chop up time, weaving the reader in and out of the patchworked and non-linear tale. The ability to move in and out of the present through storytelling; to trigger thoughts about

the past and in the case of Mother Shipton, to predict the future, opens up the possibility of prophecy for me: The stuff around us triggering memories and opening slippages though time. I will expand more on how this description of narrative and time affects my understanding of Mother Shipton's Cave later in the chapter.

1B. Crossing the Threshold: The Mouth of the Cave

In my experience, to step in through the mouth of Mother Shipton's cave, even an inch, was to allow myself to be swallowed up. It was to opt in to a new reality, to suspend the rational. Mother Shipton's Cave is not underground, it is a hollow light cave but one has to enter it nonetheless; there is a threshold of the mouth of the cave. It is easy to imagine other Shipton in there, fact or fiction. Sitting at the entrance of Mother Shipton's Cave and watching petrified bric-a-brac swing slowly above the pool, one can imagine the trepidation with which the site would have been approached in the 16th Century. Standing in the mouth of a cave is to feel surrounded by an outline of rock, a body about to be swallowed up. Perhaps the contemporary challenge is to find a way to approach with wonder against rational thought. To cross into the bounded arena of the cave and to suspend reality. Here, I will turn momentarily away from caves and broaden the scope to the underground. In an account of 'draining' by Garrett (2013), in which he describes the activity of urban exploration, and in particular, going underground into city infrastructure of drains, tunnels and rail networks. Garrett describes the conceptual shift that occurred when moving across the threshold from surface to subsurface:

‘When entering the sewer networks..... we passed through a literal threshold (the sewer lid in the street) into a world where the only social expectations to be found were the ones we chose to bring with us’ (Garrett 2013:177).

By crossing into a subterranean world you enter into another realm (Bridge 2013), and more specifically, by entering through the mouth of a cave; swallowed into the body of rock, these ‘anti-landscape’ (Della Dora 2016) offer the opportunity for a re-examination of surface status-quo. Mother Shipton’s Cave is an open, light, surface level cave, but nevertheless, one crosses the threshold into a space surrounded by rock, there is a sense of being both through the mouth and below what is taking place above.

In order to understand the effect of the ‘mouth’ of the cave I want to use the work of curator and writer Amy Lay-Pettifer. Lay-Pettifer explores the image of actress Billie Whitelaw’s disembodied mouth hanging in the darkness in Beckett’s ‘Not I’ in relation to the cave entrance and Luce Irigaray’s analysis of Plato’s Cave in ‘Dialogues’ (1974). Like the story of Mother Shipton, ‘Not I’ begins with an illegitimate birth, the mouth continues to speak and embody the ‘unmetered and unrestrained female voice in flow’ (Lay-Pettifer, 2012:4). Irigaray points out the lack of a female voice in the allegory of the cave and disputes the singular point of knowledge of the beam of light from the sun (Lay-Pettifer, 2012). Rather than singular enlightenment and order, ‘The Mouth of The Cave’ draws out ideas that resonate with less linear and more messy modes of knowledge making that take place past the threshold of the mouth of the cave ‘The blurriness of the female mouth in the monologue ‘Not I’, rather than offering ‘temporal anchor’ the phrases referencing time loop and slip

and refuse to stay still 'She is a 'bad copy' as Irigaray might put it - a blurred shadow or a muddled echo' (Lay-Pettifer 2012:4).

Plato's cave is an allegory in which humans trapped in the cave since childhood are fixed facing the back wall of the cave. The humans only know the shapes and shadows cast on the wall in front of them from the light behind, this is all they know, 'this is their truth' (Parrott and Hawkins 2020:97) until they are brought up and out into the light of the day through the mouth of the cave. Irigaray (1985) believes this to be a masculine model of knowledge forms, in which ways of knowing linked to the deep, dark and earthly cave are abandoned for reason and for the bright light of the surface (Parrott and Hawkins 2020:97).

In his 2017 paper on permeability, Bosworth foregrounds three aspects of feminist geophilosophy 'geologic forces as substrata of human existence, sexual difference as an inhuman matrix, and the non-local and the insensible as constitutive of thought' (2017:23). Bosworth asserts that the "'feminism'" of feminist geophilosophy derives from a post-Irigarian and expansive conception of corporeality and sexual difference' (2017:24), he goes on to quote Irigaray in defining geophilosophy as an area of interest with a particular focus on firstly; intervals, fissures and ruptures and secondly; fluids and flows (Irigaray 1985). This description of the porosity and interconnection between the bodies of rock and that which flows within them is echoed in the space created by Lay-Pettifer's blurry mouth of the cave, a space without clear definition and which speaks in an unrestrained flow.

These readings of Irigaray's Cave describe a porous and permeable geology. I am now going

to speak about the boundary of the cave and how defining a conceptual edge helps me to sit with the complexity and contradictions within. Pérez argues against the idea of a karstic system being described as bound (Pérez 2014), reiterating Adey's (2013) argument that a 'multi-dimensional and dynamic approach to earth and its processes resists' the description of being 'bounded' (Pérez 2014:230).

In my own image and experience of Mother Shipton's Cave, stepping over the threshold, into the space within is significant; the 'through' and the 'below' discussed above. By entering through the mouth of Mother Shipton's Cave, we enter into a bounded space in which multiple forces and ideas sit without clarity or hierarchy, it is bound by the rock walls and bounded in that it is distinct from the land outside (Paasi 2009). I imagine Mother Shipton's cave as another realm, in which the workings of Mother Shipton's mind are messily held together by the rock walls. Mother Shipton's is, as I have already observed, not a deep, dark cave, but nevertheless this is the most complicated cave I have ever visited. For me, the complexity and intrigue of the cave are rooted in the collisions and collapses of time that the figure of Mother Shipton and her cave present. To give an example: If I stood in Mother Shipton's Cave surrounded by ancient rock and petrifying waters, and look up the Mother Shipton Estate website on my phone, the search results would be interrupted by text messages, diary reminders and notifications from social media to remind me of images I posted a year ago. We can see visions of the future and snatch clips from the past, window after window. A nonsensical pile-up of futures and pasts, all held together within the boundary of the screen.

To add to this further, Mother Shipton is said to have foreseen the invention of the internet, the very infrastructure on which her website can be found today: ‘Around the world, men’s thoughts will fly. Quick as the twinkling of an eye’. If this interpretation is to be believed, Mother Shipton saw a virtual place that we can reach through a mobile phone connected to the internet; a portable portal. Like the patchwork in Seremataki’s writing, the time spans and narratives in Mother Shipton’s Cave are malleable. The more that I thought with Mother Shipton’s Cave and the multiple ideas and time spans that the figure and her story present, the more I found myself thinking back to the work of artist Camille Henrot and the ways her work. Henrot is a multi- disciplinary artist , who in 2014 won the Nam Jun Paik award for her video work ‘Grosse Fatigue’ and installation ‘The Pale Fox’. Henrot’s work references social anthropology, online marketplaces, social media and the public and private realm.

In her work ‘Gross Fatigue’ (2013) Henrot uses a chaotic pile up of digital video references in which attempts to tell the story of the creation of the universe in 13 minutes. The work was made while in residence at The Smithsonian Institute in Washington D.C. and combines found and made clips with objects and images from the collection. In an interview (Cosson and Luciani 2014) she speaks of the density and the fast and unsettling rhythm of the material: computer screen window after window open and unfold their contents on top of one another. In the video many images and clips sit together in a fractured but single creationist story. As a viewer I look for meaning and coherency, I try to follow the structure established by Henrot, who admits herself that it doesn’t all fit together. ‘It doesn’t work like a logical story’. This epic and impossible retelling is set against a beating drum and rhythmic voice, Henrot describes expression of the voice in the film as the ‘desire to believe despite the accumulation of so many possible beliefs’ (Henrot 2014). Interestingly this bombardment

of wide ranging and often obscure references is held together, not only within the computer desktop backdrop of the video but in the controlled environment of the screening room, Henrot states the importance of the conditions in which the film is viewed; a bound space in which to hold multiple, dense and messy types of knowing. For me, thinking with Mother Shipton's Cave, is to use a small footprint bound in rock as a lens through which to look at and to sit with a vast expanse of complicated, messy time and matter. It is a disorderly and enmeshed cave, separate from the outside world. Setting it within the boundary of the cave walls makes it possible to sit with ideas that would otherwise be overwhelming. In the next section of this chapter, I will look at ways in which the Mother Shipton Estate has been organised and commodified; ways in which the orderly outside has been imposed on the disorderly inside of the cave.

As you leave the Mother Shipton Estate, you will pass through the museum and gift shop. The collection in the museum boasts a wide range of petrified objects donated by celebrities to be saturated in the dropping well water. Amongst the collection is a petrified bow tie donated by magician Paul Daniels and a stuffed white rabbit from his wife and assistant Debbie McGee. In the next section I will explore the character of the popular television magician, Paul Daniels and think through what his short part-ownership in the Mother Shipton Estate brings to the story of the cave.

Part 2: Paul Daniels

The main character in this chapter is without doubt Mother Shipton, but there is another character amongst the many woven into the story of the cave to whom I would also like to draw attention; the magician Paul Daniels (1938-2016).



Fig. 19. Paul Daniels buys Mother Shipton's Cave 1987. Photography by David Hickeys.

Paul Daniels only owned the estate and the cave within it for a short period of time in the late 1980's , so why have I found this so interesting when there have been many other characters involved in the story of the cave and of Mother Shipton? Perhaps it is the charisma of Daniels? The fact that I remember him on television as a child? Or the irresistibly compelling tale of a popular television magician buying the estate on which an outcast prophetes may or may not have lived out her life in solitude. In spite of his short connection, Daniels is inextricably linked to Mother Shipton. Come out of the Mother Shipton website and scroll a little further down the web browser search results; history blogs, newspaper articles, travel

advice websites and witching websites begin to appear. In 2009, The York Post reported that the estate in which Mother Shipton's Cave is located was put on to the property market for an asking price of £1.8 million, the fourth time in its 400 year history that it has changed hands. The article goes on to report that the estate in Knaresborough, North Yorkshire was once owned by magician Paul Daniels, an award-winning member of the Magic Circle, famous for popularising magic on the television in the UK in the 1980's and 90's. Daniels was described as a 'brilliant showman' and performed magic tricks and illusions on his Saturday evening television show 'The Paul Daniels Magic Show'. Daniels was a member of The Magic Circle, *the premier magical society in the fascinating world of magic and illusion*. In the pre-internet world, and when magic shows like The Paul Daniels Magic Show drew huge ratings on weekend television in the UK, The Magic Circle was a secret organisation swathed in mystery and intrigue. The mysteries of the tricks performed only understood by a select few and the secrets protected from the general public. With the rise of the internet, the 'how to' of magic tricks is only ever a few clicks away. The tricks performed on a Saturday night television program were designed to entertain, to mystify and were dressed up in sequins and glamour. Audiences were amazed by the power of the illusion, the magical puzzles to be solved. The magician carefully choreographs the trick, practices it over and over again until it appears effortless. Gripping, slipping, dropping the balls until it can be operated at a subconscious level. Thinking in space, manipulating space.

In an interview with The Express in 2012 magician Daniels stated that he wished he could 'turn back time' after he suffered an acute case of gallstones resulting in the removal of his gallbladder. "Hey," writes Paul on his blog. "Has anyone out there got a time machine? I

would really like to go back to 8am on January 1 and start all over again.” Gallbladder stones are a tiny mass formed by layer upon layer of mineral residue; hardened deposits of the digestive fluid bile and cholesterol (Surg 2013) that present in various ways, most commonly obstructing the bile duct (Bouchier 1990). An investigation of the bladder stone by Theodor Ringborg describes the rich history of the field and the surgical investigation leading to modern treatments describes the extraordinary case of Jan de Doot, a Dutch blacksmith who surgically removed his own stone in 1651 using the perineal technique. In 1655 De Doot was immortalised in a painting by Carl van Savoyen ‘holding a knife in one hand and his egg-sized stone in the other. His subject’s actions are near-biblical, but his portrait also shows the stone as a natural object of wonderment’ (Cabinet Magazine 2014) In the act of inspecting one’s own gallstones makes the once invisible interior processes of the body are revealed. These bodily revelations momentarily make space for imagining the inside of one’s own form, the heart beating, the blood running through the veins, the food being digested, the stones slowly forming, like the mineral crust over a teddy bear in *The Dropping Well*. In his essay ‘L’Intrus’ Jean Luc Nancy (2000) describes the experience of having a heart transplant, the strangeness of intervention and of visualising the interior world of one’s own body. ‘Between myself and me there has always been a gap of space-time: but now there is the opening of an incision and an immune system that is at odds with itself, forever at cross purposes, irreconcilable.’ (Nancy 2002:10) The inside of the body, like the inside of the cave, is a space with which we must learn to sit with the unknown, the uncertain.

Daniels’ gallstones were not, of course, the result of his time spent living near to the petrifying waters of *The Dropping Well Estate*, but the collision of the imagery

conjured by the reporting of the gall stones and the land ownership settle on top of the already complicated sedimentary layers of information at Mother Shipton's Cave. The aforementioned article in the York Post does not state what Daniels' motivation was for owning the estate on which Mother Shipton's cave is found, perhaps for the property investment, the business, the amusing correlation between the magician and the prophetess: Paul Daniels conjured billiard balls from thin air, Mother Shipton turned things to stone and conjured images from the future. Daniels and his magic tricks are intended to entertain and to create illusion. The audience doesn't believe him to be magical but may be magical but is left with a sense of uncertainty; unable to work out exactly how he executed a trick.

The 'Paul Daniels' story offers something else to the already densely packed cave, it speaks to our desire to get to the bottom of things, to control through demystification; whether demystifying a magic trick or a geologic process. Daniels, the TV persona, was a modern day reframing of how the mystical can be commodified, much like Mother Shipton, he had an audience that watched him in wonder. But unlike Daniels, there remains some uncertainty around Mother Shipton's mystical abilities and her cave resists demystification; it is swathed in uncertainty and in it we must sit with the state of not-knowing. Paul Daniels may have owned the land on which the cave is found, but he could not have uncovered the secrets of the myth of Mother Shipton and the Dropping Well. And, all the time that he lived on the Dropping Well Estate, there were stones forming slowly in his gallbladder.

According to an interview with Daniels documented on MagicBunny.co.uk, Daniels owned

49% of the shares and sold them back when the council rejected plans to expand and update the site. Daniels had plans to turn Mother Shipton's Cave into a major centre for tourism the new 'Blackpool-by-the-Nidd', according to the York Press, local environmental groups called for Mother Shipton's Cave to 'concentrate on it's history' (2013). As I have already established, any records of Mother Shipton and her cave are enmeshed with tourism and financial gain, with paying visitors at the site since 1630; visitors come to see the cave where the prophetess saw into the future and the fast paced geologies of the dropping well. Mother Shipton 's has never been a site that concentrated entirely on its history. In his memoir (2000) Daniels refers to himself as a 'product' and in meetings with television companies, Daniels would revert to his childhood nickname of 'Ted Daniels' in order to 'disassociate' himself with the character of stage and screen. In this next section I will focus on the success of the Paul Daniels Magic Show and think through the collision between Daniels and Mother Shipton through the lens of commercial success.

2A. Magic Making Money

In his paper 'The Experience of Magic' (2016) Jason Leddington describes magic as 'once among the most popular and profitable forms of public entertainment' but 'now widely ridiculed as a sideshow art' (Leddington, 2016:2). In defining what a magic show does, Leddington states that the magician's primary goal is to fool the audience and he goes on to quote prominent magician Darwin Ortiz: "Magic is not simply about deceiving. It's about creating an illusion, the illusion of impossibility" (2006:15). Although Leddington doesn't specifically mention Paul Daniels, several of his contemporaries are discussed as part of the

study. Leddington describes the experience of magic as essentially involving the willing suspension of disbelief by the audience. In his television show, Daniel's focused on small illusions, in his memoir he writes:

‘when performing a big illusion, the audience is watching you top to toe, arm to arm, the full image, rather than just looking at your hands. The rhythm and timing of your body doesn't matter so much in close up, the audience are looking at the trick. On stage, it's a totally different ball game. The whole scene has to be sold to an audience’ (2000:303).

The Paul Daniels Magic Show was not mystical, it was full of sequins rabbits and spectacle; a stark contrast to the folkloric, elemental magic described in *The Book of English Magic* (Heygate and Carr Gomm 2010).

‘Magic began in caves and under the stars, in our ancestors' awe of the forces of nature all around them. The play of light and darkness - of the cave's depths and of the brightness of the dawn sun as it struck the cave's opening - was the primal experience that fashioned the very earliest practice of magic.’

(Heygate and Carr Gomm 2010: 11)

The Saturday night television show was about as detached from the forces of nature as it is possible to be and it is hard to imagine Paul Daniels in connection with the primal early practices of magic. What then, was the attraction to the Dropping Well Estate? Why Paul Daniels decided to buy the estate and within it, Mother Shipton's Cave is not documented. Perhaps it was less about an association with Mother Shipton, the mystical prophetess and more about Mother Shipton the spectacle: A visitor attraction enshrined in myth and magic, the property of the ultimate primetime populist showman Paul Daniels. Not a classic show cave, which became popular in the late 19th Century and involved pathways being built in kartic networks so that visitors could comfortably experience the underground (Crane and Fletcher, 2015) but a cave for tourists nonetheless, a show cave for a showman. Inevitably though, Paul Daniels bought both the cave of the prophetess and of the spectacle, because Mother Shipton's Cave is both of these conflicting things and has been from the earliest records of the site. One of the interesting puzzles of Mother Shipton's Cave, is that hers is not a story that has been commodified long after her death. This is not a site on which tourists have stomped over once sacred ground, instead, it seems that this has been a story of tourism and commodification from the very beginning. In fact, it's possible that it is pure commerce, that Mother Shipton has never existed and instead is a figure generated for commercial gain (Kellet 2002; Wilson 2004; Warner 2006). Whether she existed or not, Mother Shipton has brought wealth and notoriety to the landowner of the Dropping Well Estate for centuries.

2B. Bounded Undergrounds: Cavers and the right to roam

The idea of owning the business of Mother Shipton's Cave makes sense in relation to its long

history of tourism but there is something still strange about the idea of owning the rocks that make up the gap that is a cave. There are underground spaces in which surface infrastructure may more naturally be applied; mines, tube trains, tunnels and bunkers, as Williams describes it ‘the substructure of modern life’ (R, Williams 2008:53). But in the deep, dark twisting passages of a natural cave network, the idea of land ownership and clear cut land boundary seem abstract. Even in Mother Shipton’s shallow, surface cave, it is difficult to reconcile the idea of human ownership and the ancient time spans of geology. Property law in the UK and US was based upon the idea that one owns the land down to the centre of the earth, the law ‘was enshrined in the Latin phrase “*Cuius est solum, eius est usque ad coelum et ad inferos*” – which roughly translates as: “Whoever owns the soil, holds title up to the heavens and down to the depths of hell” (Garrett 2018). This legislation is recorded as first being used in 1285 in Norwich (Morgan 2013) and according to Morgan ‘most of the cases concerning the *cuius est solum* doctrine (which is embedded throughout the Common Law world) have arisen in the context of airspace; relatively few have concerned the ownership of subsoil’ (2013:819). Unsurprisingly subsoil ownership comes with the caveat, according to the British Geological Survey, that under common law minerals (not all but oil, gas, coal, gold and silver) found underneath a property belong to the Crown Estate⁷ which dates back to 1066. In most cities, just as you cannot expect to control the airspace above a property, you cannot control transport and utilities infrastructure being dug up underneath it (Garrett 2018). Of course, for most, there is not a great need to control the land under a property and the idea of ownership will remain abstract. For the cavers that roam underground in the UK however, who owns the subterranean land is a major issue. In 2016 the Guardian interviewed caver Tim Allen (British Caving Association) about the omission of the underground in the 2000 ‘right to roam’

8. <https://www.thecrownestate.co.uk/>

legislation. DEFRA and Natural England have given permission for exploration only as far as cave entrances 'are open to the daylight'. Permission beyond the light to dark threshold has to be arranged with the landowner. Some cave systems cross multiple boundaries with multiple owners making access and maintenance of the tunnels difficult to negotiate. Geographers have been evolving contemporary understanding of land ownership of the underground and trespass (Garrett 2011) in the subterranean, particularly in the urban environment. In his thesis 'Place Hacking' (2012), Garrett describes the act of urban expiration and within that, groups that are particularly interested in infiltrating the subterranean city. From Garrett's accounts, it seems that what was illegal about his activities with the group with whom he was working, was the way in which access was gained through force, rather than exploration of the underground tunnels (2012).

'It is clear from the reaction of authorities I have encountered through exploration that the "problem" with what explorers do is not that it is "illegal", it is that, in capitalist terms, it's pointless and therefore highly suspect' (2012:215)

A fascinating point drawn out by Garrett is that, often the legality, access and ownership of an underground site may be unclear, simply because these are not spaces that many people want to visit, they are forgotten or simply never thought of except by specialist groups such as cavers or drainers:

'Many of the places accessed had clearly been empty for decades and often the group commented when we were in places on how bizarre it was no one had ever thought to

do this before' (2012:185)

Chew (2017) has carefully worked through recent changes in subterranean land use in Singapore and in doing so made an excavation of international approaches to subterranean land ownership.

'In many jurisdictions such as Australia, England and the United States, technological developments, which enable the increasing exploitation of minerals, gases and other resources found under the surface of the earth, provoked debates about the limits of the surface landowner to rights over the underground' (2017:2)

Chew sites recent legal cases in the Supreme Court in the UK in which landowners have claimed rites over the underground. Lord Hope notes that there: 'Must obviously be some stopping point, as one reaches the point at which physical features such as pressure and temperature render the concept of the strata belonging to anyone so absurd as to be not worth arguing about' (Chew 2017:2)

In spite of these cases, Chew continues, there is yet to be clear legislation that defines underground land ownership across any of the aforementioned jurisdictions.

Building on the idea above that the idea of owning any underground space quickly becomes abstract, I want to think through what this would mean in the context of a cave like Mother Shipton's Cave; although a shallow, surface cave, the complexity of this space makes ownership seem even more abstract than it might if we were discussing a deep karstic network. In fact, it seems more possible that a cave like Mother Shipton's could own a person

that steps over its' threshold, and that by putting a hand into the mineral rich waters a human body might become swallowed into the cave and transformed into stone.

One may own the deeds to the estate, or a share in the deeds but could you ever own the forces at play in the cave? Mother Shipton's Cave, in spite of its touristic trappings, has a sense of geologic force that belittles the human power to own or shape. To explore this idea further I will draw on the work of Katherine Yusoff, whose writing describes the Anthropocene as a centering of the human as a geomorphic force (Cutzen 2002; Yusoff 2013), capable of shaping earth systems (Yusoff 2013). As a way of rethinking Anthropocentric positioning, Yusoff uses the term 'geologic life' which she describes as: 'a mineralogical dimension of human composition that remains currently under theorised' (Yusoff 2013: 779). Thinking through 'geologic life' emphasizes not only the agency of the rock but also visualizes the human body as a geologic being, made up of the same matter as the rock. Yusoff's geology is not made up of inert material that can be owned but of a living and dynamic force: When we walk within the rocks of a cave, we find that we are made up of much of the same matter. I have discussed Mother Shipton's Cave as a site that plays with time spans in confusing and unexpected ways, undermining linear understandings of the geology of the cave. The slow geology of vast time spans (MacFarlane 2016, 2019; Yusoff 2013; Tilley 2004) is tripped up by the encrusting of teddy bears in the dropping well, each one turning to stone in a matter of months versus the tens of thousands of years of stalagmites that more traditionally hang from cave ceilings. Amongst these 'lively geologies' (Hawkins 2020:19) even more rapid, than the petrification is the fast drying concrete Mother Shipton figure at the back of the cave. This stone human shape is a quick-set reminder of

the fossilisation that will become of all organic matter, the tiny organisms that make up the rocks in the cave walls. It is the collision of these fast and slow transformative processes; the internal and external merging of the body and the geologic that make the fixing and owning of Mother Shipton's slippery and messy cave seem so impossible. Amongst these geologic and bodily transactions, what would the worth of a contract of ownership be?

Conclusion

Mother Shipton's is not the type of cave I had anticipated writing about in this thesis. It is not deep or dark, it is not visually dramatic or physically challenging and it has already been seen by thousands of visitors. But the visit to Mother Shipton's Cave was compelling and that is because of its messy complexity, it slipped away from most definitions or assertions that I have tried to make about it. These characteristics of non-fixity, of shape shifting and paradox, make Mother Shipton's small and light Cave, one of the most compelling and difficult caves to negotiate that I have encountered.

At the start of the chapter I wrote about the sense of hollow disappointment when I visited Mother Shipton's Cave, perhaps at the lack of some kind of sense of mysticism. I realise now that to expect something from a fleeting visit, to anticipate some kind of mystic happening in a few minutes spent in a tourist attraction was wildly unrealistic; what has become important is how this cave stays in my imagination, refusing to settle. Mother Shipton (real or not) invested her time in this cave, she may never have owned it in the monetary sense like Paul Daniels did but nevertheless it was her place of conjuring and it became so because of time

spent within the cave walls. As time goes on, I find Mother Shipton's Cave more confusing, more complicated. The layers of thinking are building up like rock on the surface of one of teddy bears hanging in the water of the Dropping Well.

Mother Shipton's Cave is densely packed. The ancient figure of The Prophetess and the magician Paul Daniels draw out discussion of tourism, the illusion, fast and slow geologic time, commodification, ownership and all of these are set against the uncertainty of the authenticity of Mother Shipton herself. This small, light cave asks us to hold all of these conflicting themes together without giving one more importance than another.

Mother Shipton's Cave as a space in which time is a material, within the boundary of the cave, the character of Mother Shipton is said to have been able to see into the future. Against the backdrop of the Dropping Well and its fast geologies, this possibility of time travel in malleable stone seems possible, especially when the prophecies line up with real life events and inventions: The internet was one of prophecies if you choose to believe it. The internet, on which I first looked up the mothershipton.co.uk website. I return for a moment to the video work by Camille Henrot 'Grosse Fatigue', when asked about her relationship to the internet and digital culture, Henrot replied:

'I make no distinction between religion and magic. And this is not a criticism of religion. The Internet is the realm of science and superstition alike: the Jehovah's Witnesses are just as active online as the Smithsonian Institute, where I conducted my research for Grosse Fatigue. I can see how the Internet develops the desire to believe,

to be immersed in a coherent whole that only religion can offer' (2014)

Henrot uses the boundary of the screen in which to explore multiple messy collisions and references, rewriting a believable new narrative and asking her viewers to suspend outside beliefs for the duration of their time that their eyes are with her within the screen.

My instinct at the start of this research was to compare the characters of Paul Daniels and Mother Shipton against one another as opposites; the outcast and authentic prophetess versus the commercial and popular male magician. But as their stories have unfolded, the line draw between them becomes less clear. The historical site is to be preserved rather than developed, but its history for centuries has been entangled with tourism and consumerism. Like Shipton, Daniels has more than one identity; a show persona and a 'real' person and all of these characters are a sense of uncertainty about when authenticity stops and the 'trick' begins. Thinking with Mother Shipton's Cave asks for not only the willingness to suspend disbelief, but also to suspend the urge to resolve and organise ideas. Mother Shipton's Cave requires its visitors to sit with the unknown and the unresolvable.

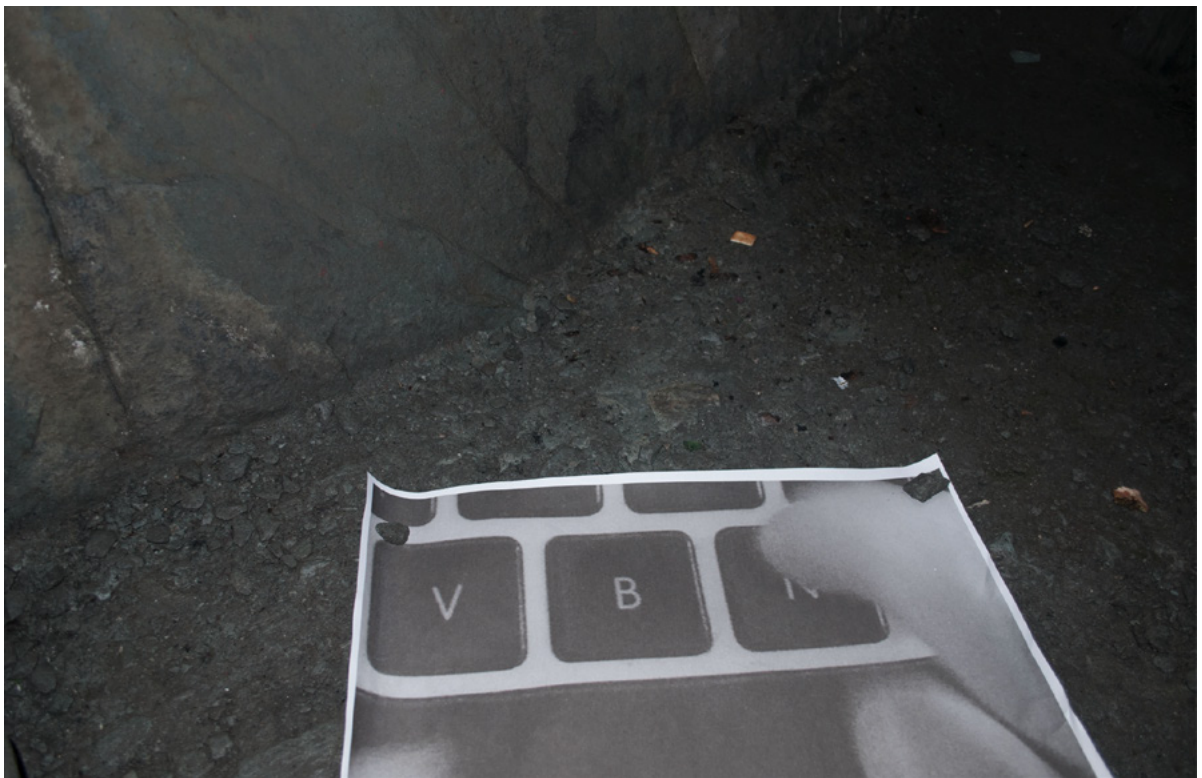


Fig. 21. Keyboard Photograph in Cave. 2018.

Conclusion

Introduction

By way of conclusion, I would like to think through the experiences of the three cave sites; The Ice Cave on the Mer de Glace, Chamonix; Aach Spring cave network near to Konstanz; and Mother Shipton's Cave in North Yorkshire and also the material that inspired the 'tunnels'; the short experimental pieces of writing found in between the 'caves'.

Firstly, I will revisit these sites through the key themes of the project; permeability, non fixity and material encounter. Then, secondly, I will move on to discuss ways in which these sites have influenced the thinking and making in this thesis. However, before I move into the two main sections of the conclusion, I will pause for a moment to think about the types of caves that the thesis has focused on.

None of the caves in the thesis are the types of site that I had expected to be writing or making artwork about at the beginning of this project. They are not the romantic, dramatic and hellish caves found in the writing of MacFarlane (2019) or Pearson (2018), that I imagined writing about. In some ways they are all relatively mundane; Mother Shipton's Cave and the Grotte de Glace are both ticketed tourist sites for which one does not even have to change clothes or take equipment and the Aach Spring is a tiny opening in a peaceful setting in rural Germany. This apparent banality is perhaps what has been so powerful about all three of the sites; they have drawn me in and then become lodged in my imagination. I

saw many caves during the course of this research project, some much closer to the deep and dramatic landscapes I might have imagined focusing on. However, after visiting these three main sites, each one of them became a preoccupation; it seems impossible to ignore them. So if these undramatic caves did not require the ‘udging’ (MacFarlane 2016) and the ‘pushing’ (Pérez 2013) of twisting horizontal passages, what was it that was so appealing? All three of the caves presented paradoxes and problems that as sites for knowledge making have proven to be both challenging and generative.

The tensions and paradoxes provided by the sites also reflect, in some ways, in the context in which the work has been made. As a practice based researcher with a background in visual arts, it has been both challenging and generative to move into a new discipline. Working as an artist within the geography department has informed my practice in ways that I couldn’t have anticipated. In the second section of this conclusion, I will think through the process of making the two bodies of artwork that form the practice based part of the thesis, and the inherently interdisciplinary nature of studying caves. I will draw the thesis to an end by reflecting on the burgeoning field of research into the underground in both geography and in visual arts and reflect on how this project which is an intersection of the two disciplines might make a contribution.

As the project has evolved, the form and the navigation of caves has spilled into the planning and shaping of the thesis. What I hope the experience of reading the thesis has been, in combination with viewing the artwork, is one of a labyrinthine space in which themes and ideas intersect and loop back on one another. The idea has been to generate an imaginary cave

network in which one could take a number of routes and even potentially become lost; but the intention is that structure frames the ‘lostness’ and ambiguity as a creative and exciting space for thinking; a space in which to sit with the unknown and the unresolvable. I will now move on to a reflection of ways in which the chapters (caves), tunnels and artworks respond to the three key themes of non fixity, permeability and material encounter.

Section 1.

1A. Permeability

In thinking about permeability I have turned consistently to the work of Kai Bosworth, who in his studies of geophilosophy thinks through the ‘permeable surfaces between human bodies, ecological systems, and politics events’ (2017:35) I believe that this project aligns with Bosworth’s assertion that the leaky and permeable nature of materials are not acknowledged by the ‘traditionally patriarchal institutions of capital and corporate science’ (2017:35). I hope that this thesis extends this argument through a practice that embodies an open ended and interdisciplinary approach to making with materials; studying the body in caves through methods that sit across the geography and art disciplinary boundaries.

In Mother Shipton’s cave, the fast geologies of the dripping well and the slow geologies of the cave’s rock walls, set a scene of uncertainty. The mythology around Mother Shipton suggests that she could see into the future (Kellet 2002; Wilson 2004; Warner 2006) disrupting linear time with her prophecies. Mother Shipton’s cave is a site through which

I have investigated subterranean land ownership and the right to roam in caving; how boundaries are defined and the ways in which the underground challenges surface structure (Williams 2008; Garrett 2018). There is however, an important contradiction here; this chapter outlines the significance of crossing a threshold (Bridge 2013; Garrett 2018), of walking into the mouth of the cave. On the one hand I have written through ideas of seepage and merging, the transgression of boundaries and yet on the other hand, the significance of moving over from one realm into another. Here, I want to return to Della Dora's writing about caves in the Byzantium in which she describes the paradoxical conditions of a cave (2016); Della Dora speaks of small, confined spaces that also become vast open spaces. Oscillating between a sense of confinement in a cave and an overwhelming sense of vastness in a cave is a description that resonates with my own experience of caving and of thinking with caves. The conclusion that I have come to is that the cave is both of these things; it is vast and confined, and it is both bound and permeable. The tensions that the paradoxical cave presents make it a site that is difficult to define and capture. This difficulty is reinforced in the work of Maria Pérez, whose work has been an important influence in the development of this thesis, Pérez describes the physical wrangling that takes place in the mapping of the cave (2013) and the emotional 'yearning' induced by the memory of the cave that has permeated the mind (2016). I have found the tension between states that the cave embodies to be a generative space in which to study; one that requires us to sit with paradox and to be, for example, both without and within at the same time.

The development of the Darkness Retreat digital exhibition, made in response to both the experience of the darkness retreat and a visit to Mother Shipton's cave, speaks to this idea of

the paradoxical cave (Della Dora 2016) The making process switched from material to virtual and back again; generating sculptural works like the heavily embroidered ‘snake curtain’ through internet searching, printing, working by hand, rescanning and eventually situating, digital sculptures within a digital exhibition that appears on a screen every time the URL is typed into a computer. It is an exhibition that is both heavily material and virtual.

The interior and exterior of the permeable body has been central to the research.

Through the writing of Nemanis et al (2013), Invisible Fish invites an imaginary engagement with the layers and materials at play at the moment of encounter between the cave loach and the cave diver; through skin, neoprene, sediment, water and rock. Trying to imagine the experience from the non-sighted cave loach, hyper sensitive to vibrations passing through one material after another. Permeability is present too in the Aquarium tunnel, the anecdotal writing uses the layers from the inside of the body through to the outside of the building to imagine the transfers of heat, sound and matter. Also important to mention is the presence of the image used in Aquarium of my daughter looking at the diver in the tank. This photograph started in my sketch book and then moved to a large scale print on my studio wall, remaining there without any further resolution for the duration of the PhD. It has permeated my thinking.

The Mer de Glace uses the fragile and highly permeable setting of the ice cave to think through the impact of the body on the ice; firstly, a visible and immediate transferral of heat moving between body and ice and secondly the monstrous impact of climatic change on the glacial landscape. In the Darkness Retreat tunnel, I described an experience of uncertainty, as

dreams merged with wakefulness (Rowlandson 2015) in the 60 hours of profound darkness.

The written account of the experience has been extended into the form of a letter in the Darkness Retreat digital exhibition, I will expand on this further in section 2.

In the introduction to this thesis, I discussed the influence of digital technologies in the writing and making. In the Aquarium tunnel, the layers of buildings, water and bodies are also extended and merged with digital technologies; the physical devices might crack or break but the ideas and information stored on them can still be found on a ‘cloud’ or through the internet. I could pause now and look at the webcam in the Boston Aquarium. Digital technologies are present in all aspects of the research, not merely as a means of accessing information but as a way of thinking, working, making and in the case of the Darkness Retreat exhibition, as a way of experiencing the ideas. The digital device frames the work and conceptually permeates the work. There is also the marked absence of digital technology in the underground; the lack of signal, the passages inaccessible to drones, these are still spaces that require us to get into them, in order to gain an understanding of them (Pérez 2013). The way that I have come to understand the role of the digital in the project is as another paradox; another example of ‘both without and within’: in the context of this project the digital is both a gridded, pixelated filter in which information can be organised and simplified, however it is also a format through which to transgress and subvert. In the interview with Una Hamilton Helle, which forms one of the ‘tunnels’ between chapters, she describes digital space that is fluid and messy and goes on to discuss the design of the internet, which was inspired by the mapping of Mammoth Caves. Pérez describes cave mapping as an unending task; one which is physically demanding of the caver and as an experience in which the caver becomes

enmeshed with their surroundings (2013). Thinking of the internet as a space inspired by the physical and incommensurable nature of a cave network has made me look at the digital through a new and less ordered lens.

The theme of permeability also speaks to the recurring acknowledgment in the thesis, that the cave is an interdisciplinary space (Cant 2005; Hawkins 2019; Kuklick and Kohler 1996; Pérez 2016). In Section 2, I will discuss my own experience of working in an interdisciplinary context, reflecting on the ways in which I hope this research has extended geographical thinking about the underground through practice based research. The call for more attention to be given to creative methods as a way for geographers to explore undergrounds in recent scholarship (Hawkins 2020; Squire and Jackman 2020) has reinforced the potential importance of a practice based contribution to the geographic exploration of caves and the underground: This practice based project, based in Geography, has used studio based material investigation as a means to think with the underground, selecting and combining materials and processes in response to field sites. Through sustained artistic practice based within a geography department, drawing on geographic scholarship, this thesis has contributed to the intersection between art and geography by producing exhibitions that are in dialogue with both disciplines. In addition to the production of two main bodies of art work; *Darkness Retreat* and *I'm In The Bath On All Fours*, the project has used research events to explore the underground. One of these events was titled 'Expand and Contract: Navigating Undergrounds' (2018). This event is an example of an attempt to use the types of experimental and creative methods called for in Geography (Squire and Jackman 2020) to explore the volumetric and specifically, to consider experiences of caves

and the underground. Co-organised with Harriet Hawkins, it included drumming, a LARP workshop, a talk about subterranean engineering, archaeology and an audio essay. There were contributions from Dr. William Rowlandson (University of Kent), Una Hamilton Helle (Artist and Curator), Shell Like (Curatorial duo Amy Pettifer and Jennifer Boyd), Professor Clive Gamble (University of Southampton), Loretta Van der Tann (Think Deep UK). Images of the workshop can be found in the sketchbooks at the end of this thesis.

1B. Non Fixity

The theme of non fixity was key to my artwork about caves prior to the start of the PhD process; as described in the introduction, using the cave entrance as a way to make a distinction between the real and the virtual was an endeavor that proved impossible. What I had hoped was that the solid rock of the cave would represent some kind of certainty but what I found only a few steps into the cave was a nebulous and complex space even less fixed than the surface world that I was trying to understand. This thesis started from a position of exploring what it means to sit with non fixity, to acknowledge the vast expanse of unexplored and unreachable underground space and think through attempts to make knowledge within and about these spaces. These themes echo the writing by Herkenhoff about Mirosław Balka's 2009 work at the Tate, 'How It Is', in which Herkenhoff describes Balka's exploration of darkness as an 'invitation to think in terms of a discontinuous form'. The idea of the moving, nebulous nature of the dark is illustrated in Balka's sketches in which crossings out, underlinings and connections are made between black holes, caves, hell visions and Malevich. The seemingly solid cave speaks to the idea of the formless and non

fixity not only through its geomorphology and darkness; but also through the underground resistance to conformity to surface rules (Bridge 2013; Garrett 2018). The underground, and the cave slip out of surface frameworks. In Section 2, I will discuss the open-ended nature of studying caves, this is emphasized in the work of Pérez, who describes ‘pushing passages’ with no obvious end in sight’ (2013: 294). This unending aspect of caving was also part of the descriptions of cave diver Joachim Kreiselmaier’s experiences, who did not anticipate reaching the goal of joining the underwater passages within his lifetime. Cave exploration asks us to accept non fixity, to understand when we set out that we will never reach a finite end point.

In *Invisible Fish* the diver Joachim Kreiselmaier spoke to me about the nature of cave diving and subaqueous cave exploration, he spoke of working in the knowledge that he wouldn’t complete the tasks that the team had set within his lifetime. This acknowledgement of never reaching a moment of completion is set against the backdrop of the habitat of the evolving cave loach, a species that has adapted from its surface cousin; had it remained fixed, it would not have survived.

Mother Shipton’s messy cave slips out of definitions; it is a small perimeter in which I encountered narratives that could not be confirmed, the myths and untruths sit against a backdrop of the transformative waters of the dropping well in which objects are coated and changed. It could be said that the dropping well ‘fixes’ the objects, turning them to stone, but this thesis draws on the work of scholars who describe stone as a ‘liquid landscape’ (MacFarlane 2019), as permeable, living and moving (Bosworth 2017; Tiley 2004; Yusoff

2017).

The *longue duree* of the movement of the rock (Yusoff 2017) may not be visible to the naked eye but on the Mer de Glace, the movement can be seen annually. The glacier is a fragile landscape, the writing in this chapter was defined by the lack of fixity; the movement both downwards and upwards, the dripping and melting interior of the ice cave and markers on the stairway showing the dramatic thinning of the ice. In *Invisible Fish*, the narratives describing the cave fish are built around their physical evolution; their gradual recalibration to adapt to their new surroundings. The non fixity of the cave fish is precisely how they survived in the deep darkness of the cave.

To close this section of the conclusion, I will reflect on the two main bodies of artwork and think through ways in which the practice in this thesis contribute to the type of open ended and embodied engagement with caves that Maria Pérez describes in the 2013 article: 'Lines Underground: Exploring and Mapping Venezuela's Cave Environment'. Pérez draws on the work of Cant (2003) when describing cave mapping as a practice in which the sensual is as important as cartographic and geologic knowledge, Pérez's speaks of embodied and emergent explorations of undergrounds; 'cave maps are not merely attempts at representing the world but material instantiations of ways we explore it, together, and change in the process' (304:2013), this thesis has attempted to present multiple engagements that describe or 'map' experiences of caves and caving in an embodied, open ended and emergent manner: *Invisible Fish* sees an ongoing collaboration with Lindiwe Matshikiza, which takes inspiration from the cave loach and the Aach Spring underwater cave network in Germany, she considers the material encounters within the cave and follows the narratives and conversations opened

up by the field site. The project is now beginning its fourth creative iteration with no end in sight.

There was a particular moment in the development of the Darkness Retreat digital exhibition that speaks to the vastness and open endedness that Pérez describes in the ‘pushing passages’ with no obvious end in sight’ (294:2013). Matt Woodham, the designer who constructed the digital environment, suggested that we should extend the perimeter of the exhibition space out so that it appears to have no edge. The artwork is based on experiences in two very small spaces: an ordinary bedroom in the darkness retreat and shallow cave of Mother Shipton; the Darkness Retreat artwork maps the experience of these spaces, a sense of open ended vastness presented by the profound darkness of the retreat and by the fast and slow geologies of the prophetess in her cave. Pérez describes the experience of the endlessness of the cave passages in her writing. I hope that my project has evolved this thinking through the production of an exhibition made in dialogue with geography and geographic scholarship on the underground, in which one can navigate a space and experience a sense of endlessness.

1C. Material Encounter

Caves require embodied engagement (Pérez 2013, 2016; Cant 2003, 2006), they require us to move and feel within the rock and the dark conditions often encountered within a cave enhance our abilities to sense and feel without vision (Edensor 2015). Here, I would like to once again reflect on the thesis title: ‘Both Without and Within’, the importance to this thesis of being in the cave; of engagement with the material of the rock, the ice and thinking

through the elemental dynamics of the space (Squire 2016; Adey 2013, 2015) cannot be overstated. However, also fundamental to the research has been the imaginary cave; the ways in which one can think and imagine a cave space from ‘without’. For me, it is important to have had the experience of being in the caves as a backdrop for my remembered and imaginary cave landscapes; partly because these are such material experiences, so unfamiliar to surface (Bridge 2013) and so the imaginary caves are informed by the weight, textures, temperatures and navigation of the ‘within’ experiences. What I hope this thesis offers is thinking that extends the idea of the imaginary underground, strengthening the arguments laid out by Hawkins framing the underground as a powerful space of great imaginary potential through which surface crisis can be rethought. I will return to this discussion in Section 2.

In each of the cave sites, the material encounters have underpinned the writing; the ice cave, the ice and the experience of attempting to make artwork on the ice that I described, fundamentally shifted my approach to making practice based work in geography. Imagining the elemental dynamics within the Invisible Fish chapter, not only informed the narratives embedded within the text, but a body of artwork which uses the notion of ‘feelers’ as a tool with which to think, I will expand on this in Section 2. In Mother Shipton’s cave, the encrusting of objects in the mineral rich waters and the heavy stone walls are the materials that act as counterpoint to the imaginary, illusory and prophetic nature of the Mother Shipton and Paul Daniels stories.

This thesis reflects, throughout, on scholarship attending to the vertical and volumetric (Elden 2013; Weizman 2002; Squire and Jackman 2020) and the elemental (Adey 2013;

Bennett 2009; 2015; Englemann 2015; McCormack 2016, 2018; Neimanis 2013; Squire 2016; Whatmore 2013; Yusoff 2013, 2015) . I will pause here to think through the ways in which the two exhibitions that form part of this thesis, contribute to calls within these schools of thought for consideration of the ‘stuff’ within the volume (Adey 2015) and experimental methods as a way of engaging with the volumetric (Squire and Jackman 2020).

Scholarship on the elemental considers the ‘stuff’ in the spaces that were previously considered to be benign or empty. Building on Squire’s work in Gibraltar, in which she explores the principle that the body immersed in the elemental field can ‘translate’ the elemental into a physical sensation, ‘Invisible Fish’ uses the elemental dynamics within the cave as a way of thinking and making. The art work uses materials in the form of a sculptural installation, sound work narratives and a digital exchange with Lindiwe Matshikiza. The project thinks through a moment of encounter between a Cave Loach and a diver, the work considers the seen and acknowledges the unseen dynamics within that moment; a wetsuit, the water, the sediment, the rock of the underwater cave passage of the Aach Spring.

The Darkness Retreat project responds to the experience of being within the perimeters of both Mother Shipton’s cave and a bedroom in a darkness retreat in the Black Forest in Germany. The experiences of both of these spaces spilled over and exceeded the boundaries within which they took place. The project takes the form of a digital exhibition that is viewed through the small, flat edge of a computer screen - but I hope that despite this limitation - it conveys the sense of immense space and endlessness that I experienced within the two small locations that inspired it. The artworks in this installation are heavily material, consisting

of vellum, dried flowers, embroidery, engraved copper, ropes, soap and fabrics of varying weights and textures. During the development of this work, the transactions and compromises were not straightforward. In the translation of the sculptures into the digital, much was lost; moving into 3D software meant taking a messy, volumetric form and organizing it into code that can merely give the illusion of a volumetric space that will be viewed through a flat screen. I return here to the writing of Gaboury (2015) who asserts that the computer is not a medium concerned with the visual but instead, primarily, mathematical or electrical, but as Gaboury goes on to point out, the screen image is a 'material object in its own right' (2015:13).

Within the digital environment of *Darkness Retreat*, the movements that you can make as a viewer are limited to up down, left right, there is no choreographic complexity to the way in which you can move in this artwork. As someone who works with objects and material processes, I hold the belief that the time poured into the making of the thing and the handling of the materials is somehow conveyed to a viewer. Giving up the build up of tactile energy within the objects was the most difficult concession. But what was lost in material currency was gained in the atmosphere created by the edge-lessness and liminality of the virtual world. It also meant that although multiple people could view the work simultaneously, the experience is a solitary one: There are no other bodies in the volume. The digital offered the possibility of a dream-like space in which sound, lighting movement could be manipulated. It also just sits there as a work, on the internet, and other than the audio, it doesn't seem to start or finish. The viewer may return to the unchanged digital exhibition, through a laptop screen that is aging and changing; it is a 3D space that evokes the caves that I experienced

throughout the development of this thesis; caves as spaces in which the real and imagined collapse and edges become blurred.

What I hope is the result of this exhibition, is that the dynamics of Mother Shipton's Cave and the room in the darkness retreat, have been consolidated into a single, imagined, digital space that evokes a sense of the voluminous. Elden, in his foregrounding of the volumetric, asks us to think in three dimensions (2013), this artwork offers a 3D space but one which has given up the 'stuff' of the artwork and translated it into an airless, flat and consistent digital realm. Building on Elden's call to consider the volume and Adey's call to consider the 'stuff' within it, this project thinks through the volume and the dynamics within the volume through 3 dimensional configurations. The work has used sensed, embodied and material investigations in its methodologies, producing practice based research furthering understandings of undergrounds and thinking through geographic scholarship on the volumetric.

What is clear from these reflections on the three key themes of the thesis, is that there are multiple overlaps and intersections across the ideas of permeability, non fixity and material encounter; this is perhaps inherent in the type of material that I am dealing with, no clear definitions or distinctions can be made. What I hope is that the messy nature of these ideas has been within the structure thesis: An imaginary cave network, and that these ideas are further enhanced by the experience of the practice. The intention is to have created a rich and complex experience that seeps between the real, the imaginary and the digital and that draws on the experiences of the caves and sites that I have encountered during the course of

the research. What follows is an account of artworks and the context in which they have been made.

Section 2

2A. Practice in the thesis

Before I begin, I want to reflect on the second part of the thesis title and what it means in relation to the practice: 'Caving as a Guide to Knowledge Making'.

The experience of the sites in the thesis, as places with which to think has constantly informed this artwork. The exhibitions do not look like caves, nor do they particularly reference the materials found within the caves; what they do is use the experience of caving and of being within these sites as a conceptual framework through which to think and make.

I have been led by the three key themes in the studio (although perhaps in a less easily identifiable way than in the writing) and I have allowed material from all of the sites to influence and permeate the exhibitions.

I'm now going to discuss the two bodies of artwork that make up the thesis, I will also briefly explore the events before moving on to a short account of working in an interdisciplinary context. Before I begin, I should state that the focus here is on my own experience of making artwork in the studio and in an exhibition context; this is an individual reflection of artistic practice rather than a broad view of experiences of making art work.

I'm In The Bath On All Fours is a collaborative project made with Lindiwe Matshikiza, a writer, director and actor based in Johannesburg. I wrote an email to Matshikiza from Konstanz, where I had been visiting the Limnology Department at Konstanz University and the opening to the cave at Aach Spring. My email explained the new discovery of the fish, their loss of sight and pigmentation, the moment of encounter between the diver and the fish. What resulted was a long correspondence between Matshikiza and I, discussions reaching far and wide, covering ultrasound, board games, teenage displacement and colonial acts of discovery. We would write to one another and meet on Skype, share a message board which has resulted in an ongoing online sketchbook. Matshikiza would send me small excerpts of writing inspired by our conversations and in turn I would make images and objects. The work began to take shape as a series of hanging objects made of hand cut fringed vellum, the first of the 'feelers'; a delicate object made from a range of materials (fabric fans, vellum, rubber washers, plastic bags, silk, wood, engraved copper) each with a large surface that seemed to speak to the idea of the extended barbel of the fish; the imagined material encounters of the fish and the diver. The first iteration of the exhibition was at Well Projects in Margate (2019) and featured an installation of the objects on a floor made from paper covered in images of bubbles. The short excerpts of writing by Matshikiza were on audio in the room and on headphones so that one set of audio overlapped another. This show was part of an accumulating series of exhibitions that grew and evolved over a six month period, the program involved a number of talks, including two geographers; Harriet Hawkins and Rikke Jenson. Lindiwe Matshikiza joined the events program one evening via skype, projected into the exhibition from a darkened room in Johannesburg due to planned power cuts called 'load shedding'.

The process of making this work as felt open ended, it is a work made in the spirit of non fixity; it never seems to reach a clear resolution, instead the work finds a moment of pause and then a new momentum builds and the objects and texts begin to shape shift again. In the second showing of the work, it became part of Sonia Boyce's 'In The Castle of My Skin' at Eastside Project, Birmingham. Once again the work was shown alongside the work of others, resulting in further recontextualisation, this time the objects are within the crystalline Boyce structure and feel more formally cave-like. 'In The Castle of My Skin' is a group show in which Boyce displays the work of numerous artists within and around the architectural structure based loosely on the dynamic environment of a skate park. In an interview with Olivia Heron, Assistant Curator at MIMA Lindiwe and I spoke about the influence of 'In The Castle of My Skin' on our project:

'The exhibition, and Sonia's practice more broadly, is so inherently collaborative and to have the opportunity to explore ideas within and alongside the work of many other artists is very generative. It's made me think about adding complexity rather than streamlining as a way of working. Making more connections rather than editing down' (2021).

I'm In The Bath On All Fours was shown in a different configuration at MIMA in June 2021, for which Matshikiza and I made new works, both objects, text and spoken word.

When I think about the process of making this work, the sense of authorship is so fundamentally blurred. Matshikiza and I have worked so closely in its production, it is about touch and permeability and yet we haven't been in the same room to discuss it once. In some

ways the idea of the cave loach seems like a distant memory to the work in its current form and yet the cave, the fish and the diver are deeply embedded in the fabric of the project, no matter how far from the original discussion it moves.

‘Darkness Retreat’ is the second exhibition in the thesis, it takes the form of a digital exhibition hosted on the Legion Projects website. It is most closely aligned with the Darkness Retreat site in that it takes the form of a bedroom and uses the experience of a prolonged time in the darkness as a lens through which to think about themes such as prophecy, wellness industries, navigating by memory and the death of a close friend. This project has been incredibly laborious, the making of some of the objects has spanned a number of years. The exhibition includes a heavily embroidered curtain and hand cut vellum leaves. Translating this exhibition into the digital realm has been an extraordinary experience; seeing materials rendered into 3D and thinking through how this changes their temporal resonance. The lack of material weight in the digital space, in many ways, aligns more faithfully with the experience of the deep darkness of the retreat, or of a deep cave. The idea of fixing the works into a digital exhibition as their ‘real’ counterparts sit gathering dust and absorbing damp in my studio has been challenging and generative. The idea of the small room in the exhibition has drawn on Mother Shipton’s Cave, a small and ordinary cave in which the extraordinary can happen. In the ordinary space of the room at the darkness retreat I did find it difficult to make a distinction between dream and hallucination and the time spans, shapes and textures became confused. I have tried to reflect all of this blurring and confusion in the Darkness Retreat exhibition.

The way in which my PhD has been set up in the geography department has meant that in some ways the artwork has been relatively free. Being outside of a fine art department has had its challenges but has also meant that academic examination has been directed at my writing rather than my practice. I have however, not made the artwork in isolation; working collaboratively and alongside my peers in the arts communities has helped me to form artistic decisions. What this format has enabled, is a relatively free approach to making and I believe, a conceptually unlaboured body of artwork. This has been particularly important in the context of 'Darkness Retreat', in which the collisions and overlaps in the artwork are often surreal and difficult to describe in words. An example of this is the story of the death of a close friend which has become entangled with the journey to darkness retreat and the visit to Mother Shipton's Cave, the intersections make no linear sense but their merging within the artwork felt intuitively rich.

As mentioned, the project is digital and the process of building the 3D models and the website has been outsourced to artists George Eksts and Matt Woodham, the sound design was produced by Mark Dicker. Learning about their working methods and approaches to space and materials in the digital world has been a fascinating process and one that I plan to explore further in future projects. The insights offered by working with specialists from another field, have featured throughout this thesis. I am now going to move on to a short reflection on the importance of interdisciplinary study and spaces in both the writing and making processes of this project.

2B. Interdisciplinarity

This thesis has been inherently interdisciplinary at every stage; working as an artist within a geography department, working alongside guides, cave divers, a theatre writer, digital artists, a limnologist. The interdisciplinary approach taken in the development of the work, reinforces the notion that caves are interdisciplinary spaces (Cant 2005; Hawkins 2019; Kuklick and Kohler 1996; Pérez 2016) that they demand a porous approach to study; the project also speaks to the observation made by Pérez that working in caves is collaborative, with team members being constantly aware of each others position and movements (2013).

Expand and Contract was an event co organised with Harriet Hawkins, which has been discussed in the methodology and documented in the sketchbooks. The day was loosely based on a conference format but took place in a dance studio, which I ‘dressed’ with images, bean bags and props. ‘Expand and Contract’ drew together specialists from a wide range of disciplines and backgrounds around the themes of darkness and the cave. When I reflect on the methods and outcomes of the thesis, I return to the ‘Expand and Contract’ event as a moment of real collaborative achievement, as a successful model for ‘caving as a guide to knowledge making’. As my research on undergrounds continues, I will draw on the experimental and interdisciplinary nature of this day; it was a collaborative and varied program in which ideas were given space to sit unresolved alongside one another, rather than being interrogated, it has continued to evolve and inspire many of the participants since it took place in 2018.

Finding ways to describe the sometimes ephemeral and nebulous outcomes of this project

has been part of the challenge of the thesis. This struggle with words has been observed and undertaken by cave explorers and geographers; Robert MacFarlane described caves as a space that invokes a new kind of lexicon to explore a ‘data depleted darkness’ (2013: Unpaginated); an environment in which our spoken and written language isn’t quite satisfactory. Pérez uses ‘yearning’ to describe the emotional connection with the cave (2016), and Hawkins proposes that the underground is a space with which we can use the power of imagination to rethink relations between humans and the environment (2020). The subterranean is a space that requires a new language, new movement, new thinking. Thinking with caves requires the researcher to think on the cave’s terms, they are not spaces that will fit into pre-existing and organized rubrics. And Squire et al (2020) and Hawkins (2020) call for creative methods and practice to be considered seriously in the exploration of the underground. I hope that this practice based interpretation of the experience of caves and caving serves to extend this discussion of experimental methods and the underground in geography. Throughout this project I have been working in geography, a field of which I have no prior experience. The extraordinarily generous nature of the department and the burgeoning culture of creative methods in the discipline has made this project possible; but nevertheless, I am an artist used to presenting my ideas through visual material. Presenting my ideas in this new context has been challenging at times and occasionally uncomfortable, but discomfort and risk (both factors in any caving expedition) have been crucial to the research and have resulted in a methodology that reflects the interdisciplinary nature of the cave.

2C. Open Endedness

A conclusion, by its very nature, is part of what this project aims to navigate around.

Thinking with caves is a practice of knowledge making within the unending; and of sitting with the darkness of the unknown rather than trying to illuminate and organise. Like the dictionary format of Bataille's *Informe* (1929-30), the organization of this thesis is intended to hold the work but also to allow for movement and interpretation; inspired by the labyrinthine geography of cave passages. Pérez uses the open endedness of the process of cave mapping to describe the 'range and intensity of a human experience in an ever-emerging world' (305:2013), from her writing I understand the cave map to be a document that evolves and changes, that can't be fixed. In line with Pérez's work, this thesis has considered the open-ended nature of a cave network and of cave exploration in the way in which it has been formatted and presented. The art works are shown in project spaces and activated and reshaped by discussion and events, the writing has been organized in such a way as to avoid a traditional linearity and therefore suggest variability in the order in which it is encountered.

What I understand from this period of study is that when we speak about caves, we are speaking about a diverse and complex range of attributes and features, one might have a singular picture of a romantic, dark and endless cavern but caves appear in a multitude of ways. Caves represent the gaps and cracks between things. The empty spaces that contradict and won't quite adhere to the structures by which we understand space and ground. These complexities are what make the study of caves such an opportunity; once you cross the threshold of a cave the normal rules don't apply and in the void that is left, less conventional

modes of knowledge making present themselves and with them comes an overwhelming awareness that there is much that can never be known.

2D. A burgeoning interest in the underground

I want to end by reflecting on the field in which I have been working; the recent burgeoning interest in caves and the underground in both geography and art. What is clear is that geographers and artists are looking downwards and inwards.

The work in this thesis will be continued in the context of a new European Research Council Project ‘Think Deep’ led by Professor Harriet Hawkins. As a team, we will also contribute to the program of a new major touring exhibition that looks at contemporary art and the cave, due to open at Nottingham Contemporary in 2022. Practice as a mode of studying caves and the underground will continue to evolve and develop.

I want to finish with a short anecdote, it is a story told to me by one of the members of the Imperial College Caving Club at the very start of this project. It speaks to the way in which the underground permeates the imagination and has the capacity to become a lens through which we might see the surface. It is short a description of the club’s caving expeditions in Slovenia in which the group stayed in the caves for up to two weeks at a time in a camp whilst mapping the network. The caver told me that they don’t like to use sophisticated instruments for mapping the caves, and this was in part because they didn’t particularly want to speed up the process, that they didn’t really want to complete the task because they liked

going to the caves so much. They would use string lines and pencil and paper to measure and plot the points in the tunnels by hand producing an increasingly detailed map at the end of each trip. The caver said that he keeps a copy of the map on the wall in his kitchen so that he can look at the blank spaces until he can return to the caves once more. It was a passing comment at the end of the account but the image of the blank space on the map on the kitchen wall has stayed with me; sitting with the unknown.

List of Figures

All images used as chapter covers and in the sketchbooks have been made by the author unless otherwise stated.

Fig. 1. Cathedral Cave 2018, Fieldwork experiments.

Fig. 2. Augmented map of the Artificial Cave, made for a workshop with Open School East, 2018

Fig. 3. Suspension Point Neuenschwander. South London Gallery (2008)

Fig. 4. The Famous Goldfish that lives in the pool of water in Cathedral Cave, it is not known how it got there. 2018

Fig. 5. Detail of the Installation 'Fixed Position' at Atelier Fidalga, Brazil 2015.

Fig. 6. Detail of photograph of the group of participants in Arts Council Funded 'Swallet', caving expedition in the Mendips, 2016

Fig. 7. Leonora Carrington (1953). And Then We Saw The Daughter of The Minotaur. Oil on Canvas, 60 x 70 cm. MOMA Collection

Fig. 8. Lygia Clark Diálogos: Óculos 1968

Fig. 9. The entrance to the Grotte de Glace, 2017

Fig. 10. Gletscher Mer de Glace, Mont-Blanc-Gruppe - Eduard Spelterini 1909

Fig. 11. Boston Aquarium, a diver cleaning the tank. 2017

Fig. 12. A screenshot of the live webcam in the main tank of the Boston Aquarium (New England Aquarium)

Fig. 13. Cave Fish Collage, 2018

Fig. 14. Still from a Youtube video made by the divers of the Aach Spring Caving Club. Stephan Schild.

Fig. 15. Cave Loach by Joachim Kreiselmaier

Fig. 16. The inside of the bedroom before lights out in the Spirit Balance darkness retreat 2018

Fig. 17. Still from 'Colossal Cave Adventure' developed between 1975 - 1977, image circa 1980

Fig. 18. Objects hanging from the Dropping Well, Mother Shipton's Cave. Taken from Mothershipton.co.uk

Fig. 19. Paul Daniels buys Mother Shipton's Cave 1987. Photography by David Hickers.

Fig. 20. Paul Daniels Billiard Balls Routine. The Paul Daniels Magic Show. BBC1, 1979-1994

Fig. 21. Keyboard Photograph in Cave. 2018.

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Mirosław Balka (2009). How It Is. Unilever Series, Turbine Hall. Tate Modern.

Maeve Brennan (2018) Unintended Consequences. *Jerwood Visual Arts*

Lygia Clark (1976-88) Structuring the Self Series. Lygia Clark Cultural Association and bitforms gallery nyc

Libita Clayton (2019) Quantum Ghost. *Gasworks, London and Spike Island, Bristol.*

Dorothy Cross (2013) Cave,. Royal Hibernian Academy

Tacita Dean (2001) The Green Ray from The Sun Quartet. *Gift of the Hess Foundation, Kathy Fuld and Department of Film Funds*

Jem Finer (1999-Ongoing) *Commissioned by Art Angel.*

Maria Fusco. (2015). Master Rock. *Commissioned by Art Angel.*

Ryan Gander (2011) Locked Room Scenario. *Commissioned by Art Angel.*

Anthony Gormley (2019) Cave. *Royal Academy of Arts*

Una Hamilton Helle (2019) Lair of the Neo-Diggers. *Limbo Margate*

Una Hamilton Helle, Susan Ploetz and Francis Patrick Brady (2016) Katabasis: A LARP about descents and origin myths. [Space] Studios, the Smoke Larp Festival, London, and at the Larporatory in Vilnius.

Werner Herzog (2010) Cave of Forgotten Dreams. Producers: Erik Nelson, Adrienne Ciuffo

Carsten Holler (2015) Decision. *Hayward Gallery, London Southbank.*

Rene Magritte (1933) La Condition Humaine. On display at Norwich Castle Art Gallery and Museum.

Onya McCausland (2015) Deep Material Encounters. *UCL*

Mike Nelson (2000) *The Coral Reef*. *Matt's Gallery and Tate Britain*.

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Otobong Nkanga. (2021) *From Where I Stand*. MIMA and Tate St. Ives.

Open School East Associates with Benedict Drew (2017). *Spelunking*. *Open School East, Margate*.

Ben Rivers (2020) *Look Then Below*. *Lux, London*

Natasha Rosling and Vilma Luostarinen (2018) *Edible Coastlines*. *Hestercombe Gallery*.

Amie Siegel. (2017) *Strata*. *South London Gallery*.

Laura Wilson (2019). *Deep, Deeper, Deeping*. *Commissioned by Norwich Castle Museum & Art Gallery as part of the East Contemporary Visual Arts Network three-year project, New Geographies*.

Sam Winston (2017) *Darkness Visible*. *Whitechapel Gallery and London Southbank*.



Sketch Book 1
I'm In The Bath On All Fours

'I'm In The Bath On All Fours' is a body of artwork that began with a fieldtrip to Konstanz, Germany in 2018 to find out more about a new species of cave fish, the Cave Loach, that had been discovered there. In the deep, dark waters of the cave, a tiny surface fish had adapted over tens of thousands of years, to the environment of the cave.

The evolution of the fish, into a creature sensitive to pressure rather than visual stimulus, was the point of departure for the studio work which unfolded into a number of collaborations and continues to develop and shift in format.

During the trip to Germany, I made contact with a friend in Johannesburg; writer and director Lindiwe Matshikiza. Lindiwe has been central to the project, we began to correspond about the fish and think through how their form, habitat and first encounter with the divers might be translated into sculptural and sound works.

The following pages document key stages in the project so far.

Please click on the links below to see the work installed in galleries:

[Well Projects, Margate](#)

[Eastside Projects, Birmingham](#)

[MIMA, Middlesbrough \(exhibition forthcoming, link to interview\)](#)



In 2017, I presented my work on the underground to the Associates Program at Open School East.

Open School East is a Margate-based space for artistic and collaborative learning that is free, versatile and non-exclusive. (openschooleast.org)

I remained in touch with a group of the associates, who set up a project space in Margate, UK. Well Projects. Soon after returning from Konstanz, I approached with an idea for a program that in some way revolved around conversations about the Cave Loach. The result was a series of three interconnected exhibitions consisting of pairings of artists and explored further through a rich events program and publication.

The title of the first of the three shows was 'I'm In The Bath On All Fours'; a collaboration between Lindiwe Matshikiza and Flora Parrott

I'M IN THE BATH ON ALL FOURS is a 3-phase visual art exhibition and interspersed series of talks, performances, workshops and screenings curated by Well Projects and artist Flora Parrott. Its premise stems from a research trip, undertaken by Flora Parrott, to learn about a recently discovered cave dwelling fish, the Cave Loach, that inhabits a labyrinthine cave network. In each phase of 'I'm in the bath on all fours' a pair of artists, artist-groups or researchers are invited to collaborate and expand upon notions of the sub-aqueous, engaging with the nature of water, embodied experience and the deep dark in relation to community and commonality.

Phase 1 is comprised of an exhibition with works from Flora Parrott and Lindiwe Matshikize developed in loose collaboration over a long distance. To support the first phase of the project, Flora Parrott and Well Projects have organised an EVENING LOACH SEMINAR. The seminar brings together a range of speakers to each give their perspective on the Cave Loach, and the conceptual framework of the project. The evening will begin with a talk by Flora Parrott, who will introduce her work and research into the Loach; and be followed by Lindiwe Matshikiza (via Skype link from South Africa), who will read from a collection of exploratory texts written in response to this cave dwelling fish. Professor Harriet Hawkins (Geography, Royal Holloway University, London) will then discuss the wider themes of the exhibition..

www.wellprojects.xyz

'I'm In The Bath On All Fours': Notes on Making.

In this writing, I will build on the schematizing of my studio practice outlined in the Methodology, giving a first hand account of aspects of the development of this ongoing project with artist Lindiwe Matshikiza. In particular, I hope to convey how the site (the Aach Spring cave network) influenced the thinking and making of the artwork. I will also draw out some of the key conceptual themes of the research in relation to the artworks. I have approached the writing in a style inspired by Emma Talbot first hand account of her work in the article 'Overstepping the boundaries: notes on intimacy' (2018). Talbot writes through her process of drawing with watercolour, describing 'acutely personal life experiences' (2018:195). Talbot uses autoethnographic descriptions of practice to open up her decision making for the reader. Talbot draws on Irigaray's writing on non-linear time and the interior space of individual thought (2004) but rather than making an in depth comparison between Irigaray's writing and her own work, I was inspired by the way in which Talbot holds the two up next to one another.

As a way of organizing this writing, I will list and respond to a selection of the elements and techniques that have made up the three iterations of the installation shown so far.

Vellum is a parchment, a treated and stretched animal skin, in this case, goat skin. I have used vellum as a material multiple times and am familiar with its weight and texture. I am drawn to the way that it buckles and moves when exposed to damp air and then stretches back in dry air: It continues to 'live' beyond life. Part of the conversation between Matshikiza and I related to the skin of the Cave Loach. We have discussed the wetsuits worn by the divers at the Aach Spring; the thickness of the neoprene versus the fine transparency of the skin of the Cave Loach. Using the vellum, cut into fringed, curling strips which are hung over ropes in each of the three iterations of the installation, was a way to give this part of our conversation form and presence. When thinking about the processing of this material, I am drawn back to ideas of permeability explored by Bosworth (2017) in the thinking through of a uranium mine in South Dakota, Bosworth explains that the products of our lives seep beyond perceived boundaries; I find the responsiveness of the vellum (once live skin) to the heat and moisture of my hand when I am working with it, to be a way-in the ideas expressed by Bosworth.

Runners' hand was a description used by Matshikiza in one of her poetically written responses to our online conversation. We used a platform called 'Evernote' to share text, video and images and spoke regularly on Skype and Whatsapp during this time. The image of a runners' hand was used to explain the positioning and extending of a human hand as it morphs backwards in time, the body imagining itself into the form of a prehistoric bird. We had spoken at length about the evolution of the Cave Loach from the surface Loach; the processes that these little bodies had undergone in order to survive underground. We spoke about our own evolutions, we imagined changing from one creature into another in a long and fluid, ongoing state of transformation.

When Matshikiza sent me this writing I immediately visualized the start of a sprinting race on television, runners lining up, kicking and stretching then carefully shaking and positioning their hands on the line. Why this image, rather than any of the others painted by the text, stuck out, I can't say, but I try to trust these responses and selections and follow them through in the studio. In this case, I made a literal response in the first instance, trawling the internet for an image of a runners' hand in the position I was imagining. Cropping it, trying to draw out the information from the pixelated from the low resolution photograph. Initially, the image was printed out on paper and stuck on the wall, it then got stuck on to a block of wood, a rough, heavy piece of mahogany I had in the studio. This block then sat around, in combination with other evolving forms, for a number of weeks before its place in the work was certain. Once I knew that I wanted to keep the hand, I tried to develop the form in a number of ways; alternative blocks of wood, stone, folded paper. I settled eventually on refining the image of the hand by printing it in silk and keeping the original block of wood which had a dimension and weight that seemed to suit the idea of the starting block. The block was used in the first iteration of the installation at Well Projects in 2019, although it was taken to the installations of both Eastside Projects

and MIMA, it was not used.

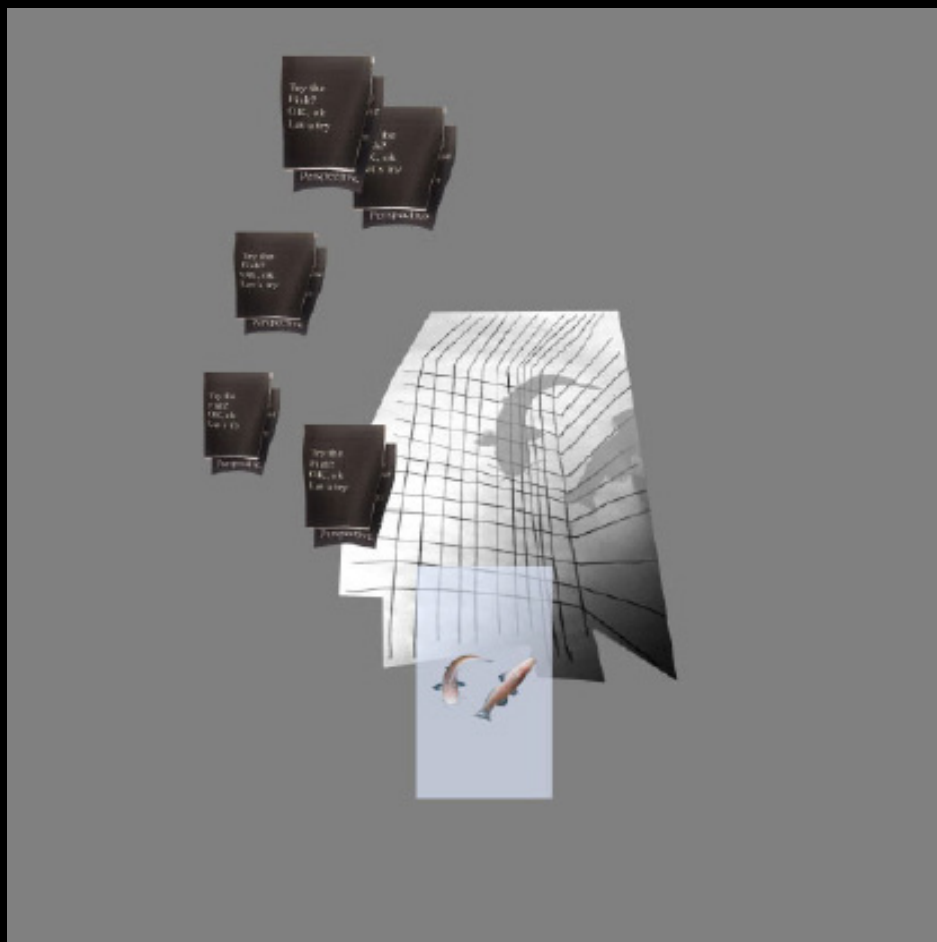
The two fans, so far, have had a central presence in all three of the installations. Opened out their full stretch in Well Projects and folded down to a more acute angle in both Eastside projects and MIMA. The fans were a form that I became attached to early in the thinking through of this work. The forms speak to the movement of air and sensing with skin that I drew from the descriptions of the cave loach from my time in the laboratories in the Limnology department at the University of Konstanz, I must mention here, that my interpretations of the scientific information given to me are imaginative, I elaborate and follow tangents, the creative process that I undertake in my practice is in no way meant to be a literal response to the places that I visit and information that I am given. When thinking through the geography scholarship that has informed this research, and in particular, through elemental geographies (Adey 2015; Squire 2016; McCormack 2015; Englemann 2015) that have been key texts for this research project; I often think about these fans, why I made them and how they occupy space. The fans featured in the early sketches that I sent to Matshikiza, these were intended to be hanging upside down within an installation, to be unhooked and used in a performance, the performance is yet to happen within the work, but the hanging of the fans remains. The print on the fans is taken directly from the youtube footage authored by the divers at Aach Spring using GoPro cameras. I took sections of stills of the bubbles made by the scuba equipment underwater and made a printed textiles fan cover from the image. The skeleton of the fan is made from faced ply and given a jagged edge to create more texture and surface area on the form - speaking to the idea of 'feelers' as discussed in the Methodology. The cast aluminum handles have also been given a texture, the metal was lost cast from clay into which a pattern was scratched. The fans hang within the perimeter of the space in which they are exhibited, in the case of Well Projects that was a small, open gallery space. In the case of the works' participation in 'In The Castle of My Skin' by Sonia Boyce at Eastside Projects in Birmingham and MIMA, the fans hung in a small wooden structure that formed part of Boyce's fools gold crystalline structure (which I will discuss in more detail later on in this section of writing).

The fans are intended to move with the air in the space, to remind the viewer of the forces at play in the within the perimeter of the gallery or structure, that occupy the negative spaces around the work. The fans are intended to allude to the presence of the 'stuff' (Adey 2015) in the spaces that were previously considered to be empty of benign.

These are just three of the elements that form part of what I perceive to be a modular installation that shifts and changes with each iteration, the pieces may or may not appear in the next version of the work. Each time Matshikiza and I make an exchange, we return to the moment of encounter between the cave fish and the diver; imagining the ways in which they might read and interpret one another's presence in the caves. As the project moves on, new directions emerge, the voices in the new sound works at MIMA, leading us towards a

narrative around a young, displaced person, adapting to new surroundings and evolving to survive. The next ambition for the work is to find a way to have the voices as bodies moving within the objects, like a theater set, testing to see if the sculptures and textiles have a new life as prop or costume. We will be thinking about how to incorporate the digital correspondence into a live experience, using the works we have to develop a new conversation around the subsurface, concealment, tight squeezes and shape shifting.





Digital Sketches made at start of the process.



'I'm In The Bath On All Fours'. Detail of installation from Well Projects, Margate. 2019



'I'm In The Bath On All Fours'. Detail of installation from Well Projects, Margate. 2019





'I'm In The Bath On All Fours'. Detail of installation from Well Projects, Margate. 2019

By the time I get to 1, come to a
complete stop,
in a comfortable position.

Use all the numbers to get there.
Try not to stop, too early or, too
late.

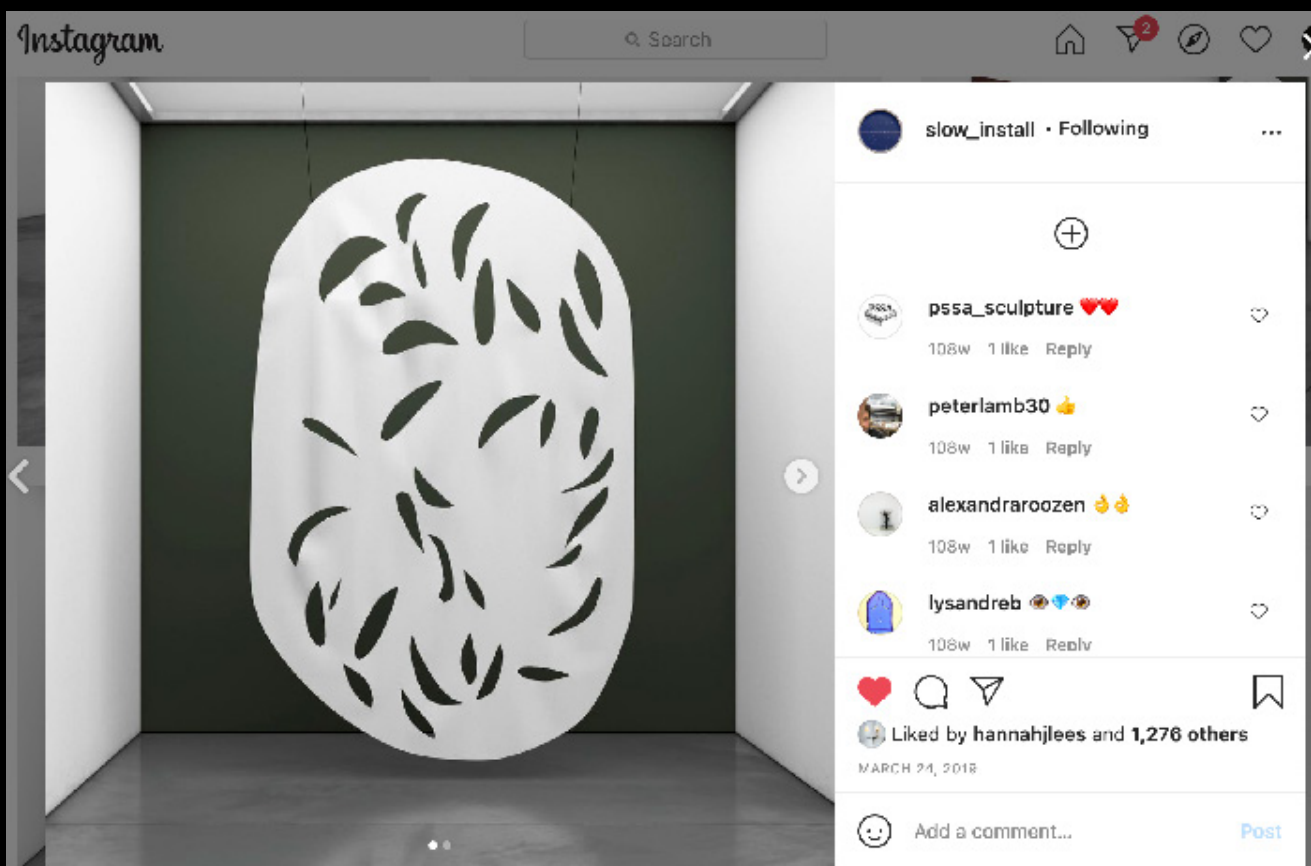


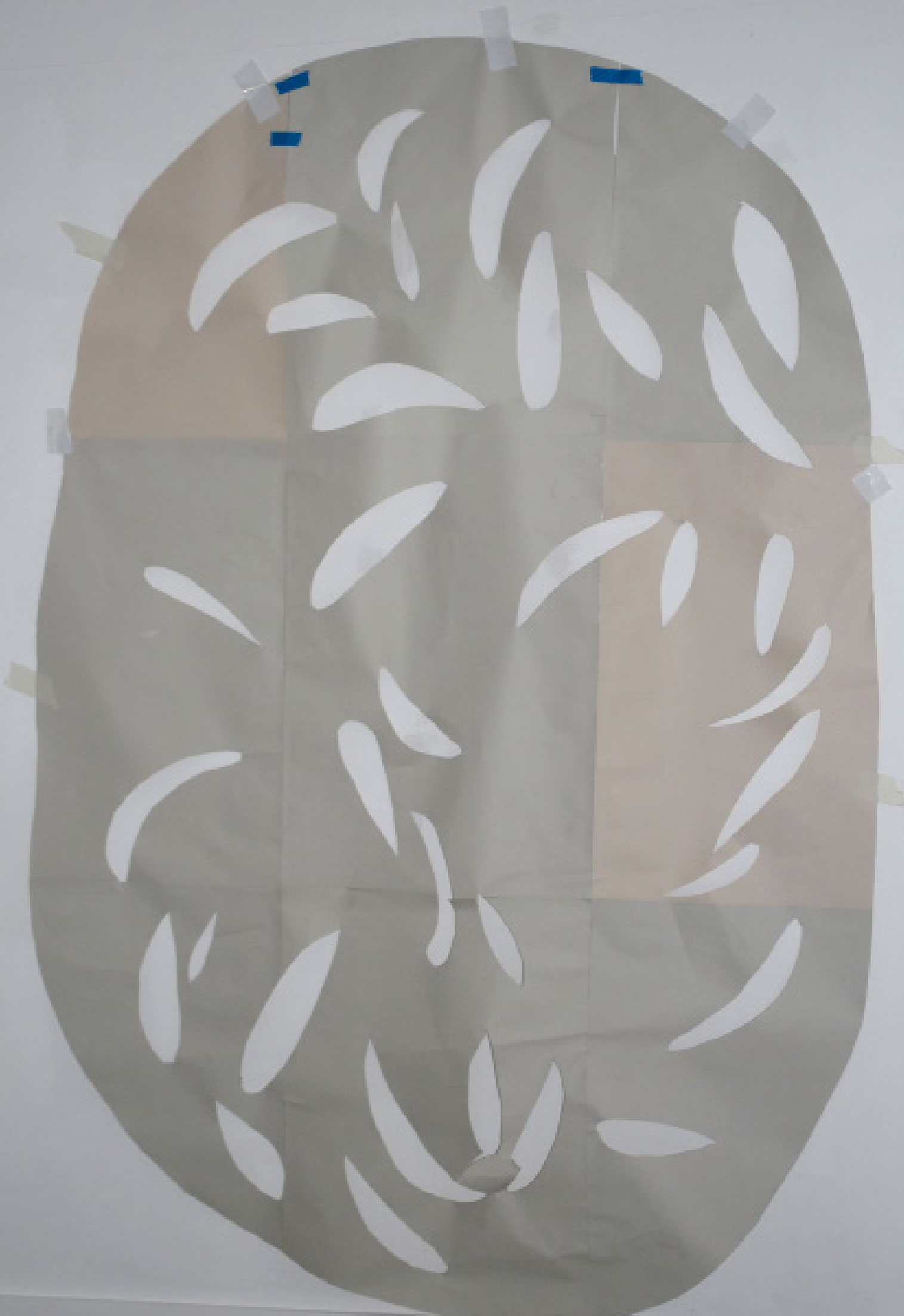
I had been grappling with neoprene in the studio for a number of weeks, the fabric that is used to make wetsuits.

I couldn't make the fabric hold the form I wanted it to. I was approached by a virtual gallery called 'Slow Install', run by an artist called George Eksts. Slow Install is a space which is in a perpetual state of installation, never open, always on Instagram. The curator offered to work with me to digitize an existing work or to generate something new for the space. I explained the neoprene problem.

The curator was able to build a virtual model from my sketches, masking the form and making it appear to drape and hang as if it were fabric, but without the gravitation disadvantages of the real world: A virtual work in a virtual gallery that is not open.

This connection and way of working became an important part of the development of the other body of work submitted as part of this their 'Darkness Retreat' see other sketchbook.





List of materials:

Copper, box wood, pen shell, bin liners, rubber washers, silk, cast aluminum, birch faced ply, digitally printed cotton satin, ropes, masking tape, carabiners, poster prints, printed silk, vellum.

Planning documents included digital sketches, writing excerpts and project space tests; working through the balance between the texts and the materials. The original plan was to make a stage space on which Lindiwe Matshikiza could perform but we are yet to co-ordinate a live event. Matshikiza and I discuss this process in an interview published by Middlesbrough Museum of Art in 2021, the article can be found [here](#).

Matshikiza read her sound pieces out live one evening as part of an event in which Professor Harriet Hawkins and I discussed the project. Matshikiza was live over Skype but there were power cuts in Johannesburg, she joined us by candlelight using a battery pack borrowed from a friend.

Making work with Lindiwe was a process of correspondence. We would discuss themes over Skype, email, Evernote. A long distance exchange over the course of a year. I would send her an image, she would respond with a text, and so on until there was a combination of materials, images, rhythms and words unique to our conversations



Matshikiza joining a live event at Well Projects, Margate in 2019 via Skype.



'I'm In The Bath On All Fours'. Detail of installation from Well Projects, Margate. 2019



Sonia Boyce and Lindsey Mendick - Virtual Tour

Unfortunately, until further notice the gallery is closed in line with the closure of the City of London School and the recent photographs by Lindsey Mendick have been cancelled.

However, you can still experience the exhibition by taking an online tour, just click on the button below to start to explore.

Virtual Tour [View](#)



In January 2020 'I'm In The Bath On All Fours' was included in Sonia Boyce's exhibition 'In The Castle Of My Skin' at Eastside Projects, Birmingham. The following text accompanied the exhibition:

In the Castle of My Skin is a solo show of new commissions and existing work by Sonia Boyce, with work by seven other artists co-curated with Boyce. The exhibition is built through improvisation techniques and riffs on ways of playing in urban space. It takes shape across a large new sculptural display system that houses works by Boyce and artists including Anna Barham, Harold Offeh, Flora Parrott and Alberta Whittle alongside selected works from the Middlesbrough Collection. The sculpture is based on the crystalline form of the mineral pyrite, known as Fool's Gold, and is clad in wallpapers made by Boyce since the early 1990s.

In the Castle of My Skin starts with the metaphor of skin as a covering, a surface, a barrier, a marker of identity and a connector between internal and external worlds. This builds on the intersection of diverse histories as a recurring theme in Boyce's work. The sculpture and a newly-commissioned video expand Boyce's thinking about the speculative nature of improvisation, social bonding, visual cultures and relationships to the built environment.

Boyce is fascinated by moments of serendipity that occur when people are brought together without a script. The new video comes out of the performative laboratory of two live, public events produced at Eastside Projects in 2017 in which local skate-boarders and skate-boarding ukulele players performed. This unlikely pairing is combined with footage of female skaters shot in Middlesbrough who play and improvise, uncovering knowledge of their bodies and the town's urban architecture.

The title, In the Castle of My Skin, comes from an autobiographical novel by writer George Lamming, a study of colonial revolt that is seen as one of the great political novels in modern 'colonial' literature. Set in the 1930s in Barbados, where the author was born, the story follows a young boy's life against the backdrop of major societal change. This reference builds on Boyce's extensive work in re-evaluating modernism to incorporate a range of perspectives, journeys and voices.

In the summer of 2021, the exhibition will be reimagined and reconfigured at MIMA in Middlesbrough. MIMA holds one of Boyce's key early works, *She Ain't Holding Them Up, She's Holding On (Some English Rose)*, 1986 (acquired in 1987) and throughout 2019 the artist has collaborated with the institution and colleagues from the Black Artists & Modernism research project to audit the collection for contributions by black artists.

This exhibition is organised in partnership with MIMA, [Middlesbrough Institute of Modern Art](https://mima.org.uk/). The new works are co-commissioned by Eastside Projects and MIMA, with support from The Henry Moore Foundation and The Elephant Trust.

<https://eastsideprojects.org/projects/in-the-castle-of-my-skin/>

In March 2020 the exhibition was closed early due to the COVID-19 Pandemic, the work was available by virtual link:

<https://eastsideprojects.org/about/virtual-tours/>



Sketch Book 2: Fieldwork

How practice might work in the field has been a consistent discussion throughout the project. Whether to make and position art work 'in the field' or whether to draw upon experiences of fieldwork and translate them in the studio.

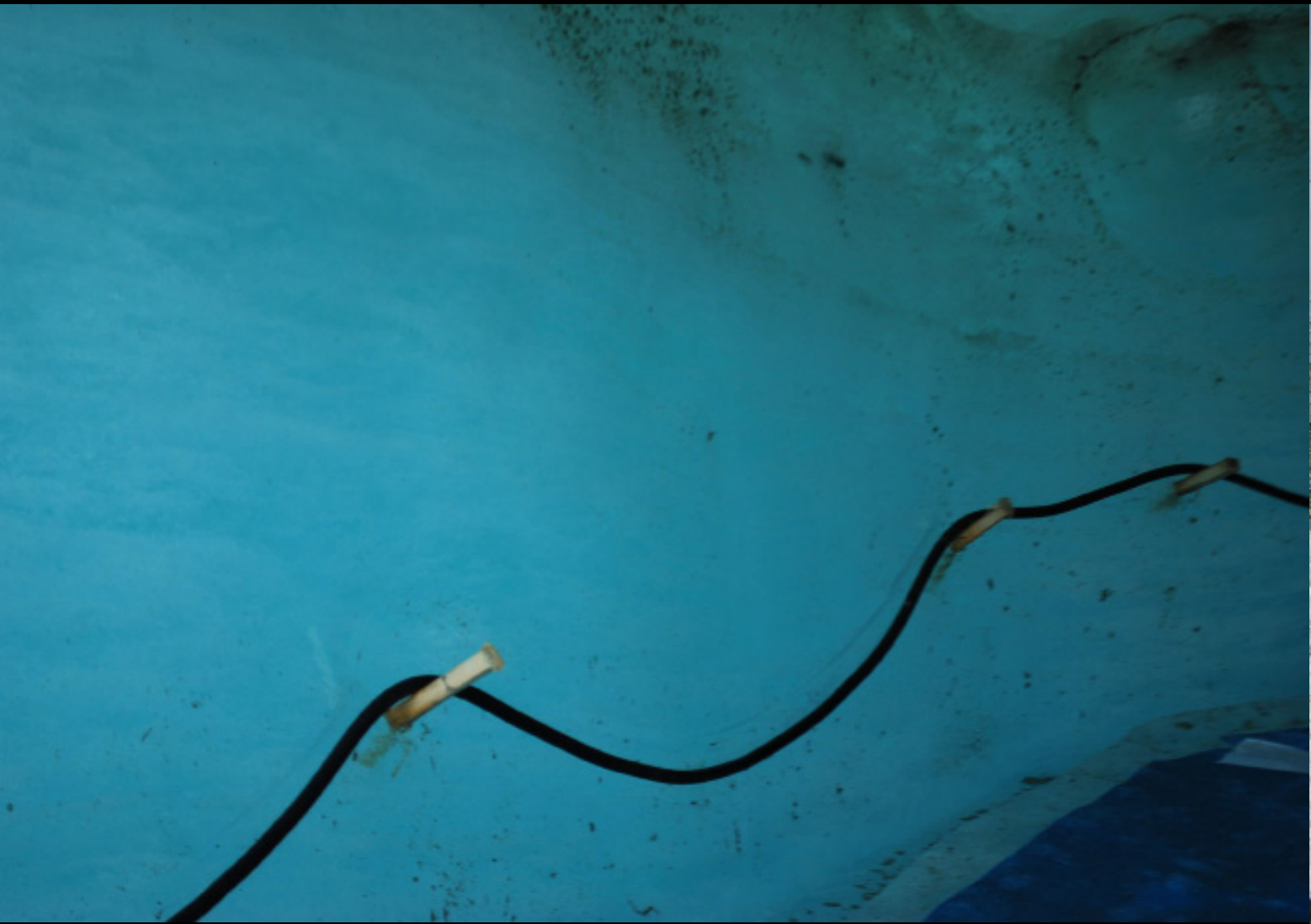
Taking a number of objects and works in progress to a site and trying to find a direction was the initial approach and although difficult to quantify, the objects have borne witness to place, and that has a kind of significance.

Fieldwork on the Mer de Glace took place in 2017 with artist Luce Choule and Professor Harriet Hawkins. We spent several days walking in the Alps and one day visiting the ice cave tourist site and climbing down to and walking on the glacier. The following sequence of images document both the experience of the glacier and some of the practice based experiments that I carried out during the trip.







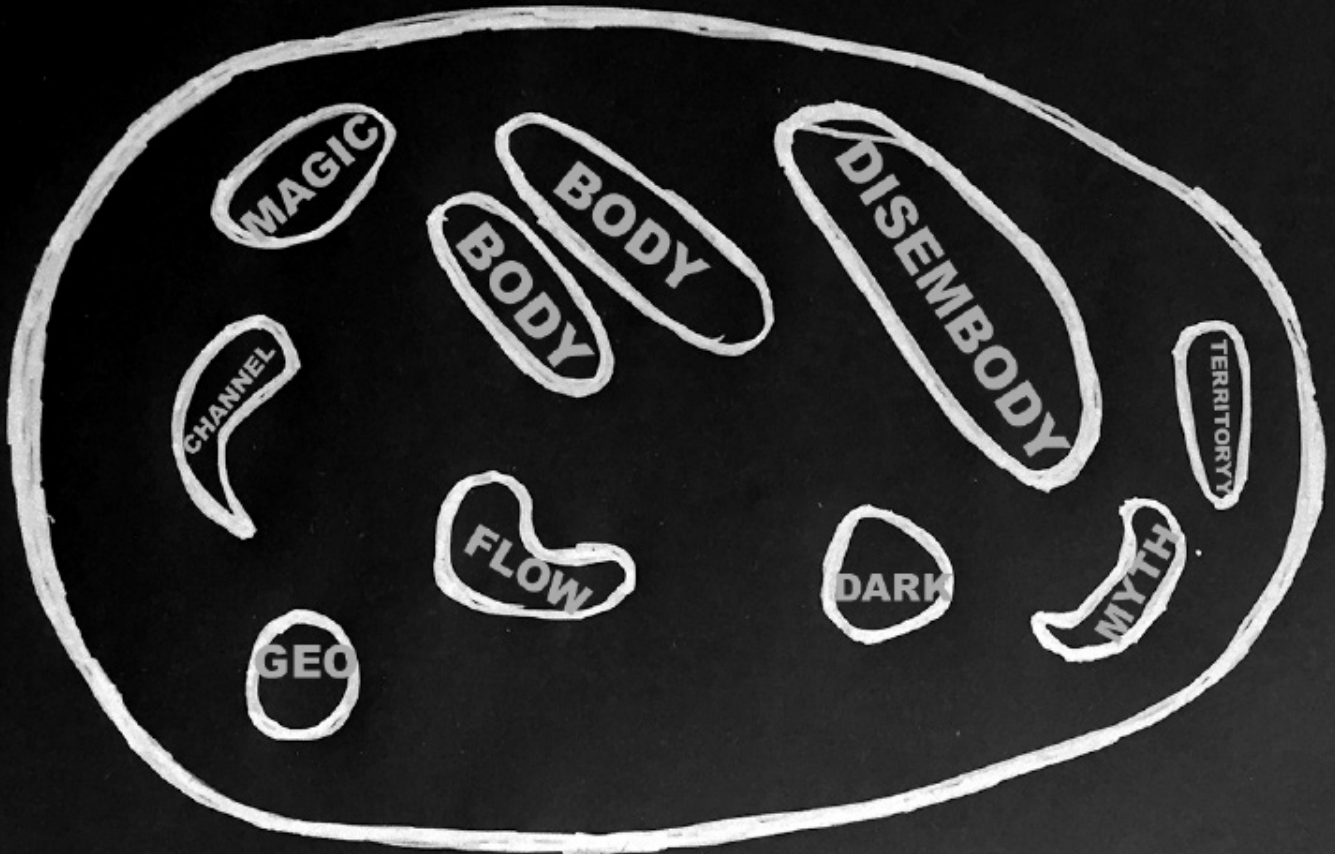






This textiles piece is an example of an artwork that has been made as part of the research project but has not become part of an exhibition. The work started out as a kind of map, a piece of fabric taken to a number of sites and used as a tablecloth, surface to sit on, place to plan and think on. I drew around objects used, inspired by and found in the 'field' and embroidered around them. The act of sewing was a way to think and know the places that the fabric had been.







The experience of the ice cave influenced the work a great deal, the carpet running through the ice, the selfies and photographs, the ice-bar. As a way of trying to make sense of the ice cave I took blue paper on the to glacier, a make shift carpet; a divide between the foot and the ice. This idea was extended into a more developed workshop for Open School East in which we used the motif of the blue carpet from the glacier and mapped out an imaginary ice cave on the beach in Margate.







I took a similar approach to the glacier in Cathedral Cave in the Lake District, taking a number of key objects and materials with me and working through them on site: Arranging and organizing them into a configuration that seemed to speak to the location. I have continued to draw on these configurations in the studio and to think through how their shifting context makes new sense of coding.



Skech Book 3:
Darkness Retreat

Please see the digital exhibition [HERE](#)

Legion Projects Website Exhibition Text

Legion Projects presents Darkness Retreat, an online project by Flora Parrott, made in response to a retreat the artist attended where she spent 60 hours alone in complete darkness.

The retreat took place in a nondescript hostel room in a German ashram found on the internet. Inside the otherwise ordinary room every crevice and opening was gaffer-taped and the only door led to a blackened hallway, all of this to keep out the light.

Darkness Retreat is a response to the physical and tactile nature of the room the retreat took place in; where surfaces and shapes extruded and morphed once the lights were out. It is also a response to the interior space of the mind, which - when somewhere between sleep and wakefulness - spilled into the exterior during this period of self-imposed sensory deprivation.

Darkness Retreat presents itself as a series of spoken letters to Aoife, a close friend of the artist who she met at art school twenty years ago. Aoife was diagnosed with a rare and aggressive form of cancer during the development of the project. She died in a room at St. Joseph's Hospice in 2019. Aoife worked with film sets and props, and as the pieces for Darkness Retreat developed it became clear that her aesthetic had made its way into the work. How much space does grief occupy? Does it have a lumen? And where does the memory of someone go when they are gone?

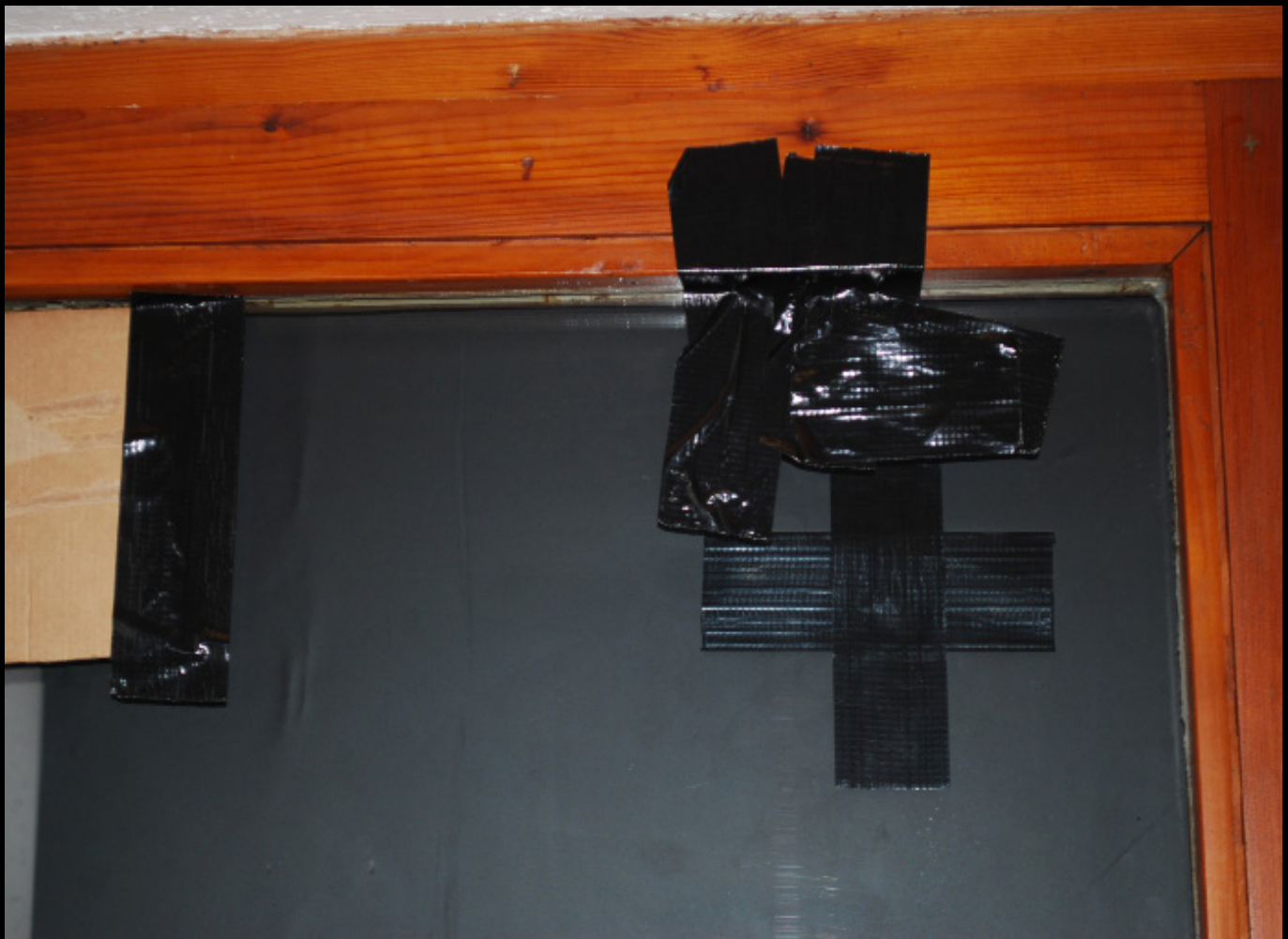
The end result was always intended to be a digital experience, although the making of the individual works has been firmly rooted in the physical realm. Pieces of cut vellum and carefully threaded flowers, shed snakeskin and egg shells hang suspended in black virtual space. A hand embroidered curtain that took the artist a year to make, stitching around Google searched images of snakes on a road; a prophetic visual registered in the darkness that has stuck with the artist. Once made, these works were hung in a physical gallery space as an exhibition to no one but the photographer and 3D model maker, artist George Eksts who has carefully mapped and translated the textures into digital space.

Around the snakes on the curtain, the stitches are in blue. These marks were inspired by 'blue flashes', a phenomenon that can occur in profound darkness. A memory of light, a relaxing of the muscles in the eye. The same colour as the blue emitted by the screen on which the work will be viewed.

As part of an ancient Buddhist meditation practice, an extensive period in the dark is only to be attempted after years, perhaps decades, of practice. The work is intended to ask questions about the 'shortcuts' to such experiences offered by the wellness industries for paying (and mostly Western) customers. As such, the project is perhaps a questioning of authenticity. If you have paid to experience mind-altering visions, does that detract from their significance when they appear? When in profound darkness, does it matter whether you are in a bedroom or a cave? Should the comforting warm glow of a Himalayan salt lamp, thoughtfully placed on the bedside table of a hospice room, feel any less comforting because it was bought on Amazon? In an ordinary setting, where extraordinary events are unfolding, the eye sometimes seems to settle on the mundane detail.

The exhibition is the room as Parrott remembers it in the dark, the shapes and patterns distorted. The work explores an encounter with the space between dream and waking vision, the lines between hallucination and prophecy and a feeling of deep connection with someone that is no longer here.

The exhibition takes the form of a navigable online space. Best viewed on desktop, compatible with most browsers. Headphones recommended for sound, VR available on mobile devices. Duration is 10.30 min.



‘Darkness Retreat’: Notes on Making

In the Methodology, I highlight the complexity of tracking the development of this artwork. The project evolved over a number of years between 2018 and the project release date in 2021; a period of huge change globally and personally. The artwork is rooted in the experience of visiting Mother Shipton’s Cave and of the 60 hours in the dark at the Darkness Retreat, however, entangled with those references the project reflects the personal state of grappling with confusion and grief during that period of time, and as such, much of it has become difficult to explain in rational terms. In the following descriptions, I attempt to unpick some of the practical decisions made in the studio and how they relate to ‘site’. I have chosen a single piece of work from the installation, in the following writing I will recount the decision making and processing through which it was made. As with *I’m In The Bath On All Fours*, I have drawn on the writing of Emma Talbot and the autoethnographic style in which she has approached the writing through her practice.

Snake Curtain. This work comes directly from an experience at the darkness retreat, a ‘vision’ or dream of snakes piling up in the road in front of me. The image of the snakes still sits so strongly in my mind. The day after coming out of the dark, I was walking down to a nearby village and saw a squashed snake on the road. The snake became a motif through which I could explain the uncertainty I had experienced at the retreat, a lack of clarity about what was true and what had been imagined. Throughout the research, I have looked to accounts of experiences of the underground as a way to try to frame this sense of uncertainty and the need for sitting with the unknown that the underground, and in particular caves and the darkness in caves, inspires. The mysteries around the figure of Mother Shipton (Kellet 2002) and the uncertainties and altered states that one might find in the darkness of a cave, described by Lewis-Williams in ‘The Cave in The Mind’ (2002) are present in this artistic project. I wanted to make works that might sit within a ‘hallucinatory realm’ (Lewis-Williams 2002:204) and evoke a sense of both familiarity and unease.

The motif of the snake became undeniable to me, it was my own personal encounter with the blurred reality that prolonged periods in the dark can bring about, when this sort of motif arises in the studio, there seems like no choice but to follow its lead. So, I trawled the internet to find images of snakes on a road that felt close to my imagined image. I used the image to build up a pattern on Photoshop, playing with clarity and sizing and organizing the images into a frame by frame configuration that, to me, references a sequence of stills from a film. I wanted the curtain to be dramatic, a large work that could divide a space; create a threshold

sense of another, mysterious space behind it. When the digitally printed cotton arrived, I decided that it was going to need to go through another process in order to achieve the sense of weight that I had imagined. I tested a number of stitches and colours on a swatch piece before coming to the idea of a blue radial design around the snakes, working over the frame of the image and leading the eye down the length of the textile. The blues came from a conversation with one of the guides at the retreat; they explained to me that I might experience blue flashes in front of my eyes in the darkness. The hand stitching of the curtain took almost a year and was done in the evenings in blocks of an hour or so, as much as was physically manageable with heavy threads and fabric. The curtain is interlined and lined with bright red lining fabric, this is a high contrast decision and one that I can't really explain, although, when I reflect on it, I realise that perhaps this colour is one that I connect with Aoife McKim, the friend to whom the work is dedicated. Aoife was a prop designer and buyer and one of the final films that she worked on before her death was 'In Fabric', a British horror and comedy film written and directed by Peter Strickland.

The final decisions made for the work was the hanging, it felt important to carefully consider the scale and proportions of the hanging mechanisms, keeping the the disproportionate and surreal in mind. I decided to make large uneven hoops in wire and string that could be lost cast in aluminum, these were strung on to a painted wooden pole and coloured ropes used to hang from the ceiling. The ropes were tethered to the wall and floor in a purposefully over engineered tethering of the curtain. Originally, I had used a black ruche on the back of the textiles, I wasn't sure about the look of it once installed so I brought the fabric back down and played with making the ruche invisible and then after a few conversations with peers decided to replace with a more conventional white ruche that might remind a viewer of the type of curtain found in a hostel or B&B.

Once installed, the curtain was photographed by George Eksts, an artist specializing in digital environments and model making using a software called Maya. George Eksts runs an online project space called 'Slow Install' which showed a digital rendering of a textiles piece made from neoprene, referred to in the writing on 'I'm In The Bath On All Fours'. George would send drafts of the model and together we made decisions about the creases and folds in the digital rendering of the fabric. Once the model of the curtain had been built, it was sent to Matt Woodham, a website designer who worked on the project commissioned by Legion Projects. Matt was able to position the curtain within the A-Frame model of a room. The digital 'room' has no edges and has two orbiting light sources casting shadows of the sculptural elements of the installation.

Without a ceiling to tether the curtain pole to, we had to make decisions to hang the pole in space and tether it to the ground to give the illusion of weight and gravitational pull.



In the case of the curtain, the trajectory of the snake motif has been complex: From imagined, to Google image search, to printed fabric which was heavily worked by hand, then back into the digital through a photograph that was then made into a 3D model in Virtual Reality software and stored in the internet. I have explored the theory of this journey in more detail in the Methodology but I want to close with a short reflection on what, in my opinion, the digital format did for the work conceptually.

The works for Darkness Retreat were installed in a project space that I painted black during the lockdown. I showed the work to a few contacts via zoom and had one or two visitors as was permitted by the regulations of the time, but it was never open to the public. Instead the work was launched digitally on a website and experienced by the viewer as a virtual environment with a ten minute audio piece. What was lost in this exhibition decision, was the materiality of the work, the detail, weights and physical evidence of techniques use on the materials that made up the show. What was gained was a soundtrack, a singular experience of the work by the viewer and importantly, a sense that the work is going on in another realm. What I mean by this, is that an exhibition is normally packed up and stored in my studio space. In the case of Darkness Retreat, it has become a kind of dream space that can be accessed through the computer, it is always there and the work and conditions of the space never change. Despite all of the limitations of the virtual exhibition, I find this sense of another realm to be of huge benefit to the project conceptually.







In the studio, the threads of thought from the darkness retreat have been extended by research into Mother Shipton's Cave; prophecy, vision and magic. The work has begun to explore distinctions between dream, vision, hallucination and illusion.

Mother Shipton's Cave is set within an estate, which was once owned by popular television magician Paul Daniels. Billiard ball tricks, disappearing scarf tricks and other popular illusions have been a way into thinking about making the impossible, possible; the invisible, visible.

All of these influences collided with the death of a close friend, Aoife McKim and then the COVID lockdowns. The project began to take shape just as galleries were closing, I became aware that actually the exhibition was less about the retreat and more about extraordinary events that can take place in ordinary, confined rooms.

The exhibition is loosely based on a bedroom, a sink, a bed, curtain, window; but each of the objects is distorted, too large, the wrong shape, strange patterns and materials.

I spoke with George Eksts, a digital artist about building 3D models from the sculptures. George is an artist and also runs a virtual space with which I have shown before; Slow Install. George came down to Margate to photograph the work, get a feel for the exhibition and look at the minute detail of the materials; the tarnishing on the copper, the papery leaves of the dried honesty, the folds of the embroidered curtain. All of this information has been translated into the models built on Maya and then subsequently placed into a virtual environment by digital designer Matt Woodham, using A Frame virtual reality software.

The soundscape was made by Mark Dicker using a single track recorded from his window and then given melody and depth to mimic the kinds of outdoors sounds that one might hear from within a room. The kinds of noises that form the backdrop when your own life has temporarily stopped.

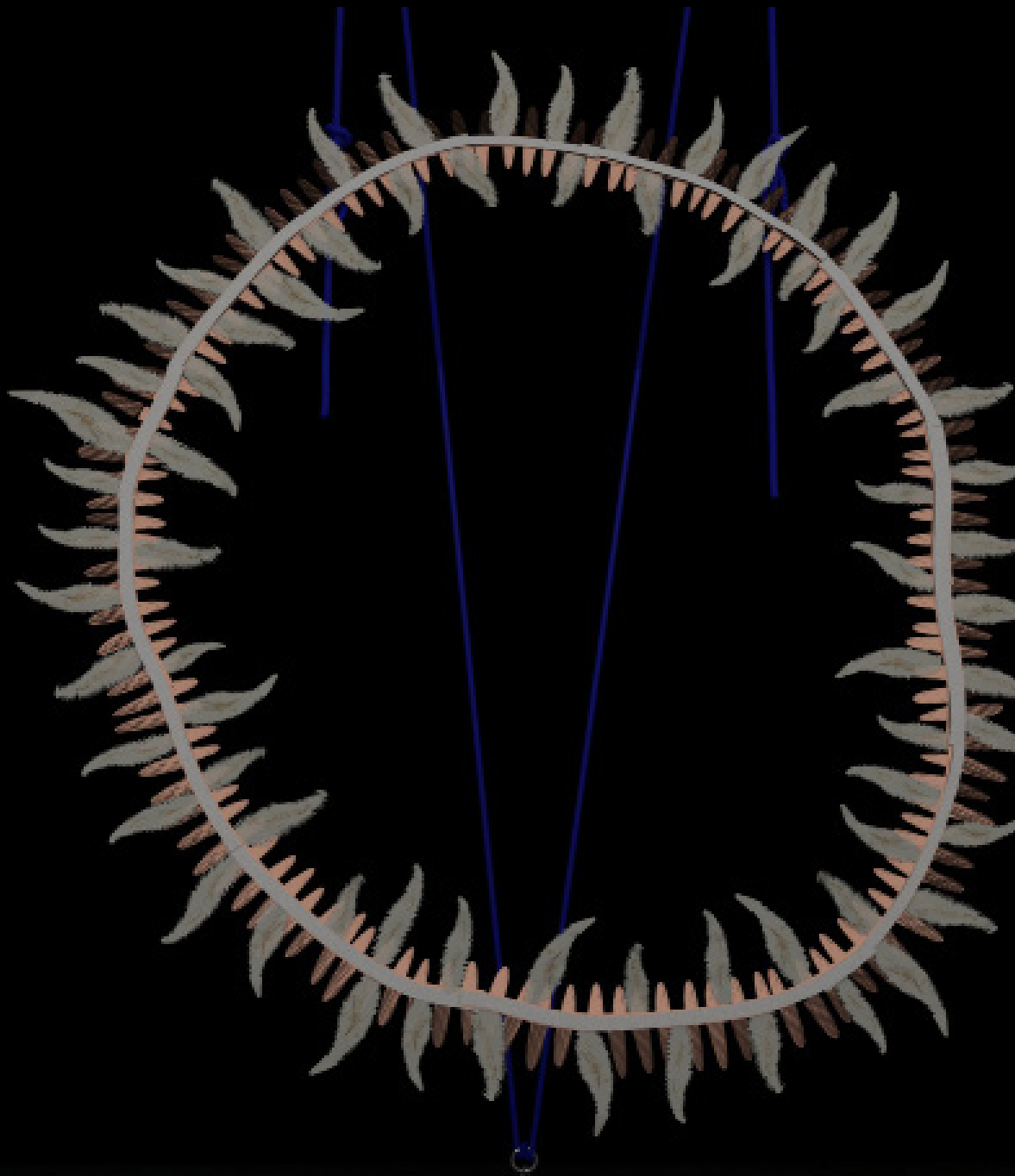
Thinking about what it means for the objects and the materials from which they are made, to be transposed into the digital has been an incredibly rich process for me, listening to George speak about his thinking and working has been both inspiring and informative





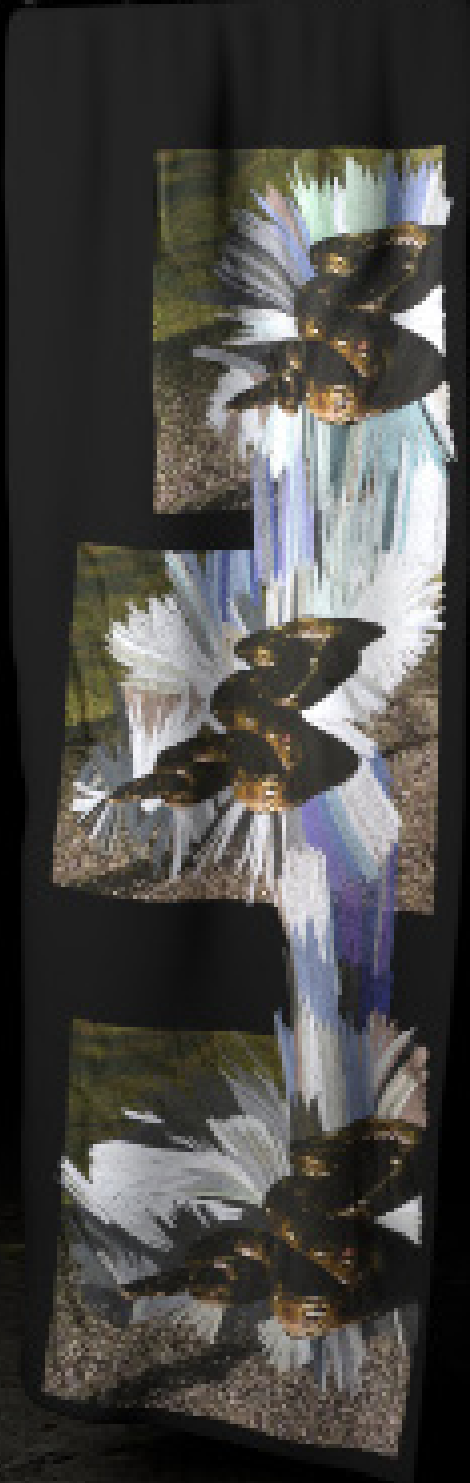
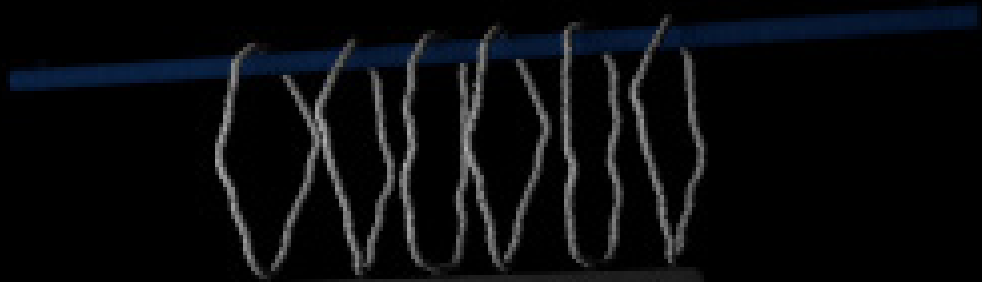






3D renders of the sculptures made by George Eksts using computer software called Maya.









Sketch Book 4:
Research Events

This is a selection of documentation tracking the presence and interpretation of the conference format throughout the project.

How best to present practice-based work within a conference? To speak anecdotally? Run a workshop? Present a live interpretation of the work? Work within poster presentations, power points and hotel events spaces?

In 2017, I travelled to the American Association of Geographers conference in Boston. I was presenting with Harriet Hawkins but rather than contributing a paper, I developed a sequence of objects and instructions to accompany the talk.

Central to the sequence was a large textiles banner on which is printed a cross section of an artificial cave.

www.aag.org

As the speaker finishes, a dark fabric canopy is lifted above the audience and tethered at each corner. No explanation is given. The fabric is pulled tightly but still sags down in the middle.

The lights go out and then a set of instructions appears on the screen at the front of the room. It reads:

Turn on your phone. 2. Switch on the camera and turn it to selfie mode. 3. Place the phone on your lap, camera live. 4. A mirror will be passed around the room. Put it on your lap underneath the phone. 5. Keep it for 30 seconds, count it down in your head. 6. Pass it on.

The phones change in the light in the room, the mirror cut in the shape of a laptop screen is handed to the audience member on the end of the front row.

Harriet Hawkins sits down at the front of the room, a camera is held above her head, the image is projected live on the screen behind her. Below her feet is an image mirroring the banner overhead.

As she speaks, the images in the phones, mirror and banners are reflected in the content.

Soon after the conference I visited Ape Cave in Washington State, a Lava Tube, I took the fabric with me to the entrance.



1. TURN ON YOUR PHONE
2. SWITCH ON THE CAMER AND TURN TO SELFIE MODE
3. PLACE THE PHONE ON YOUR LAP FACING UPWARDS, CAMERA LIVE
4. A MIRROR WILL BE PASSED AROUND THE ROOM. PUT ON YOUR LAP UNDER THE PHONE
5. KEEP IT FOR 30 SECONDS, COUNT IT DOWN IN YOUR HEAD
6. PASS IT ON



Basecamp was a collaboration between artists Kelly Large and Flora Parrott to explore common and parallel themes within their work. The props and discussions that are developed over the time in the V22 Summer Club will be expanded into a program of talks, screening and workshops.

<https://www.v22collection.com/events/collaborative-projects/summer-club-2018/>

25th August -27th August 2018

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The project is called Basecamp, this is a place of anticipation, a sense of something yet to happen. It takes the literal, geographical basecamp and draws parallels with other kinds of holding spaces such as archives and collections, the group dynamics and behaviors of the real and imagined expedition, and the encounters these explorations produce.

If you enter an archive with no real sense of purpose, more just an instinct that there is something you need in there, how do you begin to search? How do items buried deep in storage call to you or make themselves legible to your search? Which keywords do you use? How do you decipher the list of finds? How do you maintain a sense of purpose?

Whether objects, papers, code, ideas or sounds the items held in physical and online archives, collections and libraries emerge as significant through user interactions. In the close relations between thing and observer – in time spent studying, handling and simply being with a thing, it comes into presence, transmitting its being intimately to the user and more widely across the field of culture. This process of inter-relational transmission alters the thing that is engaged with and transforms the user too.

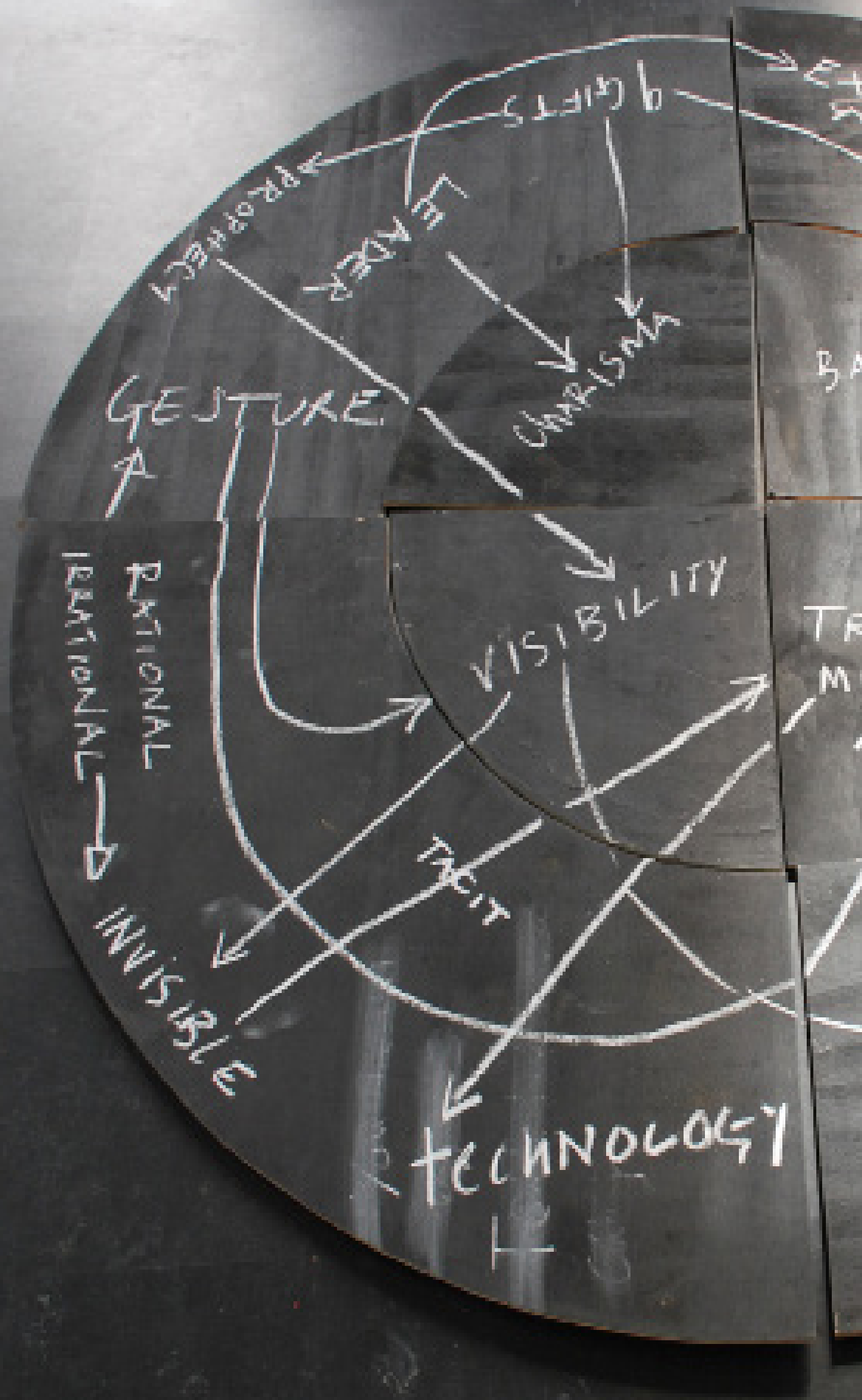
This encounter can be a transmission of knowledge affecting the cultural field but, it also within the intimate moment of beholding an object, you feel its significance as a physical energy, an aura or charismatic force.

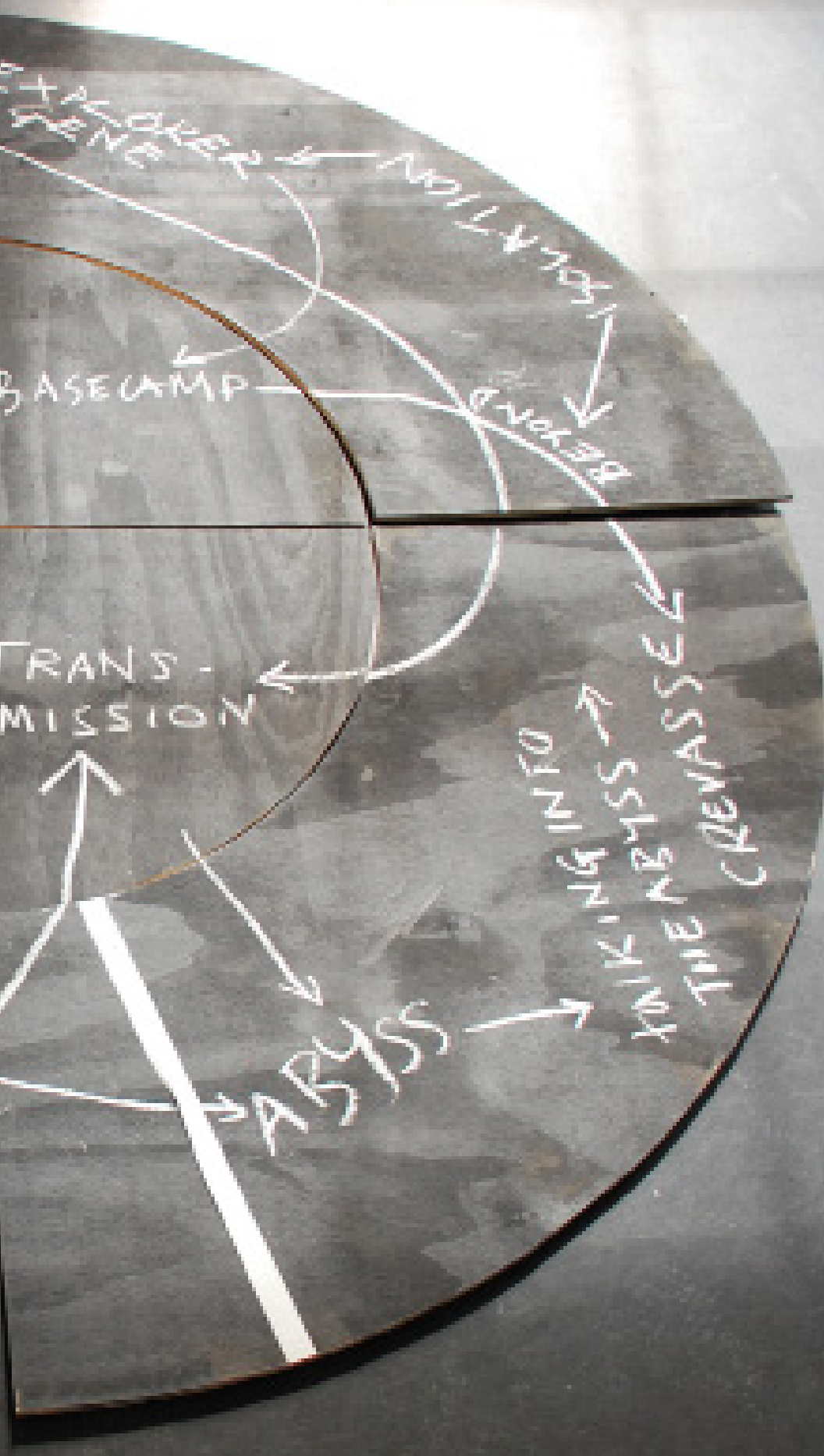
There is an imperceptible tingling in the air. It's magnetic.

We are starting with a constellation of thoughts and references drawn from various collections and archives that might include: charisma – as the amplification of the 'self' to a public, as institutional power, as material or human magnetism; cultish behaviour; the invisible, the overlooked and the unknown; subject-object relations; feedback loops, repetition and amplification; and team dynamics.

We are going to use the space to set up tasks and physically manifest the research and discussion, using diagrams, maps and props that begin to make sense of the ideas. We will invite specific specialists and drop-in visitors to contribute to the research at 'work stations' in the basecamp.

Over the course of the 3 days we will prepare and organise material in the space. The work will be an inter-linking of loops of thought. The reference material and workings will be on display in the workspace.





Strike a match, watch it burn for a moment, move your elbow from where it rests on your knee to light a candle. The candle is burnt down low, about two inches remains standing in the pool of hardened wax. Blow out the match and put it down next to the candle. After looking at it for a moment, you pick it back up and push the un-burnt end into the softening wax around the candle. The match now sits at the end of a pattern; a long line of matches pushed into the wax on the floor by people there before you.

Cleaning one fingernail with the other you look around the room, it's getting dark but the candle light opens the space back out again. The walls are patched together, every object in the room has been brought there and left behind, everything accumulated, nothing matches.

Time passes slowly, boredom is interrupted by the anxiety creeping over you momentarily and then subsiding again with a breath. You try to imagine things on to the blankness outside of the low entrance to the base-camp but every thought evaporates, nothing will stick. All the ideas slide off the surfaces, you won't know until you've done it.







BASECAMP

VISIBILITY

SSS

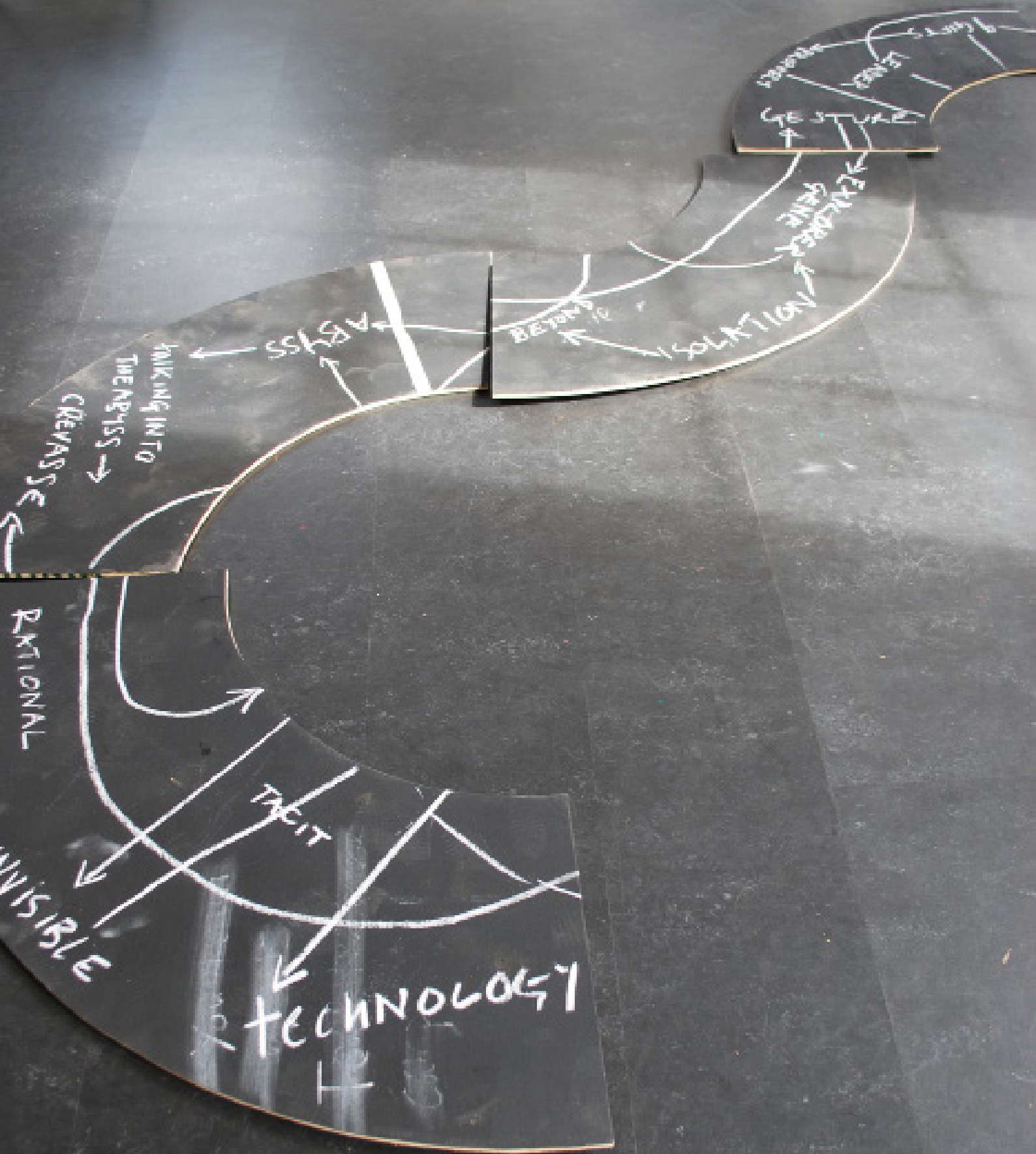
SSA



BEFORE

1900





Transmission work station

As you walked into the large gallery space, on your right, in the far corner of the room was a workspace that represented the idea of 'transmission'.

At this station we had an architectural print on the wall on my hands on the keyboard of a mac computer. There was a tressel table pointing out into the room with Professor Harriet Hawkins sitting at it next to the wall, facing anyone entering the room.

Harriet was working in her note book, next to her is a camera tripod with a mobile phone strapped to it. The camera is filming Harriet's notes which are then being projected up near to the ceiling, above the archway near to the door. As visitors come in, we introduce Harriet and speak about her and her role without including her in the conversation. We stand and watch her.

There is a line of blue masking tape on the table. At the other end of the table there is a chair facing inwards in the normal manner. On the Opposite side is another chair, this time facing away from the table. So the two people sitting in these chairs will both be facing the door, and one of them is facing the back of the other's head.

Lets call the one closest to the door A and the person behind them, looking at the back of A's head B. B has a block of clay in front of them. The task for A is to imagine a charismatic object. Something that draws you in, that you think about when you are not with it, that represents something significant. A should conjure this object in their head. They should imagine the shape, weight, the texture and more importantly the essence of the thing. The unspeakable information, the ineffable.

B should focus on receiving the thoughts being transmitted by A. B should receive the transmitted form and transmit within themselves to their hands. B should mould the form out of clay.

During the course of the workshop several of these transmissions were attempted. Most notably were the two forms received by Kelly Large. The first was a transmission from Jenny Dunseath. Jenny was visualising a gif she had made for the workshop. The gif is a film of a thumb moving over a piece of glass (the edges of the glass do not show). The thumb has a pressure mark on it, as if strolling, when one looks at the gif, one feels as though you are look out from inside the phone.

It is a transmission into the abyss, scrolling down into nothing. Descending, going nowhere. Kelly produced a flat tablet of clay with marks pushed into it, almost like little waves, repeating, pushing the clay, like it was being swiped, wiped, scrolled.

The second transmission was by Katie Tysoe, Katie had bought an object with her, she descretely took the object to the chair with her in order to feel its for while transmitting the detail to Kelly. She said she had never noticed the detail of the form before this experience.

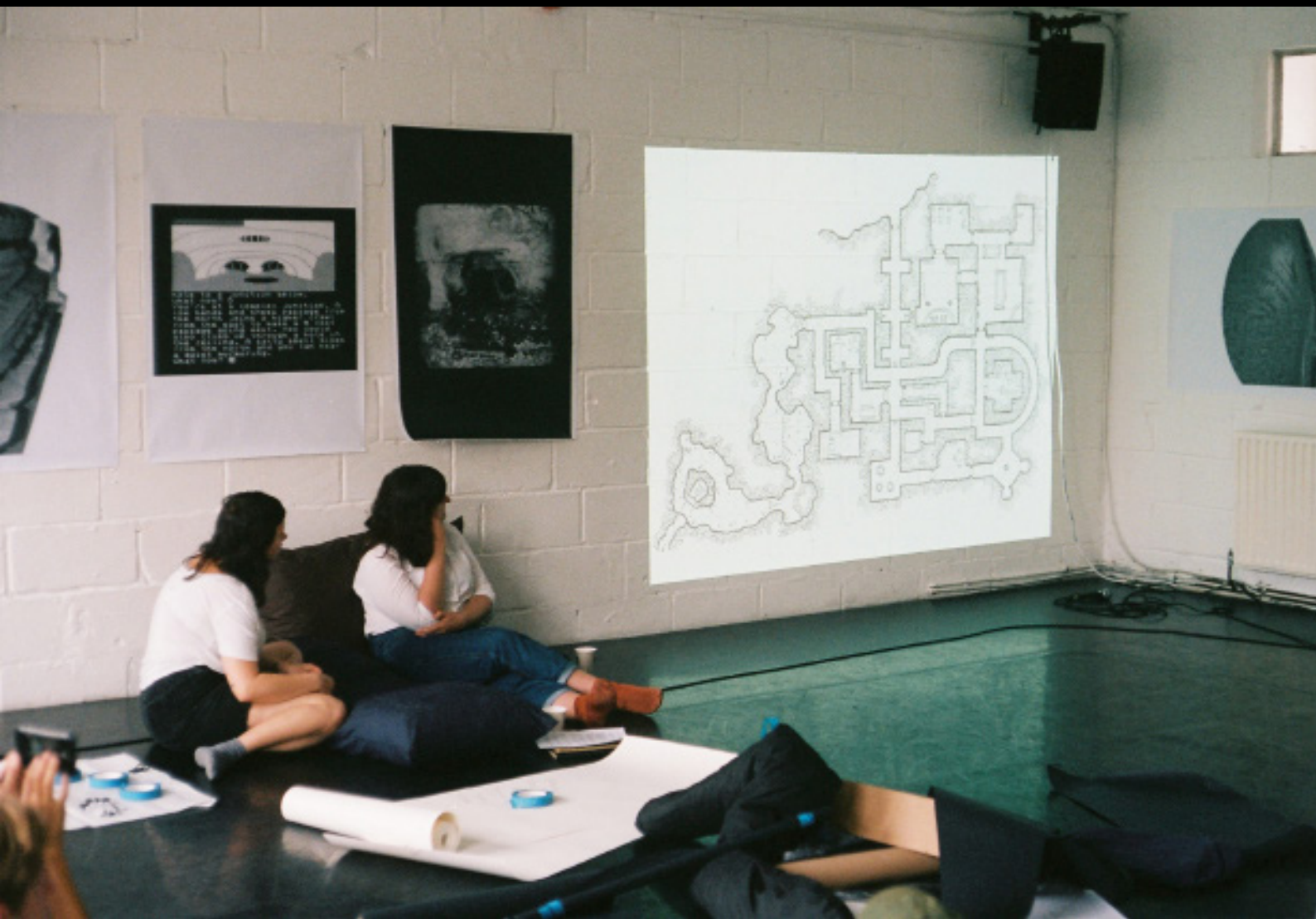
The object was a tourist ashtray from Jamaica.

Expand and Contract: Navigating Undergrounds
Chisenhale Dance Space
July 2018

Co-organised with Professor Harriet Hawkins (Geography, RHUL). Expand and Contract was an experimental conference with a focus on experiences of the cave and darkness. The day included drumming, a LARP workshop, a talk about subterranean engineering, archaeology and an audio essay. Contributions from Dr. William Rowlandson (University of Kent), Una Hamilton Helle (OSE Associate and curator Legion Projects), Shell Like (curatorial duo Amy Pettifer and Jennifer Boyd), Professor Clive Gamble (University of Southampton), Loretta Van der Tann (Think Deep UK)











Established in 1996 by Denis Cosgrove, "Landscape Surgery" is the regular meeting for members of the Social, Cultural and Historical Geography research group (SCHG) of the Department of Geography at Royal Holloway, University of London. Focused on social, cultural, and historical geography, the SCHG is a vibrant group of academic staff (c. 20), PhD students (c. 40) and taught master's-degree students on the MA in Cultural Geography (Research). SCHG's PhD students take a particular role in leading Landscape Surgery's conversations. Sessions range across themes of place and landscape, mobilities of people, ideas and things, creative and collaborative geographies, collection and curation, geographical imaginations, material geographies, urban cultures, transnationality, diaspora, and multiculturalism, among much else

<https://landscapesurgery.wordpress.com/about/>

Landscape surgery workshop proposal:

29th November 2017

A fictional cave space, many spaces and stories merged into one.

The members of the research group were asked to build cave spaces from paper, cardboard and foil, the forms were based on descriptions found in texts from the Royal Geographical Society archive. The resulting models were then joined together and used as a discussion space.

1. Ask the group to clear tables and chairs to the side of the room (have them taken out except for a few chairs in case people need them?)

2. roll out fabriano / ling paper on the floor to cover it completely.

3. draw a perimeter (edge of Danielle's cave scaled down?) Or cross section of another cave.

30 minutes

4. Once we have 'set the scene' we could show a few slides – perhaps images of the camping trip and DRAF tests. Set up a series of conversations about authenticity of experience. Physical knowing of a place.

5. Possibly play the sound footage that Milo took? Read some excerpts from the things I have found at the RGS? There is also an archive of cavers audio files on line

30 minutes

6. As with the cave at DRAF – we are going to build an artificial cave. We will use white paper / newspaper to build structures (possibly described in the Mendips book we have).

We will provide 6 sets of instructions, the group must divide into small groups and do their best to generate a model from paper.

7. Notes and ideas to be recorded on the paper on the floor

8. The group will navigate the cave sections like an assault course.

30 minutes

9. We will collectively describe the movements need to get through each one – record it on the paper.

30 minutes

10. Discussion and questions

ENVIRONMENTS / ENCOUNTERS / EXCHANGES

Tate Exchange

Drop in 12.00 – 18.00

Problems caused by global environmental change require innovative solutions.

This afternoon of events explores how arts practices based in exchange (between artists and scientists; between artists and the environment; between artists and participants; amongst participants): might begin to respond to some of the environmental challenges of our times. A series of events will stage a series of environmental encounters that explore the role of art and invite reflection on our relationship with the Earth.

Explore underground spaces through the collective creation of an imagined underground cave network with Flora Parrott.

<https://www.tate.org.uk/whats-on/tate-modern/tate-exchange/workshop/theatres-exchange/environments-encounters-exchanges>



