Re-making Networked Platforms: A Practice Based Exploration of Networked Retreat

Dave Evans

Goldsmiths, University of London

PhD

2021

Acknowledgements

I would like to thank my supervisor at Goldsmiths, Dr Wood Roberdeau, for his unwavering support through the research and writing of this thesis. His generosity, patience and criticality have been invaluable. I would also like to thank the people and organisations that supported the practice-based parts of the research, Bruce Gilchrist and Jo Joelson at London Fieldworks, Jenny Porter and Andrea Ku at Metal Liverpool, and Jason Bernagozzi and Hank Rudolf at Signal Culture in Owego, NY. I am also grateful for the opportunity to share my research and expand my horizons at Radical Networks conferences in NYC, organised by Sarah Grant and Björk Roi. Attendance to these conferences was supported by the Goldsmiths Graduate Fund. On a personal level I would like to thank my mum, Pauline Evans, from whom I inherited, amongst other things, the determination to continue and finish this research. Finally, and most importantly, I would like to thank my partner Fran and my children John and Zane for the unconditional love and support they have given me throughout this long project.

Abstract

This practice-based PhD situates itself within digital networks increasingly dominated by a few global platforms and considers how retreat can be used as a creative strategy to reconfigure or reimagine what networks can offer at other scales. While there are existing practices that critically examine the implications of how dominant platforms operate, few build alternatives from the ground up, as this research does. The thesis includes three case studies of retreats in which I built networks, a mountainside, a garden in a train station, and my home connected to the internet. I take a situated approach to reflecting on these networks, exploring the environments in which they are built, how they are built and what the networks carry. These reflections are extended through the looking at other artworks and the writing of others, from the historical context of retreat to contemporary writing around technology and philosophy. What emerged from the research is that both 'the retreat' and 'the network' represent relatively static concepts with embedded agendas of their own. Nevertheless, through process of building a network specific to a location, I discovered that retreat also offered the opportunity to *be with* other people and things in new ways. Also, when presented with the complexity of an actual site, any effort to circumscribe a network, as I built it, began to spiral out of control. As a result, retreat provided an opportunity for the digital network to become a tool for temporarily letting things in; to express the shifting material dynamics of the world, rather than enclosing them.

Contents

Image Index

Anonymous. *Spiritsurfers.Net*. 2008. Website. http://www.spiritsurfers.net/.

Beste, Peter. *Old School Saxon Tribute Vest*. Digital Photograph. Accessed September 8, 2021. https://www.kerrang.com/features/the-10-best-styles-of-metal-battle-vest-by-photographer-peter-beste/.

Bewersdorf, Kevin. *Self Portrait in CD*. 2008. Digital Photograph. https://shareyoursorrow.tumblr.com/tagged/photography.

British Pathé. *Around The Maypole (1929)*, 2014. https://www.youtube.com/watch?v=vjd5M_bOnng.

Rhizome. "Catalog of Internet Artist Clubs." Accessed February 21, 2020. http://rhizome.org/editorial/2016/mar/30/catalog-of-internet-artist-clubs/.

Desjardins, Jeff. "Interactive Map: The Flow of International Trade." *Visual Capitalist* (blog), December 15, 2016. https://www.visualcapitalist.com/interactive-mapping-flow-international-trade/.

Facebook Places: Here's How It Works - CNN.Com. Accessed September 8, 2021. http://www.cnn.com/2010/TECH/social.media/08/19/facebook.places.explain/index.html.

Fra Angelico. *Thebaid*. Circa 1420. Tempera on wood, 208 x 73.5 cm. https://commons.wikimedia.org/wiki/File:Angelico,_tebaide.jpg.

Google Maps. "Edge Hill Station." Google Maps. Accessed September 8, 2021. https://www.google.com/maps/@53.4028931,-2.9474216,68m/data=!3m1!1e3.

———. "Pier Head to Liverpool John Lennon Airport." Google Maps. Accessed September 8, 2021. https://www.google.com/maps/dir/Pier+Head,+Liverpool+L3+1DP/Upper+Parliament+St,+Liverpool/Asda,+Smithdown+Road,+Liverpool/john+lennon+airport/@53.373897,-2.9962139,17355m/data=!3m3!1e3!4b1!5s0x487b2053f43cdaeb:0xf83d308c5c5d3910!4m26!4m25!1m5!1m1!1s0x487b212d3b0afab3:0xb6de5921e773521d!2m2!1d-2.9971916!2d53.4045748!1m5!1m1!1s0x487b20e204499c09:0xbd1d8176c7cc505!2m2!1d-2.9628145!2d53.3967682!1m5!1m1!1s0x487b205476b18c89:0x46e13bfc6e846673!2m2!1d-

2.9362333!2d53.3934751!1m5!1m1!1s0x487ae040a0b71767:0x62cb025e20649746!2m2!1d-2.8550475!2d53.3358627!3e0.

"Google Street View." In *Wikipedia*, August 15, 2021. https://en.wikipedia.org/w/index.php?title=Google_Street_View&oldid=1038855828.

Google Street View. "Mini Amsterdam." Google Maps. Accessed September 8, 2021. https://www.google.com/maps/place/Mini+Amsterdam/@53.3914028,-2.9319018,3a,75y,250.44h,78.99t/data=!3m6!1e1!3m4!1s2JY5dFSIexy4oJtjzqmdSQ!2e0!7i16384!8i8192!4m5!3m4!1s0x487b2051972000af:0xab9b367861e5be73!8m2!3d53.3913881!4d-2.9320286.

MTAA. *Simple Net Art Diagram*. 1997. Animated GIF. https://anthology.rhizome.org/simple-net-art-diagram.

"Network-Map-DR-Update-24317.Pdf." Accessed September 8, 2021. https://d11vpqhghel6qd.cloudfront.net/images/maps/2017-12/Network-map-DR-update-24317.pdf.

Northern Network Map. Accessed September 8, 2021. https://d11vpqhghel6qd.cloudfront.net/images/maps/2017-12/Network-map-DR-update-24317.pdf.

"Photo Galleries | Valmont Structures." Accessed September 8, 2021. https://www.valmontstructures.com/resources/photo_galleries.

Posenenske, Charlotte. *Small Series E Drehflügel*. 68 1967. Expanded plastic slab coated with aluminum plates, spray painted matt grey, revolvable on 4 axes, 100 x 100 x 100 cm. https://wentrupgallery.com/en/exhibitions/the-other-space#lg=1&slide=7.

Rafman, Jon. "Jon Rafman: Photo." Accessed September 8, 2021. https://9-eyes.com/image/636827634082496512.

Shore, Stephen. *Beverly Boulevard and La Brea Avenue, Los Angeles, California, June 21, 1975.* 1975. Chromogenic color print, 43.2 x 55.2 cm. Museum of Modern Art. https://www.moma.org/audio/playlist/45/709.

Stark, Peter. *The Artist (Francis Bacon) in His Studio*. 1973. Silver Gelatin Print, 21.4 x 16.5 cm. https://www.bonhams.com/auctions/24613/lot/10/.

Unknown. *Camp Grounded - Digital Detox 10*. Digital Photograph. Accessed April 8, 2020. https://www.digitaldetox.com/experiences/camp-grounded.

———. *Saint Simeon Stylites. Icon of 16th Century*. Sixteeth Century. Painting. https://commons.wikimedia.org/wiki/File:Saint_Simeon_Stylites.jpg.

Introduction

Digital networks are now so ubiquitous that almost all levels of artwork appear, in some form or another, on a networked platform. It could be a snapshot or broadcast on Instagram, a photo on an artist's WordPress site, documentation shown on a gallery or institution's site, sound art on SoundCloud, video art on Vimeo, and so on. There is a presumption that most creative work will have a certain level of networked visibility, often the greater, the better.

However, what alternatives are available to those who would like less visibility, or no visibility at all, and what, if anything, is hiding behind this preoccupation with visibility through these well-established platforms? This practice-based thesis investigates how the act of retreat can be used to explore, understand, and reimagine digital networks. Retreat has been identified as it provides a whole range of well-documented shifts of scale, both historical and contemporary. It also offers a way of framing the network as something that is not fixed, but can, itself, be shifted under certain circumstances. I suggest that the practice-based elements of the research, which consist of building *networked retreats* in different locations, could provide such circumstances and, in this thesis, I will reflect on how my understanding of them grows, as they are built. This chapter serves as an introduction in which I will lay out some background of the network in art and of retreat. I will then discuss further why retreat is necessary and outline my aims, objectives and research questions. I will also present the reasons why I consider this research to be useful. Finally, a structural summary is provided of the rest of the thesis.

Using networks as components of artworks has a rich history that, arguably, goes back to László Moholy-Nagy's telephone paintings of 1923, made by describing the compositions over the telephone to someone working at a sign making factory. Recent innovations in this field include Non-Fungible Tokens (NFTs) and art memes. The reasons for engaging with the network shift across geographies and generations, from the Modernist urge to escape the bounds of the flesh, to Postmodernism's critical

engagement with the increasing domination of information and communication technologies.[1]

My own experiences of networked art began as an undergraduate in the mid-1990s, when the internet was first becoming commercially viable and more widespread. I rode along on a wave of techno utopianism, inspired by *Wired* magazine and weird and wonderful niche websites, learning Photoshop, HTML, JavaScript and ActionScript. However, with the arrival of web 2.0 and increasingly dominant platforms, such as Myspace and Facebook, I lost interest in networked art, and returned to education to study printmaking. This satisfied my interest in the democratic distribution of artwork, and I spent a few years making prints, zines and posters. However, my interest in networked art remained, and was reignited by self-hosted projects using low-powered computing, local area networks and decentralised platforms. Through these DIY and 'Do It With Others'[2] (DIWO) strategies, I discovered a whole range of exciting alternatives that were becoming increasingly accessible and appeared to push back against the dominant platforms that had initially disillusioned me. It is here, at this point, that my thesis begins to emerge, as I started to consider my interest in alternative platforms more carefully. What was I hoping to accomplish by this return to smaller, 'home-made' platforms with a considerably limited reach? I became interested in how the practice of making networked art might *meet* the practice of retreat. What would this look like?

Retreat itself has a varied and fascinating history, including early Hindu and Buddhist hermits, the Christian 'desert fathers', who retreated to the caves of Egypt, and the Monastic retreats of the Middle Ages. More contemporary images of retreat include the likes of Christopher Thomas Knight, the North Pond Hermit, who captured the

---

[1] For a historical overview see: Charlie Gere, "The History of Network Art," in *Network Art: Practices and Positions*, ed. Tom Corby, Innovations in Art and Design (London, New York: Routledge, 2006).

[2] Marc Garrett, "DIWO (Do-It-With-Others): Artistic Co-Creation as a Decentralized Method of Peer Empowerment in Today's Multitude.," *Turning Art into Real Life - Marc Garrett* (blog), February 12, 2014, https://marcgarrett.org/2014/02/12/diwo-do-it-with-others-artistic-co-creation-as-a-decentralized-method-of-peer-empowerment-in-todays-multitude/.

public's imagination after living alone in the woods of Maine's Belgrade Lakes for twenty seven years.[3] In this thesis, I ask the question, how might one enact a *networked* retreat? This proposes something different from simply 'opting out' of the network, a privilege few can afford, in favour of exploring how to work with networks in a way that counters their tendency towards constant expansion.[4] This introduction will begin by first moving between retreat and networked art to establish some foundational context for each area individually, before beginning to bring them together in later chapters.

When considering retreat, there are, as I have begun to suggest above, an array of references that one could call upon to situate the practice. Yet, I am mindful of focusing too heavily on historical precedents that tie the thesis too tightly to religious asceticism, or new age spirituality. I will still draw upon these in due course, but I am also interested in looking at secular acts of retreat in other fields. One such example is the book *Tell Them I Said No*, in which Martin Herbert considers various artists who have withdrawn from the art world. Herbert analyses the act of withdrawal itself. The author suggests that in the face of an art world that has become hugely professionalized, in which self-promotion and permanent visibility is almost obligatory, 'some kind of retreat, some respect for the Joycean triumvirate of silence, exile and cunning, might constitute a vanguard.' [5] The artists he discusses position themselves in opposition to the artist as celebrity, 'prototyped by Dali, and more quietly, Gauguin, perfected by Warhol and updated by Koons, Hirst and so on' for various reasons; to regain integrity where outside forces seek to influence, to find self-fulfilment, as 'symbolic resistance to gendered or racial subjection'[6] or, simply as a mode of

---

[3] Michael Finkel, "Into the Woods: How One Man Survived Alone in the Wilderness for 27 Years | Michael Finkel," the Guardian, March 15, 2017, http://www.theguardian.com/news/2017/mar/15/stranger-in-the-woods-christopher-knight-hermit-maine.

[4] "IDC's Global DataSphere Forecast Shows Continued Steady Growth in the Creation and Consumption of Data," IDC: The premier global market intelligence company, accessed August 24, 2021, https://www.idc.com/getdoc.jsp?containerId=prUS46286020.

[5] Martin Herbert, Tell Them I Said No (Berlin: Sternberg Press, 2016). 12.

[6] Herbert. 12.

performance. The idea of retreat as a vanguard in the face of a system that demands certain levels of visibility begins to resonate with my interest in moving away from dominant global platforms to produce networked alternatives. However, if Agnes Martin retreats from New York to live out her life in New Mexico, or Stanley Brouwn systematically retreats from the public eye through the complete absence of any sort of documentation of him or his work, where might an artist go if they wish to perform a *networked retreat*?

The practice-based component of the research initially proposes a retreat to *other* digital networks. This work builds on experimentation by artists and creative technologists, making ad hoc networks that function at a smaller scale in order to reclaim networking infrastructure and reimagine it. James Bridle's *Right to Flight* from 2014 suspended a military grade balloon over Peckham in London that allowed local residents to connect to it, communicate and read a series of 'letters' speculating on the project. This project was built on technology from Dan Phiffer's *Occupy Here* network, a text-based supplement to the many spoken conversations in Liberty Square (aka Zuccotti Park) during the 2011 Occupy protests in NYC. Phiffer's local network was built to counter internet surveillance and as part of a movement in which he envisaged 'building up a collective network infrastructure that is owned and controlled by its users.'[7] This creates an alternative to a network run by corporate interests over which users can continue social exchange, but perhaps on different terms. Other works in this vein range from the local, as in the above example, to the individual, such as Djanja Vasilev's *Netless*,[8] a 'sneakernet' in which individuals become nodes that transfer data via the proximity of wearable devices as they travel around the city.[9] Whilst they are not made as artworks: scaled up community meshworks such as Freifunk in Germany and NYC mesh in the US, or the InterPlanetary File system all seek to create alternative communication infrastructures.

[7] "Occupy.Here / a Tiny Self-Contained Darknet," accessed April 18, 2019, http://occupyhere.org/.

[8] "Netless. a Network without The Net.," accessed April 18, 2019, https://k0a1a.net/netless/.

[9] For an excellent survey of DIY networking projects see http://nethood.org/links/

This thesis builds on these examples and begins by taking a closer look at the impulse to scale down or become decentralised. Arguably, this exploration of downscaling runs counter to other recent trends in networked art, such 'Post-Internet' art. Gene McHugh describes these artists as accepting the internet as 'less a novelty and more a banality,'[10] in which artists are free to roam the expanse of the internet and use images as objects in the same way as any other. Another chronicler of the Post-Internet movement, Artie Vierkant describes how the Post-Internet moment acknowledged the end of a 'fixed monolithic system' of mass media, in favour of 'new hierarchies of many to many' in which artists 'engage with this proliferation of images and objects…and proclaim an authorial stance by indexing/curating these objects.'[11] This indexing and curating aligns itself with the activity already taking place across the whole network, in which users are continually consuming and producing content. Vierkant suggest that the artistic zenith of this alignment 'would be those who pass by…largely unnoticed due to a decision to opt out of any easily-accessible distribution networks.'[12] He seems to suggest a total dissolution into a hidden corner of the internet as the ultimate Post-Internet manoeuvre. Yet, with this comes an acceptance of the network as it appears, as if the deluge of information is inevitable, and the best critique available is to passively go with the flow of production and consumption.

While it is, perhaps, unfair to single out the Post-Internet movement as a form of networked art, it does typify an approach that privileges the visual, creating an image of the networked artist as a modular figure with endless input, constantly rearranging output on increasingly obscure platforms, on or off-screen. Does this preoccupation with the visual stand in the way of understanding how computation and networks structure our lives? Can this be revealed, and alternatives explored, with a retreat to a different level of visibility, or none? In her essay 'Why Are the Digital Humanities So White? or Thinking the Histories of Race and Computation', Tara McPherson explores the emergence of a particular type of contemporary fragmentation by comparing the

---

[10] Gene McHugh, *Post Internet. Notes on the Internet and Art 12.29.09 > 09.05.10* (Brescia: Link editions, 2011). 25.

[11] "Artie Vierkant // The Image Object Post-Internet," accessed August 25, 2021, https://jstchillin.org/artie/vierkant.html.

[12] "Artie Vierkant // The Image Object Post-Internet."

development of UNIX with how social attitudes towards race shifted during the 1960s. For McPherson, these corresponding developments both share characteristics of dynamically modular and covert managerial systems that emerged in the post-war years. This was built into UNIX through its main principles of encouraging programmes to interact with one another without sharing any information about what is happening elsewhere. McPherson also describes how, at the same time, racism was shifting from the open racism of 'whites only' signage to the more covert racism of 'colour blindness', during which rights were seen to be increased, but a less visible form of segregation and oppression emerged. Both demonstrate a separation of the parts from the whole, a fragmentation through loss of context. Singularly focusing scholarship on representation, for McPherson, also 'may in fact be part and parcel of the very logic of modularity that such code [as UNIX] inaugurates, a kind of distraction.'[13] There is a directive, from McPherson, to engage with the 'nonvisual dimensions of code,' and for 'hybrid practitioners' to produce 'vernacular digital forms that make us *nervous*, authoring them to better understand them.'[14] This call to the vernacular resonates with my impulse to explore networked retreat that encompasses building networks, as a way of better understanding them, rather than rearranging them or simply opting out.

While I enjoy artworks that critically explore platforms such as Facebook,[15] or Google Search, [16] in this thesis I am keen to retreat from this type of online space to get involved with the actual production of alternative networks, to see if this helps me to better understand the networks that I am part of. Therefore, the aims of this thesis are

---

[13] Tara McPherson, "'Why Are the Digital Humanities So White?' Or Thinking the Histories of Race and Computation," Debates in the Digital Humanities, accessed September 1, 2021, https://dhdebates.gc.cuny.edu/read/untitled-88c11800-9446-469b-a3be-3fdb36bfbd1e/section/20df8acd-9ab9-4f35-8a5d-e91aa5f4a0ea.

[14] McPherson.

[15] See "Facebook Demetricator | Benjamin Grosser," accessed August 25, 2021, http://bengrosser.com/projects/facebook-demetricator/.

[16] See "NET ART ANTHOLOGY: EverythingIveEverWantedtoKnow.Com," NET ART ANTHOLOGY: EverythingIveEverWantedtoKnow.com, October 27, 2016, https://anthology.rhizome.org/everythingiveeverwantedtoknow-com.

as follows: *Given the increasing dominance of a few global networked platforms, this practice-based study sets out to test and evaluate retreat as a strategy to understand and reimagine networks, through the production of a series of networks as artworks.*

This breaks down into a sketch of objectives for the research:

- *To explore and practise different approaches to networked retreat.*
- *To evaluate these, alongside relevant literature, as approaches for understanding and reimagining networks*
- *To compare or contrast these approaches.*

In turn, this suggests a series of questions I will address during the thesis:

- *How does retreat traditionally operate, and how can this be applied in a networked context?*
- *How do each of these strategies help to understand the network?*
- *What are the strengths and weaknesses of each of these strategies?*

Answering these questions is important, as it begins to deploy the type of interdisciplinary scholarship that McPherson outlines above. It takes retreat; a gesture with deep historical precedents that continue to resonate today, and enacts it via an art practice in the context of the contemporary digital network. This collision troubles contemporary modularity, as described by McPherson, by potentially aligning itself with previous forms of modularity, which might organise the world into less isolated chunks. Contemporary modularity is represented in practice by using well-established technical protocols such as TCP/IP and DHCP to generate digital networks at different scales. As I will discuss later, these protocols offer an image of uniformity in which elements connect to one another by stripping out context (the TCP data knows nothing of the IP data whose safe delivery it ensures). Given this form of modularity is currently dominant it is interesting to speculate on previous forms of modularity, and retreat gives me the opportunity to delve into historical forms of organisation, through the deliberately disconnected, the consensually communal, and others. The research also engages with increasingly visible concerns around how much networked platforms are used in daily life, and, in turn, how these platforms use the data that is generated. These concerns manifest themselves in articles decrying issues such as a loss of

genuine 'connection'[17] caused by technology, and the use of tools such as VPNs and ad blockers to 'outsmart' algorithms. Furthermore, this research proposes alternatives to existing apps that limit screen time, digital detoxes, mindfulness apps and so on, that imply a type of retreat, whilst simultaneously being directly entangled in the global network itself.[18]

The interdisciplinary quality of the research is also, perhaps, one of its limitations. I am aware that it spans across the technical deployment of local networks, with all the attendant learning that is required around processes such as dynamic host configuration protocol (DHCP) and solar power, it delves into the history of retreat through asceticism, and then moves across different approaches to philosophy. Furthermore, the research engages with video and photography. All of this research together, potentially, produces a scope that might appear too wide, without significant depth. Whilst this may be the case, as certain elements are only lightly touched upon, I have also endeavoured to repeatedly engage with certain processes, artists and writers to evidence my growing understanding of their approaches. In practical terms, there is also a relatively long time span at play in the production of the artworks, with some works discussed having been made six years ago. That stated, this considerable period has given me the chance to reflect on how the work, and my understanding of it, has developed.

The thesis itself is structured in four chapters. The first chapter is split in to two parts: context and methodology. The first part examines the act of retreat from different perspectives, looking at historical precedents and artists who have dropped out; both from physical production and online. Finally, I explore the contemporary phenomenon of the digital detox. In the second part of the first chapter, I describe the methodology used in the rest of the thesis, drawing on Donna Haraway's 'Situated Knowledges'

---

[17] See Sherry Turkle, "Opinion | The Flight From Conversation," *The New York Times*, April 21, 2012, sec. Opinion, https://www.nytimes.com/2012/04/22/opinion/sunday/the-flight-from-conversation.html.

[18] For further analysis on the trend towards technological abstinence see "Out of Network," Real Life, accessed May 2, 2019, https://reallifemag.com/out-of-network/.

essay, before outlining the role of reflective writing. Finally, there is a discussion about how I will use the writing of others.

In the second chapter, I analyse the first of the networked retreats, undertaken as part of the practice-based component of the research. I engaged in a relatively conventional retreat to an isolated spot, where I was alone. In most of this chapter, I examine what I am retreating from, using the emptiness of the location to draw into focus what was absent. This, then, gives me the opportunity to reflect on what opportunities those absences provided, in terms of how I can use and experience the network I have constructed.

In the third chapter, I evaluate a networked retreat to the local; in the form of a network built in the garden of a train station. The location provided the opportunity to reflect on the concept of the network and on scale. This led to a discussion of globalisation on the one hand, and the local and that which is smaller on the other. Technical limitations provide me with a key opportunity to reconsider my own role in building networks, and how else I can organise them.

The fourth chapter explores the final network produced as part of this research. This work was made entirely online during the national lockdown caused by the Coronavirus pandemic in 2020. These conditions gave me the opportunity to consider a more expansive retreat and I explore the contradictions inherent in such a move. I use writing drawn from Speculative Realism and Object Oriented Ontology, and look at the works of Jon Rafman and Stephen Shore, amongst others, to explore the concept of the expanded network of things that I produced.

The final chapter serves as a conclusion, in which I discuss how my understanding of networks developed across different artworks and periods of research and reflection. I also consider how and why certain writers and approaches start to emerge in favour of others. This, then, leads me to further outline some limitations to my approach and, finally, to consider the future, and where I would like to take this research next.

This thesis is also accompanied by two forms of documentation of the practice-based projects undertaken as part of this research. Both appendices share content, so can be used interchangeably. The first is a conventional Appendices document that contains photographs, text and screen grabs from the projects. The project discussed in Chapter 2 is documented Appendix A, the project discussed in Chapter 3 is documented in Appendix B, and there is some additional documentation relating to Chapter 4 in Appendix C. There is also a website distributed across the InterPlanetary File System (IPFS) that contains video works, slideshows, images and texts. This can be accesses via a conventional web browser through the IPFS gateway at:

https://ipfs.io/ipfs/QmW8oS4GEPEt8TRnW5hEMVjKvUURgdmM3u2zztyWZj7e7w/

IPFS is a 'a distributed system for storing and accessing files, websites, applications, and data.'[19] I have used IPFS for several reasons. Firstly, it gives the opportunity to view media content, videos and slideshows, that a 'printed' appendices does not. IPFS also provides longevity for the documentation, as a distributed file system it does not rely on a single machine for hosting, so the documentation remains available as long as there are nodes sharing the data and hash tables pointing to it. Finally, the artworks documented were tied to a very specific site and moment, so it does not feel appropriate to recreate them in another space, such as a gallery. However, the decentralised quality of IPFS itself aligns with the thesis' ambitions to reconsider the network and in some respects its use extends the conversation around how alternatives might work.

[19] "What Is IPFS?," accessed September 27, 2021, https://docs.ipfs.io/concepts/what-is-ipfs/.

Chapter 1 - Networked Retreat - Context and Method

This chapter begins the task of exploring how retreat might operate on a network by contextualising withdrawal in different ways, then looking at the methodology employed to practise and reflect on the process of retreat. The first contextual section looks at the history of retreat as a deliberate practice, then looks for signs of these historical precedents in examples of artworks. Finally, I introduce the tensions inherent in the act of networked retreat by briefly looking at the phenomenon of digital detox. The second section of this chapter looks at the methodology of this thesis. It extends the first contextual section by emphasising the importance of a mixed approach that synthesises practice, reflection and the viewpoints of others.

Networked Retreat – Context

Two Types of Retreat

When considering retreat, one of two images usually springs to mind. The first is of an individual 'opting out' alone to live in isolation. In the Western imagination, this has its genesis in the desert hermit of late antiquity, and endures through people like Henry David Thoreau and the Unabomber, Ted Kaczynski. The second image is of the group of individuals who opt out together, to live in enclosed communities according to a set of rules. This, similarly, has its origins in medieval Christian monastic orders, and its influence can still be felt in various New Age and creative retreats. While it is important to acknowledge that individuals have probably been enacting forms of retreat from their communities since our species first gathered in groups, the images above bear closer scrutiny, as they continue to have a powerful impact on the Western imagination today, as we will see.

In considering these two images of retreat, it is worth looking even further back, to a period when the act of working on the self was less formalised. In 'Technologies of the Self,' Michel Foucault names these strategies of the individual acting upon themselves 'technologies of the self'. He suggests that the activity of looking inward at the self, undertaken during the Hellenistic period, prior to the emergence of hermits and

monasteries, perhaps, marks the beginning of considering the self as a malleable material that can be retreated in to and worked on, in order to improve it.

For Foucault, before one could *act* upon the self, one had to *acquire self-knowledge* to understand those parts that required changing. Foucault identified a broad tendency towards 'self-care' that had emerged by the Hellenistic period that was characterised by an ongoing practice of reflection on one's own deeds, through thought and writing. This self-care was typified by the setting aside of time as 'an active leisure, - to study, to read, to prepare for misfortune or death.'[20] In this activity, we do not see a significant retreat, rather an attention paid to the self in the name of growth, in addition to other civic duties.

According to Foucault, self-care indicates an ongoing reassertion to the self that it is essentially pure, ideal and beautiful, and can act as such. However, towards the end of this period, the dialectical exchange began to shift into a mode of self-reflection led by the teachings of a master. This involved quietly listening for truth in these teachings, then searching within, silently, for evidence of these truths. In this silence, Foucault describes a shift from *self-care* to *self-knowledge* that begins to resemble our contemporary images of retreat. If, in the Hellenistic period, the image of the self was one of essential purity, the later search for self-knowledge saw a consideration of the self as essentially deformed, and looked to an external form to which it could reshape itself. The process of building self-knowledge was penitential, a task to identify worldly thoughts and actions that stand in the way of accessing another, higher, level of reality.

As I interpret Foucault's writing, he appears to suggest that self-care helps with the revelation of an otherwise pure self that is carried within, and assists one in becoming a better citizen, whereas self-knowledge alludes to a perfect exterior form; that of God and of Jesus, as described in the Bible. This, then conveys the ideal that the human

[20] Michel Foucault, "Technologies of the Self," in *Technologies of the Self*, ed. Luther H. Martin, Huck Gutman, and Patrick H. Hutton (London: Tavistock Publications, 1988), 16–50. 27

body and mind must emulate this bodily and spiritual perfection, through discipline and retreat.

So it is that we arrive at the first Christian hermits, or eremites, such as Anthony the Great, living alone in the desert. There are three elements in this scene; the individual hermit, the form to which they aspire, and the location in which they choose to isolate themselves. The individual must cultivate self-knowledge to access the truth, or 'the light.'[21] To do this, one had to embark on a process of illumination and Foucault calls this *exomologesis,* the recognition of oneself as a 'sinner and a penitent'[22] in darkness. This process of illumination idealises public exposure of the disfigurement of sin and, simultaneously, acts to erase the sins themselves. Foucault describes this as a refusal of the self, of the sinner, and a breaking away from the previous self, not to form a new identity, but to gain self-revelation as self-destruction. The *eremite* achieved this by a continued exertion of self-discipline, engaging in acts famous for their 'exotic ferocity,'[23] such as Simeon Stylites, pictured below, who allegedly lived on top of a pillar for thirty seven years. According to Geoffrey Galt Harpham,

> Monks lived in tombs, slept one of two hours a night, ate only a few figs or a little bread each day, loaded themselves with chains, lived on top of pillars, beat themselves with rocks, scraped their skin raw, exposed themselves to the stings of scorpions and hornets.[24]

This spectacular form of self-erasure took place in the desert, a place 'impervious to history,'[25] where the trivialities of the world fall away, and thoughts and feelings that arise do so out of necessity, forcing omission of the worldly, in order to focus on and

---

[21] Foucault. 40. quoting Augustine *Quis facit vertatem* (to make truth in oneself, to get access to the light)

[22] Foucault. 41.

[23] Geoffrey Galt Harpham, *The Ascetic Imperative in Culture and Criticism* (Chicago: University of Chicago Press, 1992). 22.

[24] Galt Harpham. 23.

[25] Galt Harpham. 24.

mould the vital. The mobile, personal and historical become lost in the deep time of the desert, leaving a remainder of unruly matter that can be honed into purity. In his description of how humans attempt to access the 'other', Charlie Gere describes the desert as offering 'a (non)space for possible confrontation with god or nothingness. The desert, as profoundly inimical to human life, makes it possible to confront the fragility and absolute contingency of our existence, our fundamental decenteredness, which in turn offers the possibility of something beyond human access.'[26] Whilst a hermit, such as Alexander the Great might have hoped to see the form of the divine in the desert, so that he could build himself back in its likeness, more recent excursions echo the same sentiment, but hoping to access a different essence. In *Walden*, Henry David Thoreau moved to the remote location in Condorde, Massachusetts to build his own cabin and sustain himself through the work of his own hands in an attempt, as he describes, 'to live deliberately, to front only the essential facts of life and see if I could not learn the essential facts of life,'[27] and 'reduce life to its lowest terms.'[28] For Thoreau, following his mantra of 'Simplicity, simplicity, simplicity!'[29] brings him closer to the essential ingredients of 'life,' allowing him to translate this into his writing.

This dimension of the isolated hermit being an individual who is working on himselfalso performs a social function that can still be witnessed to this day. Returning to the image of the desert hermit living in a cave, in 'The Rise and Function of the Holy Man in Late Antiquity,' Peter Brown describes this self-destruction as a vocation for the ascetic holy men of Middle Eastern late antiquity, who, through their willingness to reveal and destroy the self, gained a key position in the society of late antiquity that was in the uncertain process of passing from the centrally administered control of the Roman Empire to a more fractured and locally governed system. This singularity and strangeness gained through *action* gave the holy man power, as he became an objective mediator who, through his retreat in to the desert, sat outside of the community, rejecting conventional economic, familial and social ties, and engaging in

---

[26] Charlie Gere, *I Hate the Lake District*, Unidentified Fictional Objects (London: Goldsmiths Press, 2019). Pg. 14.

[27] Henry David Thoreau, *Walden* (London: Penguin, 2016). 85.

[28] Thoreau. 85.

[29] Thoreau. 85.

what has been described as 'an improvisational, unregulated and ecstatic warfare.'[30] Retreat invested them with the power to arbitrate disputes, perform miracles and exorcisms, and, generally, to promote ceremonies that emphasised the communal activities of the village. This arbitration might have had its roots in the Roman magistrate, but the holy man gained the bulk of his power from 'below the brittle rituals of capital,' [31] gathering an audience and building on the theatricality already present in popular forms such as the charioteer, the athlete or the gladiator.

Figure 1 – Unknown Artist, 'Saint Simeon Stylites,' 16th Century.

Figure 2 - Peter Stark 'The Artist (Francis Bacon) in His Studio,' silver gelatin print, 1973

Galt Harpham suggest that this type of social functionary still exists today, through cultural figures, such as artists and writers. Harpham links the holy man of late antiquity to Romanticism, and to the myth of the heroic artist, who, through his unorthodox solo endeavours, manages to open up a connection to a higher reality. The lone writer at their desk or artist in their studio is typified by the image of the painter Francis Bacon, seen above in Figure 2. The thinking goes that, through isolation, the artist can process the matter of the world into something more vital than those caught up in the humdrum of daily life.

---

[30] Galt Harpham, *The Ascetic Imperative in Culture and Criticism*. 20.

[31] Peter Brown, "The Rise and Function of the Holy Man in Late Antiquity," *The Journal of Roman Studies* 61 (1971): 80–101. 94.

Anthony the Great, mentioned earlier, is a useful figure in this discussion of the different types of retreat that one can undertake. According to Butler's *Lives of the Saints*, as a young man Anthony moved into the desert of Egypt and lived alone, fulfilling the obligations of an eremite, defending himself against temptations sent by the devil with 'faith, prayers and fasting.'[32] Yet, after twenty years, Anthony emerged 'neither grown fat, nor waxed lean from fasting,' and began persuading 'any to choose the solitary life; and so, thenceforth, cells sprang up in the mountains, and the desert was colonized by monks.'[33] His unspectacular appearance, and the role he took as self-appointed 'father' of other monks marks a shift towards a second type of retreat, of a group of individuals living as a community as typified by the monastery.

These monastic communities all held in common communal habitation. Habitation, as Giorgio Agamben explains in *The Highest Poverty: Monastic Rules and Form-of-Life*, does not simply imply that monks lived together, but refers to a virtue or spiritual condition in which monks share a way of living together and acting. Retreat then, is partially spatial, in that monks lived together, but, more importantly, it is a complete retreat from individual choice to total adherence to shared rules. He refers to Acts, the fifth book of the Christian New Testament, as the paradigm of this common life, in which 'the whole group of those who believed were of one heart and one soul, and no one claimed private ownership of any possessions, but everything they owned was held in common.'[34] Monasteries established routines of obedience in which every element was unified into a demonstration of habit. This was externalised in the monk's attire that came to be known itself as the 'habit'. This marked a process of moralisation of dress that marked each item as an allegory of virtue of a way of life.

---

[32] "The Project Gutenberg EBook of The Lives of the Saints, Vol. 1, by Rev. S. Baring-Gould.," accessed June 14, 2021, https://www.gutenberg.org/files/46947/46947-h/46947-h.htm#Page_252. "The Project Gutenberg EBook of The Lives of the Saints, Vol. 1, by Rev. S. Baring-Gould.," accessed June 14, 2021, https://www.gutenberg.org/files/46947/46947-h/46947-h.htm#Page_252.

[33] "The Project Gutenberg EBook of The Lives of the Saints, Vol. 1, by Rev. S. Baring-Gould." 257. "The Project Gutenberg EBook of The Lives of the Saints, Vol. 1, by Rev. S. Baring-Gould." 257.

[34] Acts (4:32)

Amongst other items, Agamben cites the leather belt, the *zona pellica* or *cingulus,* as a sign of the monk as a 'soldier of Christ ready to fight the devil in any circumstances', symbolising, according to John Cassian, the 'mortification of his members, which contain the seeds of wantonness and lasciviousness.'[35]

Cenobitic monks were also required to internalise what Agamben calls a collective 'temporal scansion'[36] that divided the totality of their waking hours into periods for prayer, labour, reading or reflection. As he points out, fifteen centuries before the Industrial Revolution, monasticism had created a daily routine that 'not only had no precedents in the classical world, but its strict absoluteness has perhaps never been equalled in any institution of modernity, not even the factory of Taylor.'[37] That this sort of system could be implemented before the invention of reliable mechanical clocks is telling, as monks could rely on sundials only for parts of the day in sunny weather. The rest of the time, they were required to become clocks themselves, measuring and estimating as accurately as possible the changing hours. Through this process of internalisation of a particular 'knowledge of self', we see the early potential for coordinating the lives of the individual and community with much greater efficiency than was possible with the 'care of the self' of earlier periods. As Agamben points out, if we are now used to articulating our existence in the context of standardised hours in the 'homogeneous course of time', rather than as a series of 'discrete and heterogeneous unities,'[38] then it is with this cenobitic drive towards self-erasure that this first occurs.

Whereas Michel Foucault characterises the desert hermit as engaged in *exomologesis*, a form of mortification by shaping the flesh and will of the self through isolation and other exertions, he suggests that those who live in monasteries undertake *exagoresis.* The latter is differentiated from the former, in that self-renunciation in exagoresis occurs through total and unconditional obedience to rules laid down by a master; the

---

[35] Giorgio Agamben, *The Highest Poverty: Monastic Rules and Form-of-Life* (Palo Alto: Stanford University Press, 2013). 15.

[36] Agamben. 24.

[37] Agamben. 19.

[38] Agamben. 24.

evacuation of the self from the impure body. Whereas eremites were spectacular men of action and excellence, cenobites were faultless men of labour, focusing on routines that were non-productive and non-creative. In essence, they strove to be blank and empty, not to perfect, but to eradicate, to 'walk in newness.' [39]

These two forms of retreat separated in the fourth century, with the *exomologesis* of the eremite gradually overshadowed by the more advanced and communally organised *exagoresis* of the cenobite, living in the monastery under rule and oversight of the abbot. Agamben discusses this shift as a partial resolution of the 'political' tension between the 'private and common' in which the eremitic desert holy man represented nomadism, anarchy and disorder, while the cenobitic monk represented stability, governance and order.[40] A flamboyant retreat into the blankness of the desert was superseded by a more organised, communal retreat into the rules of the monastery.

Retreat to Egoless Communality

Given that we now have two types of retreat, it might be now useful to look at how we can examine examples in the context of contemporary art. In *Tell Them I Said No*, Martin Herbert examines the work and careers of several artists who have withdrawn from the art world. While it is easy think in terms of the artist as contemporary desert hermits, retreating to their studio to cultivate and draw on their uniqueness in order to fashion a role of sanctioned 'professional outsider' within society, it is less easy to identify an artist who seeks uniformity and community as their mode of escape. For this, we can look to Herbert's discussion of Charlotte Posenenske, a German artist whose art career lasted only twelve years, between 1956 and 1968, before she withdrew from the art world to become a sociologist. It is useful to discuss two aspects of Posenenske's career through the lens of retreat: the work itself, and then the work in the context of her leaving the art world.

In Herbert's short chapter he describes how Posenenske's early exposure to Russian Constructivism was foundational to her practice. Her early works, geometric patterned

---

[39] Galt Harpham, *The Ascetic Imperative in Culture and Criticism*. 29.

[40] Agamben, *The Highest Poverty: Monastic Rules and Form-of-Life*. 12.

paintings that slowly developed into reliefs, were characterised by 'an impersonal mode of abstraction divorced from the hand and rooted in the prewar modernism she studied.'[41] From this, we can see glimmers of exagoresis, or the erasure of the self through the 'slavish' adherence to a system. In Posenenske's case, the formal geometry of Constructivism was inspired by utopian visions of Modernism. Yet, what distinguishes her from the number of other artists who work in this way is how far she pushed this process. According to Herbert, she worked to 'rigorously dissolve her own authority,'[42] resulting in her *Square Tube Series*, which she began in 1967. These works, fabricated from steel, with the appearance of industrial ducting, reflected Posenenske's changing views on authorship and ownership, as she considered 'collectors, promoters, steel workers, transporters, installers' and 'spiritual and financial supporters' as 'coauthors.'[43] Herbert observes that the works became similar something produced in a factory, assembled by many hands, exploring the tension between the exclusivity of the art world and the 'egoless communality'[44] of the factory floor. In this egoless communality, working towards the production of standardised units, I see glimmers of the communal retreat of cenobitic monks, and the unifying social qualities of working together towards a shared purpose.

While I am loath to labour comparisons between Posenenske's production line and monasteries, there is one important distinction. Monks in a monastery sought to perfectly align their own subjectivity with a form; to produce a 'form of life.' The modern factory, arguably, sought to form subjectivity in a similar way but geared around efficiency. However, having witnessed the horrors of systematic industrialisation in her own childhood at the hands of the Nazis, Posenenske sought to produce 'standardized objects designed to behave in non-standardized ways: they restore power to owners.'[45] Posenenske's *Square Tube Series* are unruly, subjectively

---

[41] Herbert, *Tell Them I Said No*. 41.

[42] Herbert. 41.

[43] Herbert. 42.

[44] Herbert. 41.

[45] Herbert. 42.

slanted, and [they] remain in flow,'[46] perhaps absolving them of becoming too dogmatic.

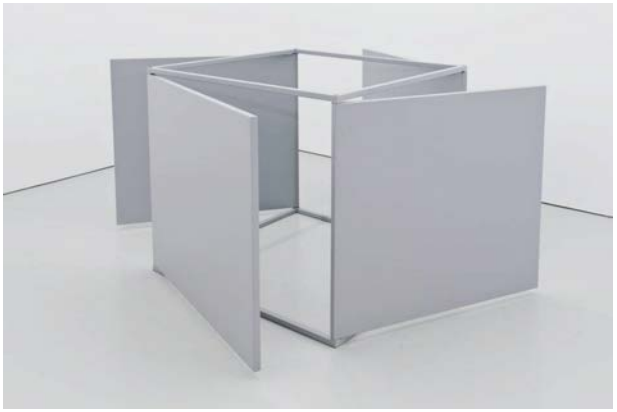


Figure 3 - Charlotte Posenenske, 'Small Series E Drehflügel,' expanded plastic slab coated with aluminum plates, spray painted matt grey, revolvable on 4 axes, 1967/68

Posenenske used standardisation and co-authorship to undermine her own autonomy and activate the subjectivity of others. However, she quickly became aware of the works irresolvable limitations, leading to a further departure – from the art world altogether. Herbert describes how she wrote, in May 1968, that 'it is painful to me to face the fact that art cannot contribute to the solution of urgent social problems.'[47] Against a backdrop of the political and social upheavals in Europe during that time, Herbert speculates that, for Posenenske, asking an audience to 'enter a gallery and daintily revolve some metal sheets, as if doing so would transform society in a trickle-down way while streets burned'[48] was simply not enough. Around this time, she began to turn down invitations to exhibit and stopped producing artworks altogether. Herbert suggests that Posenenske was, through her work, exploring how art's social function could catch up with its formal development. In this way, it might be possible to be 'honest enough to say when she hit an unassailable wall', which could be reflective of the tension between 'a learned love of idealistic art and its apparent underperformance in the real world'[49].

[46] Herbert. 42.

[47] Herbert. 42.

[48] Herbert. 44.

[49] Herbert. 44.

What makes this move out of the art world interesting, in the context of retreat, is that it highlights the slipperiness of the term. I recognise more of a sense of retreat in Posenenske's move away from traditional artistic autonomy in the production of her work, towards a more socially minded, collaborative practice, than I do in her outright quitting of the art world to become an academic sociologist. Perhaps it is a move towards a potential existing state, of egoless communality, that Posenenske was attempting to grasp. However, in leaving the art world altogether, she simply quit, and changed direction completely.

Retreat to Form the INFOspirit

If Posenenske's retreat is towards this egoless communality, it is worth considering what artists might strive to in the context of the internet. I will now consider the work of Kevin Bewersdorf, and his own gradual retreat from the Internet. As with Posenenske, it is useful to consider the artist in two ways; firstly his work, then the act of his departure from the mainstream art world.

Bewersdorf was a co-founder of spiritsurfers.net, an Internet surf club, with Paul Slocum in 2008. Slocum suggests that the term Internet Surf Club 'is often used to describe group artist blogs where the prevailing subject is internet culture and aesthetics and where lines are blurred between the roles of artist, curator, and archivist.'[50] Most *clubs* use a blog format where posts appear vertically above one another. Members can post. Anyone visiting can comment. In his essay 'Spirit Surfing,' Bewersdorf describes how discovering the world of surf clubs through nastynets.com, he was 'connected to a shapeless organisation of users who rearranged bits that were unimportant individually**,** but whose sum amounted to something so massive that it could only be thought about and never seen.'[51]

Spirit Surfers loosely followed what Slocum describes as a 'comic spirituality'[52] through which they could manifest this 'never seen' thing into something visible, which they

---

[50] "Catalog of Internet Artist Clubs," Rhizome, accessed February 21, 2020, http://rhizome.org/editorial/2016/mar/30/catalog-of-internet-artist-clubs/.

[51] Kevin Bewersdorf, *Spirit Surfers* (Brescia: Link Editions, 2012). Pg. 22.

[52] "Catalog of Internet Artist Clubs."

named the INFOspirit. The INFOspirit was a sort of indescribable foundation of information that runs through the global network that 'constructs all YouTube videos and all celebrity gossip blog posts and all jpegs of van Gogh painting and all of officemax.com.'[53] They describe surfing the web and, as spirit surfers, recognising 'The Boon', which may be 'a cluster of jpegs left untouched or a gif with a single frame added.'[54] The Boon then yields a 'jewel' that is then added to the spirit surfer site to give form to the INFOspirit. 'The Wake' is described as another type of image, one that points to the journey to 'The Boon'.

For Slocum and Bewersdorf, not everyone is alert to The Wake and The Boon. They describe INFObrats as those who use the web by 'clicking around on links as they shop and consume.'[55] However, INFOmonks are able, not only to recognise 'jewels' as they surf the web, but are able to use sites, like spirit surfers, to 'frame' these in the best way to disclose its indescribable truth. So, in opposition to the ineffable truth of the network, Bewersdorf appears to position spirit surfing as pioneering and intuitive, whereas mere surfing is simply responding to prompts to consume.

Figure 4 – Screen Capture of Spiritsurfers.net, February 2020

When Bewersdorf wrote 'Spirit Surfing' in 2008, it is easy to imagine that it might have been part of a reaction to the growing commercialisation of the web. The process by which the internet was becoming an ever-shrinking collection of massive ringfenced sites, such as: Amazon, Facebook and Myspace, that tailored content to each user, was

[53] Bewersdorf, *Spirit Surfers*. 25.

[54] Bewersdorf. 23.

[55] Bewersdorf. 24.

well underway. Therefore, it comes as no surprise that groups of artists were wandering around the wider shared web and retreating to surf clubs to celebrate the quirks that these journeys threw up.

This ethereal wandering around the network sits in contrast to the increasing ease with which artists were able to access a broad array of material objects, as a result of huge e-commerce sites, such as Amazon and Ebay. Discussing the difference between his work, as it appears in a gallery, and his work as it appears on the internet, Bewersdorf commented,

> 'The products I exhibit are ordered from the web and are made by a series of default operations on order forms that travel from virtual space to a physical product shippable by UPS. Once in the gallery, the product stands in for the flow of information that caused it, it is merely a conduit for the INFOspirit. I document these products on my website, completing the circle of info by joining the product back with the web.'[56]

This reference to 'default operations' suggests that surfing the web had become, for Bewersdorf, a machinic process that simply generates products that move in a similarly machinic way across standardised networks towards the artist.

The actual products are 'pathetic' and 'mediocre', when compared with the 'majesty' of the INFOspirit.[57] Whist I am keen not to read too much into what, from a lot of the lofty tone of Bewersdorf's writing, is very much a tongue in cheek description of how Spirit Surfers operated, I do appreciate the communal and consensual creation of meaning and value that occurred in these spaces. Furthermore, I admire the creative use of the stretched monastic metaphor, all against the homogenising backdrop of the increasing popularity of social media. Like Posenenske before him, Bewersdorf

---

[56] "Interview with Kevin Bewersdorf," Gene McHugh, accessed February 21, 2020, https://night.house/interview-with-kevin-bewersdorf. "Interview with Kevin Bewersdorf."

[57] "Interview with Kevin Bewersdorf."

attempts to subvert the standardising tendencies of an environment to offset it with something that celebrates the individual experience.

Although Spirit Surfers is still available on the web, with occasional Boons and Wakes added, Bewersdorf himself made a concerted effort to remove himself from the web from 2009 onwards. According to the 'about' section of Domenico Quaranta's online archive of Bewersdorf's work, he emptied his personal website, 'maximumsorrow.com', and replaced it with a new homepage, 'purkev.com'. This new site featured a single animated gif flame against a blue background that moved down the screen day by day.[58] After three years, the flame disappeared, and only a blank page remained for two further years. Bewersdorf described this process over five years as 'an experiment in treating the technology of the Internet with the authentic austerity of a ritual practice', with an intention to 'slow, cool and deepen the breath of information.'[59]

Figure 5 - Kevin Bewersdorf 'Self Portrait in CD,' digital photograph, 2008

What was behind this slow departure? In 2015 correspondence to Quarenta, Bewersdorf stated that 'dropping out' is the only internet ritual that can create a cooling space of shelter from the constant pressure of online existence.'[60] Websites are places, for Bewersdorf, 'where we act out a coded order of operations for the

[58] "Share Your Sorrow," accessed February 24, 2020, https://shareyoursorrow.tumblr.com/?og=1.

[59] "Five Years Later, Kev Has a New Website," Rhizome, accessed February 24, 2020, http://rhizome.org/editorial/2014/may/30/five-years-later-new-website-kev-bewersdorf/.

[60] "Share Your Sorrow."

audience' through 'well-worn routines' in which 'the power of ritual is guiding our fingers.'[61] Rituals are repeated patterns of behaviour that can provide unity and a sense of order, but his sense is that, online, people begin to feel overwhelmed by their patterns, as these rituals are not practiced 'with clear intention.'[62] The retreat, or drop out, is, for Bewersdorf, an immediate way to break these restrictive patterns and to create 'a new kind of silence that is full of life'. He uses the analogy of the forest fire as 'an extreme event of destruction that helps life grow.'[63] So, rather than viewing the internet as a place where the past and the present are archived forever, Bewersdorf's retreat serves as an 'act of faith…in the internet as fertile ground for rebirth.'[64]

In both Posenenske and Bewersdorf's work, there is a focus on collective action, in the construction and manipulation of sculptural objects in a gallery for Posenenske, or in the creation of an online image board for Bewersdorf. However, for both artists, the medium was found wanting. Are these artists seeking a *genuine* exchange that, for whatever reasons, their work is not sufficiently providing? In the context of Bewersdorf, the Internet encouraged a 'coded order of operations' and 'well-worn routines', tied to the shopping and consumerism of INFOBrats. Bewersdorf's 'codes' and 'operations', versus 'life', 'fertility' and 'birth', mentioned above, all suggest a duality between something that can be formed as either machine or as living, with the latter being preferable. This biocentric retreat towards life, away from technology, is emblematic of a certain type of retreat. The implicit suggestion is that internet use somehow lacks the characteristics of 'life' present in other activities. The excesses of use should be curbed, and the effects of overconsumption should be remedied by practices, such as 'digital mindfulness' and 'digital detoxes', which will be discussed next.

Digital Retreat / Digital Detox

The retreat that Kevin Bewersdorf undertook began in 2009, attempting to minimise his engagement with the internet, is now supported by an entire digital wellbeing

---

[61] "Share Your Sorrow."

[62] "Share Your Sorrow."

[63] "Share Your Sorrow."

[64] "Share Your Sorrow."

industry that spans apps, self-help books and sites and, of course, physical retreats, where people gather to experience life, unadulterated by digital technology. In her journal article 'Disconnect To Reconnect the Food/Technology Metaphor In Digital Detox', Theodora Sutton has explored the increasing popularity of the 'Digital Detox.' Sutton gives a useful summary of the idea that the term 'in real life' (IRL) is, somehow, considered inferior to the digital realm. This 'digital dualism', whereby IRL is opposed to mediated connection, is academically contested ground. Sutton cites Sherry Turkle as emblematic of an approach that bemoans the loss of authentic connections as a result of the rise of digital technology. For example, in her 2012 op-ed piece for the New York Times, 'The Flight from Conversation', Turkle describes how spoken conversations, which 'unfold slowly' and 'teaches patience' are replaced by digital connection via text messaging, characterised by our desire to control how and when we communicate, ensuring our contacts are conducted at a distance that is just right for us. Therefore, this 'diminishes chances to learn the skills of self-reflection.'[65]

In opposition to this viewpoint stand authors, such as Heather Horst and Daniel Miller, who argue that Turkle 'reflects a more general tendency towards nostalgia widespread in journalism and a range of work focusing on the effects of media that view new technology as a loss of authentic sociality.'[66] They suggest that these theories exploit anthropological writing about small-scale societies, which 'are taken to be a vision of authentic humanity in its more natural and less mediated state.'[67] For them, anthropologically speaking, the world is constituted by material devices, through which we learn to behave appropriately, and there is no such thing as unfiltered human connection. Therefore, through their anthropological lens, 'online worlds are simply another arena, alongside offline worlds, for expressive practice and there is no reason to privilege one over the other.'[68] Horst and Miller suggest that a focus on the framing of the world through the digital can be unsettling 'largely because this makes us aware and newly self-conscious about those taken for granted frames around direct face-to-face contact.'[69] Taking this further, Nathan Jurgenson argues that, if anything,

---

[65] Turkle, "Opinion | The Flight From Conversation."

[66] Heather A Horst and Daniel Miller, eds., *Digital Anthropology* (London, New York: Berg, 2012). 12.

[67] Horst and Miller. 12.

[68] Horst and Miller. 12.

[69] Horst and Miller. Pg. 12.

digital technology has enhanced our appreciation of the world around us, suggesting that 'Nothing has contributed more to our collective appreciation for being logged off and technologically disconnected than the very technologies of connection.'[70]

Regardless of the persuasiveness of the positions outlined above, Sutton recognises the sentiments expressed by Turkle; that digital media results in a diminution of lived experience, reflects a social fact. Sutton acknowledges that the concept of disconnection 'strikes a chord; it sells books and tickets to retreats and articulates a feeling of concern that individuals genuinely feel.'[71] Furthermore, this concern is at the root of my research. Nevertheless, I am engaged in critically analysing at how these movements of retreat translate into practice, and what is at stake.

Kevin Bewersdorf used his individual disconnection as a tool to evaluate, or rebirth, his relationship to digital connection. Others look to apps, books and retreats. Sutton wrote about the time spent at 'Camp Grounded', and the annual residential retreat in the Mendocino Forest, north of San Francisco, described as 'an alcohol and drug-free environment where you can't talk about work, you can't use your real name, and you check all of your technology in at the entrance' for 'an off-the-grid weekend of pure unadulterated fun.'[72] The emphasis appears to be on re-establishing *human* contact outside of the influence of technology, with games, workshops and activities that promote working together in a cooperative, non-competitive way that encourages communication and sharing. Sutton discusses how these activities aim to open participants up to one another in ways that are different to how they connect digitally. She uses Sherry Turkle's description of how 'online contact is low risk, with little possibility for awkwardness or embarrassment, whereas face-to-face contact brings higher social risk.'[73] Following this logic, Sutton suggests that the activities campers are

---

[70] Nathan Jurgenson, "The IRL Fetish," *The New Inquiry* (blog), June 28, 2012, https://thenewinquiry.com/the-irl-fetish/. Jurgenson.

[71] Theodora Sutton, "Disconnect to Reconnect: The Food/Technology Metaphor in Digital Detoxing," *First Monday*, June 1, 2017, https://doi.org/10.5210/fm.v22i6.7561. Sutton.

[72] Digital Detox, "The Camp Grounded® Experience from Digital Detox®," accessed April 8, 2020, https://www.digitaldetox.com/experiences/camp-grounded. Detox.

[73] Turkle, "Opinion | The Flight From Conversation"; quoted by Sutton, "Disconnect to Reconnect."

encouraged to participate in promote an intentional openness that brings a higher social risk. Nevertheless, through face-to-face contact, the participants' experiences are 'ultimately more wholesome and satisfying.'[74] Sutton recognises that the camp is temporary, and participants return to technology when they leave. However, the experience, provides an opportunity to 'discuss new ways to live alongside technology after the detox has ended.'[75]

Figure 6 - Activity at Camp Grounded

Sutton identifies that the attendees at Camp Grounded were 'white, in their 20s or 30s, able bodied, well-educated and financially comfortable,'[76] and often worked in or around the tech industry based in Silicon Valley. She speculates that these facts made digital connection a convenient scapegoat for feelings of dissatisfaction, and one that could be addressed due to this demographic's digital literacy. There is no mention of ever-increasing workloads, environmental crisis, a deadlocked political system, fractured communities, or any of the other vectors of pressure that adults in the West, even those of privilege, are subject to. There is also an unspoken level of privilege implicit in any decision to go off-grid that, for Sutton, signals 'conspicuous non-

[74] Sutton, "Disconnect to Reconnect."

[75] Sutton.

[76] Sutton.

consumption.'[77] Many people who rely on digital communication for work simply could not carve out time to take an expensive holiday during which they are disconnected. There is also an implicit level of 'world making' in attending a camp, where participants conjure up utopian new ways of living with technology, almost as if the previous new ways of living devised in Silicon Valley, through digital connection, have proven unsuitable. This speaks of a level of comfort in which speculation around such matters can be made. Coupled with the fact that the camp is set in a beautiful forest, and promotes contemplation, play and a healthy diet, alongside the disconnection, points, for Sutton, towards a reinforcement of Western and romantic ideals in which previous ways of living were best and somehow technology 'makes us less human'.

In this section, I have begun to draw upon references that use and examine retreat in different forms. The key operation that occurs in each example is an attempt at the reduction of input, a simplification that attempts to draw something essential into sight. Foucault outlined two approaches from history, through manipulation of the self by hermits, or erasure of the self through enclosed, rule-bound communities. Charlotte Posenenske looked to the standardisation of the factory for egoless communality, whereas Kevin Bewersdorf slowly disengaged from the 'patterns' and 'operations' of the internet to seek 'rebirth.' Theodora Sutton's analysis of 'Camp Grounded' brings this process of simplification to its contemporary manifestation as a service industry. This raises many questions in relation to this thesis. Am I exploring moving back to a more authentic version of *connection*? Is the retreat a way of revealing the dynamics behind the frames of digital interaction? Or, am I simply using retreat from the network to heighten a sense of individuality by being conspicuously disconnected? Can retreat operate outside of these binaries of real versus synthetic, and use a different framework than an aspiration to a Western romantic ideal? Before I begin to address these questions I will now discuss my methodological approach.

Methodology – Networked Retreat

[77] Sutton.

The research for this thesis uses three methods: making, reflecting and drawing on the viewpoints of others. These three parts echo Robin Nelson's multi-mode epistemological model for practice as research. The first is *know how*, in the form of the use of existing skills and embodied knowledge. In the thesis, this is achieved by using *technical* knowledge to build and deploy networks as artworks in different locations. The second part, *know what,* is critical reflection through writing on what is produced. Nelson's final element is *know that*, or the use of other positions that arise from the first two elements and help to develop them. The praxis, then, involves a triangulation between doing, critical reflection, and an understanding of key related positions to develop new knowledge. There is, as such, no specific body of knowledge that requires mastery for the completion of this thesis. To quote Nelson, the rigour 'lies in syncretism, not depth mining', and in an interdisciplinary approach that will 'draw upon a range of sources in several fields.'[78]

In this section, I explore each of these elements in sequence, and draw on existing writing around methodology to support this format. Initially, I refer to Donna Haraway's 'Situated Knowledges' essay from 1988 to explore why practice based making *in situ* is a vital aspect of developing a broader understanding of networks. I then use Dorothea von Hantelmann's writing on the performativity of art to explore why reflecting on the conditions that artworks produce around them is vital. Finally, I look to Alexander R Galloway and Olga Goriunova to explore how the viewpoints of others can be drawn in to reveal how digital networks already structure our reality, and how these can offer clues as to how they might be reconfigured.

Practice – Building Networks

When I consider the multiplicity of what can constitute digital networks, one element remains consistent; they are inevitably created by someone else. The network is produced elsewhere, with its nodes, connections and functionality, decided by an invisible other. The same could be said for visualisations of networks, social networks, network maps and so on. They are 'materialised' from another's standpoint. In 'Situated Knowledges: The Science Question and the Privilege of Partial Perspective,'

[78] Robin Nelson, *Practice as Research in the Arts. Principles, Protocols, Pedagogies, Resistances.* (Basingstoke: Palgrave Macmillan, 2013). 34.

Donna Haraway describes the 'god trick' as a disembodied, usually masculine, 'gaze that mythically inscribes all marked bodies, that makes the unmarked category claim the power to see and not be seen, to represent while escaping representation.'[79] Those who set the standards for the scientific objectivity that Haraway questions are engaged in a power play that names others, whilst remaining unlocatable and irresponsible. Digital networks are filled with such positions, like Telecommunication companies who dictate access, or billionaire CEOs, whose corporations can define how we socialise or consume. We *join* Facebook or TikTok and *connect* to Sky Broadband, or to a Starbucks Wi-Fi hotspot. In each instance, we move into a network. Where, how and what we appear as, and how and what we connect to, is defined elsewhere.

Does this also occur in art made with, or on digital networks? I am regularly inspired by work on Rhizome's 'Net Art Anthology', which documents net art from the 1980s to the 2010s. The exhibition, 'The Art Happens Here' at the New Museum in winter 2019 draws on this archive and takes its title from MTAA's 'Simple Net Art Diagram', shown below. Made in 1997, the diagram shows that art made using the network *happens*, that it 'can be thought of as an action or performance'[80] that occurs in an undefined *here*. Accompanying text on the Rhizome website suggests *here* could be 'the physical infrastructure of the internet, as a network context from which a work cannot be extracted without altering it fundamentally, and as the space between users, where no clear distinction is drawn between author and audience.'[81] Yet, I also find this free-floating *here* problematic. It suggests a network that can be *defined* in any number of ways that is opposite to the singular, predefined 'god trick' definition of networked environments like Facebook.

Again, a similar parallel can be found in Haraway's text. In discussing her quest to reveal that science's claims to truth are socially constructed, she describes how this initially resulted in a set of rhetorical 'force fields', moving in a 'fully textualized and

---

[79] Donna Haraway, "Situated Knowledges: The Science Question and the Privilege of Partial Perspective," *Feminist Studies* 14, no. 3 (Autumn 1988): 575–99. 581.

[80] "NET ART ANTHOLOGY: Simple Net Art Diagram," NET ART ANTHOLOGY: Simple Net Art Diagram, October 27, 2016, https://anthology.rhizome.org/simple-net-art-diagram.

[81] "NET ART ANTHOLOGY."

coded world'[82] via theories, such as Marxism or Psychoanalysis. However, for Haraway, this radical contingency alone is insufficient, as it 'perversely cojoined with the discourse of many practising scientists' as it 'discovers and describes'[83] by *means of* activity, be it by arguing or testing. It *theorizes* the world. I am no less keen on simply swapping Mark Zuckerberg's image of the network for one singularly defined by an interpretation of Karl Marx. Perhaps it *is* important to understand the networked *here* of 'the art happens here' in Marxist terms, or in infrastructural terms, but, taking Haraway's lead, it is also important to recognise that the networked *here,* in every instance, is different. So, what is preferable, for Haraway, is 'an earth wide network of connections, including the partial ability to translate knowledges among very differentiated communities.'[84]

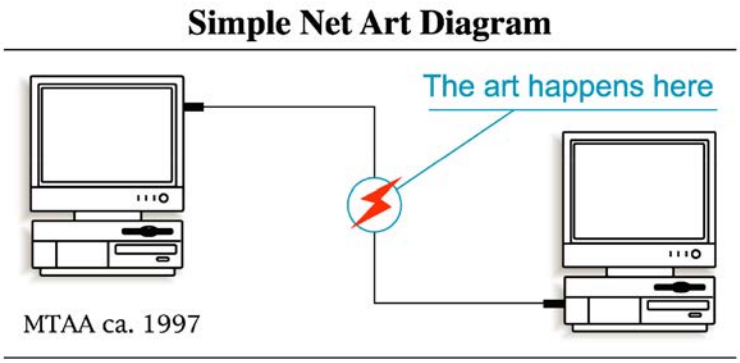


Figure 7 - 'Simple Net Art Diagramme,' MTAA, 1997

Through the practice of *making* networks undertaken as part of this research, I am entangled in them and develop this *partial ability* that does not allude to completeness yet is open to connections. For Haraway, those taking the position of dominant and disembodied self-identifiers 'disappear from view,'[85] through a lack of critical distancing. Instead, Haraway suggests that we

> learn in our bodies, endowed with primate colour and stereoscopic vision, how to attach the objective and theoretical scanners in order to name where

[82] Haraway, "Situated Knowledges: The Science Question and the Privilege of Partial Perspective." 577.

[83] Haraway. 579.

[84] Haraway. 580.

[85] Haraway. 587.

> we are and are not, in dimensions of mental and physical space we hardly know how to name.[86]

I argue that this viewpoint could be extended to the networked spaces we also occupy. On reflection, it does seem peculiar that we have such a limited, non-specific vocabulary to express our position within the network. As *users,* we are a *node* in *a web*, dispersed in *the cloud*. Throughout the thesis, I will practise Haraway's suggestion to produce situated knowledge by building and locating networks as part of the practice element of the research. This establishes our eyes as *visualization technologies,* through which we can take a 'subjugated standpoint', where 'partial, locatable critical knowledge' can sustain the 'possibility of webs of connections.'[87] For Haraway, it is also vital to critically engage with our own way of seeing. Asking what has enabled us to see, it is important to ask the question, who I am seeing with? Who gets to see? Who is accorded more than one viewpoint? Building a network, followed by reflecting on how that network functions, is crucial. This allows me to examine my own position, and the conditions it creates for others. This process of positioning explores how more invisible, but dominant forces, resonate with more tangible personal or local forces, as they are revealed. The networks are made, and the reflective language used to discuss them shifts between the technical, anecdotal and theoretical. As I engage with the world with my body to make these artworks, what circumstances am I producing?

Reflecting on Practice Through Writing

The act of networked retreat, of building isolated networks in specific locations, invites a process of reflection concerning how these new networks function *specifically* in these places. This reflection occurs in the thesis, through the process of writing. In writing, I attempt not to flatten these experiences into a technical exercise, or to fit them into a particular theoretical framework, but rather, to encourage a way of viewing networks that allows me to develop my own understanding of how they can function beyond these well-established paradigms. Whilst there is a value in technical

---

[86] Haraway. 582.

[87] Haraway. 584.

innovation and theoretical discourse, for the purposes of this thesis, I am more interested in what else emerges from practice and reflection.

In '10 Concepts Following Cathy Wilkes' Practice' by Simon O'Sullivan, he suggests that 'Writing's only role…must be to somehow accompany the work, to seize upon certain aspects and to amplify or develop them. This might involve writing as itself a kind of fiction; writing that produces the same 'structure of feeling.'[88] As I practise building networks in various locations I seize upon elements from these locations, such as materials and histories. Similarly, the writing uses these contingent additions as jumping-off points from which to discuss networks and the conditions they create; how they are conceptualised, and how they might be thought about differently.

It is also useful to consider my process in relation to what Dorothea Von Hantelmann calls the *performative* nature of all artworks. Just as Haraway suggests all visualisation techniques reflect a particular 'way of life,' in 'The Experiential Turn', Von Hantelmann suggests that all artworks have a 'reality producing dimension.'[89] For example, our inherited nineteenth century exhibition format typifies a 'reinforcement mechanism in relation to new institutions of social training'[90] that made up Foucault's disciplinary society.[91] Disciplinary societies relied on the enclosure of authoritative spaces in which

---

[88] Simon O'Sullivan, "Ten Concepts Following Cathy Wilkes' Practice," *Afterall*, no. 12 (2005): 65–70.

[89] D. von Hantelmann, "The Experiential Turn," *Living Collections Catalogue* 1, no. 1 (June 30, 2014), https://walkerart.org/collections/publications/performativity/experiential-turn/.

[90] Dorothea von Hantelmann, *How to Do Things with Art* (Zurich: JRP|Ringier, 2010). 10.

[91] The process of discipline, for Foucault, is a technique in which power is exerted by rendering the body 'docile'. Docility suggests that the body 'may be subjected, used, transformed and improved'. So, disciplinary power is not just concerned with simply getting what it wants, not caring how, as long as it gets it (as a king or emperor might); it also must also 'mould' the subjects to produce what it wants in the most economic and efficient way (a by-product of this, for Foucault, is that the more efficient a body gets, the easier it becomes to dominate). There is no singular, over-arching power mechanism that reaches into each life, rather Foucault sees 'a multiplicity of often minor processes, of different origin and scattered location, which overlap, repeat or imitate one another, distinguish themselves from one another according to their domain of application, converge and gradually produce the blueprint of a general method'. Michel Foucault, *The Foucault Reader*, ed. Paul Rabinow (London: Penguin, 1984).

the individual passed from one space to another: the family home, school, the factory and the hospital or prison. Although each space retained its own characteristics, the power dynamic within each remained essentially the same, those of 'enclosure, surveillance, reward and punishment, the pyramidal hierarchy.'[92] Required behaviour was established, whether that be in terms of productivity or actions, to provide whatever those in power wished to achieve. Then, the body was subject to an ever-narrowing scrutiny in terms of its performance to ensure its ongoing development. Using the numerical basis of techniques such as examinations and time and motion studies, those in power could weed out those performing outside of required parameters, and adjust accordingly, or raise performance levels by shifting expectations higher. This meant that overseers of these spaces had an essentially administrative function, organising individuals into identifiable groups, and manipulating their behaviour, so that their collective output was greater than the sum of its individual parts, and geared to maximum efficiency. In the exhibition format, Von Hantelmann suggests, we see another example of how space is organised to present what Foucault calls 'evolutive time'[93] that is deployed to 'give shape and presence to history, inventing it, in effect by defining the space for a ritual encounter with the past.'[94] Artefacts were presented along a linear trajectory that the visitor traces, presenting a sequence of unlimited growth, through which they are trained in a specific version of history that is 'bound up with a mode of functioning of power.'[95]

As much as this suggests how artworks can be examined to expose vectors of power that include or exclude people, it does not help us to understand how networks themselves help to shape reality. Von Hantelmann does recognise that times have changed and the notion of armies of bodies rendered docile by constant travel through distinct disciplinary spaces has been superseded. This has been replaced by a society in

---

[92] Michel Foucault, "The Subject and Power," in *Michel Foucault: Beyond Structuralism and Hermeneutics*, ed. Hubert L. Dreyfus and Paul Rabinow (Chicago: University of Chicago Press, 1983). 219.

[93] Michel Foucault, *Discipline and Punish. The Birth of the Prison*, trans. Alan Sheridan (New York: Vintage, 1995). 160.

[94] von Hantelmann, *How to Do Things with Art*. 10.

[95] Foucault, *Discipline and Punish. The Birth of the Prison*. 160-161

which the individual is an active seeker of *individualised* experiences through which to define themselves. It would be relatively easy to see the attendees of the Camp Grounded digital detox, discussed by Theodora Sutton, as pursuing such an experience, temporarily opting out of networked life, in order to define themselves as somehow occupying a more unique position than others in society.

Von Hantelmann draws upon Gerhard Schulze's writing around the 'Experience Society' to explain this shift towards individual experience. Society is no longer characterised by scarcity, but by abundance. With this shift away from the gathering of the material necessities for sustenance, there comes a 'shift towards immaterial and subject related concerns.'[96] Abundant societies mean 'more and more people can (and need to) shape their lives according to their own needs and preferences, people have to learn how to relate to their living context in a mode of selection- and their selection criteria are no longer primarily purpose orientated, - that is driven by necessity, but are also, and increasingly, aesthetic.'[97] So, the self becomes more engaged with how it presents itself and, for von Hantelmann, the aesthetic contemplation of the object or artefact becomes less important.[98] The process of retreat, to build and reflect on networks, allows me to examine this mode of selection. What do I notice? What is in? What is out? Through approaching networked retreat as a form of situated knowledge, building and reflecting on networks as a constituent part of my reality, it also becomes apparent that they *already* form reality in very distinct ways and the work of others can provide some insight into how.

---

[96] von Hantelmann, "The Experiential Turn."

[97] von Hantelmann.

[98] It is interesting to note that von Hantelmann also describes the emergence of the bourgeois as a significant social force who united the material with the aesthetic. She describes how aesthetic contemplation was the preserve of the aristocracy who could commission and collect objects of beauty while the labouring classes were preoccupied with securing the material necessities to sustain life. With the bourgeois, *culture* and aesthetic experience emerged as an opportunity to explore this relationship between subjectivity and materiality via artistic production and presentation in museums and galleries.

The Mobilisation of Concepts from Elsewhere

In his essay, 'The Anti-Language of New Media', Alexander Galloway describes how previous art forms, such as painting or cinema, rely on proximity, drawing the viewer into a world by drawing them close, whilst, at the same time, stripping them of their agency to interact with it. This proximity is achieved by fixating on the embodied human or, 'at least the absolute horizon of their various aesthetic investments.'[99] Computers, on the other hand, do not need to appeal to the world of the human viewer, as they contain, in the amorphous space behind the screen, a *body* of data that already represents the world outside. The viewer selects from *this* body, using 'acute fact-finding, our scanning and data mining, our spidering and extracting'[100], to reveal the world in our (the user's) image. Here, Galloway and von Hantelmann align in their recognition that the process of selection is key, but Galloway develops this concept further by suggesting that what is selected *from* is a digitised translation. He states that the world outside of the screen is spoken about less and less, 'not because it is gone for good, but because we have perfected a language *for* it.'[101]

In this thesis, it is also important to question how this language appears and others have interpreted it, what is available for this selection, who formulates it, and how it is being used? I do this by drawing on the varied writings and artworks of others. However, in the same way as Donna Haraway writes about 'high status games of rhetoric,'[102] Galloway also recognises that it is important not to be impeded by trying to establish, or reinforce, a specific 'language,' or set of formal qualities for media. To do this 'forecloses on contingency and historicity.'[103] As I understand this, Galloway appears to be suggesting that accidents of fate or circumstance should be allowed to interfere with the neat protocological world as it is constructed behind the screen. Perhaps, also, alternative and idiosyncratic ways of using the media itself, can, and

---

[99] Alexander R Galloway, "The Anti-Language of New Media," *Discourse* 32, no. 3 (2010): 276–84. 277.

[100] Galloway. 278.

[101] Galloway. 278.

[102] Haraway, "Situated Knowledges: The Science Question and the Privilege of Partial Perspective." 580.

[103] Galloway, "The Anti-Language of New Media." 279.

perhaps should, be practised through the lens of a multitude of historical moments? By building situated networks and reflecting on this process, I am, hopefully, giving space for this contingency and historicity to emerge.

What is built, reflected on and contextualised, can be thought of as a *platform*. In *Art Platforms and Cultural Production on the Internet*, Olga Goriunova describes a platform as 'a set of shared resources that might be material, organisational, or intentional that inscribes certain practices and approaches in order to develop collaboration, production and the capacity to create change.'[104] Art platforms provide an opportunity for the creation of a flexible space that is temporarily open to reconfiguration of the internal dynamics usually at work within a larger structure that perpetuates its own conventions. What are these *internal dynamics* and *languages* that operate on digital networks? Where are they from? Who established them? A vital part of this thesis concerns mobilising interpretations of these operations, so that networked platforms too 'become settings that ask questions,'[105] in much the same way as von Hantelmann asks questions of artworks in the exhibition context. The key difference is that the platform is a space to explore what Goriunova calls *organisational aesthetics* as a practice simultaneously 'partaking in the sphere of organisations and networks dominated by forces and interests of particular kinds' whilst 'working from within upon their formation.'[106] Rather than looking back at an artwork, or cultural behaviour after the fact, and celebrating or condemning it, the art platform explores emergent practices by 'openly thinking about what their power is and to describe this power through means that do not exhaust it or reduce it to a decidable equation.'[107] Again, this echoes Haraway's discussion of partial, critical viewpoints.

Conclusion

I began this chapter by exploring notions of retreat from several perspectives, in order to establish it as a useful strategy for understanding digital networks. Through

---

[104] Olga Goriunova, Art Platforms and Cultural Production on the Internet (Abingdon: Routledge, 2012). 8.

[105] Goriunova. 6.

[106] Goriunova. 18.

[107] Goriunova. 19.

discussing Foucault's ideas around self-knowledge, and processes, such as *exagoresis* and *exomologesis*, I established retreat as a complex and flexible activity with deep historical roots. What also emerges from this section is that the act of retreat is enduring, as suggested by how Charlotte Posenenske sought to use strategies of self-erasure through standardisation. Kevin Bewersdorf sought to reconfigure the self through (networked) isolation. Although I demonstrated that there are traces of the hermit or monastery in some of the activities of these artists, it was also important to gesture towards retreat from technology as a broader contemporary activity. It was useful to discuss Theodora Sutton's writing around digital detox to see its relationship to romantic notions of a return to a purer, universal form of 'nature' and 'human' interaction.

In the methodology section, Donna Haraway's writing on Situated Knowledges challenges the idea of movement towards these overarching concepts, such as 'natural' or 'human', instead preferring a critically *positioned* stance that encourages a network of partial, embodied viewpoints, which consider the conditions that enable them. I suggest a parallel between Haraway's description of scientific, objective knowledge as a disembodied 'god trick', and the fact that digital networks are materialised elsewhere by ubiquitous, yet invisible presences, such as global platforms, or telecommunications companies. I use this to support the method of building networks, as artworks, through practice, then reflecting on this process to develop a richer understanding of them, which, in turn, feeds back into my practice. In acknowledging that networks perpetuate what Haraway calls, in relation to objective knowledge, 'power moves'[108], this chapter also more broadly discusses how artworks have a similar 'reality producing effect.' These effects can then be revealed in two ways, firstly through individual reflection, using Dorothea von Hantelmann's writing around the performativity of artworks. Secondly, as this performativity emerges, I can look to interpretations already described by others in artworks and writing. I will begin this process in the next chapter by exploring a network made during 2017.

[108] Haraway, "Situated Knowledges: The Science Question and the Privilege of Partial Perspective." 580.

Chapter 2 – A Retreat to the Forest

Introduction

In this chapter, I will focus on a work titled *Memorial* made in 2017 on a residency in a forest on a mountainside in the Highlands of Scotland during a rainy August.
The isolated location gave me a chance to consider retreat in its most conventional form, and in the proposal submitted to the selection panel I described how I wanted to explore traditional forms of self-isolation, referencing early Christian saints, such as Simon of Stylites, who, as previously mentioned, lived on top of a pillar for thirty-seven years. As the first significant piece of practice research undertaken, it is perhaps unsurprising and fitting that I begin by exploring this conventional aspect of retreat, of the person alone, returning to 'nature' with the aim of discovering *something* that has, otherwise, been obscured. It is worth pointing out that, during the initial stages of the research, I was unsure as to what I was actually looking for. I was hoping that the act of retreat and the isolated setting would provide the answers, which, as I reflect, they duly did.

I intended to build a Wireless Local Area Network (WLAN) on the mountainside. A WLAN connects devices in an immediate geographical area to a central server. They often connect machines in large organisations together, like corporations or institutions. I applied for the residency as it was off-grid, isolated, and provided me with an interesting situation in which to work with local broadcast. I thought the counter-intuitiveness of this disconnected situation could provide an interesting stage on which to explore my interest in digital networks. The studio could only be accessed by walking up a steep track through dense forest to a 'private' boarded path to the space, which was a smallish, square room built on top of the trunk of a tree, with a table, chair and single window looking out over the valley. The long steep walk up to the space meant that I could only carry a limited amount of equipment each day, and the lack of mains power meant that if, I was working digitally, I was only able to work for the duration of one battery charge. Along with food and drink, each day I could

only take a laptop, two books to read, a notebook and pens, some twine, a saw, a pair of pliers and a pair of scissors.

On this mountainside, I built a telecommunications mast that broadcast a Wi-Fi signal to nobody in particular. I imagined that, if there were any walkers passing by, they had better things to look at than their phones or laptops. Due to its isolated location in a valley there were no other signals available, no Wi-Fi, no 4G. The mast was a six-foot length of wonky bark, covered branch that had spent its life high up, horizontally jutting from a tree; but was now planted in the ground, vertically, with a small computer hanging from the top. The computer, a Rasperry Pi 3b, was in a plastic case roughly the size of a pack of playing cards. It was powered by a battery of a similar size that was taped to it. This device was tied by string to a small platform made by tying small sticks together, a bit like a miniature raft. The raft was covered by a small triangular tent. I had tied some thin, white plastic from a carrier bag, to keep the computer and battery dry. I bound another stick, shaped like a hook, to the top of the mast, and hung the plastic covered computer raft from it, using twine. The computer raft could broadcast a Wi-Fi network over an area of approximately thirty metres. The broadcast is produced by encoding the data of a website and video into binary data packets that can then be translated into radio waves, oscillating 2.4 billion times per second in all directions, ready to be received on other, nearby devices, and translated back into website data and video.

Throughout this thesis, I will take a situated approach that draws just on anecdotal responses to site and material construction. These, in turn, provide opportunities to look at the work of others. This chapter, and those after, will be formatted by using a sequence of headings that relate to such elements of site and material. For this chapter, I chose to look at, The Mountainside, The Mast, The Captive Portal, Memorial, and Waves. I have chosen to take this approach, as it, inevitably, builds an incomplete image of the digital network, yet exposes the network as something that is constructed, both conceptually and physically, from interacting parts. In *Media Ecologies. Materialist Energies in Art and Technoculture*, Matthew Fuller uses a similar approach to explore media systems, from a London pirate radio station to a singular media object in John Hilliard's 1971 series of photographs, 'A Camera Recording Its

Own Condition (7 apertures, 10 speeds, 2 mirrors)'. For Fuller, this method allowed him to ask how 'different qualities in media systems with their various and particular or shared rhythms codes, politics, capacities…can be said to mix, to interrelate, and to produce patterns, dangers and potentials?'[109] The text becomes a mix of conceptual worlds and different material elements that, for Fuller, 'seeks not to develop a necessarily unifying framework, but to hold in its hands for a few moments an explosion of activity and ideas.'[110] I take Fuller's lead, and look, not only to the media systems themselves, but also to the environments in which they operate. This approach offers an opportunity to look at networks in a broader capacity.

Figure 8 - The top of the mast against a backdrop of the surrounding forest.

The Mountainside

This first section explores the location of the mountainside as a site for creating a network. These conditions raised initial questions about how and why I used networks in my daily life, and allowed me to begin to think about aspects of connection that I

[109] Matthew Fuller, Media Ecologies. Materialist Energies in Art and Technoculture (Cambridge, Massachusetts: MIT Press, 2007). 2.

[110] Fuller. 12.

took for granted. The residency itself, Outlandia, is described as an 'off-grid treehouse artist studio and fieldstation', inspired by 'childhood dens, wildlife hides and bothies, by forest outlaws and Japanese poetry platforms.'[111] It was situated three miles from Fort William at the foot of Ben Nevis on Scottish Forestry Commission land. I camped at the base of the mountain, then hiked up each day to the studio with my equipment.

The landscape was diagonal and vertical, with lush undergrowth sloping downwards, and spruce pines reaching upwards. The damp and diagonal floor was slippery underfoot, as there were few paths. It was crowded with plants, grass and ferns that I was forced to wade through. It was green and feathery, with the fine lines of slender tree trunks poking towards the bright, flat sky. The treetops moved in the wind, causing a permanent swish. My research mostly consisted of: writing, taking photographs and short videos, reading, making notes and experimenting with the low-powered computer I hoped to broadcast with. I felt quite isolated, yet received visitors every day, due to the mysterious nature of the private path that branched off into the forest that attracted walkers, who were curious about what was at the end of it.

Figure 9 - The view of Ben Nevis from the Outlandia studio, 2017

Figure 10 - The forest path to the Outlandia studio

[111] "Outlandia," accessed May 4, 2020, /air/outlandia.

Figure 11 - The Outlandia studio is pictured right of centre, while the mast for the artwork is on the left.

In this location, there was no wireless or 4g connectivity. I could get no signal on my phone. Reading notes written in the studio I observe 'the air feels empty of signals.' Although there were probably signals everywhere, (radio waves on other frequencies for other purposes), I thought that the small sections of the spectrum reserved for my 4g mobile and wireless broadband were pleasingly empty. I felt a sense of relief that all the information carried on the network was, temporarily, at bay. But relief from what? What was congesting my surroundings, and ubiquitous in everyday life, so much so, that I only really noticed it when it was gone? This sense of congestion brings with it the sense that there is an almost inescapable obligation to connect in certain ways, at a certain tempo, that, on reflection, I found oppressive enough for me to pursue an opportunity that allowed me to leave it behind.[112]

[112] While I should acknowledge that this line of thought might appear quite close to those attending the camp grounded retreats that Theodora Sutton discusses and the wider discussion around the 'digital detox', there are three important differences. Firstly, I was alone, I was not trying to connect with others in a more 'genuine' way. Secondly, nor was I, despite appearances, attempting some connection with nature or the romantic sublime on a mountainside. Finally, I was not 'rejecting'

On the mountainside, I became aware of the frequency spectrum as a 'space' that was normally densely crowded with many different signals; for space science, aeronautics, maritime navigation, and so on.[113] Yet, I had sought a location in which parts of this space were much less populated and, consequently, the network began to emerge as a space of *social obligations*; obligations that had to be filled in a certain way. Written in 2007, Maurizio Lazaratto's essay 'Immaterial Labour' goes some way to explain how networked connection might have taken on somewhat obligatory and even authoritarian undertones. For Lazaratto, immaterial labour is characterised by an increase in the informational content of labour. The worker now operates a computer and communicates. To do this, he or she must develop the skills to function on multiple platforms and devices. The obligation now spills over in to lots of other aspects of life beyond work, such as: socialising, relationships, sex, entertainment, finance, and so on. For these diverse types of networked interaction to operate they must be subject to a process of *standardisation*.

What are the characteristics of this peculiar image of the network as simultaneously flexible, yet standardised? Firstly, the system needs to be one in which data can be transmitted effectively across whole populations. Secondly, each node must also be able to have the ability to feed its own data into this network. So, in order to be truly global, all local idiosyncrasies must be standardised or stripped out, or translation/transmission will be affected. These characteristics are neatly encapsulated in John Postel's RFC 791 document which describes key aspects of the early Internet: 'In general, an implementation must be conservative in its sending behavior, and liberal in its receiving behavior,'[114] or, 'Be liberal in what you accept, and conservative in what you send', as it is often shortened to. One must be accepting of a high degree

---

technology, or trying to escape from it, merely looking for a different setting in which my experience of it could shift.

[113] "Ofcom Spectrum Map Page," accessed July 8, 2021, http://static.ofcom.org.uk/static/spectrum/map.html. "Ofcom Spectrum Map Page."

[114] John Postel, "RFC 791," IETF Internet Engineering Task Force, 1981, http://www.ietf.org/rfc/rfc0791.txt. RFC's were requests for comments sent between engineers developing the internet.

of individuality, but only as long as it is translatable into a strict administrative system. In the case of the Internet, there is a singular set of synchronising conditions, through which an infinite array of human activities and contexts can be standardised.

On reflection, the space created on the mountainside offered an opportunity to think about how *narrow* the modes of communication offered by the network are. I can engage in any number of activities through the network, but perhaps that is not the problem? Perhaps it is that I must engage with the network is *certain ways.*
It is important, at this juncture, to look at little closer at the mechanics of these liberal/conservative networks, and the foundations on which they are based. In *Protocol: How Control Exists After Decentralisation*, Alexander Galloway describes how the internet rose from ARPANET, an American military network built during the Cold War to be a decentralised communication system that could still function, even if one of its nodes were disabled. It functioned by routing *packets* of data through other nodes, with each node relaying the information in the general direction of its destination, to the next available node. Should the transfer fail, the nodes update their information on which neighbouring node is available and reroute accordingly. This remains the principle of today's Internet; data is routed across the network, between hosts, in a manner that constantly considers available paths and traffic volumes.

The way that these different nodes can work together so efficiently is by all following the same *protocol*. Historically, protocols have denoted a document guiding correct procedures or behaviours in each situation. Today, in the context of networking, protocol refers to 'standards governing the implementation of specific technologies.'[115] For instance, the Transmission Control Protocol (TCP), amongst other things, establishes a connection between networked hosts, and checks that the data has arrived in the correct order, and, if it has not, requests retransmission. Protocols provide rules for very specific tasks, so while TCP is responsible for moving the data, it has no idea what the content of the data itself is. This data is encapsulated into a 'packet' by another protocol, the Internet Protocol (IP). IP ensures that the data to be

[115] Alexander R Galloway, *Protocol: How Control Exists After Decentralisation* (Cambridge, Massachusetts: MIT Press, 2004). 7.

sent is broken down into a readable 'payload' that also contains its source and eventual destination. TCP/IP was formalised during the 1980s, and is the standard for transmitting data across the Internet. It is one amongst many protocols that govern the internet, including Hypertext Transfer Protocol (HTTP), Hypertext Mark-up Language (HTML), Simple Mail Transfer Protocol (SMTP), and so on. It is in these protocols that we can see how the logic of decontextualised and fragmented modularity described earlier by Tara McPherson, in relation to the development of UNIX and race in the 1960s, continued through the development of the Internet.[116]

For the purposes of this thesis, the actual mechanics of network protocols is less important, and Galloway provides a sufficiently detailed account. However, what is important to note is the tension between 'anarchical distribution', through a fundamentally flat technical framework, and the 'territorialising structure'[117] of strict protocols that consumes diversity, on the other hand. There is a balancing act between allowing the freedom of unfettered communication, and the standardizing of information exchange that allows this. Push too far in one direction, and the complexities of individual experiences become too rich to standardise, and push it too far in the other direction, and the complexities of experience are subsumed through a totalising, standardised mode of communication. Perhaps there, on the mountainside, I wished to tip more towards revealing 'the complexities of individual experience'. Ordinarily, the network cannot flex to this requirement.

Given the genesis of the Internet in military research, one can understand that these issues around the standardisation of experience might have been somewhat irrelevant at the time of its development. The command and control structure of the military

---

[116] This modularity is a feature of all network connection models, however, TCP, with its built-in routing and error checking protocols, is particularly well suited to the transmission of discrete data objects such as text, video and image files. This contrasts with models such as UDP (User Datagram Protocol) that opens, but does not manage, a connection and uses a more basic checksum error checking mechanism. Consequently, for the purposes of this thesis, in which different forms of modularity are encouraged to sit together, the 'more' modular TCP/IP model is favoured over 'less' modular models such as UDP that are more suited to the transmission of data streams such as VoIP.

[117] Galloway, *Protocol: How Control Exists After Decentralisation*. 64.

lends itself well to the transmission of standardized orders. Once its development became independent of the military, standards have been maintained and extended by a loose grouping of organisations, such as the Internet Engineering Task Force (IETF) and Institute of Electrical and Electronic Engineers (IEEE). These groups develop and ratify the protocols, through open discussion.[118] The result is that 'in order for protocol to enable radically distributed communications between autonomous entities, it must employ a strategy of universalization, and of homogeneity.'[119] Paradoxically, it must promote standardization in order to enable openness. Yet, this is a 'total' openness to create *one* network.

Sat on the mountainside, I could not alter these relatively hidden computational standards. Nevertheless, this process marked the beginning of a shift in understanding, in terms of how I interact with networks, that continued to evolve throughout the research. I became aware of the concept of the network as an intentionally structured concept. In the case of the internet, with its roots in command and control, an invisible authority names the nodes and the links. This authority became aligned with Haraway's imagined 'they…a kind of invisible conspiracy of masculinist scientists and philosophers,'[120] replaced with white, male, middle-aged engineers in government

---

[118] Although these discussions are open, as Galloway points out, the expertise required to understand and contribute to these discussions actually limits the groups to a small number of 'highly educated, altruistic, liberal minded, science professionals' who are 'electrical engineers' and 'computer specialists' from modernised societies' arguably biasing the results to the needs of this group. These groups can be superseded by groups with greater resources and access to expertise, with an accompanying potential shift in agenda. Google's setting of new technical standards that favour their advertising platforms is a good example and Michel Foucault makes a similar point in reference to the building of railroads between Germany and France. 'In France a theory developed that the railroads would increase familiarity among people and that new forms of human universality made possible would render war impossible,. But what the people did not foresee-although German military command was fully aware of it, since they were much cleverer than their French Counterpart-was that, on the contrary, the railroads rendered war far easier to wage war' Foucault, *The Foucault Reader*.Foucault.Foucault. 243.

[119] Galloway, *Protocol: How Control Exists After Decentralisation*. 142.

[120] Haraway, "Situated Knowledges: The Science Question and the Privilege of Partial Perspective." 575.

funded laboratories, or Corporate HQs performing a similar god-trick by defining our networks.

Before arriving at the mountain, my experience of networks had been one of consuming and producing endless content in this territory that is defined by others. Was my arrival at a studio, at the dead-end of a long path in an isolated forest, a sort of rejection of these existing definitions that result in an endlessly compulsive stream of 'personalised' content, in order to experiment with defining the territory myself? Why did I have to retreat to the quiet of a mountain for these things to become visible? Galloway suggests that it is because there exists a second set of conventions, not as well documented as protocols, but just as pervasive and vital. These conventions are the formal qualities of the 'surfing experience' and use, as a key feature, a process of *obfuscation*, of hiding that which makes it function (for Galloway, this is a characteristic of all successful networks, such as the mode of production in Capitalism, and the camera in the Hollywood movie). On the web, these mechanics are hidden by what Galloway calls the undocumented conventions of *continuity*. Continuity defines how the Internet remains a pleasant experience for the user, rather than being a disorientating experience that it should be, of being continually directed from server to server in geographically diverse places and leaping between different types of encoded data (text, image, audio, video etc). Continuity is sustained, for Galloway, in several ways; by a continual link available to other virtual locations, and the hardware simply 'functioning' in the background, with no glitches or crashes. Content must also load quickly and give the opportunity to feed back. This is to keep pace with the register of consciousness, and the illusion of interactions taking place in real time.

Galloway's description of continuity, written as it was in 2004, describes the process of navigating endlessly between linked web pages or posts. Yet, we are now in the age of the ubiquitous *feed.* In his essay, 'The Post as Medium,' Paul Soulellis describes how the concept of the post was fundamental to the evolution of web content. The post was an individual message posted to a specific community, that, much like posters, or postcards, was addressed to an individual or explicit community. The collection of posts, then, becomes a communal memory for that group. The feed, on the other

hand, 'pulls us into a flowing state of new boredom and semi-awareness that feels like a texture.'[121] The page was able to contain multiple posts, yet the feed breaks free from any such constraints to provide a virtually endless stream of condensed information from everyone, everywhere. Much like how the management of a factory might speed up the production line to increase productivity at the expense of workers' exertions, the network 'extracts' attention and productivity from its nodes, through a continually changing feed accompanied by constant user interface tweaks, on a globalised, standardised platform.

On the mountainside, nothing would load. There were no links to take me elsewhere. I could not scroll endlessly. For a short period, I was static in the network by being disconnected from it. In a sense, I was beginning to redefine my relationship to the global network by defining my own position as 'not connected,' not browsing, not e-mailing, simply not inputting. Returning to Lazaratto's 'Immaterial Labour,' the immaterial labourer must have technical skills to communicate and navigate the territories outlined above. However, these are only useful insofar as they allow the worker to generate and manage connections with fellow workers and consumers, through which they can disseminate their own intellectual skills, made up from their informational and cultural backgrounds. For Lazaratto, this is the second part of immaterial labour. It includes creative tasks that are not ordinarily associated with work, such as 'defining and fixing cultural and artistic standards, fashions, tasks, consumer norms, and, more strategically, public opinions.'[122] Usually, the job of 'the bourgeoisie and its children', Lazaratto suggests that immaterial labour now emerges from 'mass intellectuality' of the general public.

On reflection, whilst I was standing on a mountainside, in damp undergrowth, deliberating on building an isolated network, I was, not only trying to retreat from the standardisation of my interactions with others, but also their reification. This further

---

[121] Paul Soulellis, "The Post as Medium," in *The Art Happens Here: Net Art Anthology*, ed. Connor Michael and Aria Dean (New York: Brooklyn, 2019). 428.

[122] Maurizio Lazzarato, "Immaterial Labor," in Radical Thought In Italy: A Potential Politics (Minneapolis: University of Minnesota Press, 2006). 132.

obligation to use a computer to disseminate my cultural background to shape trends was problematic, for several reasons. I have no problem with the distribution of knowledge and skills. After all, the roots of the world wide web lie in a set of protocols that were written in as open and transparent way as possible. Its inventor, Tim Berners Lee, imagined it as a network that was 'an interactive sea of shared knowledge…immersing us as a warm friendly environment made of things we and our friends have seen, heard, believe or have figured out.'[123] Instead, we have a situation in which the network is dominated by a small number of corporations who, through their co-option of this technology, and its programming, have stripped the emancipatory opportunities from them, and retooled them to serve the market.[124] Google, Facebook, Apple, Microsoft and Amazon are now in a position where they are so powerful that they can monopolise whole rafts of online experience. From hardware and communication, to socialising, to entertainment and banking, these corporations have, through the clever deployment of technology, turned the 'user' into something other, into a mere opportunity for channelling behaviour into profit. To be a user, arguably, one must make a choice to use, to select, but this does not happen. Instead, one is presented with an algorithmically generated environment of faux choices based on previous activity. It is the buyers of this data that are the real users. As Bruce Sterling suggests in *The Epic Struggle of the Internet of Things:* 'People are not Google's 'customers' or even Google's 'users', but its feudal livestock.'[125]

Immaterial labour, for Lazzarato, doesn't happen in the factory but is still a cycle of production, more accurately described as the atomised work of an autonomous intellectual proletarian. He suggests that, while Fordist organisational principles integrated consumption into labour, through, I imagine, the excessive production of cheap and varied commodities, the immaterial production cycle integrates communication into labour as well. To quote Lazaratto, 'as it is no longer possible to

---

[123] Galloway, Protocol: How Control Exists After Decentralisation. 142.

[124] See Google's Accelerated Mobile Pages Project (AMP), which is a set of additional web publishing standards that privileges websites that deploy them in Google's own rankings, meaning a 'preferential web' emerges where higher visibility is afforded to those complying to corporate, rather than institutional, standards.

[125] Bruce Sterling, *The Epic Struggle of the Internet of Things* (Moscow: Strelka Press, 2014). 6.

confine subjectivity merely to tasks of execution, it becomes necessary for the subject's competence in the areas of management, communication, and creativity to be made compatible with the condition of "production for production's sake".'[126] Communication as labour spills over into much of the rest of life, through an endless use of platforms that facilitate: banking, socialising, dating, exercising and almost anything else one can imagine. The ability to use our technical skills has not, for Lazzarato, eliminated the tensions between cooperation and hierarchy, or autonomy and command, that existed under Taylorism. They have just been 'reposed' to play out at the higher, immaterial, level of communication. The tone remains authoritarian; 'one *has* to express oneself, one *has* to speak, communicate, cooperate and so forth.'[127] There, on the mountainside, I was, for a short time at least, freed from this immaterial labour, and able to consider other ways that a digital network might function.

The Mast

If the previous section looked at what the retreat to an isolated studio on a mountainside offered in terms of understanding networks, this section focusses in on part of the built artwork, *Memorial*, namely, the mast. At the site, the mast I erected was built with materials drawn from the forest floor, stuff that was already part of a cycle of renewal, as it slowly decomposed back into the ground from which it came. The mast was around six feet long, and held vertical by three guide ropes, pegged into the soft forest floor. It sat temporarily in the middle of a forest clearing, smaller and less assertive than the trees around it. The mast I constructed stood in stark contrast to the telecommunications masts that I now see everywhere. These solid masts are often painted in either grey or green to, ostensibly, 'blend in' with the scenery. They are uniformly tubular, with their distinctive elongated pods on top, hiding the antennae. They often cosy up to other buildings in a further effort to hide themselves, or are disguised as other objects entirely, whereas my mast is out in the open, bathed in the forest light. The mast is a useful discussion point, as it ties the immaterial waves that we connect with, to a physical structure. To erect a mast is to acknowledge that

[126] Lazzarato, "Immaterial Labor." 134.

[127] Lazzarato. 134.

signals do not come out of nowhere, that immaterial labour might generate social connections, but it relies on a hardware constellation of connected transmitter/receivers.

Figure 12 - A standard wireless icon

One of the key enablers of immaterial production is the ability to connect anywhere, at any time. This is often facilitated by masts. The combination of 4g connections and wireless signals means that we need only connect once to any available network, and our devices will 'remember' that network for the future and connect automatically by default. If we stray out of range of that signal, we are 'handed off' to another available network, if possible, without us knowing. We either just *are* connected, or can quickly and easily search out and connect to a network that is available, whether it is in a coffee shop, shopping centre, or a friend's house, when we are not. The question 'Can I have the Wi-Fi password?' is something I have asked time and again in lots of places, without giving it a great deal of thought. We either accept connection as a given, or go through the motions of seeking to establish it, when it is missing.

If we consider, for one moment, the ubiquitous logo that we see on our devices, which often tells us that a network is available, or that we are connected to it, we can see that it is ambiguous. Is the dot at the bottom, the mast or my device? More importantly, it speaks of a singular entity; a single mast or a single device *searching*. In his essay 'A Little History of the Wireless Icon,' Erik Born suggests that the logo, three curved lines on top of a single point, looks 'almost like a wireless transmission being sent out into space.'[128] which tallies nicely with the genesis of Wi-Fi as a by-product of

[128] Erik Born, "A Little History of the Wireless Icon," Medium, April 1, 2018, https://medium.com/palais-des-beaux-arts-wien/a-little-history-of-the-wireless-icon-b50741b01da6.

radio astronomy. [129] The lines above the point increase in size, suggesting an expansion that fills spaces and crosses borders. These are not the unidirectional signals of lightning bolts, another icon from radio, but and omnipresent field of signals, expanding in all directions. For Born, 'members of a wireless network are not to be found at the end of a cable, but rather at unknown coordinates in the electromagnetic ocean'. Like searching for distant stars in the night sky, for the Wi-Fi network to function, each node must emit its own signal in order to be discoverable, and users must endlessly seek each other out. Has this seeking out now sunk below the threshold of deliberate activity? Has it become habitual? I would argue that it has, and wireless connection, not only promotes a particular type of obligatory labour, it achieves this by integrating this connectedness into our *habits.*

Wendy HK Chun describes habit as 'practices acquired through time that are seemingly forgotten as they move from the voluntary to the involuntary, conscious to the automatic,'[130] echoing Felix Ravaisson's description of habitual actions, in *Of Habit*, as 'more of a tendency, and inclination that no longer awaits the commandments of the will but rather anticipates them.'[131] I would consider the connection to wireless this type of activity. Anecdotally, I remember my early experiences of connecting to a wireless network, the strangeness of using a completely untethered laptop to connect to the Internet, the sensation of moving it from room to room, away from mains and phone sockets. This is no longer the case. The phone in my pocket, connected to the internet, is just *connected.* If the connection fails, it either reconnects automatically, or I reconnect without any of this early sense of novelty. Whilst these behaviours are

---

[129] Dr John O'Sullivan co-authored a paper in 1977 called 'Image Sharpness, Fourier Optics, and Redundant-Spacing Interferometry', whilst working at Dwingeloo Radio Observatory in the Netherlands. He detailed a technique to clear up picture images from radio telescopes that was eventually deployed to reduce multipath interference of radio signals between networked computers, and formed part of
IEEE 802.11 wireless standards that are still used.

[130] Wendy HK Chun, *Updating to Remain the Same: Habitual New Media* (Cambridge, Massachusetts: MIT Press, 2016). 6.

[131] Felix Ravaisson, *Of Habit*, trans. Claire Carlisle and Mark Sinclair (London: Continuum, 2008). 51.

repetitive and mechanical, Chun cites Elisabeth Grosz's writing on habit in the works of Deleuze, Ravaisson and Bergson, suggesting that it

> is regarded not as that which reduces the human to the order of the mechanical … but rather as a fundamentally creative capacity that produces the possibility of stability in a universe in which change is fundamental, Habit is a way in which we can organise lived regularities, moments of cohesion and repetition in a universe in which nothing truly repeats.[132]

The deceptively complex act of addressing another person using a networked device, the encoding, the signal hand off between masts, appears effortless, allowing us to communicate whilst on the move. We can search for or reach out to anyone, regardless of where they are. In the context of this thesis, I am in broad agreement with Grosz's viewpoint; that the ability to connect anywhere, without thinking about it, does provide a universal stability through which we can grow. Our constantly networked selves can develop, through these easy connections, facilitated by so many masts and routers.

Nevertheless, do these networked habits have an impact on *how* we develop? To highlight the social dimension of habit, Chun draws on Bourdieu's work on *Habitus*, described as the 'generative principle of regulated improvisations.'[133] For Bourdieu, habitus links together members of the same class through an apparently unprompted synchronisation. Whilst habit might link to the attainment of certain individual goals, how these goals are actually met, (as they can inevitably be met in a variety of ways) is influenced by what we see others doing, 'to acquire a habit, one deliberately learns from others; habits are forms of slow training and imitation that lead to belief.'[134] I can see how this might perpetuate class or gender behaviours. I also see this at work on massive social platforms, such as TikTok, where individuals, new to the platform, look

---

[132] Elizabeth Grosz, 'Habit Today, Ravaisson, Bergson, Deleuze and Us' Body and Society 19, nos.2-3 (2013): 219 quoted by Chun, *Updating to Remain the Same: Habitual New Media*. Pg. 6

[133] Pierre Bourdieu, Outline of a Theory of Practice, trans. Richard Price (Cambridge: Cambridge University Press, 1977); 78 quoted by Chun, Updating to Remain the Same: Habitual New Media. 7.

[134] Chun, Updating to Remain the Same: Habitual New Media. 7.

to others for clues about how to behave. They then carve out an individual approach, based on these apparent trends.

To return to the crooked mast built on the isolated mountainside, why, if habitual connection to digital networks is so useful, was I compelled to build it? How has the crowded electromagnetic spectrum, or the greyly ominous telecommunications masts I now spot everywhere, become oppressive enough to warrant retreat and a reconfiguration out of sticks and string? Is it, perhaps, because habit itself has begun to shift? Chun suggests that change is central to habit, and following that logic, how habits themselves are acquired can also change, and have done so. She notes that there is a renewed interest in habit, citing data on self-help books on habit as amongst the most read on Amazon Kindle. However, she suggests that much of this literature focuses on constant improvement, contradicting much of existing thinking around habit, in which favourable internal adjustments to external changes are made through repetition, to the point where they become automatic. I understand Chun's description of this type of habit as a slow, creative adaptation to our needs, as the world around us changes. Chun describes this as happening 'beneath personality and consciousness.'[135] In contrast to this, much of the popular literature around habit focuses on how we can *consciously* work on habit in order to change our behaviour. She gives the example of Charles Duhigg's 'Habit Loop,' in which a cue prompts a response that provides satisfaction, and these responses become habits as they are repeated. If the responses cease, then we lose satisfaction. For Chun, this suggests that 'habit is becoming addiction: to have is to lose.'[136] Habit becomes constant vigilance for that which requires change, in order to achieve satisfaction.

How habit previously operated is illustrated by Chun, using an example from *Of Habit* by Ravaisson, regarding a person who wishes to become more moral. Initially, there is a gap between themselves and the conditions of morality to which they aspire. Ravaisson describes how 'Virtue is first of all an effort and wearisome; it becomes something attractive and a pleasure only through practice, as a desire that forgets

[135] Chun. 9.

[136] Chun. 8.

itself or that is unaware of itself, and gradually draws near to the holiness of innocence.'[137] The purpose of 'becoming moral' is lost, and the moral acts become 'pleasurable in and of themselves.' For Chun, 'through habit, we become independent of both cue and reward, spontaneously producing actions and sensations that satiate and satisfy.'[138]

This example suggests that habit helps us to slowly resolve internal differences with general, exterior conditions to the point at which they become automatic. What happens, then, if access to these persistent general conditions, moral or otherwise, disappears? In Chun, what appears to emerge is a focus, not on general conditions that might have a degree of *persistence* in the world*,* but the shifting internal needs of the individual. These needs are constantly shifted, for Chun, through the manufacture of the individual as a consumer, focused on their own cravings and satisfying them through the market.

The constant searching and 'handing off' of our signals between ubiquitous telecommunications masts, seamlessly hopping between them as we move around, never disconnecting, acts as a metaphor for how the fidgety search for opportunities for self-improvement must be constantly maintained and satisfied. This activity becomes *consistent,* different from previous form of habits that were, for Chun, *persistent*. This shift in language is telling. Consistence describes an endless internal uniformity, of the same thing happening again and again. Persistence, on the other hand, speaks of a less uniform stability through ongoing adaptation to external challenges. It is worth more broadly exploring what is at stake in this shift to a more restless, internally focussed habit of habit formation itself as can shed light on my escape to build one mast, rather endlessly connecting to many.

One perspective is to consider how this change reflects a shift in how society is organised. In his short essay, 'Postscript on the Societies of Control,' Gilles Deleuze describes how there has been a significant swing in how power operates, from the

---

[137] Ravaisson, *Of Habit*. 69.

[138] Chun, *Updating to Remain the Same: Habitual New Media*. 10.

society of *discipline,* as discussed by Foucault above, to one of *control*. The forces of control do not offer enclosed training spaces with an identifiable 'overseer' that one can attribute a singular administrative identifier to, such as a school or factory. Instead, Deleuze suggests, 'one is never finished with anything-the corporation, the educational system, the armed services being metastable states coexisting in one and the same modulation, like a universal system of deformation.'[139] Gone is the singular overseer, factory owner or headteacher, to be replaced by the faceless corporation, and gone with it is the resentment towards the former, (and the opportunity for collective resistance), to be replaced with a system of perpetual rivalry with other individuals. Individual adaptation shifts from an external, social and institutional set of conditions to which one must adapt, to a consistently self-generated set of cues to which one must find a reward. This relates to Chun's analysis of how habit has shifted, self-improvement becomes habitual task-reward metric, through which one compares oneself with others. There is now an atomised collection of self-administered entities, who feed data into an almost incomprehensible system of human and non-human actors, which then modulates in response, according to its requirements. All of this is set against a backdrop of 'freedom', in which these internal, self-administered elements are all vying for influence.[140] Gone is the polar tension between individual authority figure and the many of the discipline society, to be replaced by standardised nodes competing with one another while amorphous global corporations profit from using the data that is generated to shape the competition itself.

This focus on individualism, of being the point at the base of the wireless icon discussed above, searching for others to connect and compare to, for Chun, is closely tied to the emergence of neoliberalism. Neoliberal economics came to prominence as a reaction to the threat to the position of ruling elites posed by the rise of social movements throughout the world during the post-war years. Although it took different forms in different countries, one of the central strategies deployed was the promotion

---

[139] Gilles Deleuze, "Postscript on the Societies of Control," October Winter, 1992, no. 59 (1992): 3–5. 5.

[140] For a further perspective on the consequences of this Social Darwinism see Franco Berardi, *Heroes. Mass Murder and Suicide* (Brooklyn. NY: Verso, 2015).

of individualism over social obligation, encouraging entrepreneurship and consumerism in order to fashion individual identity.[141] Free markets and limits on regulation would drive competition and open all aspects of life to economic choice. One of the key thinkers behind neoliberalism, Friedrich von Hayek suggested that self-interest, and the pursuit of 'freedom', could produce an order in which, 'The common good…is not a particular state of things but consists in an abstract order in which a free society must leave undetermined the degree to which the several particular needs will be met.'[142] So, by this logic, the common good is not achieved by a *particular state of things* (which equates to the governmentality described by Foucault above, describing a rationalisation and organisation of all things in the name of effective production), but through a *free society* with faith in the primacy of abstraction of the market to organise itself. For Hayek and other economists of the Chicago School, for this operation to function effectively, *all* aspects of life must be opened to the organising principles of interest and competition, not just those of work. The ever-present telecommunications masts, that facilitate government subsidised connection almost everywhere,[143] can be viewed as a key ingredient in neoliberalism's continued aim to marketise as many aspects of life as possible.

The precarious mast built from a fallen branch and held up with string becomes emblematic of resistance to the 'always on' network to which one is perpetually connected and habitually competing with others. It is through this network which I, as a neoliberal subject, am habitually 'always searching, rarely finding. Shifting from zoom to the overview, from search term to search term…[I] defer and extend decisions; the end, like that mythic pot of gold, is never reached.'[144] Arguably, then, I was isolated before I arrived at the mountainside, floating in space or out at sea, constantly broadcasting my shifting signal, with the expectation to be found over and over again,

---

[141] For a brief introduction into the reasons for the rise of neoliberal economics and how it was achieved in the UK and USA see the first two chapters of David Harvey, *A Brief History of Neoliberalism* (Oxford: Oxford University Press, 2005).

[142] von A Hayek, *Law, Legislation and Liberty* (Chicago: University of Chicago Press, 1982). 114.

[143] "UK Government Pumps £5 Billion into Broadband Sector - Telecoms.Com," accessed September 28, 2021, https://telecoms.com/503027/uk-government-pumps-5-billion-into-broadband-sector/.

[144] Chun, *Updating to Remain the Same: Habitual New Media*. 39.

receiving a correspondingly shifting signal to keep me 'updated' and 'updating'. The crooked mast was present, temporary, but available – and I could do with it whatever I decided.

The Captive Portal

On top of this mast, I decided to broadcast a Wireless Local Area Network (WLAN) that operated as a Captive Portal. A WLAN is any network in which two or more computers are connected via radio waves in a specific geographic area. A Captive Portal is a web page that the user is automatically directed to, when they connect to a network. They are most often used in places like coffee shops, where someone connected is required to input their details, or to agree to terms and conditions on a webpage, before they can be connected to the wider internet. On the mountainside, I placed a Raspberry Pi 3b powered by a battery in a small container made from string twigs and part of a plastic bag and hung it from my mast. The Pi broadcast the Captive Portal to a radius of approximately thirty metres around the forest floor. A key difference between what I broadcast and how Captive Portals are conventionally used is that my broadcast automatically directed the user to a single webpage, then *stopped*. There was no access to the wider internet, only to a single webpage on which the user could view a video.

Given the isolated location far from public paths, the likelihood of anyone connecting was almost nil. I am aware of the issues this raises in relation to its efficacy as a work of art, which deliberately avoids any sort of audience beyond its documentation. These issues around how an audience might experience site-specific digital works through documentation, after the event, is an interesting discussion that is beyond the scope of this thesis. What is more important are the conditions that 'not sharing' created in the networked space, a space ordinarily focused on the immaterial labour of creating and maintaining the social connections, as discussed above.

One of the conditions created was that the network on the mountainside was *private,* not private in the sense of being encrypted, firewalled, or password protected, but private in that it used an *air gap* to separate the machines on the network from any other networks. The air gap is used when very high levels of security are required, such

as in military, governmental or financial networks, and usually indicates a network that is deliberately kept isolated from any other networks. These networks consequently have a very high degree of control over how information enters or leaves the 'secure' environment. However, in the case of my network, the air gap was created by the miles of forest floor between the site and nearest telecommunications infrastructure.

This suggests that there are two different types of privacy; the *public* privacy of ordinary networks and the *private* privacy of the network behind an air gap.
Our 'privacy settings' in our web browsers or social media accounts suggest that we live in public, and it is up to us to actively limit what we wish to reveal. This living in public is a prerequisite for an economy based on competition, as outlined above. We need to see, in detail, all that other people have, to enable us to shape ourselves in response. We are private citizens, but only in as much as we are free to choose how we shape ourselves in public.

What is lost, to return to Wendy HK Chun, is an intimate, darkened space, a shield from scrutiny in which we can process our public actions and grow. On the mountainside, with a network air-gapped by forest, had I inadvertently produced one of these 'darkened spaces?' For Chun, there is a relationship between previous approaches to habit, as a set of actions in which we can adapt routines that allow us to function in a shifting world, and the provision of a bounded private space in which this adaption can take place. The mountainside network certainly fits this description, it is bounded and private. She discusses how Thomas Keenan describes privacy, in this respect, as a window, behind which the individual can observe and 'theorize' a framed public that represents alterity. On joining this public, the subject assumes rights and responsibilities, shared with other subjects.[145] I understand this as a back-and-forth negotiation, with privacy affording the subject the opportunity to assess changes, and to absorb the behaviours it will adopt, accordingly, on rejoining the public.

With the shift of habit to a consistent state of seeking increasing levels of reward, we see the function of privacy becoming more a permanent state of greater or lesser

[145] Chun. 90.

exposure. While this might suit the requirements of the market, it is less suited to the complex and subtle adjustments required during major life changes. On the mountainside, I was unable to 'feed' this habit based on short term task/reward. I could not feed my curiosity around what was in the news, or see what was new on Netflix, or check in with work, or look at Instagram, which perhaps opened the potential to make a more intimate space in which I could address less urgent, but more deeply felt issues. Perhaps this is why I chose to broadcast a short film made up of short recollections of my mother, Pauline Evans, who died very suddenly in 2009.

Memorial

Users searching for a Wi-Fi network to connect to would have seen a network called *Memorial*. Upon connecting, they would have been automatically redirected to a webpage on which a video was playing. This video was shot in landscape format and was composed of a sequence of short clips of a small waterfall. Each clip was a zoomed in shot of part of the scene, with the whole scene itself never revealed. Over this, there were text subtitles in a yellow serif font, with a small drop shadow. These subtitles contained different snippets of text, taken from anecdotal memories of my mum.[146] There were allusions to memories of her appearance, shared experiences, things she made, a rail replacement bus service amongst other things. The sentiment is not mawkish, but cryptic and incomplete, due to being drawn from shifting personal memories. As time passes, it is peculiar what emerges in one's memory; the sight of the palm of another's hand, the sudden sense of loss one feels when saying goodbye to someone at a bus stop. It is these more pedestrian, yet no less personally

[146] It is worth noting that I did not retreat to the mountainside to grieve for my mum or build a temporary monument to her. I have never had the urge to share images or memories of my mum on social media or make artwork concerning her death. Each Mother's Day there are a slew of images of mums on social platforms, both living and dead, as people celebrate them. While I understand the gesture, I don't feel comfortable with doing this myself. I'm also aware of artists who publicly explore personal loss, such as Felix Gonzalez-Torres whose 'Untitled (Portrait of Ross in L.A.)', from 1991 consists of a pile of sweets equivalent to the weight of his partner who died of AIDS in 1991. Again, I appreciate the sentiment and celebration of a life, but would not usually be comfortable exploring this subject myself.

meaningful, moments that I chose to draw on in the forest, whilst making this video, before my laptop battery inevitably ran out.

The intention to make something on the forest network that was personal, complex and open-ended flies in the face of much of what was discussed earlier in this chapter. The standardisation of expression into universal terms that must then be dropped into a *feed* or *stream* that perpetuates endless continuity suggests a digestibility ill-suited to the process of grief or mourning. In her article, 'The Space Between Grief and Mourning', Claire Wilmot describes how social media 'by design demands tidy conclusions and dilutes tragedy so that it's comprehensible even to those distantly aware of what has happened.'[147] She reflects on how Facebook posts mourning her own sister's death did not come close to describing the 'horror' of the actual event. Wilmot describes how mourning is a behaviour, an outward expression of sorrow, whereas grief and grieving are the internal processes of coping with loss. The gestures of mourning that social media facilitate turns the complexities of grief and grieving into something easy to digest and respond to. Whereas communal expressions of mourning can be supportive to those grieving, social media reduces the range that this mourning can take by compressing it into formats designed to be consumed quickly. The process of working through this space between mourning and grief on the mountainside was not so constrained by the short form format of social media, nor did it invite platitudes from 'friends.'[148]

[147] Claire Wilmot, "The Space Between Grief and Mourning," The Atlantic, June 8, 2016, https://www.theatlantic.com/entertainment/archive/2016/06/internet-grief/485864/.

[148] Online Death Studies is a well-established field within Death Studies, for further reading on the impact of social media see on death and mourning see Tony Walter et al., "Does the Internet Change How We Die and Mourn? Overview and Analysis," *OMEGA - Journal of Death and Dying* 64, no. 4 (2012): 275–302.

Figure 13 - Still from 'Memorial'

On reflection, it is this relative absence of networked others that also allowed me to feel that I could create a moment of mourning on the mountainside. Apart from the general availability to anyone of our public posts on platforms, such as YouTube, what I consider to be 'friends' online, especially across social media, are a mix of personal, professional and social connections. So, to post to this diverse, unseen audience would require a particular type of complicated social management. The latter resonates with Maurizio Lazaratto's earlier description of immaterial labour as an obligation to perpetually channel the self into the market, in order to collectively shape trends that the self can then tap back into, as they shift. As Claire Wilmot suggests, these mechanisms generally fail to provide the breadth to express a type of mourning that reflects the complexities of grief.

Grief, as I have come to understand it through personal experience, is an individual, ongoing process. Yet, as 'immaterial' as networked information is perceived to be, with its data *flows* into *clouds*, each choice made, privately or not, builds a hidden narrative stored as data that can then be used to influence what we see, often for commercial gain. Chun suggests that 'They have turned once silent and private acts – such as reading a book – into noiselessly noisy ones, eroding the difference between reading, writing, and being written.'[149] Reading becomes writing. Even searching for the term

[149] Chun, *Updating to Remain the Same: Habitual New Media*. 91.

'grief' online or navigating to a Facebook memorial page reduces the depth and complexity of bereavement to a minor character in this vast, hidden data narrative. Ordinarily, anything expressed on the network often remains stored, and visible, for a long time. Just as the expression of grief becomes a permanent element of the big data narrative, the social post also becomes a permanent marker of a moment of sorrow that one might not wish to return to. However, on the mountainside, with no data capture at work on the network, there is no contribution to this hidden narrative. The memories are broadcast locally. They are allowed to exist in their complex, and continuously unresolved state. The text in the video spoke of fleeting, shared moments over the top of footage of a constantly changing scene, carried by ever diminishing radio signal from a temporary structure made from string and branches. The retreat provided a shift away from permanence into something more impermanent.

Waves

I accessed the *Memorial* network on the mountainside whilst sitting on the wet ground, viewing the work on my phone with dirty, wet hands. The touch screen was hard to operate. It did not respond well. The video seemed a small and relatively useless representation of the all-encompassing landscape in which it was situated. The subtitled text offered only short snapshots of a relationship that was complex. Ultimately, it was a rather clumsy and inadequate exchange. The conditions of retreat had produced a poignant response that would not have occurred on the wider internet. Yet, the actual work, as I experienced it, initially seemed somewhat lacking.

However, spending time with the work over the remaining days of the residency, with the knowledge that there were no other network signals other than *Memorial*, meant that the Wi-Fi signal itself, outside of its on-screen content, became available as an aesthetic sensation. Whilst sitting close to the mast in the misty, damp forest, I could almost 'feel' the radio waves surrounding me. Obviously, one cannot really feel radio waves of any frequency, but, due to my isolation, I became aware of them as passing around and through my body. The data of the recounted memories pulsed around me, broken down into a mist of tiny waves that my body was immersed in. I was closer to the person remembered. I could sense them, but not in ghostly way or spiritual way. It was more that these memories were no longer fixed within the frame of a screen or a

photograph. Neither did they drift in to and out of one's thoughts, but, instead, hovered somewhere between, as a diffuse presence on the air.[150]

As mentioned earlier, there was something of a disconnect between these memories, dispersed into the air, and the standardised, digestible content that digital networks usually encourage. Bernard Stiegler's writing around the process of individuation can provide further insight into why this might occur. For Stiegler, mnemo-technics, or the externalisation of human experience into other things (such as grief into networked devices), holds the key to psychic and collective individuation. He cites the process of *grammatisation* as being integral to the evolution of mnemo-technics. Grammatisation is the analysis and synthesis of actions into systems.[151] To post a memorial on Facebook or Instagram would begin the process of grammatizing my experience of grief, alongside that of many, many others.

To use Stiegler's example, the development of the Greek written alphabet from the Phoenician alphabet, allowed for the political organisation of collective city-states, and the designation of individual citizens. This analysis and synthesis of gestures, utterances and language into an alphabet and the written word, then into the mnemo-technics of a system of documentation, allowed the individual and collective to be defined in relation to one another. For example, mourning is the name given to how an individual, within a community, publicly expresses grief. This language was passed down through a mnemo-technics of images and written descriptions around what should be worn, and how one should conduct oneself during a period of mourning. For centuries, mnemo-technics evolved slowly through writing to printing, separated from other technical systems. However, Stiegler suggests that this changed in the nineteenth century, when mnemo-technics fused with technical modes of mass production, producing the photo, the phonograph and the movie, and later still, the

---

[150] On reflection, the sale of my childhood home shortly after the death of my mum also meant that I have not had a place to go to that allowed for this 'closeness.' For further reading around the relationship between memories of those lost and place see Annika Jonsson and Tony Walter, "Continuing Bonds and Place," *Death Studies* 41, no. 7 (n.d.): 406–15.

[151] Bernard Stiegler, *Symbolic Misery Volume 1: The Hyperindustrial Epoch* (Cambridge: Polity, 2014). 57.

products of advertising and public relations. According to Stiegler, consumption could no longer keep pace with production, so the market had to reorientate itself to produce desire for products that were not, essentially, needed. Here, we see the market flooded with recorded sounds and images that began to organise populations in ways that they had previously never been. In *Symbolic Misery: Volume 1*, Stiegler draws on an Alain Resnais movie, *The Same Old Song,* to illustrate how, he himself, is part of a community who identify with a particular set of recorded French songs from the second half of the twentieth century.

For Stiegler, these recorded songs are *industrial temporal objects* – new forms of mnemo-technics, along with television programmes, music videos, radio broadcasts and so on. They do not exist as conventional industrial objects, (the products that emerge from machines and sit inert until they are required by a human need), but they are *temporal* objects that exist in a state of becoming, only coming in to being as they disappear. Stiegler suggested that what is useful about these for the market is that they have the same attributes as consciousness itself, that of something always in the process of making itself. The aim of the industrial temporal object, then, is to align itself with consciousness on the widest scale possible to produce desire for consumption. This causes a synchronisation of the consciousness of many consumers around a 'false' or 'market driven' desire. A sense of individuated diachronic time is lost, of the individual living within his or her *own* time. Stiegler describes how these manufactured desires populate the 'pre individual milieu,'[152] on which we apply 'primoridial narcicissm,' to form our individuality.

This situation is further complicated by an emerging computational logic that goes beyond the mechanical, into what Steigler calls the 'hyper industrial', characterised by computational networks. A mechanical component is simply a fixed, functioning part of the machine, a machine with a narrow range of outputs dictated by its construction. However, the component of a hyper industrial network modulates its own construction through feedback mechanisms. The implication is that the hyper industrial constantly moulds and perpetuates itself in the image of its own desires,

[152] Stiegler. 68.

those that satisfy the market. While *machinic* industrial operations still cater for synchronized desire, when this becomes *hyper* industrial, desires can be individually raised and the speed at which they can be sated has been sped up to that of light. This in not, however, a fixed situation. Stiegler suggests that 'disjunctions are possible.'[153] Perhaps, on the mountainside, the combination of the small scale, isolation, and the difficult subject of the artwork begin to produce such a disjunction?

This 'pre individual milieu', from which the individual emerges, for Stiegler, contains a multitude of personalised images and elements that have been circulated by hyper industrial objects. Nevertheless, I imagine that this milieu might also include lived experiences from early encounters with others, such as family. Is such a disjunction, as described by Stiegler, achieved by severing a connection to the hyper industrial feedback mechanism on the mountainside, and replacing it with highly personal reflections drawn from a different component of the milieu? On reflection, it is the disconnectedness from the larger network, and the circulation of easily digestible texts and images, that provides *Memorial* with its potential as an art platform. In the absence of this simplifying and an audience to consume it, two other distinct realms are connected; the cold computational logic of data and radio waves, and the warm, incommunicable qualities of a long personal relationship. The result was that the latter became configured by the former. Broadcasting signals into the air acted as a focused gigahertz spray mist of complex memories and emotions that demand reconfiguration, so that they can be come to terms with.

An image or a video circulated on the global internet immediately becomes subsumed into an incomprehensible matrix of data. Whereas, on the mountainside, the single available network, in an uncongested band of the radio spectrum, broadcasting a basic web page devoid of tracking, cookies or other sneaky tactics, just memories, processed into a stream of video data and Wi-Fi signal, all served to provide an *experience*. On reflection, this felt more akin to scattering the ashes of an image or a memory, providing an opportunity to experience the presence of an individual in an elemental form, as waves on the air. Through the creative engagement with a platform, a WLAN,

---

[153] Stiegler. 68.

individuality is promoted through a different sense of connection, of belonging to a network. However, in this instance, it is a hybrid digital/familial network of caring and love that stands in stark opposition to the standardised and digestible networks of social media.[154]

Suggestion

If I have acknowledged that digital networks have a suggestive power in which they subtly shift our habits through algorithmically determined feedback loops, have I simply harnessed these suggestive powers in a different way, to express different concerns? This tallies with the increasing amounts of publicity surrounding how online platforms are used to prime users to encourage them to act in particular ways. In *Haunted Data, Affect Transmedia and Weird Science*, Lisa Blackman draws attention to the process of priming as 'the management and control of conduct, behaviour, thought and feeling which can be shaped and produced via techniques taken to work through non-conscious registers of experience.'[155] This suggestibility is a form of control. The algorithm or whichever external force attempting to mould behaviour can only do so, due to a deficiency of will or absence of self-control. This seems to suggest that, if only one could make oneself aware enough, one would not be manipulated. However, Blackman quotes Isobel Stengers' discussion of the paradoxes of suggestion as follows: 'What would hypnosis be if it was rid of the illusion whereby the hypnotist is situated as the external observer of his patient?'[156] What if, instead, we become alive to the idea that we are subject to, and can create our own suggestive forces? The network I produced on the damp mountainside was, perhaps, such a suggestive force. Working in the treetop studio, making the short video and building the mast, I had no

---

[154] For further reading see 'The Grand Interruption: Death Online and Mediated Lifelines of Shared Vulnerability,' in which Amanda Lagerkvist and Yvonne Andersson explore how understanding digital media as a constitutive element of an individual, existential 'lifeworld,' beyond economic, social, or cultural concerns, can offer 'existential security' in a world reshaped by loss. See Amanda Lagerkvist and Yvonne Andersson, "The Grand Interruption: Death Online and Mediated Lifelines of Shared Vulnerability," *Feminist Media Studies* 17, no. 4: Affective Encounters: Tools of Interruption for Activist Media (June 2017): 550–64.

[155] Lisa Blackman, *Haunted Data. Affect, Transmedia, Weird Science* (London: Bloomsbury, 2019). 7.

[156] Isabelle Stengers, *Power and Invention: Situating Science* (Minneapolis: University of Minnesota Press, 1997); 105 quoted by Blackman, *Haunted Data. Affect, Transmedia, Weird Science*. 11

idea that what the waves of the video would be translated in to from the mast, would emerge as an affective element of the work. Perhaps this could only occur, as the frequency spectrum in this location was so empty, but also, because the usual conditions for production were interrupted and I was able to consider alternatives.

To reiterate, I did not feel a 'presence', in the spiritualist sense of the word, on the mountainside, in spite of the fact that the radio waves that carried the text and image of my memories of my mum circulated around me. I am aware that there has been much interesting research into the relationships between technology, telepresence and the spirit,[157] but I am more inclined to think about being immersed in the waves as a way of remembering that was not necessarily fixed to an image or to a text. The invisible waves worked in the opposite way to how Claire Wilmot describes social media as encouraging 'platitudes,' by producing something complex, open and temporary. But what purpose did it serve?

In her journal article, 'Maintaining Relational Continuity with the Deceased on Facebook' Jocelyn M DeGroot explores the act of communicating with the deceased on Facebook by analysing posts made to them after death. While I was not 'communicating' with my mum on the mountainside, (and would have been uncomfortable posting to a public platform, such as Facebook) DeGroot's analysis offers a strong explanation as to what might have been occurring during my experience of being surrounded by a mist of memories, dispersed into waves on the mountainside. For Degroot, people continue to communicate with the deceased after death for two reasons. Firstly, she suggests it allows the poster to make sense of the impact of death, by giving them the opportunity to articulate the many emotions that accompany loss, such as shock ("I can't believe you are gone"), or hope (for an afterlife or spiritual redemption for the deceased who might still exist *somewhere*). Secondly, and most relevant in this context, she suggests that people write to the deceased as a way of continuing bonds with them. Degroot suggests that 'people generally do not

[157] For an excellent historical overview see Jeffrey Sconce, *Haunted Media. Electronic Presence from Telegraphy to Television* (Durham, NC: Duke University Press, 2000)

forget their friends just because they are dead.'[158] They continue this communication in a variety of ways – by 'using emotional expressions, posting memories of the deceased, noting the deceased's presence, providing updates, indicating appreciation for the deceased, making promises or requests, and mentioning an eventual reunion.'[159] I was interested to read how some posters 'noted the deceased presence' in their posts, leaving messages like "u noe wat to me you will never b gone . . . the present of your soul will remain here where it belongs.'[160] She suggests that continuing bonds in this way allows the living to 'determine what these things, places, and events now mean in the absence of their loved ones, which is how people begin to reconstruct their identity'.[161] The deceased do not simply disappear. They remain in memory and, for Degroot, the Facebook wall offers a place for the living to negotiate their identity in light of the physical absence, by engaging with different facets of the loss. While I have outlined the reasons why I would not, personally, consider mourning on global platforms, I understand this sentiment and Degroot's analysis resonates with my experience on the mountainside.

I found myself in a private space, using the network to draw back memories and to experience a 'presence' as a way of, perhaps, tempering loss, or attempting to readjust my perspective to accommodate loss. In the lush and ceaselessly shifting forest landscape, immersed in oscillating patterns of waves, perhaps there was a suggestion of movement and growth that gave shape to a positive experience of this ongoing, and often deeply hidden, adjustment.

Conclusion

As this was, chronologically, the first networked retreat that I undertook, this chapter focuses on the networked conditions that made retreat, itself, desirable. The initial impact of the retreat to the mountainside was to remove some elements of the network that ordinarily are present. There was no audience to speak of, as the location

---

[158] Jocelyn M DeGroot, "MAINTAINING RELATIONAL CONTINUITY WITH THE DECEASED ON FACEBOOK*," *OMEGA: Journal of Death and Dying* 65(3) (2012): 195–212. 205.

[159] DeGroot. 204.

[160] DeGroot. 205.

[161] DeGroot. 206.

was geographically isolated, which also meant that the range of the electromagnetic spectrum dedicated to 4g and Wi-Fi was empty. This disconnection allowed me to reflect on the everyday characteristics of networked connection. This connection became 'immaterial labour' that, at once, demanded technical and experiential standardisation, yet also drew on my own 'unique' viewpoint, as tiny data points that allow corporations to constantly track and shape trends. What started to emerge was a more nuanced image of the digital network as something *shaped by others* alongside which I am also compelled to contribute.

Focusing on the mast I constructed in the forest, using sticks and string, prompted me to reflect on the global network of access points that facilitates seamless and consistent connection. Using Wendy HK Chun's writing, I came to understand that the connection to this network had become habitual. Yet, habit itself had undergone a shift. This consistency provided a continuous, networked environment in which the only adjustment required was the satisfaction of one's own self-identified goals, rather than adapting to changes in the world outside of the network. Further reflecting on the configuration of my own constructed network, as an isolated captive portal that did not lead anywhere, I discussed how the concept of privacy has shifted, from a private privacy to which one could retreat, observe and adjust, to a public privacy in which one is always on view, unless steps are taken to limit how much is seen. I recognised that I had created the former type of private space, protected by the 'air gap' of the forest, in which I could observe and consider how I might adjust to a changed world, in order to grow. A consequence of this was the decision to broadcast a short video, in which I reflect on memories of my mum, who died in 2009. The WLAN captive portal created a platform, from which I could broadcast, that was less digestible, less social, and did not add to any archive, hidden or visible. Having made the work, I found myself experiencing it in ways that I had not anticipated. The radio waves that carried the signal to my device proved to be more compelling than the video content itself. What would ordinarily be considered as the by-product of the transmission of information, became the most meaningful part of the work. It was as if I had harnessed the endless suggestion that the network usually directs towards shaping the individual, and then used it to adapt to a different need; the adjustment to loss.

For all I discovered during my short residency in the Scottish Highlands, I was very aware of the tradition that I was part of, namely men isolating in remote places. Looking at imagery of contemporary isolation, I sense that Outlandia is part of a very well-established mode of escape that includes men like Henry David Thoreau in his cabin at Walden Pond, and Ted Kaczynski in his cabin in Lincoln, Montana. One could describe these men as using the same language that Geoffrey Galt Harpham uses to describe the early ascetics, of 'becoming self-made men, beings that owe nothing to genealogy or community.'[162] This is reflected in his descriptions of the Thebaid paintings during the Reformation, depicting the desert area of Thebes in Egypt, which was popular with lone ascetics.

Figure 14 - 'Thebaid,' Fra Angelico, tempera on wood, circa 1420

For Galt Harpham, despite the depiction of lone ascetics, these locations are 'intensely social, crowded with roads, meeting places and encounters.'[163] Yet, the paintings show an 'unworldly world, unlike a village…in that there is no centre, no variety, no hierarchy or diversification, no women or children.'[164] There is a shared uniformity, but everyone is alone. He suggests that 'they [the ascetics] display what Weber, in a famous phrase, called the 'unprecedented inner loneliness'…of being apart from all collectivity.'[165] Further discussion on how the Reformation made conditions favourable for the emergence of Capitalism is beyond the scope of this thesis.[166] Nevertheless,

---

[162] Galt Harpham, The Ascetic Imperative in Culture and Criticism. 30.

[163] Galt Harpham. 30.

[164] Galt Harpham. 30.

[165] Galt Harpham. 30.

[166] Max Weber, *The Protestant Ethic and the Spirit of Capitalism* (Oxford University Press, 2010); Elettra Stimilli, *The Debt of the Living* (New York: SUNY Press, 2017).

there is something significant concerning how Galt Harpham characterises the act of isolation as still connected, yet generic. Both Thoreau and Kaczynski's voices can still be heard, despite their isolation. Their trips into the wilderness merely gave them a distinct platform from which to broadcast. The description of the desert of early Christian ascetics as a space with no centre, no variety, no hierarchy, in which people are sociable, but alone, could, equally, be used to describe digital networks. So, was my lone retreat to the forest merely about a process of swapping the global network, one type of generic, androcentric structure, with another in the isolated cabin? Maybe the adjustment to personal loss demands this type of space, but equally, could a slightly more connected environment offered something more? In the next chapter, I describe the construction of another networked retreat that was not as isolated, and I begin to reflect on how this can help to broaden my understanding of what a network could be.

Chapter 3 – A Retreat to the Local

Introduction

During Chapter 2, I explored a retreat into total isolation on a mountainside. The absence of radio signals in the portion of the frequency spectrum reserved for telecommunications gave me some important insights into how digital networks encourage and emphasise certain behaviours over others by creating 'space' that is transparent, whilst recording everything. The work produced was unusual, in that it occurred in a relatively disconnected space – but how would it operate in a more connected environment? In this chapter, I will reflect on a network built in the middle of a busy city and a different type of retreat, to the local. To do this, I will focus on another artwork produced during a residency. In late 2018, I was awarded a small research and development grant, and the opportunity to work in a small permaculture garden built alongside a platform in a train station. Metal is an arts organisation that provides support for artists in the UK. They have three sites, in Peterborough, Southend and Liverpool. Metal in Liverpool is based in buildings in a small passenger railway station called Edge Hill. The organisation provides studios, exhibition and meeting space, and, more recently, they have opened a permaculture garden inviting artists and local volunteers to develop the space. It was in this context that I was invited to work in the garden for three months to realise a work of art.

In the initial proposal to Metal, I had identified the station as a place of intersecting rhythms: of the garden, of local commuters coming and going about their business, of freight and goods crossing the country and world. I wanted to add a local area network to this to draw attention to these visible rhythms and to, perhaps, make people think about other rhythms that might interconnect there, the stochastic rhythms of checking in to social media, or the imperceptible 2.4 billion oscillations per second that carry that data at the speed of light.

My initial idea was to build a mast in the garden that created a wireless access point in order to broadcast a captive portal to the whole station. After all, commuters are a captive audience. From personal experience, I know that waiting for public transport, and travelling on it, is a relatively boring moment of stasis, when we are keen to get moving, but cannot move from that spot. To offset this, I find myself reaching into my pocket and idly checking email, the news, or social media. I proposed that this inertia gave a good opportunity to drive interest to the garden, which was slightly hidden. Furthermore, I think about the site as a space of intersecting rhythms, as discussed above. I imagined that there was a local audience of commuters who, although they come and go at different times, would share the same space and might be interested in keeping track of the garden or learning about how it was being developed.

This work continued my interest in small-scale networks that are disconnected from the wider internet but begins to explore how this scaling down offers the opportunity to build or engage with a community that is not, as I suggest in chapter 1, invisibly peeping into a transparent private space. On reflection, I think that I viewed the station users as a potential manifestation of the local, a community that shares a locus, or space, but does not necessarily exchange information with others in that space, often preferring, instead, to communicate with others geographically removed via social media, email etc. Or, this readymade audience might engage with events far away, via news feeds. The station gave me the opportunity to try to draw these people together and to focus attention much closer; to the garden behind the platform.

I am aware that, yet again, this perhaps harks back to Theodora Sutton and Camp Grounded, a retreat to a more genuine sense of connection to others. Nevertheless, I was not looking to facilitate a more meaningful mode of connection between people in the station, but a different mode of connection that was, perhaps, more rooted in the geographical locale**,** and the shared experiences of using the station. In the previous chapter, I discussed the Wi-Fi logo as showing a point from which signals emanate from, reaching out into space, seeking a return signal. The metaphors used were borrowed from Wi-Fi's origins in radio astronomy, or beacons out in vast oceans. Yet, with this work, I am more concerned with points that are not so distant and even share

the same local space, but, perhaps, at different times, to see if this proximity changes the nature of the interactions.

What, then is this a retreat from? The shift to a smaller scale retreats from a sense that the systems I am caught up in, that surround me and pull me this way and that, are so vast and incomprehensible that I am unable to place myself within them. This includes the electromagnetic soup that I move around in, the air I breathe, the weather that I experience, the financial systems I am deeply implicated in, and the network, the Internet, that carries a whole array of my data that I generate around the globe. As I write this, these massive, intertwined systems are becoming visible through the spread of Covid 19, as variants, tests and vaccines begin to circulate on a massive scale. Amid all of this anxiety, is there relief in a retreat to the local?

This chapter will use the physical spaces of the residency to explore different aspects of the retreat. Through four sections, I will gradually focus in, from the station to the network map, then onto the garden, the mast, and finally, the content that is broadcast into the station. This allows me to explore different scales as I go, thereby addressing certain ideas. Each section is a mix of description, contextual reference, discussion and evaluation. This allows me to begin to think about the resilience of the concept of the local network, by examining and placing alongside other spatial scales.

The Station

Figure 15 - Platform 1 at Edge Hill Station

Figure 16 - The station garden.

Edge Hill Station is a passenger railway station in Fairfield, a central district of Liverpool, a city in the north of England. The station itself consists of two island platforms with buildings set back from the platform edge on each. All of the buildings and walls are made from stone. Towards the end of platform 1, there is a long, thin garden behind a wall. Visitors cannot enter the garden from the platform. Instead, people enter through a gate from outside the station. This was the space that I was selected to work in for three months at the beginning of 2018. I was also given desk space in the offices of Metal, the commissioning organisation, which were situated further along the platform. On reflection, the appeal of the station and garden as sites in which to create artwork comes from their qualities of being bounded spaces, yet connected to wider networks. That I might seek a bounded space reflects an implicit suggestion, as mentioned above, that global networks such as the internet, are difficult to orientate oneself in, and a smaller, more manageable space, might, somehow, allow for some perspective. I will begin this chapter by exploring this sense of disorientation by looking at the station more closely, and its ties to globalisation.

Edge Hill Station is unique in that it is the oldest continuously used passenger railway station in the world. Opened on the 15th of September 1830, when Stephenson's Rocket left Edge Hill for Manchester, some say that this event 'marked the beginning of the modern world.'[167] Its opening continued the acceleration of materials, goods and people from the relatively slow mode of travel on horseback and canals, to a mode that was to become standardised and spread across the globe. Indeed, it was on

[167] "About | Edge Hill Station," accessed August 18, 2020, http://www.edgehillstation.co.uk/about/.

this stretch of line, between Liverpool and Manchester, that the standard gauge of railway track, at a length of 4ft 8½ inches, was first used.[168] This continued to be adopted worldwide and is still used today as part of the global multi-modal transport network that sees goods moved via container across the sea, by rail and road to our high streets and local Amazon distribution centres. It was also the desire to better coordinate trains that used the same lines that contributed to the development of the telegraph around the same time across several countries simultaneously.[169]

Figure 17 - Looking down the tracks from Platform 1 at Edge Hill Station

Standing on the platform, looking down at the tracks, I imagine them as an embryonic part of the modern project to place a legible grid across the surface of the earth on which humans can quickly and easily travel and transport between distant points. In *Down to Earth, Politics in the New Climatic Regime*, Bruno Latour discusses the contemporary outcome of this trajectory, that of globalisation. He seeks to understand what is meant by the term and differentiates between two ways of understanding it. *Globalisation plus* suggests a 'multiplying of viewpoints, registering a greater number

[168] "Standard-Gauge Railway," in *Wikipedia*, August 13, 2020, https://en.wikipedia.org/w/index.php?title=Standard-gauge_railway&oldid=972689683.

[169] For a more detailed account of the simultaneous key discoveries of this period see Gere, "The History of Network Art."

of varieties, taking into account a larger number of beings, cultures, phenomena, organisms and people'[170] while *globalisation minus* is the exact opposite, 'a *single vision,* entirely provincial, proposed by a few individuals, representing a very small number of interests, limited to a few measuring instruments to a few standard protocols' that have been 'imposed on everyone and spread everywhere'[171].

The standard gauge tracks first laid at Edge Hill Station represent this latter *globalisation minus* outlook, a network technically determined by a few and owned by fewer still. This outlook, Latour suggests, has been discredited on the grounds that the perpetual growth expected of the globalised economy is unsustainable, even with the best intentions of governments willing to modernise. Of global governments at the Paris Climate Conference in 2015 he writes:

> 'Even as they were applauding the success of the improbable agreement, [they] realised with alarm that if they all went ahead with their respective modernisation plans there would be no planet compatible with their hopes of development, they would need several planets, not one.' [172]

In the context of orientation, neither outlook provides much opportunity. Neither standardisation, nor the perpetual expansion of viewpoints, offer much in the way of stable ground on which to stand. As I look down the standard gauge tracks, I am looking at the material manifestation of something so vastly complex that I am uncertain I can position myself anywhere in relation to it. On the wet and windy February morning in the photograph above, I momentarily glimpse global capitalism; a supply chain with containers filled with goods from China, crossing oceans in their thousands, dockyards, trains, trucks that consume fuel extracted from the earth and much, much more.

In his 2013 book, *Hyperobjects, Philosophy and Ecology after the End of the World,* Timothy Morton describes the impact, socially and psychically, of the emergence of

---

[170] Bruno Latour, *Down to Earth. Politics in the New Climatic Regime* (Cambridge: Polity, 2018). 12-13

[171] Latour. 13.

[172] Latour. 5.

these huge systems. He describes hyperobjects as 'things that are massively distributed in time and space relative to humans.'[173] He considers things such as 'the sum of all of the whirring machinery of capitalism,'[174] global warming, or the Styrofoam cup as hyperobjects. Ironically, they are only made visible 'through our advanced technologies and measuring instruments,'[175] measuring microscopic plastic particulates in the ocean, or using massive data sets to model the global climate, or the flow of international trade, of which the tracks in Edge Hill are part, as below.

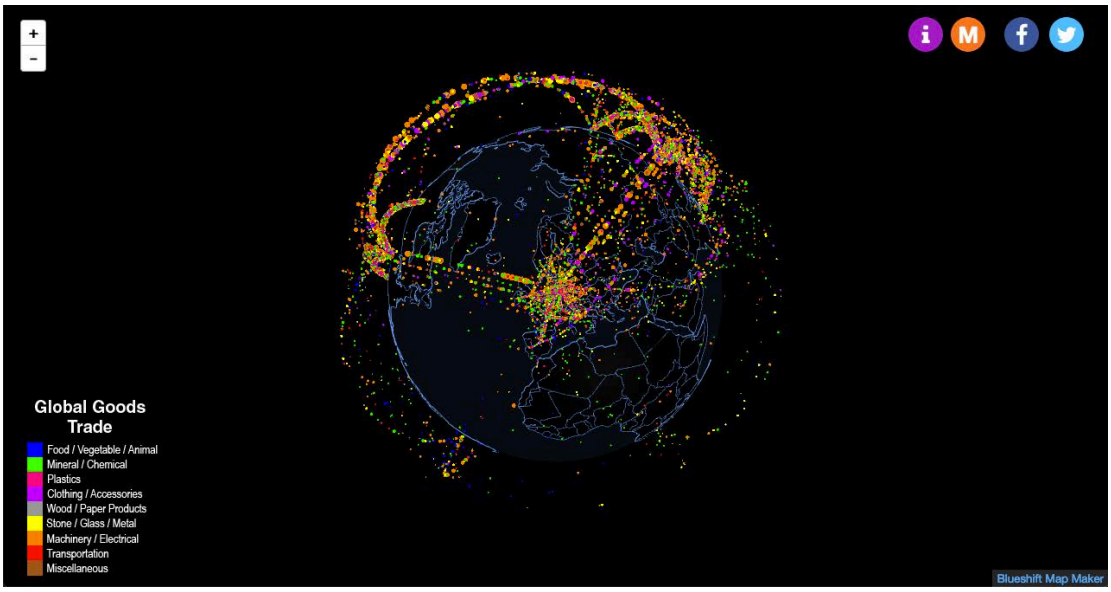


Figure 18 - Max Galka, 'The Flow of Interactive Trade,' still from visualisation, 2016

Morton describes how hyperobjects have a *viscosity* that causes them to stick to objects. Just as the hyperobject of global trade sticks to the tracks that I look at from the platform in the station, the hyper object of the global telecommunications network sticks to the phone that I look at while I am waiting on the platform. As I glance at it, I am connecting to the electromagnetic spectrum that crowds the air, which is passing through me and extending across the universe, combining in an electromagnetic space with waves from the sun and distant stars. That signal is shifted to pulses of light or electrical current and directed via a network of cables through multiple exchanges to a data centre somewhere. This, then, flows across a grid of

[173] Timothy Morton, *Hyperobjects, Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, n.d.). 1.

[174] Morton. 1.

[175] Morton. 36.

transistors in a servers solid-state drive to, perhaps, generate a response that returns in the opposite direction. Controversies surrounding state surveillance, corporate profiling using big data, and the potential effects of new communications systems such as 5g, bring this hyperobject right to us, right *in to* us.

For Morton, hyperobjects occupy *higher dimensions* of structure, to which we have limited access, so much so, in fact that 'we only see pieces of them at once, like a tsunami or radiation sickness.'[176]Morton calls this the 'phasing' in and out of hyperobjects, making themselves visible through snapshots. This has the effect of taking something that was once familiar, such as rainfall, and turning this into 'a sensual representation, a thin slice of an image, a caricature of a piece of global climate.'[177] The phone in my hand is a snapshot of a hyperobject, in which my finger glides over gorilla glass (alkali-aluminosilicate glass, composed of aluminium, oxygen, silicon, and several other positively charged ions[178]), under which rare earth minerals, such as neodymium magnets, are present. The production of the latter also involves the extraction of uranium as a by-product, which is disposed of in the environment in places such as the 'toxic sludge lake' in Batou, China.[179] We can no longer pretend these things do not exist. 'There is no away,'[180] Morton suggests.

As much as we can only glimpse snapshots of these hyperobjects, they also introduce 'very large finitude'[181] that is rendered real through computational measuring instruments. Morton suggests that we can no longer fall back on comfortably nebulous concepts of the 'infinite', such as the universe. Neither can we simply rely on woolly metaphors that suggest that we are simply scaled down versions of such a universe.

---

[176] Morton. 70

[177] Morton. 70.

[178] "5 Things You Need To Know About Aluminosilicate Glass | BodyGuardz," accessed August 4, 2020, https://www.bodyguardz.com/blog/5-things-to-know-about-aluminosilicate-glass.html. "5 Things You Need To Know About Aluminosilicate Glass | BodyGuardz."

[179] "Neodymium," Popula, accessed August 4, 2020, https://popula.com/2018/07/30/neodymium/.

[180] Morton, *Hyperobjects, Philosophy and Ecology after the End of the World*. Pg. 31.

[181] Morton. Pg. 60.

Styrofoam cups will outlive us, slowly breaking down over 500 years.[182] The plutonium P-239, used in nuclear reactors, has a half-life of 24110 years,[183] and the light waves from Quasar APM 09279+5255, viewed through a telescope, were emitted 12 billion years ago.[184] Amongst other things, Morton calls these timescales *petrifying*, suggesting that if anything is left of humans after this length of time, it will be fossils, and the concrete we use to construct our skyscrapers and overpasses will be a geological strata of minerals. Rather than the comfortably speculative future we were used to, this future is, for Morton, a *future future*, a far-off reality. Yet, it is 'beyond predictability, timing or any ethical or political calculation.'[185] For Morton, these gigantic timescales are truly humiliating and, to add insult to injury, 'impossible to handle just right.'[186] Perhaps this accounts for the disorientation that I feel when I stare at the tracks. The systems I am aware of are vast, yet not so vast that somebody, somewhere, with powerful enough technology cannot model it, or track the impact that it might be having on my body.

In the face of this humiliation, was choosing to work in the station with the steady rhythm of the trains and the seasonal rhythms of the garden, an attempt to return to, or focus on, a place that retained some consistent rhythms? Trains have a timetable that they run to, and a destination to reach. Plants grow and wither with the seasons. Was there is a discernible *telos* to the station and garden in which I was hoping to situate myself, rather than being poked by the very large finitude of hyperobjects? In the next section I examine the network map to see if its boundaries off any such reassurance.

---

[182] "The Problem with Disposable Cups," *Plastic EDU* (blog), December 26, 2019, https://plastic.education/the-problem-with-disposable-cups/. "The Problem with Disposable Cups."

[183] "Plutonium-239," in *Wikipedia*, July 21, 2021, https://en.wikipedia.org/w/index.php?title=Plutonium-239&oldid=1034630214.

[184] Michael J. I. Brown, "When You Look up, How Far Back in Time Do You See?," The Conversation, accessed July 28, 2021, http://theconversation.com/when-you-look-up-how-far-back-in-time-do-you-see-101176.

[185] Morton, *Hyperobjects, Philosophy and Ecology after the End of the World*. 67.

[186] Morton. 67.

The Network Map

Figure 19 - Part of the Facebook.com homepage

What is starting to emerge, then, is an urge to retreat to a *more* comprehensible network. If Morton deals with very large finitude, can the garden network provide a movement towards a smaller finitude? In asking this question, further problems arise. Can networks aid orientation? If so, what is the cost of this orientation? Returning to Wendy HK Chun, it is useful to examine her analysis of the concept of networks, in order to answer these questions.

The network, as Chun describes it, is characterised as 'rendering the world into nodes and edges,' [187] typified by Figure 15, taken from the facebook.com homepage, in which we can see how the Facebook network is represented by a set of nodes with a standardised set of characteristics. In this case, the nodes are all the same colour, and notionally gendered using long or short hair. For Chun, the simplicity of such renderings solves the postmodern problem of the inability to 'navigate in an increasingly confused and confusing world' by 'diagramming allegedly unrepresentable interactions.'[188] Chun describes how Postmodernism, essentially, produces a sense of disorientation, with media saturation and 'placeless places' that speak of an 'inhuman and globalised' world that could not be apprehended by the 'painfully local and organic' tools at hand.[189] She cites Frederic Jameson's writing on the disorientating experience of navigating around the postmodern architecture of the Los Angeles Bonaventura Hotel, a space which exemplifies the way in which 'postmodern

[187] Chun, *Updating to Remain the Same: Habitual New Media*. 39.

[188] Chun. 39.

[189] Chun. 40.

hyperspace … has finally succeeded in transcending the capacities of the individual human body to locate itself, to organise its immediate surrounding perceptually, and cognitively to map its position in a mappable external world.'[190] For Jameson, this dislocation between individual experience and the ability to recognise the 'truth' of the system in which it was operating, began to separate in the nineteenth century. This schism occurred through processes of empire and transnational capital, partly as a result of activities that were reliant on operations in far-flung locations, such as the Caribbean and India. This returns us to the tracks at Edge Hill Station, a stretch of railway between Liverpool and Manchester, built to transport the cotton picked by slaves in the West Indies to the inland mills of North West England more efficiently.[191]

Although Jameson suggests that Postmodernism makes orientation difficult, he speculates that, through a process of *cognitive mapping,* it is possible to make visible the link between individual and social structure. Jameson drew on the writing of geographer Kevin Lynch, who studied city layouts and concluded that 'urban alienation is directly proportional to the mental unmappability of local cityscapes.'[192] A city like Boston, with its 'combination of grand but simple spatial forms, including dramatic boundaries such as the Charles River', [193] allowed those situated within it to hold a map of it in their imaginations. Jameson suggests that it is possible to extrapolate this spatial geography into the social structure, and the technology of mechanical reproduction, 'films, tapes, video, computer and the like', used in autoreferential postmodern art, 'offers a degraded figure of the great multinational space that remains to be cognitively mapped.'[194] Postmodern art can make orientation, via cognitive mapping, possible, through the use of reproduction technology to build analogues of the global system that produces it. Is building a network in a train station,

---

[190] Frederic Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism* (Durham, N.C.: Duke University Press, 1991); 83 quoted by Chun, *Updating to Remain the Same: Habitual New Media*. 40

[191] "Origins of the Liverpool Cotton Market," Liverpool cotton history, accessed July 29, 2021, https://www.liverpoolcotton.com/origin.html.

[192] Frederic Jameson, "Cognitive Mapping," in *Marxism and the Interpretation of Culture*, ed. Cary Nelson and Lawrence Grossberg (London: Macmillan, 1988), 347–57. 353.

[193] Jameson. 353.

[194]Jameson. 356.

perhaps, a way of beginning to 'cognitively map' larger digital networks? Could the proposed small-scale network present, as Jameson suggests, a 'faulty representation of some immense communicational and computer network'[195] that provides an interpretation of 'how power (literally) flows among and through individuals?'[196]

Yet, according to Chun, neoliberal subjects are constantly 'shifting from the zoom to the overview,'[197] forever building networks that are visualised for us through: friend lists, metrics of likes and retweets, sets of open browser windows and social media feeds. According to Lazarattos description of immaterial labour, touched on in the previous chapter, building and maintaining these networks is now the primary form of labour that spills out into every aspect of our lives. If I am seeking networks, I can find them everywhere, rendered for me to see. Yet, as Chun suggests, 'we are forever mapping, forever performing-and so- we are told, forever empowered-and yet no more able to imagine, let alone decisively intervene in, the world around us.'[198]

As I reflect on this, I sense that one of the reasons I wish to retreat to the comprehensible local, why these visible maps of my activity are of limited use, is because there are *other* maps behind the scenes, maps of my activity stored and analysed, and fed back to me, with the intention of encouraging me to behave in a certain way, or to predict my behaviour, such as presenting me with a product that I have a high statistical likelihood of wanting to buy. As discussed in the previous chapter, I am being constantly *primed* through suggestion. A territory is being defined, but I am not the one who is defining it. Instead, opaque technologies, including the ubiquitous algorithm, are deployed by Google, Facebook and Amazon, to orientate me, by using a data image of me, aggregating my choices, and comparing them with the choices of others. This raises questions around what is mapped. Which elements are chosen to form the network? Did moving into the garden offer me the chance to make these decisions for myself?

---

[195] Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism*. 37.

[196] Chun, *Updating to Remain the Same: Habitual New Media*. 43.

[197] Chun. 39.

[198] Chun. 44.

Moving into the locality of a garden to make a network was, as I have suggested, the opportunity to think about the intersecting rhythms of the site and potentially provide some orientation amongst them. However, the question remained, 'how do I begin to make sense of them?' To answer this, it is useful to look at how networks operate. For Chun, networks need to listen to a lot of signals. They operate by being *promiscuous*. She uses the example of the way in which a wireless card will read *all* packets in the vicinity, but delete those not addressed to it, or how in CMDA phone, *all* local users share a signal from a phone tower, but connections are made between devices by using different frequency bands and individuating codes. For Chun, these examples illustrate how networks are conceptualised and made, by ignoring some signals and elevating others. This streamlines a messy process, one that is made up of the signals of multiple users, travelling through material, space and time, which requires processing and then labels everything else as 'noise'. Only through this process of refinement can the 'network' itself emerge. The network map on which Edge Hill station appears can be read in the same way. The station appears as a node on the neat network, but other 'stuff', such as sidings, signals, tunnels, bridges and so on, are left out.

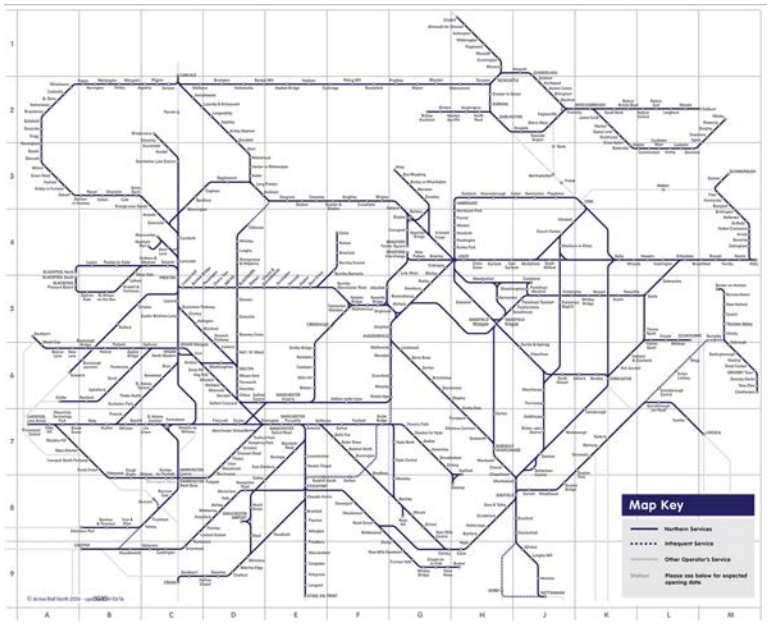


Figure 20 - Map of the Northern Rail Network on which Edge Hill is a station

The glimpse of complexity of global capital as a hyperobject that appears to me, as I peer down the tracks, stands in stark contrast to the simplicity of network map. Why is

this? Morton's hyperobject acknowledges its own illegibility and is only brought in to focus through snapshots of experience, or the real measurements taken by powerful instruments. The network map, on the other hand, appears much more simplified and circumscribed. Is this not a positive? As network scientist, Duncan Watts, points out, 'although we inevitably miss features of the world that we ultimately care about, we can tap into a wealth of knowledge and techniques that will enable us to address a set of very general questions about networks that we might never have been able to answer had we gotten bogged down in all the messy details.'[199] I understand this position in relation to these general questions, such as, how is *this* station connected to *that* station? Nevertheless, if we are now enmeshed in our own individual, algorithmically generated networks, based on massive data sets and built around a standardised set of protocols, surely one persons messy details could be another persons prime data points? To understand the implications of this further, we must look further to Chun, and continue the discussion begun in Chapter 2 regarding habit.

Things appear embedded in webpages that hope to draw me in to certain networks, advertisements for credit cards, gym memberships, an invitation to download a university prospectus. These are generated based on my browsing habits, and on those of others who I share characteristics with. These prompts may or may not go on to shape my experiences. I did not directly choose them. Instead, my behaviour was *anticipated* for me. Previously, individual experience was key to the ability to anticipate the changing world around us. Chun looks to David Hume's analysis of the relationship between experience and habit as the process of the formation of beliefs, which account for our ability to anticipate events. For Hume, *experience* is a principle that instructs one in the conjunctions of objects in the past, or in other words, things that occur together. I interpret this as suggesting that, if one thing interacts with another, and the same results occur repeatedly, then *experience* tells us that they have a *causal* relationship. *Habit,* on the other hand, 'is another principle that determines

[199] Duncan Watts, *Six Degrees: The Science of a Connected Age* (New York: Norton, n.d.); 29 quoted by Chun, *Updating to Remain the Same: Habitual New Media*. 47

me to expect the same for the future.'[200] The experience of the repeated conjunctions in the past allows habit to form, and allows people to anticipate events in the future. Whilst habit can guide anticipation, it could also 'falsify experience', that is, it could present us with conjunctions that are incorrect. Here, *understanding* can 'act as a corrective,'[201] because beliefs and anticipation must always conform to past experience. So, any experience that debunks a habit adjusts the anticipation of future events. Our belief in the relationships between things can, then be adjusted, according to our experiences, and the habits we form.

Why is this useful? It is useful, because Chun suggests that networks are increasingly constituted using big data. She cites Viktor Mayer-Schonberger and Kenneth Cukier's popular 2013 book, *Big Data* and its description of how causality, the *conjunction* in Hume, has been trumped by 'correlation.' Rather than experiencing slowly revealing causal relationships that allow us to anticipate what will happen in the future, comparing massive data sets of repeated individual actions across time and space allows for the prediction of what will happen, and it is simply presented to us. I no longer must experience something repeatedly in order to be able to anticipate it, as big data can anticipate it for me. No causality is necessary. However, what if the world outside of the network shifts, causal relationships shift, or I want something to shift? Building networks based on correlation has a profound impact on our ability to apply these correctives, as the network will continue to be constituted, not only by my actions, but based on the actions of others, who share characteristics defined by those controlling the network.

The suggestion that experiences are constructed in this way, that I might like to do something, or buy something, based on my choices *and* the choices of thousands of others, who I might share spurious characteristics with, to quote Antionette Rouvroy, 'seeks to eradicate pre-emptively everything in the human that remains uncertain or

---

[200] David Hume, *A Treatise of Human Nature*, ed. David Fate Norton and Mary J. Norton (Oxford: Oxford University Press, 2000); 67 quoted by Chun, *Updating to Remain the Same: Habitual New Media*. 55.

[201] Chun, *Updating to Remain the Same: Habitual New Media*. 55.

virtual.' By relying on actions, rather than words, 'it denies the subject the ability to give an account of themselves…to forget and thus create new forms.'[202] Whilst this is potentially stripping me of some of my agency and, therefore, my ability to use my own experience, there are more serious consequences for those whose data places them in to a category of race, class, sexuality or gender, whereby they can be actively discriminated against by certain of their behaviours being predicted.

This discussion of habit and big data may seem somewhat elliptical in the context of a retreat to the construction of a small network in the Station Garden. Yet, what begins to emerge is, not an image of a singular network that is to be simply mapped or remade, but the realisation that networks have become dynamic. Each of us is a node in countless networks that are endlessly being generated, connected and reconfigured. This process is, not only driven by our own activities, but by the activity of others, and organised according to metrics decided elsewhere. As Chun describes, the network then becomes a simplified representation that allows for a sense of orientation in the complexities and fragmentation of the postmodern condition. In the station, there is a real tension between a network as a simplified representation, and something more complex that spills out everywhere. These messy details have become increasingly difficult to ignore; how a glance at a phone can link the neodymium magnets inside to toxic sludge lakes in Batou, China, or a raindrop can trigger awareness of years of accumulated climate data that points to irreversible global heating. The measuring and communications tools of modernity draw attention to these hyperobjects, which, then, begin undermining the image of globalisation itself. The Station Garden acts as a site to explore this tension, through a change of scale to the local.

The Garden

Standing on platform 1 in the station, I could look down the tracks, but I could also turn and face the garden behind me. If the tracks represent the global and massive

---

[202] Antionette Rouvroy, "Technology, Virtuality and Utopia: Governmentality in an Age of Autonomic Computing.," in *Law, Human Agency and Autonomic Computing : The Philosophy of Law Meets the Philosophy of Technology*, ed. Mireille Hildebrt and Antionette Rouvroy (London: Routledge, 2011), 136–57; 128 quoted by Chun, *Updating to Remain the Same: Habitual New Media*. 58-59.

networks, then maybe the garden represents the local? In this section, I will use the garden as a platform to begin to think about what the local is, and what it means to try to create a local network as an artwork. I will also evaluate how my own attempt to engage with it worked out. If I am keen to retreat from the globalised world and address my relationships with the hyperobjects outlined above, do I really want to retreat to the local?

Figure 21 - View from in the Station Garden at Edge Hill Station

If we take the dictionary definition of the word local as 'characterized by or relating to position in space **:** having a definite spatial form or location and relating to, or characteristic of a particular place **:** not general or widespread,'[203] then the enclosed nature of the garden could be enough to designate it as such. Unlike the station, with its track leading in and out, the garden is enclosed all around, bordered on one long side with a brick wall, about five feet high, with another thick sandstone wall, approximately fifteen feet high along the opposite side, separating the garden from

[203] "Definition of LOCAL," accessed August 21, 2020, https://www.merriam-webster.com/dictionary/local.

the road outside. There is only one entrance, an iron gate out onto the road outside the station, which was usually kept locked. The gate led into the garden, and a path running down the centre with beds either side, with an open concrete area in the middle. The garden ends in a jumble of brambles, and a view of the Victorian tunnels leading to Liverpool city centre. It is definite in its form, opposed to the station that bleeds out along the tracks into 'the network'.

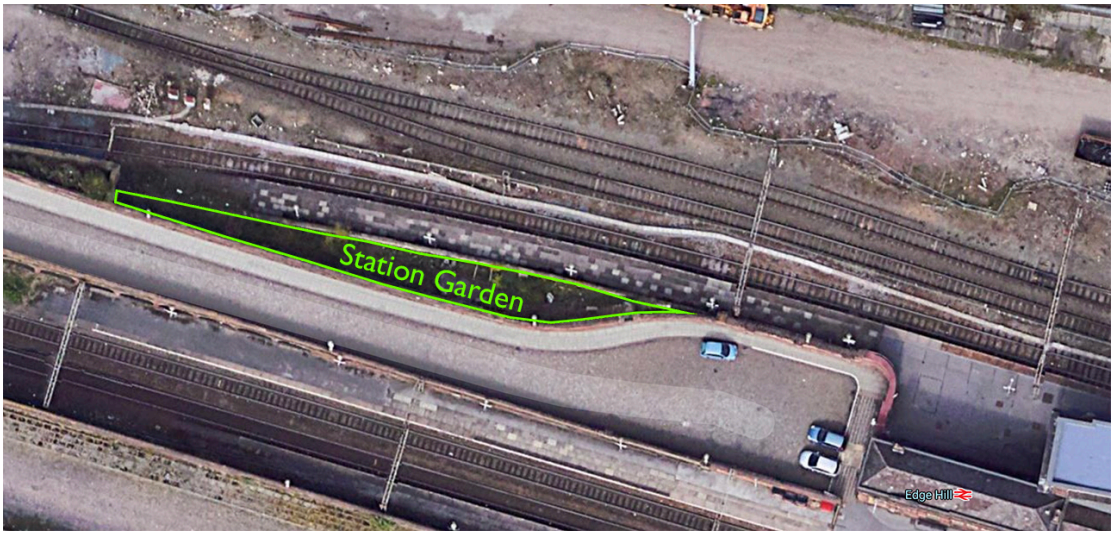


Figure 22 - Satellite View of Edge Hill Station with Garden Outlined and Labelled

However, I consider local to be a much more complex term. Much can be inferred, when the label 'local' is applied. Local produce, for instance, suggests something organic, perhaps from a farmers market. This stands in opposition to the intensively farmed produce sold in supermarkets.[204] There is a positive association. However, the local pub, on the other hand, presents an image of a place where everyone knows everyone else, and a stranger's presence might illicit curiosity. Here, I venture to suggest that there is a less favourable association, with locals representing a closed or fixed range of viewpoints. I have been introduced as a *local* artist to artists from elsewhere, visiting Liverpool for the international biennial. I have felt the urge to push back against the label. I think, perhaps, I can trace this slight unease to the suggestion that the label of local somehow *confines* one to a place, when, in order to be successful artist, an international profile is preferred to a national or regional one. The international biennial has become emblematic of the globalisation of all aspects of a

[204] Megan K. Blake, Jody Mellor, and Lucy Crane, "Buying Local Food: Shopping Practices, Place, and Consumption Networks in Defining Food as 'Local,'" *Annals of the Association of American Geographers* 100, no. 2 (March 31, 2010): 409–26, https://doi.org/10.1080/00045601003595545.

particular artworld in which: artists, curators, gallerists, and a whole host of supporting characters, spend the year travelling between events in different parts of the world, Basel, Miami, London, Sydney, etc.

Perhaps the international biennial represents a flavour of Bruno Latour's *globalisation minus* 'single vision' approach to modernisation, characterised by a limited range of interests, which operate according to a relatively fixed format. Those who adhere to the tenets of globalisation minus 'accuse those who resist its deployment of being archaic, backward, thinking only of their particles of land and seeking to protect themselves against all risks by remaining enclosed in their own little homes!'[205] The local, then, is 'no longer treated as a set of legitimate feelings,' and *locals* 'are accused of expressing nostalgia for *archaic* or *obscurantist* positions.'[206] There is, for Latour, a corresponding localisation minus, those that imagine the boundaries of the local as containing a singular set of enduring attributes. However, for Latour, that label should not necessarily apply to all with a desire to 'be held, protected, assured, reassured by their province, their tradition, their soil, or their identity.'[207]

In proposing to view the station garden as a site of intersecting rhythms, is my viewpoint that of Latour's localisation minus. As I spent more time in the garden, I became increasingly aware of how diverse the space was. I was interested to learn the Buddleia I saw growing, a plant synonymous with railway embankments and now classed as an invasive species, was introduced into Europe from the Sichuan and Hubei provinces of China in the late nineteenth century.[208] The local volunteers, from around Fairfield, also reflected the difficulty one might have in recognising a fixed type. There were students, who were temporary residents, and people seeking asylum, alongside others whose families have resided in the area for generations. The garden began to stand in opposition to the single vision of Latour's *minus* viewpoints, allowing me to actually see and experience difference, rather than homogenisation. Latour calls this

---

[205] Latour, *Down to Earth. Politics in the New Climatic Regime*. 13-14

[206] Latour. 14.

[207] Latour.

[208] "Buddleia: The Plant That Dominates Britain's Railways," *BBC News*, July 15, 2014, sec. Magazine, https://www.bbc.com/news/magazine-28196221.

localisation plus, a courageous resistance and refusal 'to trade one's own province for another … that is even narrower and above all infinitely remote, thus more indifferent to local interests.'[209] Latour acknowledges that there are parallels between the standardisation of globalisation minus and the monocultures of localisation minus. However, what really matters for Latour is 'understanding whether you are managing to register, to maintain, to cherish a maximum number of ways of belonging to the world,'[210] described by the *plus* versions of the above.

Given the project in the garden proposed the production of a small 'local' area network (LAN), and the different types of local outlined above, it would be now useful to examine the which type of local is being suggested in this context. According to the *Dictionary of Computer and Internet Terms, 10th Edition,* the 'local' in 'local' area network refers to something 'located at the users computer or site'[211] and contrasts with 'remote' as something 'located on a computer far away from the user.'[212] Whilst this may appear to be a logical and unremarkable distinction, it is worth further considering what *type* of local is being defined. Not just anything 'located at the user's computer or site' can connect to the local area network, far from it. Instead, anything that connects to the LAN must operate according to the very specific set of protocols outlined in the previous chapter. The notebook I wrote in in the garden was not local to the network, in a computing sense, as it had no way of generating the appropriate signals and data to become part of it. Physical proximity alone is not enough to be classed as local. A whole other set of common characteristics are required for inclusion in this network. To frame it in Latour's language, the LAN does not 'cherish a maximum number of ways of belonging to the world.' A variety of devices may be able to connect and exchange signals, but this is only due to them using a common set of protocols and standards. One might be tempted to describe the LAN, as it is conventionally deployed in institutions and businesses as a version of Latour's *localisation minus*; a monoculture that encloses a space to those who speak the same

---

[209] Latour, *Down to Earth. Politics in the New Climatic Regime*. 15.

[210] Latour. 16.

[211] Douglas A. Downing, Melody Mauldin Covington, and Michael A. Covington, *Dictionary of Computer and Internet Terms*, 10th ed. (Hauppauge, NY: Barron's Educational Series, 2009). 289.

[212] Downing, Mauldin Covington, and Covington. 403.

language and behave according to a specific set of rules. Whilst this may be stretching an analogy somewhat, it is interesting to consider the alternative concept of localisation plus further and think of how the embryonic garden network can explore these values.

In their collection of writings around localisation, Raymond de Young and Thomas Princen also make this distinction between positive and negative localisation. They suggest that the process of positive localisation is now not just a desirable option, but a necessary and imminent course of action, due to the combined factors of climate disruption, the imminent peak of the availability of fossil fuels and the limitations of technology to provide enough 'clean' energy in the face of the continuing increase in society's consumption.[213] These conditions create a 'biophysical reality' that traditional processes, such as politics or the market, will be unable to successfully negotiate, and 'without a plan, society risks a rapid, chaotic descent into a hyperlocal existence,' which the authors characterise as 'negative localization.'[214] The alternative is, for them, *positive localisation*, by 'adapting institutions and behaviours to living within the limits of natural systems' across regional, national and international levels.[215] For De Young and Princen, global management, characterised by elites, centralised power and specialised knowledge, operates by using 'incentives, disincentives, tight prescriptive rules and moralistic norms' that are 'not reliable or durable.'[216] The authors suggest that positive localisation, on the other hand, builds on existing internal satisfactions that already appear in individual and communal behaviours. These 'embedded benefits' from working at a local level come from solving problems, helping others and being called on to be creative and self-directed. Like Latour's suggestion that seeing, maintaining and cherishing are a few ways of belonging to the world, they appear to

---

[213] Raymond De Young and Thomas Princen, "Introduction," in *The Localization Reader. Adpating to the Coming Downshift*, ed. Raymond De Young and Thomas Princen (Cambridge, Massachusetts: MIT Press, 2012), xvii–xxvi. xviii

[214] De Young and Princen. xxi.

[215] De Young and Princen. xxi.

[216] Raymond De Young and Thomas Princen, "Bringing Out the Best in People," in *The Localization Reader. Adpating to the Coming Downshift*, ed. Raymond De Young and Thomas Princen (Cambridge, Massachusetts: MIT Press, 2012), xvii–xxvi. 208.

be suggesting that positive localisation *begins* from these small-scale interactions. Whilst these processes provide satisfaction, they are quiet and internal, and often drowned out and 'easily overlooked in high powered business and policy environments or in the glitter of modern commerce and entertainment.'[217] More visible signs of success are privileged in an environment where self-promotion is rewarded.

Perhaps this rhetoric seems somewhat idealistic in the context of me arriving at a small garden to undertake a residency, but I think the *biophysical reality* that De Young and Princen discuss, the consequences, both near and far, of the systems that I am immersed in, align with the future and *future future* of Morton's hyperobjects. Swimming in the electromagnetic spectrum, firing off signals from my phone and sucking them up indiscriminately, and the phenomenon of news and social media feeds, work emails, Amazon order updates and data centres and distribution facilities, undersea cables, and more, offer up a dizzying experience in which the opportunity to generate the internal satisfactions that De Young and Princen describe are relatively few. Yet, the process of building a local network in the station garden does offer the opportunity to solve problems and build different types of connections. This process was already well under way in how the garden had been conceived and developed. To the untrained eye, the garden looked quite scruffy and overgrown, but it had actually been designed using the principles of permaculture. Bill Mollinson, one of its key early figures, describes permaculture as a process of

> Working with, rather than against nature; of protracted and thoughtful observation rather than protracted and thoughtless labor; and of looking at plants and animals in all their functions, rather than treating any area as a single product system.[218]

Before I began to work in the garden, it already seemed to encourage the internal satisfactions promoted by positive localisation, through the thoughtful and deliberate creation of a system of mutual support within the garden itself.

---

[217] De Young and Princen. 210.

[218] Bill Mollinson, *Permaculture Two: Practical Design for Town and Country in Permanent Agriculture* (Tasmania, Australia: Tagari, 1978). 1.

Nevertheless, the question remains: is this retreat to the localisation of the network an active, creative, process, through which something new can be discovered? Action at the local scale is also not without its critics. In *Inventing the Future. Postcapitalism and a World Without Work*, Nick Srnicek and Alex Williams discuss the problems around what they define as 'Folk Politics', or a horizontal mode of organization that, in the face of an incomprehensibly complex world, 'aims to bring politics down to the 'human scale' by emphasizing temporal, spatial and conceptual immediacy', with a 'deep suspicion of abstraction and mediation'.[219] With this, for Srnicek and Williams, comes a rejection of any sort of hegemony in favour of withdrawal. Does the focus on locality and small scale in *Edge Hill Garden Network* reflect a type of organization that might simply be a residue of earlier, twentieth century modes of cooperation that were a product of the conditions from which they arose, those of a more coherent social structure, such as the factory? Is this mode of organization now irrelevant in the radically different conditions that encompass changes in spheres, such as work, and the institutional networks that arose with neoliberalism? In his analysis of *Inventing the Future*, Steven Shaviro agrees that 'we need a more expansive, and more fully imaginative, form of both action and theorization.'[220] However, he also suggests that Srniceck's and Williams's outright dismissal of 'Folk Politics' fails to recognize it as an incomplete project. In his blog post, 'Brometheanism,'[221] Alexander Galloway extends this criticism by pointing out that the authors refuse to specify the 'proper form of organization,'[222] instead hoping for it to happen spontaneously through an 'ecology of organisations,'[223] a move which, for Galloway, returns the discussion to the folksiness of 'hippy ecology.' I too, agree, in part, with *Inventing the Future. Postcapitalism and a World Without Work,* that the criticisms of horizontalism in its privileging of 'the small-

---

[219] Nick Srnicek and Alex Williams, *Inventing the Future. Postcapitalism and a World Without Work* (Brooklyn. NY: Verso, 2015). 11.

[220] "Accelerationism Without Accelerationism – The Pinocchio Theory," accessed August 2, 2021, http://www.shaviro.com/Blog/?p=1328.

[221] "Brometheanism | Alexander R. Galloway," accessed August 2, 2021, http://cultureandcommunication.org/galloway/brometheanism.

[222] Srnicek and Williams, *Inventing the Future. Postcapitalism and a World Without Work*. 162.

[223]Srnicek and Williams. 163.

scale, the authentic, the traditional and the natural'[224] fail to consider the vastness of the networks we find ourselves entangled in. Yet, that should not preclude experimentation at a small scale with local technologies that *are* also designed to scale.

More specifically, Ingrid Burrington provides a critique of local networks in 'On Local Networks & Internet Freedom', in which she suggests that 'Going hyper-local won't save the Internet from the machinations of Comcast, Google, or the State any more than a rhetorical "reset" will. A local network's community is as self-selecting as the Weird Old Internet's was.'[225] Burrington's description of the local as narrow sounds a lot like the negative descriptions of localization mentioned above. However, neither Srnicek, nor Williams, nor Burrington completely dismiss working locally, with the former suggesting that all political action begins locally, and the latter suggesting 'I believe in their [local networks] potential because I believe in *people* more than I believe in corporations or nation-states.'[226] Perhaps a network built by people is preferable to a network built by the algorithms deployed by an amorphous corporation.

The process of considering the garden as a local, bounded space resonates with the idea, (put forward in the 'Network Map' section) of a network as a selective concept with an 'in' and 'out'. Yet, the more positive descriptions of localization describe a more porous space in which 'existing internal satisfactions' are built upon. Initially, my aim was to solicit responses from the local community of station users, such as uploaded photos of rhythms that could be shared on the networks. Could one consider uploading a photo an existing internal satisfaction? It is very quick and easy. As I built the network, this idea became less appealing, as I felt that it merely aped the configuration of the existing network. I was not comfortable with the role of moderator of uploaded content, checking for inappropriate images or messages due to

---

[224] Srnicek and Williams. 10.

[225] Ingrid Burrington, "On Local Networks & Internet Freedom," SFAQ / NYAQ / LXAQ (blog), accessed October 8, 2018, http://sfaq.us/2014/11/on-local-networks-internet-freedom/.

[226] Burrington.

the open and public nature of the network. I would become a network administrator in the most conventional of ways.

Here, I began to view my initial idea of the retreat to a community to create a platform for just station users as significantly problematic. Does the creation of a quiet online space for a select few merely mirror the logic of the contemporary network, with its endless feeds, and endless audience? Would I be reinforcing the status quo? The focus would remain on yet another easily accessible network for the individual. In her analysis of the popularity of spiritual retreats in 'Monastery Chic: The Ascetic Retreat in the Neoliberal Age,' Sara Lipton suggests that the contemporary monastic retreat is a 'fundamental expression of a neoliberal spiritual logic' in that it 'echoes the cardinal neoliberal value: freedom and deregulation, comfort and isolation, individualisation and lack of community and short-term commitment.'[227] This also describes Theodora Sutton's reflections on 'Camp Grounded' that I discussed in Chapter 1. It could also be to describe the various well-being apps that simply reframe the digital experience in terms of its opposite while maintaining its core, neoliberal attributes. Could this also be used to describe the networked platform I had intended to build in the garden? A platform with no terms and conditions on which anyone with a device can connect and disconnect at will, yet not see actually anyone, and upload photographs with the touch of a button, does sound like a platform that superficially retreats but does no actual *work*. It is, potentially, just another smooth and forgettable experience. How could I complicate this process of building a local network more? To explore this further, I will look to another element of the project – the mast and the hardware that it contained.

The Mast

Initially, research into the form and purpose of the mast in the station garden was informed by the historical function of poles and columns in communal life. I was interested in things like: maypoles, barn raisings, totem poles, church steeples and obelisks as visible points around which communities could celebrate and communicate

[227] Sara Lipton, "Monastery Chic: The Ascetic Retreat in a Neo-Liberal Age," in *Evil Paradises: Dreamworlds of Neoliberalism*, ed. Mike Davis and Daniel Bertrand Monk (New York: The New Press, 2007), 241–50. 249.

shared values. I initially contrasted this with the way in which the pole has become a ubiquitous infrastructural form that attempts to be as discreet as possible. As I touched upon in the previous chapter, telecommunications masts are no exception. Their manufacturers often paint their anonymous tubular forms in colours complementary to their backgrounds, in the hope that they blend in, or resort to rather comical disguises, making them look like trees, catci and so on. Valmont Structures, a manufacturer of these disguised towers, describes them as having *MVI*, or minimum visual impact.

Figure 23 - Image from Pathe News item on Maypole celebrations in Ireland in 1929

Figure 24 - An 'Elm' concealed cell phone tower manufactured by Valmont Structures

In her short essay 'Around the Antenna Tree: The Politics of Infrastructural Visibility,' Lisa Parks suggests that efforts to hide wireless infrastructure grew to offset concerns around their impact on the aesthetic appearance of an area, and attendant economic effects on house prices and health. This is backed up by claims by manufacturers, such as Valmont, who suggest that 'the only thing your customers will ever notice is better wireless service.'[228] Yet, for Parks, this concealment of infrastructure, and discussion of it only when it breaks down or is in the way, keeps citizens naïve and uninformed about the network technologies they subsidize and use each day. This ignores questions about the '(re)allocation of publicly owned resources and the restructuring

[228] "Concealment," Valmont Structures 2018, accessed September 17, 2020, https://www.valmontstructures.com/products-solutions/communications-structures/concealment.

of lifestyles and communities.'[229] Arguably, this constitutes another version of Haraway's 'God Trick' from Chapter 1, in which the telecommunications industry presents *the* network, and in doing so is 'seeing everything from nowhere.'[230]

Yet, when infrastructure does become visible, it is also problematic. In *Hyperobjects*, Timothy Morton discusses the objections made to rural wind turbines in favour of 'hidden pipes, running under an apparently undisturbed landscape.'[231] To Morton, those who are against turbines are clinging onto a pre-industrial revolution world in which the rolling hills of the agricultural landscape represent a dream or aesthetic concept, yet are reliant on hidden infrastructure. Is this yet another god trick presented by those who painted this partitioned, agricultural land, and so began to define what was considered natural? By this logic, the generic, hidden masts could also be said to perpetuate the dream of *real* communication, sought after in places like Chapter 1's 'Camp Grounded,' that is a *personal* person-to-person exchange, that those communicating have all the agency, when this communication is, in fact, subject to a massively complex set of intertwined material, technical, legal and social factors. In relation to the wind turbines, Morton suggests that 'a profound political act would be to choose another construct, one that doesn't require smoothness and distance and coolness.'[232] As I reflect, this is, in some respects, what I had in mind for the construction of the tower, to be more material, visible and raise questions, through user input, about how communications infrastructure constructs communication itself.[233] Yet, as I have already mentioned in the previous section, I was keen to avoid the

---

[229] "Around the Antenna Tree: The Politics of Infrastructural VisibilityLisa Parks / UC Santa Barbara – Flow," accessed August 27, 2020, http://www.flowjournal.org/2009/03/around-the-antenna-tree-the-politics-of-infrastructural-visibilitylisa-parks-uc-santa-barbara/.

[230] Haraway, "Situated Knowledges: The Science Question and the Privilege of Partial Perspective." 581.

[231] Morton, *Hyperobjects, Philosophy and Ecology after the End of the World*. 106.

[232] Morton. 106.

[233] There are lots of artworks and projects where this has already been done – including Christoph Wachter and Mathias Jud's 'Can You Hear Me?', a mesh network broadcasting from a 'DIY' mast built on the roof of the Swiss embassy in Berlin's Government District and the Leimert Phone

role of distanced administrator creating another smooth, albeit isolated space. How could I produce a network that was *closer,* without being closed?

In the station garden, an opportunity to address this problem unexpectedly presented itself in the guise of a fundamental technical issue. Despite the station being a location of power, energy and movement, the garden itself, where I was working, was not served by mains electricity. Consequently, my attention shifted from immediately reaching out to *local* users, by installing a WLAN, to thinking about how I could integrate a network in the garden, and have it work *at all*. As I have already mentioned, the garden was designed around the principles of permaculture, so it was an appropriate development that I should think about how it could be self-powered and sustainable. One of the key tenets of permaculture is that species assemblies should value cooperation over competition, so the mast and its workings should somehow contribute to this. Each species must work for another species, and selections are made based on this ability to support other things, so the mast design and positioning should provide support for other elements of the garden. My focus quickly shifted from a network of singularly human nodes to something much broader.

Volunteers helped to build the mast from recycled wood, and the gardener helped us to build a hugel bed underneath, a type of raised bed which uses logs and sticks as a base to provide sloped sides for things to grow on. As the logs break down, they keep the soil aerated and retain rainwater. This was important, as I discovered that the whole garden exists on a giant slab of sandstone, so there isn't much soil depth. We planted potatoes and beans that the mast would support in the hugel bed. We also upcycled planters from palettes, which hung halfway up each side of the mast in which we grew flowers from which bees could gather pollen.

Company project which redesigned and installed phone booths for the local community http://leimertphonecompany.net/ in Leimert Part, South Los Angeles.

Figure 25 – L to R, The hugel bed at the base of the mast, potatoes harvested from the bed and the Nano station router, the final version of the mast with upcycled planters and working solar panel.

Getting the mast to broadcast consistently was an ongoing process. Towards the end of the residency, the hotspot was at its most reliable and using a Raspberry Pi 3b as webserver and access point, connected to an Ubiquiti Nano M2 to boost the signal along the platform. The Raspberry Pi 3b was powered by a leisure battery that was charged through a 20w panel. The Raspberry Pi 3b, in turn, powered the Ubiquiti Nano M2 via a Power over Ethernet (PoE) injector. The Raspberry Pi also had a Witty Pi Realtime Clock and Power Manager attached to it that was set up to conserve energy when the station was closed at night.

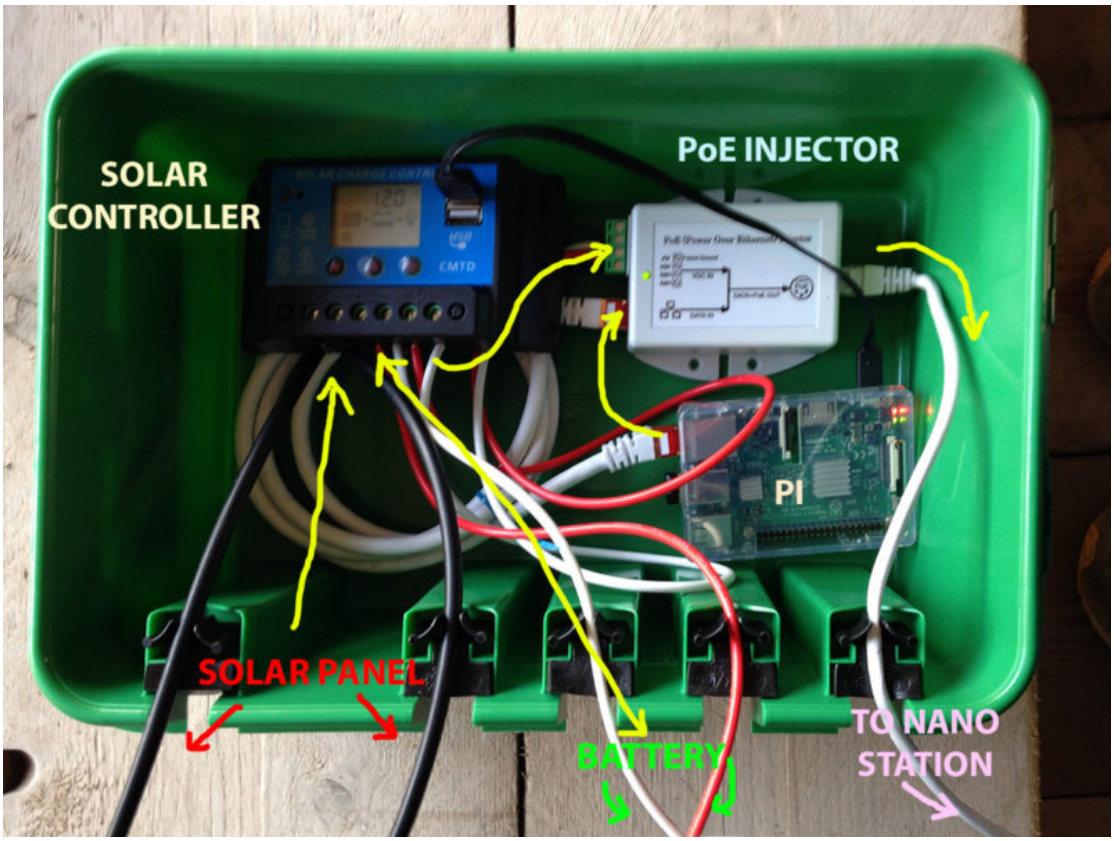


Figure 26- Part of the hardware set-up from Edge Hill Station in a waterproof box.

The necessity of powering the network by using a solar panel began a process of understanding the garden in a different way than anticipated. Initially, I was prepared to site the mast where it could project its wireless signal most efficiently along the station platform, but due to the lack of mains power, I was also required to look up at the sun and think about the passage of light across the garden during the day, in order to understand which locations would provide optimal conditions for generating solar power. This, in turn, led me to look at the architecture, and at the impact that different levels of sunlight had on different parts of the garden. With one side of the garden bordered by a 15ft high sandstone wall, there were extensive areas of year-round shade. This produced distinctively different mixes of plants to the lighter side of the garden on which I had chosen to site the mast. As Andrea Ku, the gardener, explained, 'On the darker sides, it seems like a slower cycle because things are growing slower and they're hardier, they're a bit more woodier' whereas 'On the lighter side, there's a lot of cycles within a cycle. It's like a lot of cogs within a cog machine', and there are plants that 'need light, that need water, that need care and attention.'[234] It was fascinating to begin to understand, even in a rudimentary way, that the natural rhythms of the garden, which I initially generalised and set out to contrast with the mechanical rhythms of the station, were so multiple and complex. One side of the garden might be characterised as slower growing and hardier, due to the shade, but another might be bursting with 'cycles within cycles', due to the light, and this prompted me to begin to re-evaluate the initial idea around simplifying rhythms into those of the garden, and the rest of the station.

The way in which I was thinking differently could be described as a shift in vantage point. I began by thinking *externally* about the artwork as a *project* in which *generic* features of the garden, such as people and plants, have rhythms. As invisible administrator, I aimed to do Haraway's 'God trick', and lay this network over the station, deciding who or what was in or out. The proposed network might have been bounded, but the thinking was more aligned with global management, using prescriptive rules and narrow definitions. Instead, thanks to the lack of mains power, I was now making the work from *inside* the garden, understanding more intimately its

[234] For a fuller extract of this conversation see Appendix B.

complexity, as I explored it through looking and learning. I was solving problems, and building on existing individual and communal behaviours, albeit non-human, such as the availability of sunlight to help plants and flowers grow. I was also starting to critically situate my own gaze, realising those clunky phrases such as 'natural rhythms' or 'connected users' betrayed a particularly narrow viewpoint that I could potentially move beyond.

If I was shifting my viewpoint from down the tracks and the discredited infinite horizon of globalised modernity, and away from the garden and its simplistic reduction to natural or mechanical rhythms and users, where was I looking? Perhaps, I suggest, towards something Bruno Latour calls the *Terrestrial*. For Latour, the draw of the global or the local is accompanied by this alternative, a 'third attractor … at once known to everyone and completely foreign', where some find themselves 'migrating toward an earth, a land, a country, a turf, whatever one wants to call it.'[235] The mast, planted in to the shallow soil, but also connected to the sun, seemed to point in many directions at once, while the global and local remained mapped onto a horizontal plane of generalisation that never actually touched down anywhere. The Terrestrial is, for Latour, 'not the entire planet but only the thin biofilm of the Critical Zone'.[236] The critical zone is described as the thin slice of earth, a few kilometres thick, between the atmosphere and the bedrock that has been affected by human activity. This critical zone offers a useful counterpoint to Morton's hyperobjects, as it is potentially more bounded – as Latour suggests, 'wonder at the immensity of the universe, dive down in thought to the boiling centre of the planet, gasp in fear at those infinite spaces, this will not change that fact that everything that concerns you resides in the miniscule Critical Zone'.[237]

Inhabiting the terrestrial, for Latour, consists of two complementary movements, '*attaching oneself* to the soil on the one hand, *becoming attached to the world* on the

[235] Latour, *Down to Earth. Politics in the New Climatic Regime*. 42.

[236] Latour. 92.

[237] Latour. 78.

other.'[238] Through becoming attached to the soil, the terrestrial 'inherits materiality, heterogeneity, thickness, dust, humus, the succession of layers, strata, the attentive care that it requires.'[239] For Latour, the 'soil' belongs to no-one, and reveals the complexity of the critical zone, without referring to the bounded local. However, the terrestrial viewpoint must also develop ways of living that also points beyond a single location to the world. [240]To do this, beings must actively attempt to map and describe this complexity or, as Latour puts it, 'participate in the composition of a dwelling place.'[241] The being that engages with the terrestrial in this active way 'has its own way of identifying the local and the global, and of defining its entanglements with others.'[242] The station garden project began to resonate with me only when I found myself in something of a terrestrial relationship with the network and the garden. Through the construction of the mast and the broadcast network, a complex, but not incomprehensible, interconnected web of relationships began to emerge. I will explore how I began to articulate these relationships in the next section, dealing with the broadcast content itself.

The Content

The Wi-Fi hotspot broadcast a signal along the platform, which station users could access by connecting to a 'Garden Network' network that would become available to anyone within range searching for a wireless network to connect to. Upon connecting, users were automatically directed to a webpage on which I would regularly update content. The first iterations showed a slideshow of a range of diverse images. The second update used the same format, but instead, showed a sequence of slides explaining the principles of permaculture. The final iteration was a transcribed section of a conversation between me and the permaculture gardener responsible for maintaining the space. The conversation was unstructured, apart from the fact that I

---

[238] Latour. 92.

[239] Latour. 92

[240] I disagree slightly with Latour's call to *the* world in that it suggests a singular entity, *a* world would be more appropriate as the terrestrial would potentially present many viewpoints.

[241] Latour, *Down to Earth. Politics in the New Climatic Regime*. 93.

[242] Latour. 93.

wanted to explore the relationship between permaculture, biodiversity and social media. One of the main features of each of the updates was the unstructured use of sequential images to convey information, and it is this I would like to focus on for the final part of this chapter.

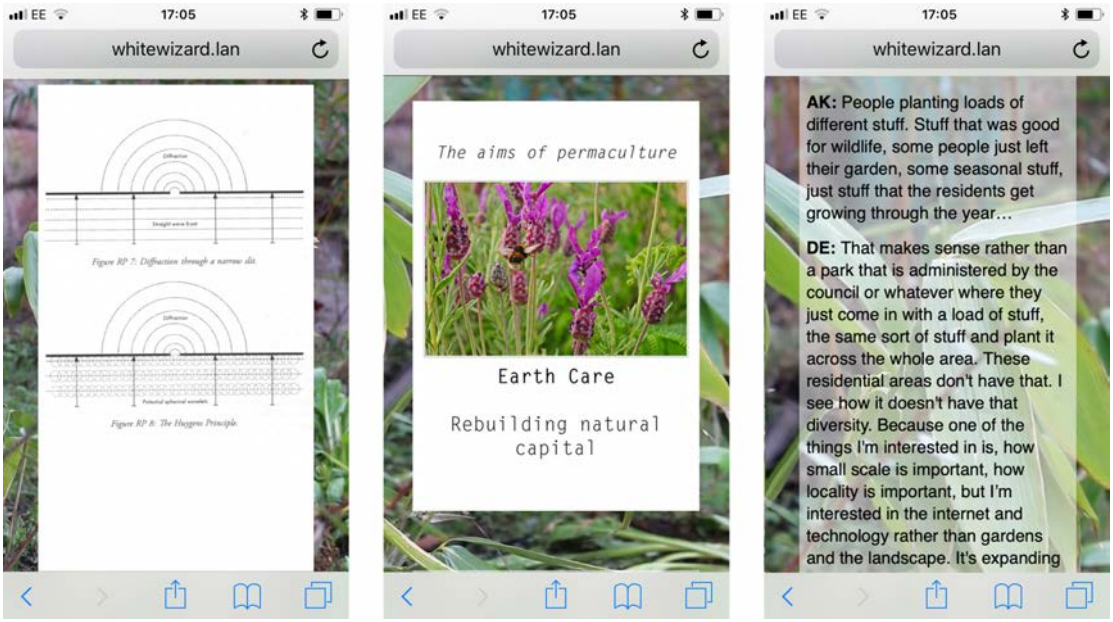


Figure 27 - Screengrabs of the different iterations of content broadcast in the station

For the opening of the garden network, the content broadcast along the platform was a very slow slideshow of images taken from a variety of sources, photographs taken in the station, images from the internet and scanned from books. This iteration reflected my initial proposal to produce an artwork that focused on the rhythms of the site, the station and the garden. Coded in as simple a way as possible, the images in the slideshow slowly faded in, paused for a few seconds, before fading out to be replaced with another. There was no text, nor any buttons for the user to interact with. In the background played a video of plants in the garden fluttering in the breeze, a train passing, and clouds passing overhead.

The initial slideshow included:

1. A stock photographic image of a hand holding an iPhone against a green background
2. An image of the platform at the station reflected in the blurred side of a passing train

3. A black and white photograph of a totem pole from the Pacific Northwest of the U.S.A
4. A scan of diagram of the polar radiation pattern plot of an antennae
5. A photograph of a ceiling painted with a scene of the zodiac by Giovanni de'Vecchi in the Palazzo Farnese, completed in 1574.
6. A photograph of a 4G telecommunications mast, poking out above some trees
7. A blurred side of a train as it passes through the station
8. Clouds in the sky above the station
9. A botanical illustration of a snow drop
10. A graphic of the map of the train network on which the station lies
11. The trunk of a tree
12. A diagram of the Huygens principle of wave propagation
13. A photograph of the sun setting over Liverpool
14. A diagram from a permaculture book showing a schematic of even yield forage over a year
15. A photograph of some bare silver birch trees near the station
16. A diagram of a spiral that shows…from a permaculture handbook
17. An aerial view of the station taken from Google maps
18. An illustration of solar flares
19. A frame from an SAP promotional video.
20. An illustration that shows the frequency of four types of brain waves

On reflection, with this first piece of content, (a slow slideshow broadcast from a mast made of wood, under which potatoes and peas were growing), I was trying to create something opposite to a Wi-Fi 'hot spot'. The graphic iconography of wireless hints at a singular point emanating out in space, seeking and sending signals into the void. The language Wi-Fi, such as 'hot spot', suggests that these signals, as confined sites of heat, energy and activity dissipate towards the edges. In the station, surrounded by the architecture of the industrial revolution, the idea of a hot spot reminded me of a steam engine, intensely burning coal, radiating heat, steam and carbon, to drive specific activity and movement. Was I trying to create a 'cool spot' in which the *heat* of web browsing experience, with its feeds and swipes, were removed in favour of a *cooler* experience? If the tempo was slower, and the exchange less heated, what was

the purpose of the *list* of diverse images that described different elements of the site and beyond, across scales and histories?

This process of listing could be framed as an attempt to *generate alternative descriptions* of the site, a strategy Latour describes as a first attempt to gain 'purchase' on the terrestrial in the face of a global and local that are 'problems at once so large and so small.'[243] As outlined above, Latour suggests that it makes no sense to confine things to a coherent narrative of the local, nor to try to circumscribe the global, as there has been a 'subversion of scales and of temporal and spatial frontiers [that] defines the Terrestrial'. This resonates with Morton's hyperobjects that now reveal a *future* future beyond our established temporal horizons, or draw attention to massively distributed systems, such as climate, that spatially encompass land, sea and air on scales ranging from raindrops to global weather patterns. In order to act politically, we must have 'inventoried, surveyed, measured, centimetre by centimetre, being by being, person by person the stuff that makes up the earth for *us.*'[244] The slideshow becomes a slow inventory of the space as a *Critical Zone* of experience, the electromagnetic waves, the air that carries them, the sky, the trains that run through it and so on.[245]

This series of images could be described as an 'Ontograph'. In *Alien Phemonenology, or What it's Like to Be a Thing,* Ian Bogost devotes a chapter to the Ontograph, suggesting

---

[243] Latour. 94.

[244] Latour. 94. (Emphasis added)

[245] This approach of mapping as a practice to establish and begin to sustain relationships between agents, both human and non-human is not new. Bioregionalism in particular suggests that mapping naturally occurring bioregions is a useful tool. The features that constitute what bioregion we belong to is open to debate amongst those who inhabit it. Kirkpatrick Sale, an advocate for bioregional thinking, suggests that it is only though exploring and learning their surroundings can territorial limits be set. These fluid borders can be drawn and redrawn as knowledge of the region develops. There are no definitive bioregions, no hard edges, as plants grow where they need, there are geological shifts, and so on. A bioregion is '*a part of the earth's surface whose boundaries are determined by natural characteristics rather that human dictates, distinguishable from other areas by particular attributes of flora, fauna, water, climate, soils and landforms, and by the human settlements and cultures those attributes have given rise to*' Kirkpatrick Sale, 1991, Dwellers on the Land, 55.

that it 'uncovers the repleteness of units and their interobjectivity', but does so 'without necessarily offering clarification or description of any kind'.[246] To Bogost, the list is the simplest approach for recording a 'group of items loosely joined not by logic or power or use but by the gentle knot of the comma.'[247] Interaction between elements is implied by *colocation.* The slideshow of things related to the station garden also does this, producing a linear sequence of elements that share colocation in a visual list. It does not attempt to circumscribe this sequence as *the local,* nor does it claim any affinity with a generic global.

The slideshow is problematic as an art form, resonant of PowerPoint presentations, in much the same way that Bogost describes the list as problematic for literature. Quoting Francis Spufford's *The Chatto Book of Cabbages and Kings*, he suggests that 'Language usually puts the signs that represent things into definite relationships with one another'. Lists 'divide, or leave divided the things they include' to produce a 'sequence of disconnected events.'[248] If the concept of the network suggests a smooth flow of information that fails to recognise the many other constituent parts, such as materials and electromagnetic waves, then perhaps the ontograph, via the list or the slideshow, can reintroduce the strangeness of these compositions, how they are ultimately separated from one another, yet connected in a mesh of proximity. The list and the slideshow remove the connections that ordinarily appear in the sentence, or the network map. The graphic below shows how a network might be represented on the left, whereas the image on the right shows how a looping slideshow might be represented.

---

[246] Ian Bogost, *Alien Phenomenology, or What It's Like to Be a Thing* (Minneapolis: University of Minnesota Press, 2012). 38.

[247] Bogost. 38.

[248] Francis Spufford, *The Chatto Book of Cabbages and Kings: Lists in Literature.* (London: Chatto and Windus, 1989); quoted by Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 39.

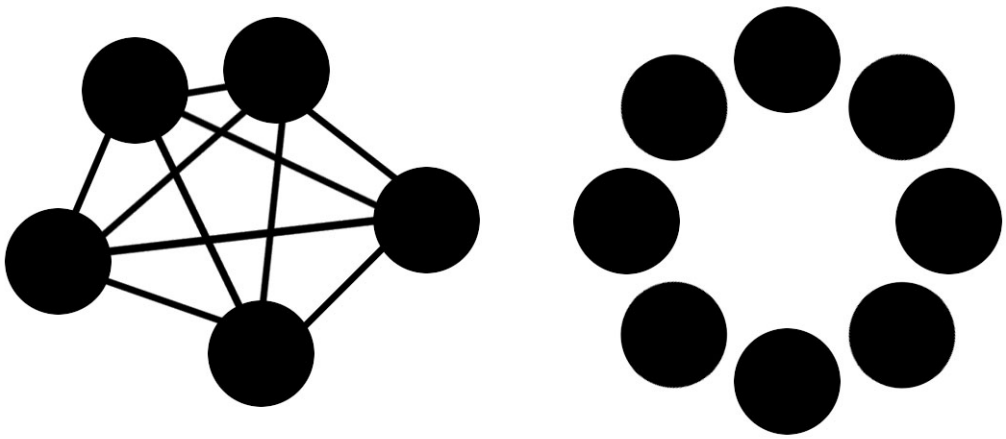


Figure 28 - L: Network map R: Looping slideshow map

I find this a useful tool to describe the relationships in the garden, whereby some things do indeed mutually connect with one another, whereas others actively prey on other elements, whilst yet others do not interact at all. The *network,* as a concept outlined earlier by Chun, tries to distil these elements to give the impression of a *flow* between interconnected nodes. The ontograph as list, or slideshow, does not try to express this coherence. In contrast, as Bogost suggests, again quoting Spufford, they 'decline traditional artifice, instead using mundaneness to offer "a brief imitation of everything"'[249]

The slideshow is, indeed, mundane, with resonances of viewing holiday photos or PowerPoint presentations. In their critical contextualisation of Microsoft PowerPoint, '"One Damn Slide After Another": PowerPoint at Every Occasion for Speech' Erica Robles-Anderson and Patrik Svensson suggest that the software, and, by extension, any deployment of the sequential single-image slideshow, 'uncompromisingly enforces the centrality of slides presented one-at-a-time', which 'prevents detailed comparisons between slides and makes it impossible to trace relationships between parts and wholes.'[250] Much like how language joins the signs of things together, the slideshow, in its usual context, requires the presence of a *presenter* to establish relationships between images. As Robles-Anderson and Svensson suggest 'Slides bind knowledge to

[249] Spufford, *The Chatto Book of Cabbages and Kings: Lists in Literature.*; quoted by Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 40.

[250] Erica Robles-Anderson and Patrik Svensson, "'One Damn Slide After Another': PowerPoint at Every Occasion for Speech," *Computational Culture*, no. 5 (n.d.).

performance rather than to representation. They are not designed to provide audiences with evidence that speaks for itself.'[251] These presenters and their slideshows provide the 'epistemic machinery' for 'project driven organizations', as 'they are able to embody and perform constantly changing, distributed knowledge, to create a sense of order when none might be present, and to anchor discussions by narrating abstract images in view.'[252] Much like the links on a network map, the presenter makes links between slides to give a sense of coherence, often, as suggested, in environments where there is little consistency. As such, it is appropriate that there is no presenter accompanying my slow slideshow. In the garden, I became interested, not in creating 'a sense of order,' as it might pertain to some idea of the local or global, or even some reciprocally operating environmental/ecological system. Rather, I wished to highlight a messy and complex, yet undeniably present, collection of elements.

In her article, 'Using PowerPoint, Artists Ask How Performative Presentations Shape Our Thinking', Shannon Mattern references Robles-Anderson's and Svensson's journal article. Mattern also addresses how artists have already explored the medium by removing the explanatory presence of the presenter. She draws on several artists' work, but the PowerPoint works of Talking Heads front man David Byrne particularly resonate with the slideshow that I broadcast into the garden. By producing slideshows 'filled with arrows pointing to nothing in particular, contentless speech bubbles, gratuitous word art, and charts'[253] Byrne suggests that they 'make no sense whatsoever. The form immediately makes you think that it's conveying information. . . . [Yet] the more you look at it, the more you realize [that] the content . . . is just confusing you further.'[254] Again, this further resonates with Bogost's notion that

---

[251] Robles-Anderson and Svensson.

[252] Robles-Anderson and Svensson.

[253] Shannon Mattern, "Using PowerPoint, Artists Ask How Performative Presentations Shape Our Thinking," *ARTnews.Com* (blog), February 5, 2020, https://www.artnews.com/art-in-america/features/artists-using-powerpoint-critique-rhetorical-strategies-tan-lin-tony-cokes-david-byrne-1202676971/.

[254] Mattern. quoting David Byrne, "David Byrne's PowerPoint Art," interview with Debra Schifrin, "Day to Day," NPR, Jan. 14, 2004, npr.org.

ontographs like lists, and perhaps slideshows, 'disrupt being, spilling a heap of unwelcome and incoherent crap at the foot of the reader. In doing so, a tiny part of the expanding universe is revealed through cataloguing.'[255] The slideshow in the garden, broadcast from the mast, powered by the sun and growing potatoes, seems like an ontograph within an ontograph. The sequence of images is a list, but so is the network itself; a distributed assemblage that ranges across the suns rays, reclaimed wood, soil, potatoes and low power computers. Electronic waves are received by devices in hands, connected to bodies waiting on platforms.

Conclusion

This chapter has explored a networked retreat to the *local,* through the building of a Wireless Local Area Network (WLAN) in the garden at Edge Hill Station in Liverpool. I began by exploring the station itself, using its relationship to globalisation, (through being the first intercity passenger railway station in the world, and the site of the first standard gauge tracks), to discuss the urge to retreat from the large scale. I discuss how scale has shifted to the very large finitude of hyperobjects, described by Timothy Morton as 'massively distributed in time and space.'[256] As these objects can now be measured using technology, they call for the reconsideration of comfortably vague concepts, such as 'the universe' and 'the future'. I discussed the difficulty of orientation in these contemporary systems, and the urge to retreat to a more comprehensible network. The viability of the network itself, as a concept that can aid orientation, was then explored by drawing further on Wendy HK Chun's writing around networks and habit. I concluded that the network conceptually streamlines the system it is trying to describe, disregarding other constituent elements as mere noise. These networks are increasingly personalised, generated by platforms using algorithms that use big data to predict what should be included at the cost of local context.

Furthermore, I asked if there was potential for orientation in the local itself, exploring the definitions of local, and my experience of it in the context of the station artwork. I concluded that, much like the network, the local as a concept is too narrow a

---

[255] Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 41.

[256] Morton, *Hyperobjects, Philosophy and Ecology after the End of the World*. 1.

definition to contain the elements that I was working with in the garden – the earth, sun, people, technology and so on. This led me to think further about the mast that I constructed in the garden. I discuss my initial intention to embrace the local community, and to build a material and visible mast that exposed the infrastructure to show the hidden and messy mechanics of networked communications. This was derailed by two realisations. Firstly, that the quiet community platform that I envisaged was, potentially, a simple mirror of the logic of existing networked platforms, and so potentially reinforced them. Secondly, the fact that there was no mains power in the garden. Consequently, I was forced to look beyond the local, or any community, to the garden itself. I had to build a more intimate knowledge of the garden, the movement of the sun, areas of light and shade, its geological base and so on, in order to establish a broadcast network using solar power. Through this, I discovered Bruno Latour's concept of the *terrestrial,* a focus on the soil and the wider world around it. This brought me from the hyperobject to a more readable concept of the Critical Zone, around, under and over the station garden.

In the final section of this chapter, I looked beyond the mast at what the network broadcast into the station. I discussed how Latour suggests that a process of describing and inventorying this Critical Zone allows us to build and refine 'the representations of landscapes in which geo-social struggles are situated.' The chapter ends with the idea of the ontograph as a way of building these representations, without claiming the authority to organise them in to bounded systems, such as the local or the global. Drawing on Ian Bogost's writing, and on his example of the list as ontograph, I explore my own use of the slideshow as a technique for momentarily highlighting the messy and complex structure that constitutes the garden, its digital network and the many other elements that exist together there.

In the project on the mountainside described in Chapter 2, there were no consumer 4g or Wi-Fi signals and, effectively, no audience for the network that I had built. This encouraged me to think carefully about how I could work in these spaces of absence, filling them with something else to create a network that expanded my understanding of how they could be used. Similarly, here in Chapter 3, the project was significantly shaped by an absence, that of mains electricity. I began to understand that these

absences disrupted the functioning of the network as a tool of neoliberalism, allowing the decomposition of networked spaces into something less streamlined both technically and experientially. Instead of being isolated from networks, in the station garden I found myself surrounded by them: rail, local, ecological, telecommunications. Yet, as I began to respond to the lack of electricity, I realised that these networks are all mapped individually and exclusively. Being in a garden, already established according to the principles of permaculture, led me to thinking about ways that I could produce a network that was less exclusive, and more elements could sit together.

I feel that the artwork shifted over the course of its completion, beginning as an anthropocentric attempt at retreating to the *local* to create a *network*. However, it ended up rejecting both the local (too narrow) and the network (too streamlined) in favour of the *terrestrial* and the *ontograph,* of acknowledging and embracing the huge range of elements contained within the site and artwork, without trying to circumscribe them. In this sense, the retreat to the station garden has been both a failure and a success. My attempt to return to the local failed, as I discovered that, as a concept, it is insufficient to contain the world as I see it. Yet, the artwork is successful, in some respects, as it has helped me to discover an alternative in the terrestrial, a more tangible zone of investigation. The terrestrial, I suspect, is better explored, not through the concept of a network, but through the ontograph, or the network *as* ontograph. It is this that I will explore in the final chapter.

Chapter 4 – A Retreat to Everything, Everywhere

Introduction

The chapter focuses on an artwork titled *Project for a New Physical World*, which can be viewed online at newphysical.world. It is a twenty-six-minute-long video that uses Google Street View to journey along one of the main road arteries that lead out from the riverside in the centre of Liverpool to its airport in the suburbs to the south. The work was conceived and made during the national lockdown due to Covid-19 in mid 2020, initially as a way of exploring an area, without having physical access to it. Instead of a physical journey, the video was made using an online tool that allows the user to take a journey on-screen along a route by adding in coordinates to Google Maps. By specifying how far apart 'Street Views' should be in both space and time, the tool then produces a sequence of images, captured by the Google Street View cars. For this 6.8 mile journey, the online tool produced a sequence of over five hundred Street View images that were then recorded from screen in order to create a video file. This video file was embedded into a HTML page and uploaded to a server. This server is another Raspberry Pi 3b, running apache web server, sitting in a wooden box bought from a shop along the route, on a shelf in my home.

If this thesis aims to consider networked retreat, then what sort of retreat is in operation in *Project for a New Physical World*? In the previous chapters, I have discussed artworks that sought to return to notional space, such as 'the isolated' or 'the local'. Yet, these categories have, on reflection, proved inadequate. This is, largely, due consideration of such generic concepts when applied to the complexities of specific sites. These complexities manifested as on-site absences such as audience, electricity, signals, that disrupted the ordinarily smooth concept and functioning of the network. This further revealed the smooth network as a neoliberal device that gives the illusion of orientation in a constantly shifting world, as a few dominant platforms select what appears to each of us.

When my attention was drawn to filling in these gaps, I noticed how much was actually *left out* of networks. They tended to spill outwards, the closer I looked, the more

invisible elements came into view, and forced me to reconsider what constituted the network. I began to question my role as artist/administrator, simply reproducing the existing network format of platform/human user. How could I open up the network further? The challenge then became about finding a language that begins to reflect this breadth, whilst remaining grounded. In the previous chapter, the slideshow provided such a language, allowing disparate elements to exist together without fixing relationships. This chapter seeks to develop this idea.

So, to answer the question of what sort of a retreat is in operation in *Project for a New Physical World*? Is it a retreat to *everywhere and everything?* Whilst it is comforting to think, in relatively traditional terms, about a retreat to work, hermit-like, on ones own subjectivity, or work within the fuzziness of the local, it is perhaps less comforting to think about retreat to such openness. Perhaps the two terms are incompatible, retreat and openness? Yet, I cannot see why a shift to a situated acknowledgement of complication and expansiveness would not work, especially if it includes a selection of vantage points from across this expanded network without circumscribing them, and sought to consider my own role as aggregator of it. This is what I aim to evaluate, through the production and analysis of *Project for a New Physical World* in the following chapter.

If the structure of each chapter reflects a movement of retreat inwards to the subject, or the local, through progressive analysis of different zones (the global, the local and so on) then, due to the nature of this chapter in which such definitions are rejected, there is no such space to move towards. Instead, there is an open field, through which connections are made. To reflect this, the main body of the following chapter, *A Network*, is split into nine parts that navigate across different elements of the work, through unspoken connections of different types. The intention is not to avoid creating meaning or understanding through a coherent linear structure. Rather, it is to reflect the way in which this can emerge by following ranging connections across elements of the artwork, as they reveal themselves. The main body of the chapter itself becomes an ontograph, deviating from the ordinary flow of the conventional thesis to mirror the situated fragmentation of *Project for a New Physical World*, acknowledging the partial viewpoint.

A Network

1. *Mock Tudor*

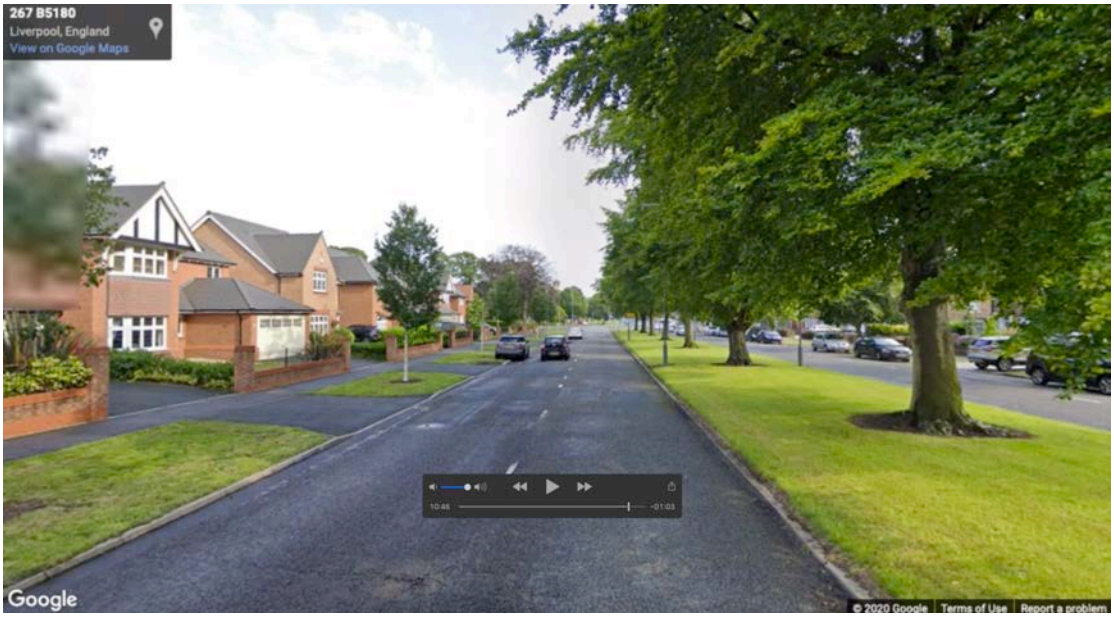


Figure 29 – 'Mock Tudor' still from 'Project for a New Physical World', online video, 2020

Project for a New Physical World consists of a sequence of five hundred images taken from along a road route between the river and airport in Liverpool, with a one second pause between each. Every eighth frame, the video is paused, and a *thing*, such as 'Mock Tudor' is identified from within the frame and described. This literal description is taken from the top-ranking description from a Google search then translated into a synthesised voice. There are over fifty such pauses, with the objects identified ranging from shadows to KFC to dandelions. It was surprisingly difficult to identify objects across the whole journey. I found myself peering at the screen, and attempting to isolate one blurred element, resorting to Google to further identify elements, such as cloud types and species of flora. I found my attention shifted between:

1. The materials an object was made from (bricks, glass, steel).
2. Whole generic objects (tyre, oven-glove, driveway).
3. More complex cultural objects, such as The Beatles' 'Penny Lane', or an estate agents.
4. Invisible objects, such as the exhaust fumes that I knew were in the air, but I could not see

These categories are identified in retrospect. There was a deliberate effort, on my part, to avoid classification, or a system whilst I was making the works, beyond what was available to me on-screen, and could be described by Google. I am aware that these deliberate choices are already present in the format; Google provided the images from Street View, I selected a route that I was familiar with. But, *within* these decisions, how can I open up these environments, and imagine them as a different type of network?

This process of troubling the network, by viewing at it as an endless array of interdependencies that goes beyond users, cables, routers and masts, further keys into Timothy Morton's writing on ecological crisis, and what he calls *the ecological thought.* For Morton, something as simple as a drop of rain, or a conversation about the weather, no longer remains a passive background element, but begins to point outwardly towards something incomprehensively active that operates at multiple scales; namely climate. Within any identified singular element, such as soil, there is both an inward movement, ('Soil is a mixture of organic matter, minerals, gases, liquids, and organisms that together support life')[257] and an outward movement (soil as a component of other things, such as a roads central reservation). The momentary paralysis I experienced when peering at a still from *Project for a New Physical World,* of a Street View image crowded with things, yet unable to choose something, could perhaps be compared to what Morton describes as 'a creepy sensation that there is literally no world anymore. We have gained Google Earth, but lost the world. World means a location, a background against which our actions become significant. However, in a situation in which everything is potentially significant, we are lost.'[258]

What kind of precedent exists for thinking about a network in which everything is potentially significant, in which vest tops somehow connect to Stratocumulus clouds? In my drive to retreat and to build networks as a way of understanding them, have I arrived at a position where I must admit that a partial *understanding* of the network is

---

[257] "Soil," in *Wikipedia*, May 23, 2021, https://en.wikipedia.org/w/index.php?title=Soil&oldid=1024624651.

[258] Timothy Morton, *The Ecological Thought* (Cambridge, Massachusetts: Harvard University Press, 2010). 30.

not necessarily a product of *knowing* about it? Does knowing get in the way of understanding, by suggesting definitive, circumscribed knowledge? Does the practice of being in a place and considering which networks connect there move into territory that requires that I seek an alternative to putting things in categories, such as the local or the subjective?

Here, it is useful to draw more specifically on Object Oriented Ontology (OOO). In his book *Object-Oriented Ontology, A New Theory of Everything*, Graham Harman describes how there are only basically two kinds of knowledge; what a thing is made of, or what it does.[259] Digital networks are primarily *known* by their constituent elements, routers, cables, devices and so on, or by what they do. This knowledge, referring to the previous chapter and to the work of Chun, is reliant on a process of streamlining elements; of excluding some and including others. How, then, is the object of the internet streamlined? It is known in different ways, for example as a *technical* network, connecting nodes or layers, described in various ways, such as the TCP/IP or OSI Models. Or, following McLuhan, the internet is known, or theorised, as an extension of the human mind into the noosphere in which the world has 'become a computer.'[260] One is reliant on an approach of scientific classification, grouping and organising known elements. The other attempts to explain technology as the evolution of the human mind and communication systems. Nevertheless, do these abstractions help us *understand* the internet?

The etymological root of the word understanding, taken literally, translates to 'stand in the midst of.'[261] As active participants, we also 'stand in the mist' of the network. Yet, we must deploy abstractions, such as those described above, that circumscribe and place us outside of it (as an element of mass consciousness in McLuhan or as a generalised 'end user layer' as in the OSI model). Harman suggests that these types of

---

[259] Graham Harman, *Object-Oriented Ontology. A New Theory of Everything* (London: Penguin, 2018). 43.

[260] Marshal McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto: University of Toronto Press, 1962). 32.

[261] "Understand | Origin and Meaning of Understand by Online Etymology Dictionary," accessed August 6, 2021, https://www.etymonline.com/word/understand.

knowledge do not allow objects to exist in their own right. They are either 'overmined', through 'theories that reduce things to their impact on us or each other, denying them any excess or surplus beyond such impact,'[262] such as the OSI or TCP/IP models, or 'undermined', whereby the objects themselves are framed terms of another foundational material, such as consciousness in a vast 'technological brain'.

In Harman's OOO, it feels as if I have found a theory that deliberately sets out to open up the world, and not just to rely on recursive definitions of observed elements endlessly, uniformly, interacting, or to some Gaia like holism, in which everything is unified through some selective component. Through OOO, the artwork *Project for a New Physical World* begins to become a *compound,* in which materials and cultural constructs momentarily mingle freely.

Does this mingling of objects constitute a 'flat ontology' in which all things are as equally 'real' as all others? For example, is a *sauna* equal to the *number 86 bus*? I agree with Graham Harman in his recognition of the flat ontology as a good starting point, because 'an initial commitment to flat ontology is a useful way of ensuring that we do not cave into personal prejudices about what is real or is not real.'[263] Harman's philosophical project of levelling the playing field of reality provides me with a way of approaching the network that, similarly, could ensure that I do not cave into personal prejudices and become a conventional administrator deciding who is in or out. That stated, I also agree with Harman in his description of the flat ontology as a 'disappointing finish.' For Harman, the idea that 'humans, animals, inanimate matter and fictional characters all equally exist'[264] provides us with little to grasp in terms of how we ourselves, as objects, relate to this array of other objects, or how they might relate to one another. OOO addresses these relations, just as Ian Bogost describes ontography as 'a practice of exploding the innards of things', not for its own sake, but to 'above all reveal the hidden density of a unit.'[265] Is the route from the river to the

---

[262] Harman, *Object-Oriented Ontology. A New Theory of Everything*. 49.

[263] Harman. 55.

[264] Harman. 55.

[265] Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 58.

airport in *Project for a New Physical World* the unit whose hidden density I am attempting to reveal?

2. The Strand, Upper Parliament Street, Smithdown Road, Mather Avenue.

The journey starts at Liverpool's Pier Head, and travels along a route that I am familiar with, alongside the riverside, turning up Upper Parliament Street, continuing along Smithdown Road and Mather Avenue to Liverpool John Lennon Airport. Living half-way along this route, I often travel in one direction towards my studio, located in the post-industrial zone that runs alongside river, and the other towards the train station at the airport from which I commute to work. The river end of the journey starts in the oldest part of the city, a palimpsest of warehousing and loft living, while the other end is newer, and more suburban. The cityscape shifts to reflect this change – from warehouses to shops and high-density inner-city housing to the wide leafy roads, gardens and semi-detached houses of the suburbs. Along with this comes a shift in what I identified in each Street View, as I peer at each image on my screen, with a focus on buildings and industrial materials in the city to the occasional inclusion of a plant or tree, to an emphasis on these and the trappings of suburbia, as the journey ends.

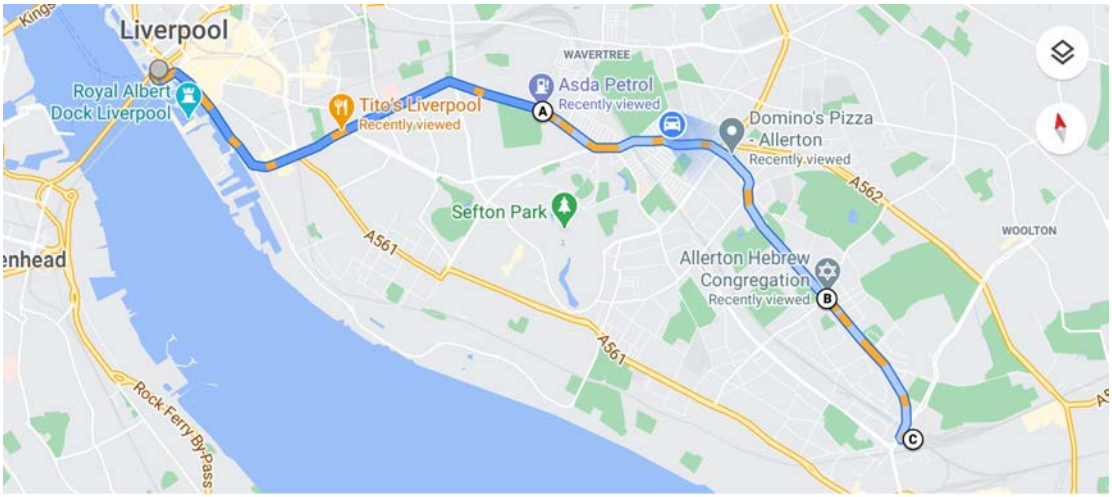


Figure 30 - Screen Cpature of the route taken in 'Project for a New Physical World' from Google Maps

The act of travelling along this route via Google Street View and picking an element from each 'View', then using Google search to find and describe this thing allowed me to get to know these things better, such as the names of plants and trees. Yet, there were lots of things being ignored that I could have included. The route passes through Toxteth, specifically past the junction of Princess Avenue and Upper Parliament Street,

where, during the riots of 1981, The Rialto, a former ballroom, then a furniture warehouse, was burned down. This moment reflected the wider social unrest caused by the policies of Margaret Thatcher and, by extension, neoliberalism. At this junction, instead, I identify an Ionic column in the doorway of one of the many Georgian style houses in the area. Then, a little further on, I find myself at the junction of Lodge Lane and Smithdown Road - here my father danced in the street on the night of New Year's Eve in 1968 as a sixteen-year-old, wearing a pair of round welding goggles, because he thought they made him look like John Lennon. In the artwork, I identify thermoplastic paint and the English Elm either side of this junction.

If this thesis aims to test various forms of retreat from the global digital network to another type of network, and this chapter deals with a retreat to a network of everything, everywhere, should events also be included? Up to now, my conception of what can constitute a network has broadened from human/technical elements to include other objects, the sun, an oven glove, and so on. Yet, these objects all have existing physical properties. Could the Toxteth Riots of 1981 and New Year's Eve 1968 count as objects in a network? Before I can answer this question, it is, perhaps, useful to consider how Speculative Realism (SR) and OOO define objects. Ian Bogost describes how in SR 'all things equally exist, yet they do not exist equally.'[266] His position builds on Manuel Delanda's and Levi Bryant's description of flat ontology, in which, for Bryan, all things, 'corporeal and incorporeal entities…whether they be material objects, abstractions, objects of intention, or anything else whatsoever'[267] count as objects. This objecthood is uniform, whilst the objects themselves all differ. This can happen, as all objects (vest tops, estate agents, shadows etc) are 'all concepts human agents mobilize in an attempt to contain and explain things in a neat and tidy way.'[268] Harman extends this, suggesting that an object is more than its pieces and less than its effects. An object is more than its pieces in that by reducing a description of, say, the number 86 bus, to a collection of atoms, we deny this bus the right to its own objecthood. The view of scientific naturalism suggests that *all* things can be undermined and accounted

[266] Bogost. 11.

[267] Bogost. 12.

[268] Bogost. 12.

for as the product 'some fundamental material firmament,'[269] atoms, neurons, genetics and so on.

An object is also less than its effects, when it cannot be explained away as a small part of a larger set of interactions, which Bogost aligns with social relativism as a way of describing reality as the manoeuvrings of human society. For Bogost, both approaches privilege human experience and discovery of increasingly smaller constituent viewable parts, or increasingly complex viewable interactions. As I understand it, Harman suggests that OOO provides a framework for what is left over hovering in between; a process for speculating on the thing that exists in its *own* objecthood. This is reliant on things themselves, ultimately, being unknowable. Digital networks cannot be known, in that they cannot be exhausted by increasingly close analysis of their measurable parts. Nor can they be reduced to the sum of their interactions. Harman suggests that the same could be said of each of us as individuals, 'each of us *is* something, and that something can never be exhausted by conscious introspection any more than by outward description.'[270] Harman even goes as far as to say that non-human objects share this characteristic of 'having a definite inwardness that can never be grasped.'[271]

By this logic, then, events can also be counted as objects. No amount of analysis can describe or explain all the individual interactions from which the Toxteth Riots were composed in 1981. Nor will the riots themselves ever yield to a singular social explanation. They might have been triggered by the arrest of Leroy Alphonse Cooper, and from the public perception of the heavy-handed tactics of the Merseyside Police Force at the time, but there were innumerable other vectors of influence at play. The striking of midnight on the final evening of 1968 also poses a similarly difficult moment to resolve. This runs counter to my initial understanding of objects as singular, and of events as composed of multiple elements. As Harman suggests, 'every event has a large number of ingredients, since the same holds for every object as well: many things

[269] Bogost. 13.

[270] Harman, *Object-Oriented Ontology. A New Theory of Everything*. 70.

[271] Harman. 70.

happen in a hurricane, but many things also transpire in an unmoving grain of sand.'[272] *Project for a New Physical World* highlights this, as the elements begin to shift between what I would ordinarily think of as components (glass, helium, bracket), and larger, more complete objects (ladder, rucksack, sauna) to cultural moments (The Beatles' 'Penny Lane'). Objects, in the conventional sense, are no more permanent than events. Harman suggests that there are objects that are fleeting, such as the mayfly. However, there are also events that last for a very long time, such as the 'stelleriferous era of the universe.'[273]

Perhaps, in *Project for a New Physical World,* there are hints at a willingness to reimagine the physical world, to make it new by beginning to attach events to the speculative network that I represent. The inclusion of The Beatles' 'Penny Lane', (identified at the junction with the actual Penny Lane) feels as if it begins to give the network licence to reach back into history to draw a different type of object into it. As I continue to build digital networks as part of my practice, I would like to continue to experiment with this broad definition of what can be accepted into them.

3. Covid-19

This work was conceived and executed during the period of strict lockdown in 2020, when my world was limited to a single hour-long period of exercise in a local park. In response to this, I began to think about how the Internet could open the world up again. After the Edge Hill Garden Network project, I began documenting local 4g telecommunications masts as a opportunity to also look at their wider surroundings, plant life and architecture. This was a continuation of my work in the garden, when I was trying to think about the telecommunications network, and the mast specifically, as a jumping off point from which to begin to describe the complex relationships in the critical zone that surrounds me, without trying to circumscribe it.

---

[272] Harman. 53.

[273] Harman. 53.

Figure 31 - Photo documentation of masts in South Liverpool, 2019

Given I was no longer able to go out and visit these masts in person, I began to look at them online, through Google Street View. I was struck by how each frame of Street View could be described as an ontograph of a possible network in itself; an image of a collection of things connected by colocation without narrative or hierarchy. I began to think about the process of journeying through Street View also as a ontograph, as a sequence or list of static images that represent the world from a machinic viewpoint.

I discuss later the implications of attempting to find meaning in any of these images, how through the act of ordering, some sort of human sense is made of the cold, automated eye of the Google camera, and of the vast mechanism that allows access to images. Yet, in the process of retreat, I am also interested in what happens beyond human sense. We can endlessly describe what happens when components of networks interact, but, again, this usually refers to the itemised, systematic networks represented by node and link diagrams and various technical representations. If I am interested in how networks spill over from these representations to include everything, everywhere, for all time, then, as Ian Bogost suggests ‘to take such

interconnectedness seriously' between all living and non-living things, 'we must really mean it…it must become everything*,* full stop.'[274] In *Project for a New Physical World*, this happens via the use of Google Street View as a generator of ontographs, gesturing to an ever-incomplete network. This, in turn, raises two questions. What is my role within this, sat at home at a computer during a global pandemic, experiencing the outside world through a screen? How does the work hint at the connections between the objects in the Street View image?

To explore this further I will, again, draw on the writing of both Graham Harman and Ian Bogost. To reiterate, Harman's writing around OOO resonates with this project, as my attempts at retreat and orientation in the network have simply resulted in a spiralling both inward and outward of my conception of what constitutes the network, to the point where any sort of coherent description of it has proven quite useless. Attempts at simplifying, in my isolated retreat to the forest, have ended up in other elements emerging. Scaling down to the local in the station garden ended up with a massive scaling up. Instead, through Harman and OOO, I can acknowledge that things, such as digital networks are, ultimately, unknowable in themselves. Yet art, though the lens of OOO, allows the production of new objects, whereby we can gain insight into other objects despite their inaccessibility.

For Harman, as I have discussed elsewhere, the problem lies with knowledge being limited to what a thing does, or what a thing is made up from. In the case of the network, neither are particularly satisfying, or even possible to answer in the form of an artwork, with the interactions that compose the network, what a thing does, and its component parts, what it is made from, potentially, going on endlessly. Instead, for Harman, art and aesthetics provide an opportunity, not to burrow down into a thing, but to build upwards, to the production of an entirely new thing. The key mechanism within this operation for Harman, is metaphor, but before exploring this further, it is worth outlining his framework for how different kinds of object and their qualities can coexist.

---

[274] Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 10.

Developing on a range of previous approaches, through José Ortega y Gasset, Martin Heidegger and Edmund Husserl, Harman suggests that there are real objects. These are 'objects in their own right,'[275] and unknowable through direct observation, no matter how close they are. These could be large or small, from a digital network in its entirety, to a pulse of light that carries a signal across it. There are also sensual qualities, which are the observable qualities of both real objects and sensual objects. These enduring sensual objects can be discerned through the careful study of the limited range of sensual qualities available at any one time. There is also a fourth category of real qualities that define the elements of an object that are essential for its continuing presence in that form. What is key is that real objects are inaccessible. I, myself am a real object, ultimately unknowable even to myself. Yet, Harman suggests that in any given experience, 'I myself am the sole real object,'[276] as I am invested inwardly in my interactions with the sensual qualities of other objects, as well as presenting an outline, or shadow of myself to others. This means I can summon the absence of another real object and internally fuse it with the sensory qualities of another sensory object to create a metaphor, and a new compound object in which something of the absent, real object becomes available. He uses the example of a shortened metaphor from a poem by Lopez Pico: 'a cypress is like a flame.'[277] For Harman, the cypress is an inaccessible real object, and the flame is a sensual quality of the sensual object, fire. I, as the only actual real object in this arrangement, summon the absent real cypress, and collide it with the sensual quality of the flame. According to Harman, my role is a theatrical one, in that I *become* the cypress/flame, and produce 'a new object generated by the metaphor.'[278]

As we move through a world of withdrawn real objects, we can only grasp them through these contact points, Harman's 'sensual qualities,' and specifically, only those that are available to us as humans. During the production of *Project for a New Physical World,* sat at home, peering at the screen, I am a conduit through which all the objects

[275] Harman, *Object-Oriented Ontology. A New Theory of Everything*. 78.

[276] Harman. 85.

[277] Harman. 119.

[278] Harman. 85.

I identify briefly emerge. What makes this an enticing prospect, in relation to the network, is that this approach acknowledges that 'innumerable compounds [also] exist without having a human component,'[279] echoing the speculative network that begins to emerge from my research as a momentary glimpse of unending of contact points between an infinite number of objects.

We can, of course, measure and describe, but we cannot pretend that gives us the truth of the object. I could have continued to photograph above-ground telecommunications hardware along the route I travelled. Yet, this would not bring me much closer to an understanding of my position within it. What might be preferable is that we acknowledge that we are 'destined to give anthropomorphic metaphors,'[280] and play to these limited resources. It would be nice to have the experience of how an oven glove experiences the concrete on which it lays but, sadly, I do not have the sensual apparatus. With this comes a key realisation, that, although I am trying to retreat to an open network in which I appreciate the way in which everything is connected, even this is limited to a caricature, defined by what I can sense. This caricature is, as Bogost describes, 'a rendering that captures some aspects of something else at the cost of other aspects.'[281]

[279] Harman. 88.

[280] Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 65.

[281] Bogost. 66.

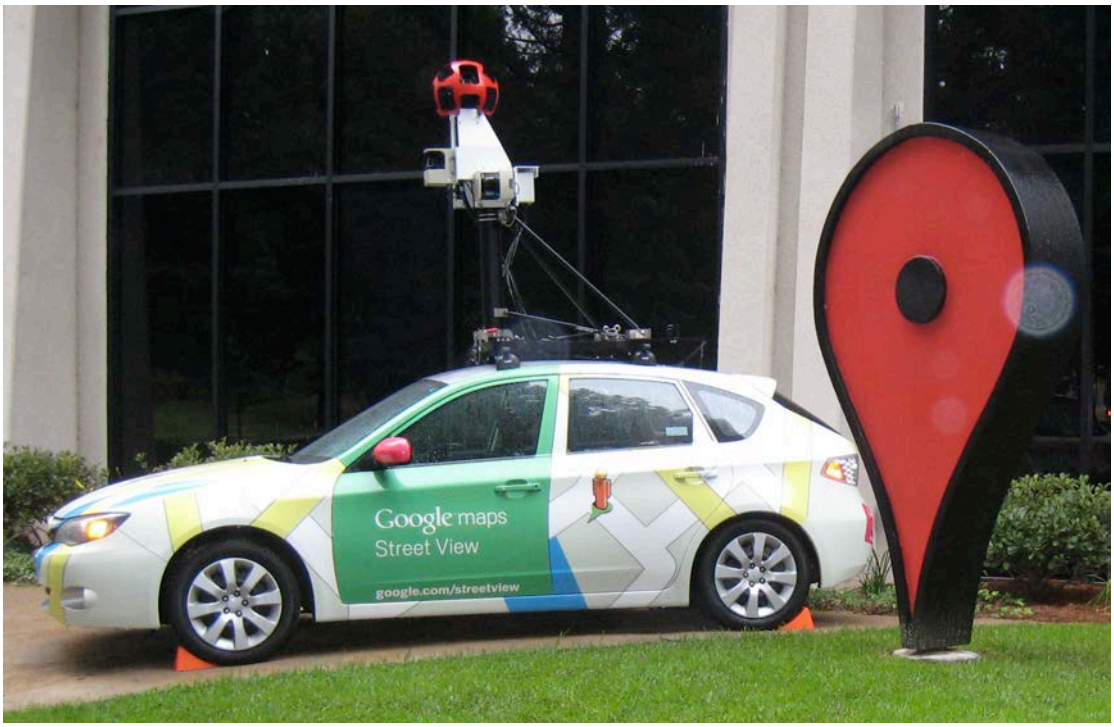


Figure 32 - Google Street View Car outside Google campus in Mountain View California - October 2010

How do the elements in this open network relate in my absence? As previously mentioned, the indiscriminate eyes of the sensors behind the lenses of the cameras, carried on the Street View car, absorb light reflected from a field of objects: dandelion, grass, cloud, asphalt, and so on. This objects reflected light is processed by the lens, the sensor, the camera firmware, the storage device, in a great chain towards the end of which I sit, at my desk, staring at a translation of these processed reflections of light, isolating parts, adding descriptions, and uploading the results to my own server that sits across the room on a shelf. This, then, makes these nested object relations available to anyone with the requisite sensory abilities of touch and sight, a compatible device, the URL and a web connection. I could go on and on, breaking the process down into ever smaller and smaller technical relations, but this would, as Bogost suggests, only help 'to understand how something operates on its surroundings'. This, he continues, 'is not the same as understanding how that other thing understands those operations.'[282] How does the sensor in the camera, mounted on the Google car, relate to the light that is reflected from the dandelion at the roadside? How does the dandelion relate to the soil in which it grows? If the aim of this thesis is *to test and evaluate retreat as a strategy to understand and reimagine networks,* then how better

[282] Bogost. 63.

to do this than by not simply expanding the list of elements that sit within a network, but by attempting to work with how these different elements understand one another?

Ian Bogost describes this as a process of *phenomenological carpentry*, in which one creates 'a machine that tries to replicate the unit operations of another's experience.'[283] In this instance, the experience is of a digital network. Yet, this network is not strictly limited to its components, or to its raw data. Instead, it reaches out to gather light reflected from other objects (in the form of images). It archives events (the release of the Beatles' 'Penny Lane'). It contains materials, gathered from across the globe (in a server). Yet, it sits on a shelf in a home in a box from a nearby shop. Bogost likens phenomenological carpentry to building a space probe, one sent to gather, translate and build an image sufficient to present its controller with a small window into an alien thing's experience. His examples deal with very specific relations, such as between components in an Atari Video Computer System. In speculating on something so vague as an expanded digital network, is such neatness possible? Perhaps the Google Street View Car becomes a version of Bogost's space probe. Nevertheless, it may be one that is more multi-dimensional and tentacular, reaching into the future, to a box on a shelf, and back to the release of The Beatles' 'Penny Lane', and across a whole array of other objects. Despite never being able to fully know this object, such an arrangement temporarily captures and characterises objects as a gesture towards *a* speculative network, rather than *the* network.

While my sense apparatus may limit this caricature, I can draw from across it, even whilst isolated at home during the peculiar conditions of a national lockdown. The Google Car extends it, and I can draw upon those images and the whole array of objects that it captures. Google's search algorithm presents certain descriptions of these objects, according to their rank. These images and descriptions can sit in a server in a wooden box on a shelf, connected by cables to global telecommunications infrastructure. Yet the images, descriptions and server all relate to a specific location, a route through a city, so there are further dimensions that connect to the network.

---

[283] Bogost. 100.

The Google Car becomes an agent. The search algorithm becomes an agent. The server becomes an agent. I am an agent, rendering the work of these agents visible for others. The result is a new compound, an artwork that builds a speculative network that links: my desktop, a server in my front room, steel, a sauna, the river, an airport, the Google Car and Google as a corporation, alongside all of the other components we usually consider to be part of a digital network. Simply anthropomorphising the Google Car would not have been enough. Suggesting that it can see and speak would close off all the other relations that occur outside of the human that constitute a network.

4. Vertical Features Remake

Figure 33 - Peter Greenaway, Still from 'Vertical Features Remake,' 16mm colour film, 1978

The title for the work discussed in this chapter, *Project for a New Physical World*, is taken from a line in Peter Greenaway's 1978 film *Vertical Features Remake*. As discussed in the previous chapter, whilst researching for the Edge Hill Garden Network, I became interested in the role of the mast or the pole as a structure around which communities could focus. During this time, I came across *Vertical Features Remake*, Greenaway's second film. The film tells the story of the attempted reconstruction of a lost film made by Greenaway's fictitious alter ego, Tulse Luper. The lost film, variously

titled ‘Vertical List’ or ‘Vertical Features’, consisted of a sequence of short, static shots of vertical features in the landscape, fence posts, telephone poles, trees and so on, all filmed within a single grid square of an Ordinance Survey map, and, arguably, other locations. My own journey via Street View felt like something similar. Yet rather than through the lens of a fictitious film maker, the footage was captured and distributed via the Google Street View Car. In *Vertical Features Remake*, the film was allegedly shot by Luper to show ‘Visual Concepts of Time and Space’ as part of a ‘State Landscape Programme,’ whose aim was ‘the creation of a dynamic landscape.’[284] The film describes how drawings and footage, shot by Luper, were found in various locations, and a project was undertaken by ‘The Institute for Reclamation and Restoration’ (IRR) to edit it together to recreate the original. However, there is considerable disagreement amongst the fictitious academics at the institute concerning how the film should be organised, and what should be included, resulting in four different short versions within the overall film. This, then, results in a film that is about structure, and has highly structured sections, yet also revolves around a narrative which is never quite resolved.

Figure 34 - Stills of drawings and research by 'Tulse Luper' from ‘Vertical Features Remake,’ 1978

My work, *Project for a New Physical World,* began as a sequence of static images documenting telecommunications masts, a particular vertical feature along the route. Since Edge Hill Garden Network, I had become attuned to spotting them in the landscape wherever I went and was surprised by their ubiquity. I was interested in these relatively uniform structures’ relationships with their varied surroundings. They appeared on central reservations, alongside trees, at residential road junctions,

[284] Peter Greenaway, *Vertical Features Remake* (BFI, 1978).

outside busy supermarkets. Yet, they uniformly tried to hide. What was I to do with them? I was not interested in building an exhaustive record of these structures, like Bernd and Hilla Becher's ongoing project documenting water towers and other structures, in order to reveal some 'basic form.'[285] This would, to apply Graham Harman's term, undermine these objects, and would suggest that they 'are too shallow to be real'[286] in their own right. Given my emergent interest in the ontograph, and in its relationship to lists, *Vertical Features Remake* resonated with me, as it took this form, a 'Vertical List', yet also disrupted it through its acknowledgement that no list is ever complete. Similarly, an agreement was never reached, within the film's narrative, as to how the actual remake should be composed. In the book chapter, 'Tabula for a Catastrophe: Peter Greenaway's *The Falls* and Foucault's *Heterotopia*', Bart Testa describes how Greenaway uses systems that are 'entirely rationalistic, coolly detached and familiarly functional', such as 'the vertical'. Yet, through 'unaccented exaggeration and over-elaboration', 'the viewer sees what is overwhelmingly familiar undergo an odd slow collapse.'[287]

In *Vertical Features Remake*, neither the convoluted narrative surrounding the life and intentions of Tulse Luper, nor the increasingly complex and systematic arrangements of vertical features at the hands of warring academics, come close to resolving themselves. Ultimately, Greenaway treads a light path between disallowing Luper from becoming a visionary auteur, through his singular vision, and stopping a simple organising principle from revealing anything, other than a growing snowball of complexity. For Greenaway, the landscape as a subject will not submit to the hands of the individual, Tulse Luper, or efforts at inserting it in to a synthetic, totalising system, represented by the IRR. No list captures everything. Neither can any system realistically contain everything. Greenaway captures how the list, and then the system,

---

[285] Tate, "'Water Towers', Bernd Becher and Hilla Becher, 1972–2009," Tate, accessed January 3, 2021, https://www.tate.org.uk/art/artworks/bernd-becher-and-hilla-becher-water-towers-p81238.

[286] Harman, *Object-Oriented Ontology. A New Theory of Everything*. 46.

[287] Bart Testa, "Tabula for a Catastrophe: Peter Greenaway's The Falls and Foucault's Heterotopia," in *Peter Greenaway's Postmodern/Poststructuralist Cinema*, ed. Paula Willoquet-Maricondi and Mary Alemany-Galway (Lanham, Maryland: The Scarecrow Press, 2008), 79–112. 88.

are pushed to collapse. With this in mind, I was presented with the following questions around my role as selector. What system was I working with? And how could I make it collapse?

The system at work in Greenaway's *Vertical Features Remake* used the symbolic form of the vertical, thinking of the film stock itself as a vertical list of images and the English landscape as a collection of vertical structures. The number eleven was used as a guiding structure, for example, through using eleven sequences of eleven frames within the first remake, and a reference to the vertical edges of the screen. Yet, I am using Google Street View, which is a database of images and other information. In *The Language of New Media*, Lev Manovich describes the database as 'a new symbolic form of the computer age,' appropriate to the 'world [that] appears to us as an endless and unstructured collection of images, texts, and other data records.'[288] According to Manovich, this form has no start or finish. It has no elements that organise it into a sequence, 'with every item possessing the same significance as any other.'[289] This form can be organised in any number of ways, much like Google's Street View, which can be used for any number of purposes to show a vast range of data. Obviously, it is an incredible attempt at systematic mapping and making available information about the earth's surface. Just as the found footage of Greenaway's protagonist Tulse Luper was part of a 'state landscape programme' to 'create a dynamic landscape,' Google works with its partners to produce an immense data set that pursues its aim to 'organise the world's information and make it universally accessible and useful.'[290]

Google's systematic vision functions by sorting the world in to indexed images and endless geographical features that are searchable: roads, banks, shops, petrol stations and so on. It is a gigantic, systematic description of the world, according to Google (with a focus on services) that can never be complete. In some respects, I am working in the opposite way from how the narrative around *Vertical Features Remake* was

---

[288] Lev Manovich, *The Language of New Media* (Cambridge, Massachusetts: MIT Press, 2001). 219.

[289] Manovich. 218.

[290] "How Google Search Works | Our Mission," accessed January 3, 2021, https://www.google.com/intl/en/search/howsearchworks/mission/. "How Google Search Works | Our Mission."

constructed. In the film, Luper's initial singular vision was lost, and had to be systematically reconstructed by the IRR. I began with a highly systematic set of references, the google maps database. Then, I troubled them with a subjective and singular selection of a route, and objects at regular intervals along it. To work with a random Google Street View route and create a random list of the features that it has already recorded, would create an unsatisfying flat ontology that merely highlights Google's expansive reach, yet fails to acknowledge a vast array of elements that fall outside of it.[291] Yet, as another observer of this world that the Street View car records, I can also include my own singular vision. I am working *against* Google to highlight elements that its mapping capabilities have not yet reached, building an alternative Street View, which is endlessly congested with vest tops, stratocumulus clouds and exhaust fumes. These elements are not stored in a generic data centre, but are self-hosted in a peculiar box, on a shelf, in a family home. This host does not reach out for 'user generated content,' or secretly track users choices with a view to tailoring the content presented. Instead, it presents a stubbornly idiosyncratic view of a network in a singular moment of time and space. Yet, neither approach can ever be complete. Google's attempts at corralling 'all of the world's information' collapses at the inclusion of my own attempts at situating and naming elements. Yet, my own attempt at cataloguing also fails. In both cases, there is just too much world to name. Having analysed Greenaway's film, what tentatively emerges is a collision of two types of looking, each selective in different ways, but both doomed to fail. Instead of claiming to present a definitive moment, an endlessly dense series of objects is, hopefully, revealed.

5. The Street View Car

I felt that the way I was viewing the images captured by the Google Street View car contrasted with existing ways that images from Street View have been used in contemporary art. The most well-known example[292] is probably Jon Rafman's 'Nine

---

[291] For a useful example of how others have attempted to show what 'falls outside' of Google's mapping project see 'Queering the Map' at https://queeringthemap.com/

[292] See also Michael Wolf's 'A Series of Unfortunate Events' and Doug Rickard's 'A New American Picture'

Eyes' project,[293] in which he trawls through images from Street View to find images that resonate with him in different ways, from allowing him to draw on his knowledge of photographic history to identifying images that represent 'Google's depiction of modern experience.'[294] These collected images all come together in a variety of formats, including in a blog, in PDF form and through exhibitions. Whilst I will write about this in more detail later, Rafman describes working with Street View as an 'extraordinary opportunity to explore, interpret, and curate a new world in a new way,'[295] from which he creates collections of images, which freely oscillate between 'rural Americana,' 'hard boiled American street photography,' 'family snap-shots' and 'landscape photographer.'[296] This new way of curating the world suggests a visual mapping of networked plurality that remains decidedly anthropocentric in a grab-bag postmodern way. While anthropocentrism is unavoidable, as I will discuss further in another section, Rafman's work operates *against* the density of the images, in favour of resolving them in to various anthropocentric narrative forms.

Figure 35 – Jon Rafman, digital image from 9-eyes.com, 2008 - ongoing

[293] "Jon Rafman," accessed December 1, 2020, https://9-eyes.com/?og=1.

[294] Jon Rafman, "IMG MGMT: The Nine Eyes of Google Street View," Art F City, August 12, 2009, http://artfcity.com/2009/08/12/img-mgmt-the-nine-eyes-of-google-street-view/.

[295] Rafman.

[296] Rafman, "IMG MGMT."

In making 9 Eyes of Google Street View, Rafman acknowledges how Google frames our perceptions through the cold, technological eyes of the Street View cameras, which have a 'supposedly neutral gaze.'[297] Yet, he operates against this neutrality, describing the modern experience as the human seeking meaning in-amongst this world that is increasingly structured by these automated images. For Rafman, 'reasserting the significance of the human gaze within Street View, recognizes the pain and disempowerment in being declared insignificant.'[298] While I agree that living in a world structured this way could be as Rafman describes, in my own work, I am more interested in troubling these implied binaries of significant/insignificant. Might there not also be relief in being *less* significant, without disappearing completely? Rather than relying on a human gaze that drifts across images applying various aesthetic criteria to give that human being meaning, is it not also possible, within each image, to attempt to highlight the density of other relationships that occur, of which the human is just one?

How can we understand this treatment of the image, in relation to the treatment of images in *Project for a New Physical World*? Rafman discusses how Street View allows him to access many types of views of the world, views popularised by photographers like Anselm Adams or Brassaï. In his discussion of ontographs, Ian Bogost describes how, within these photographer's images, through the use of large format cameras 'everything finds its place: black lampposts in relief against the mist wafting up the escalier de Montmartre, the Snake River winding carefully back and forth towards the snowcapped Tretons…All inspire, invoke, or reinforce our ordinary, human experience of these objects and scenes.'[299] Yet, Bogost contrasts these images with the photography of Stephen Shore, who popularized colour photography as a fine art practice in the 1970s, also by using large format 8x10 view camera. Bogost uses Shore's 'Beverly Boulevard and La Brea Avenue, Los Angeles, California, June 21, 1975'

---

[297] Rafman.

[298] "Archived Page from the '9 Eyes' Collection on Conifer," Conifer, accessed April 13, 2021, https://conifer.rhizome.orgdespens/9-eyes/20180103102123/http://artfcity.com/2009/08/12/img-mgmt-the-nine-eyes-of-google-street-view/.

[299] Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 48.

from 1975 as an example in which 'everywhere all across the image, objects tousle one another.'[300] What distinguishes Shore's work from those of his predecessors is that his images appear mundane. However, for Bogost, the subjects are not subordinated to mundanity, but are made mundane by presenting a composition that draws attention to nothing in particular, so everything appears at the same time, allowing unseen things and relationships to emerge. Bogost quotes Michael Fried as saying about Shore, 'You don't seem superior to the material. Nor are you seeing these places as a foreigner might.'[301] For Fried, there is no over-familiarity, yet neither is there a sense of novelty. Rather, his images 'posit objects, even the objects of human activity, in a world of mysterious relation to one another.'[302]

Figure 36 - Stephen Shore, ''Beverly Boulevard and La Brea Avenue, Los Angeles, California, June 21, 1975.' chromogenic color print, 1975

[300] Bogost. 49.

[301] Bogost. 49.

[302] Bogost. 49.

This contrasts with Alec Recinos' reading of Rafman's Street View images as 'recognizable and banal...yet nonetheless foreign.'[303] His selected images both imply and capture novelty, establishing moments of familiar human drama, from the mundane to the strange, captured in, largely, unknown locations. This merely extends Cartier-Bresson's 'decisive moment', in which the movement of the camera and the subject align and 'there is one moment in which elements in motion are in balance,'[304] and held immobile on film. In this approach, detail is something that can be subordinated or tyrannizing, a category of nameless stuff, supporting the main features of the subject and the photographer. For Bogost, Shore turns the photograph as the capture of a moment on its head, 'rejecting the singularity of the now in favour of the infinity of the meanwhile.'[305] Whereas other photographers might be occupied with momentarily capturing a subject, Shore draws attention to the mass and profusion of the world of the details in his scenes, which are happening with or without the human gaze. Cartier Bresson's subordinated or tyrannical details start agitating to produce a different type of image. On reflection, it is this the mass and profusion that I sought myself each time I peered at the Street View image on-screen, trying to pick out a detail, any detail amongst an almost infinite number, to draw attention to the wider network of unacknowledged objects.

6. Voices

Each time a new Street View appears on screen in *Project for a New Physical World*, there is a sound, a synthetic bloop. After eight such images and bloops, there is a pause, and a digitally generated voice speaks a description of an element within the view. This audio description is a translated block of text that describes the element. This text is provided by copying one of the top results from a Google search, using the name of the element. To translate the written text to audio, I used Apple's text to speech service. This gives the user the option to save the text as an audio file spoken in

---

[303] Alec Recinos, "Towards a Postinternet Sublime," Rhizome, 2018, http://rhizome.org/editorial/2018/jan/04/towards-a-post-internet-sublime/.

[304] Henri Cartier-Bresson, "The Decisive Moment - An Excerpt," in *Photography in Print. Writings from 1918 to the Present*, ed. Vicki Goldberg (Alburquerque: University of New Mexico Press, 1988). 385.

[305] Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 50.

one of forty-eight different voices. The choices offer male and female, plus numerous voices suited to different languages. I selected all of the voices that translated into English and remained relatively understandable. This meant that I cycled across thirteen different voices during the sixty-three descriptions.[306] The result is a mix of accents and gendered digital voices, some more human, some more robotic, some easy to understand, some less so.

Whilst making the work, I simply knew that I did not want to voice these descriptions myself. Using my own voice would have been too personal. I had already chosen a location that I am familiar with. I did not want to narrate this journey in the style of an audio guide. Neither did I want to employ another person to read them for me. I did think about using an online task resourcing site, such as upwork.com, but again, I was keen to avoid the limited characterisation that a single narrator would provide (as in chirpy, monotone, colloquial, received pronunciation and so on). Using the text to speech service provided enough variety to prevent the work sounding too much like a coherent list. Whilst these observations might be useful to understand the practical decision-making process of making the work, they also raise wider questions about shifting focus away from the human to the wider realm of objects. What does it mean to retreat to a position whereby there is an attempt to diminish the appearance of human organisation in favour of a more equal arrangement of objects, in which the human and their ideas are just one?

If I entertain notions of retreating to everything, everywhere, for all time, joining together things as diverse as vest tops and churches, am I diminishing the achievements of humans and our experiences? As I have drawn on the writing of Bogost, Harman and Morton, it is useful to look at how this question has been framed as a critical analysis of speculative realism and OOO. In his examination of the philosophical foundations of OOO, Andrew Cole suggests that according to its thinking

[306] For a full list of description see Appendix C.

'You, a speck of flea shit, an electric chair, and a solar flare are all equal objects.'[307] In his review of Jussi Parikka's *Media Archaeology,* Ben Kafka reflects on this statement and adds '"You" may indeed get a kick out of comparing yourself to a speck of flea shit or a solar flare. But substitute "you" for pretty much anyone else on the planet and you begin to see how dehumanizing "posthumanism" can be.'[308] I have no wish to defend posthumanism, Object Oriented Ontology (OOO), or Speculative Realism (SR), but does this same criticism apply to my work? Does travelling along the route between the river and the airport, pointing out various things that I pick out on screen, but avoiding humans and their activities, inadvertently dehumanize others, by exclusion? A key realisation, within this thesis, has been that networks, by their nature, are exclusionary. I have discussed how, in order to create a network, relationships require streamlining and some things must be left out. I have come to accept that this is a necessity. Yet, this does not mean that I cannot speculate on the extent of the networks I am entangled in. Just the very act of trying to build small networks, as I did in the forest and station garden, had the effect of revealing the complexity and density of these networks. On closer inspection, they overflowed in every direction and at every scale, from the microscopic to the universal. In this work, I am interested in thinking further about how I can practically demonstrate how the objects contained in this density touch upon one another.

In his critique of OOO and SR, JJ Charlesworth recognises that this philosophical shift of focus to the non-human aligns itself with interest in the Anthropocene. He describes how the Anthropocene 'has gained currency as a pseudo-scientific version of the environmental dogma that insists humans are fucking the planet up because they reshape matter already too much' and continues by suggesting that OOO and SR give 'philosophical credence to that cultural distaste for 'human mediation.''[309]

---

[307] "THE USES AND ABUSES OF OBJECT-ORIENTED ONTOLOGY AND SPECULATIVE REALISM Andrew Cole," accessed April 14, 2021, https://www.artforum.com/print/201506/the-uses-and-abuses-of-object-oriented-ontology-and-speculative-realism-andrew-cole-52280.

[308] "Ben Kafka on Jussi Parikka's Geology of Media," accessed April 14, 2021, https://www.artforum.com/print/201509/jussi-parikka-s-geology-of-media-55519.

[309] "The End of Human Experience," accessed April 14, 2021, https://artreview.com/summer-2015-opinion-jj-charlesworth/.

Charlesworth also suggests that SR 'derives its authority from the culture of misanthropy that rejects the idea humanity should reshape anything in its own image.'[310] What emerges from a critique such as this, a binary position that suggests that humans are reduced to the level of objects, is that humans are thus rejected, and should not intervene in anything**.** Yet, my understanding of SR and OOO is that the human element is neither rejected nor cast as an object that should not interact with its environment. Rather, both humans and non-humans are treated as having equally rich, independent lives. Rather than a correlationist approach, in which objects are realised only because of human activity and that 'reality is something constructed by language, power, or human cultural practices,'[311] OOO and SR both suggest that 'things constantly machinate within themselves and mesh with one another, acting and reacting to properties and states while still keeping something secret.'[312] The ontological contents of reality are dispersed equally throughout its entirety, with the human acting within it, machinating and reacting, along with everything else, no longer occupying fifty per cent, as suggested by Harman, but still very much present. Bogost uses Levi Bryant's description of a post-human ontology as 'one in which humans are no longer monarchs of being, but are instead among beings, entangled in beings, and implicated in other beings.'[313] The criticism that the non-correlationsist view 'denounces the idea that human beings can – even should – actively reshape the world in their own interests'[314] is countered by the idea that we are not alone in shaping the world to our own interests, with other objects endlessly intertwined with this process. So, while I understand the link between the geological consequences of the Anthropocene and the perceived rejection of human intervention, my own interest in flat ontology comes from the increasing difficulty, in my own production and reflection on networks, of disentangling a neatly parcelled human from the mess of other objects that surround it. In exploring digital networks, I have become aware that there is an ideological impetus around human representation, that could, and maybe should,

---

[310] "The End of Human Experience."

[311] Harman, *Object-Oriented Ontology. A New Theory of Everything*. 10.

[312] Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 27.

[313] Levi Bryant, *The Democracy of Objects* (Ann Arbour, Michigan: Open Humanities, 2011); 44 quoted by Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 17.

[314] "The End of Human Experience."

occasionally give way to other, more speculative representations, such as *Project for a New Physical World*.

7. The Mesh

The ontograph/list/slideshow format allows me to represent some elements in an interconnected way that doesn't privilege one thing over another, yet it does not give me any tools for thinking about the whole. As I consider the elements from along the journey, revealed by Street View, I begin to spot interconnection. Stratocumulus clouds form part of the Earth's hydrosphere, the sum of all the Earth's water. These clouds produce rain, which then becomes part of the soil, specifically the soil solution, alongside the soil matrix (solid matter), and soil atmosphere (gases), to form part of the pedosphere. This interacts with grass, part of the biosphere, through which driveways cut, across which tyres travel, propelling the number 86 bus that produces exhaust fumes. Does this description of nested and connected objects, in itself, form a speculative network? The network is a both a diagrammatical and a conceptual device that shows interconnected nodes, but, as we have seen in previous chapters, it refines the parts of this network to make them intelligible; the telecommunications network, the rail network and so on. Is the network, then, too limited to describe or represent the relationships in the ontograph? Lists, after all, can only ever gesture towards momentary completeness. A list of the contents of my kitchen cupboard, for instance, cannot include what I have in my fridge, and has no room in it for the stuff I bought last year. Is there a concept that we can use, along with the ontograph, to think in a broader way about interconnectedness, and what happens after the end of the list, or before the beginning?

Returning to *The Ecological Thought*, Timothy Morton asks 'could we have a progressive ecology that was big not small; spacious, not place-ist, global, not local (if not universal); not embodied but displaced, spaced, outer spaced?'[315] At first glance, this statement appears to revert back to the global/local type binaries that I am keen to progress from, but looking closer, this question seems not to promote near or far, but to ask for the inclusion of everything, regardless of big or small, global or local. To

[315] Morton, *The Ecological Thought.* 28.

accommodate all of this into a concept, Morton attempts to steer away from terms associated with the internet, such as network, or terms that imply a vitalism, such as web. Instead, he presents the concept of *the mesh* as representative of 'the interconnectedness of all living and non-living things.'[316] I understand a mesh as finer than a net. Consequently, the holes are part of the mesh, whereas a net is, arguably, more the material connections. My interpretation is that, in some respects, a mesh *constitutes* (3d mesh, mesh skin graft), whereas a net *captures* (fishing net, tennis net and so on). The mesh is less easy to hold, which tallies with Morton's description of it as having 'no absolute center or edge.'[317] I sense the mesh when I peer at an image from Street View. Do I see an estate agents, or do I see the bricks it is constructed from? Do I see a brick, or do I see the material it is constructed from? Morton suggests that 'scale is infinite in both directions, infinite in size and infinite in detail,'[318]allowing the view to move outwards and inwards, traversing the mesh as we go. For Morton, the constitution of the mesh also blurs the lines between living and non-living and connects things across time. The brick may be made from shale, a sedimentary rock that is produced by matter, including the organic material of dead plants and animals, settling at the bottom of ancient rivers, lakes and oceans, which is then compressed in to strata, and eventually compacted in to rock.[319]

Tools like Google Earth and Street View, with their abilities to zoom in and out with a click, give us a sense of this expanse of scale, but can never sum them up entirely. The same large-scale computing technologies show us how intertwined we are with materials, systems, histories and futures, through things such as models and carbon dated timescales. Old certainties, such as the Standard Model in physics,[320] and even

---

[316] Morton. 28.

[317] Morton. 29.

[318] Morton. 30.

[319] "Info Shale - How Is It Formed?," accessed December 17, 2020, https://www.artistictile.net/store/info-shales.html. "Info Shale - How Is It Formed?"

[320] "Physics beyond the Standard Model," in *Wikipedia*, July 28, 2021, https://en.wikipedia.org/w/index.php?title=Physics_beyond_the_Standard_Model&oldid=1035999701.

old mysteries, such as the origins of the Tully Monster,[321] have evaporated thanks to these technologies. Morton describes how we, consequently, have become more aware of risk, and try to manage it. Yet, along with this comes 'a perilous sense of vulnerability.'[322] We find comfort from this vulnerability by seeking to situate ourselves, much as I attempted to do through the research described in previous chapters. Morton describes how we want 'location to be local,' in 'the here and now,'[323] but feel that this place has been irrevocably destabilised by things like modernity, Capitalism and technology. This seems to suggest that, if only we could get back to this local here and now, everything would be ok. The mesh that Morton describes has a vastness in time and space that serves, for me, as a reminder that we are only a tiny fraction of it, and our awareness of it is a privilege that should encourage us to consider how we care for it, not attempt to mould it into a comfortable image of our liking.

While these reflections on Morton's thinking big might seem grandiose, in the context of this thesis, the mesh offers a speculative territory in which to explore how elements might be connected, without circumscribing them. *Project for a New Physical World* is a collection of such elements that is not restricted to a specific narrative about a time or place. It is a route between the sea and the sky, a car with a camera, a server on a shelf, and a host of other objects, all bundled together to provide a glimpse of a part of the mesh. There is a home and a locale, but they are objects alongside others, such as: data, flora, architecture, culture and more.

8. The Server

The digital video *Project for a New Physical World* is hosted on a Raspberry Pi 3b, the same type of small, single-board computer that is used in each of the other projects discussed in this thesis. While connection to these previous networks was isolated to a limited geographical area, this work is different in that anyone with an internet connection, anywhere in the world, can connect to view this video. It is no longer

---

[321] Victoria E. McCoy et al., "The 'Tully Monster' Is a Vertebrate," *Nature* 532, no. 7600 (April 2016): 496–99, https://doi.org/10.1038/nature16992. McCoy et al.

[322] Morton, *The Ecological Thought*. 25.

[323] Morton. 27

broadcast via wireless, but directly cabled to form part of the internet. When it is viewed, the work is served from the Pi, which is situated in a box on a shelf in my home. As mentioned, my home is approximately mid-way along the route featured in the video, just off Smithdown road, between the Street Views that discuss *Cherry Tree* and *Ladder*. This raises two questions. Why is it important that the video no longer be limited to a single geographical area? And, why is it important that it is hosted along the route, and not simply uploaded to a video sharing site like YouTube or Vimeo?

The answer to the first question – why is it important that the video no longer be limited to a single geographical area? – can be found in the evolution of this piece of work. For the third significant piece of work, following on from Edge Hill Station Garden Network, it was my intention to create and build another wirelessly broadcast work. During another residency in 2018, at Signal Culture in Owego, NY, I wanted to further explore solar-powered networks and consider how medieval cenobitic monks embodied the values they lived by, through the clothing that they wore. This was an initial attempt at embodying the network, becoming a speculative model myself of how nodes in the network might look. I created a jacket in to which solar panels had been sewn, which powered a Nano Pi, a smaller version of the Raspberry Pi. I was hoping to wear this jacket and undertake walks, broadcasting the video as a mobile wireless hotspot as I went. That way, anyone within a thirty metre radius of me, as I walked, who was looking for a Wi-Fi signal, could join the network, and would have been directed to a captive portal. This iteration of the work was based on heavy metal battle jackets, denim jackets worn by metal fans adorned with patches from gigs and of their favourite bands (in contrast to the slick aesthetics of wearable tech, associated with fitness tracking). Instead, the jacket was adorned with solar panels, a blank network of patches, and a self-powered computer that broadcast the network.

Figure 37 - L: Battle Jacket Prototype R: Peter Beste, 'Old School Saxon Tribute Vest' digital photograph, date unknown.

I still maintain that there is a lot of potential in this line of enquiry. Yet, as the work evolved beyond the residency, I also became increasingly aware of the scope of the mesh I was entangled in. Just as the Edge Hill Garden Network began to acknowledge the sun that powered it, and engaged with the geological foundations it rested on, a newer piece, which became *Project for a New Physical World* also sought to acknowledge a wider range of elements, from huge to microscopic. The limited scope of the jacket, its androcentric basis, both in its deployment as a worn garment and in its cultural roots in heavy metal, and limited geographical reach as a captive portal, did not feel appropriate to my emerging concerns around a much wider and more inclusive use of the network.

Regarding the decision to self-host, rather than using an existing platform, it is useful to consider Clare Bishop's essay 'The Digital Divide', in which she describes contemporary art's relationship to digital media as one of disavowal. Artists willingly utilise and explore the shift in access and exchange that the internet provides. Yet, for Bishop, they do not acknowledge or critique this shift, one that has become, for most, 'the shaping condition-even the structuring paradox-that determines artistic

decisions.'[324] Bishop cites different approaches that follow this pattern, but for the purposes of this chapter, and my use of appropriated images from Google Street View, it is worth considering how Bishop views the appropriation and organisation of content from the internet. For Bishop, previous generations of artists working with appropriation have done so 'with a view to questioning authorship and originality while drawing attention, yet again, to the plight of the image in the age of mechanical reproduction,'[325] In contrast, Bishop suggests that contemporary artists simply foreground the process of selection whilst ignoring such critical issues. Had I appropriated Street View Images and presented them via an existing platform such as Vimeo, then, this is perhaps what I would have been doing. Yet, in speculating on an expanded network in *Project for a New Physical World,* by acknowledging elements of the network itself, servers, cases, and so on, as part of the work, I tried to connect this process of selecting images with other, idiosyncratic or ignored, aspects of the network. The images appropriated from Google, presented on the website, are only a part of a much larger speculative network that includes elements not usually associated with networks. Rather than rely on a video hosting service whose servers I could not locate (I did search for the location of Vimeo data centres, but could find none) I coordinated hosting in my home, and in doing so pushed back against the dominant, technical aesthetic of grey server cabinets, and tried to critically re-imagine what a more situated network might look like.

Bishop follows this discussion around appropriation by focusing on Hal Foster's theory of the 'archival impulse' as an 'idiosyncratic probing into particular figures, objects and events in modern art, philosophy and history.'[326] Artists can both access an enormous amount of archival information via the web and produce and organise it in practice. Arguably, the Google Street View database is such an archive into which I have undertaken 'idiosyncratic probing,' to recreate a route through Liverpool in *Project for a New Physical World.* This sort of activity is problematic for Bishop, as it demonstrates a 'paranoid will to connect what cannot be connected' in 'carefully displayed

---

[324] Claire Bishop, "Digital Divide," *Art Forum*, no. September 2012 (2012): 434–42. Bishop.

[325] Bishop, "Digital Divide."

[326] Bishop, "Digital Divide."

collections.'[327] Yet, for Bishop, this process does not acknowledge how everyone with a personal computer has already become a de facto archivist, storing and filing thousands of documents images and music files. Instead, we are 'once again returned to the rarefied aura of the indexical and to questions of supply and demand.'[328]

I admit that I previously have used online archives in this way in my practice. At the beginning of this research in 2015, I experimented with web scrapers to pull large amounts of public domain image content from websites. A web scraper is a tool that allows the user to search across entire sites, and to execute specific commands to collect a certain type of data. In one example, I 'scraped' the entire collection of digitised photography from the Metropolitan Museum of Art's website. This resulted in a directory, on my computer, that contained eighteen thousand, eight hundred and two digital images of the entire collection from the earliest photographs, to the most contemporary. With some batch manipulation in Photoshop and renaming, I was able to organise these images into various sequences, such as pixel size order, light to dark. In one experiment, I created an animation that showed the entire collection, with one image per frame at twelve frames per second, in decreasing pixel width order.[329] The impression created was of a slowly shrinking and flashing rectangular shape. I also created a routine to reduce the opacity of each photograph to 0.1%, and to layer one on top of the other, from the largest to the smallest to produce an image file that was turned into a digital print. These experiments did not really go anywhere, as the everyday practice of manipulating files in a directory felt like a mundane activity that produced nothing revealing, simply generating increasing variations of an established canon. To order them by width was novel, but it contained no surprises.

---

[327] Hal Foster, "An Archival Impulse," *October*, no. 110 (Autumn 2004); 21 quoted by Bishop, "Digital Divide."

[328] Bishop, "Digital Divide."

[329] This work is available to view at https://vimeo.com/133594036

Figure 38 - Dave Evans, 'All Images from Sequence of 18,802 Digital Images from the Metropolitan Museum of Art Online Collection (Photography, Images Available)' Inkjet print, 2015.

In retrospect, I now understand that the eighteen thousand, eight hundred and two digital images I worked with were already, always, connected through their medium and inclusion in the canon. My experiences of building small networks on the mountainside, and in the station garden, had encouraged me to question what is connected, but not included. As part of the collection of the Met, these images are definitely 'included' in something. Nor is this a 'paranoid will to connect what cannot be connected,' as Bishop might suggest. The world is dense with relations, and as I've already discussed, large-scale computing can begin to reveal the reality of these relations in we are included along with many other elements. I may well be paranoid that small events, such as turning the key in my car's ignition might be connected to massive global events, such as climate crisis, but that does not mean they are not. As Kurt Cobain sang in *Territorial Pissings,* 'Just because you're paranoid, don't mean they're not after you.'[330]

Furthermore, by not creating a singular video broadcast locally, for sale on limited edition DVD, or even uploading to a video sharing site, it feels as if I am pushing back against Bishop's 'rarefied aura of the indexical and… questions of supply and demand.' Instead, *Project for a New Physical World* is *of* the network, rather than *on* it. Yes, it delves into an archive to produce an image sequence, but it also places it into a

[330] "Nirvana - Territorial Pissings Lyrics | AZLyrics.Com," accessed September 28, 2021, https://www.azlyrics.com/lyrics/nirvana/territorialpissings.html.

distributed context, as a server, a node, a box, a place and a journey. Returning to Haraway's situated knowledges, I have no wish to describe the network from, 'a conquering gaze from nowhere.'[331] Through the messy composition of the work, as a video, a webpage, a box on a shelf in my home, and so on, *Project for a New Physical World,* hopefully offers a partial image of a network as it might be, one that is open to different interpretations and does not endlessly maintain existing elements in a system built by an invisible other, as I do when I clear up my MacBook's desktop, post to Facebook, or make a video with images from an institutional collection.

9. Mini Amsterdam

Figure 39 - Mini Amsterdam on Smithdown Rd, photographed on the day I purchased the server case.

Mini Amsterdam is a shop at 180 Smithdown Road, along the route taken for *Project for a New Physical World*. It is from this shop that the case for the server, a small wooden box originally designed for holding playing cards, was bought. Mini Amsterdam is a shop that sells an eclectic mix of items, including things like drug paraphernalia, buddha statues, dream catchers and incense sticks. The decision to buy

[331] Haraway, "Situated Knowledges: The Science Question and the Privilege of Partial Perspective." 581.

the server case from there was, initially, a practical one. Looking along the route, there were few other places that sold small sized boxes. However, on reflection, the visit to Mini Amsterdam prompted thoughts around how pervasive the life metaphor is in discussions around objects and networks: the web, the rhizome, the noosphere. There is also a general veneration of all living things in Mini Amsterdam; cannabis leaves, trees, and so on, with very little in the way of digital technology visible. It has been open for twenty years, and appears to have changed little in that time, still not having a website or any sort of web presence. I thought this contrasted well with my own attempts to engage with the wider world of objects and networks, and how *Project for a New Physical World* included, in its descriptions, many inanimate, non-human elements.

Figure 40 - Mini Amsterdam - Screenshot from Google Street View

Mini Amsterdam is, in many ways, emblematic of what John McClellan calls 'biocentrism' in his essay 'Nondual Ecology' in Buddhist journal, *Tricycle*.[332] He suggests that, in ecology, this variety centrism has come to replace the outmoded

[332] For an extended discussion around nonduality also see the introduction to 'I Hate the Lake District' by Charlie Gere, Goldsmiths Press, London, 2019.

anthropocentrism, recognising that humans are no longer the centre of the universe. Instead, we are part of a larger group of living beings that is being extended to include things like rocks and stars. Yet, for McClellan, this centrism places biology at the centre of evolution, at the expense of 'Everything that Moves'. He suggests that all things that exist, move, not just living beings. This is everything that emerges into being, good or bad, and for McLellan, includes 'exploitative technology, warfare, social injustice, famine, urban landscape, television…'[333] This calls to mind the approaches of SR and OOO, which seek to move beyond the search for increasingly smaller foundational elements, and describing endless interactions. Instead, they develop new objects. McLellan posits that this way of thinking is opposed to the second law of thermodynamics, in which everything is working towards entropy and a state of dispersal. Instead, he suggests that tuning in to what we know of life and activity on this planet as 'negentropic', long-lasting, over four billion years and counting, and ever-expanding, overflowing the planet into the solar system.

Figure 41 - The server at home on a shelf - case bought from Mini Amsterdam

[333] John McClellan, "Nondual Ecology," Tricycle: The Buddhist Review, accessed June 8, 2021, https://tricycle.org/magazine/nondual-ecology/. McClellan.

McClellan describes this expansion as relatively steady. There was only one information system capable of negentropy 'the whole biological kingdom—all the animals plants, microbes etc, is made up of "morphs," or bodies built according to the information codes contained in the DNA molecule.'[334] Yet, humans, as one of these 'morphs', were capable of creating and manipulating information systems complex enough to generate morphs, or bodies of their own.' A new set of 'powerful symbolic systems' emerged beyond DNA that, in turn, began to 'pursue "their" own evolutionary destiny.' Could the KFC that I include in early stages of *Project for a New Physical World* be a product of such an evolution? For McClellan, humans are now part of the 'technobiota' that expands across the earth, with biological evolution 'relegated in its wild forms to out-of-the-way corners, to empty lots, roadsides, to cracks in the sidewalks of civilisation.'[335]

This acceptance that technologies, amongst other things, continually spill outwards, beyond the biological, also resonates with the inclusion of objects like 'oven glove,' 'exhaust fumes' or 'double glazing' in *Project for a New Physical World.* They become evolving participants in a process of bloom and decay that moves perpetually in all space and across all time. As a component part of this 'vast inconceivable glowing and humming'[336] movement, humans cannot hope to significantly shift its course, rather, McClellan suggests we 'be with' them and 'see and share' their true nature. Although I agree with OOO, where the suggestion is that this true nature is hidden, artworks like *Project for a New Physical World* can help us to be with objects, through metaphor and 'phenomenological carpentry', as described by Ian Bogost.

Conclusion

This chapter adds to the initial intention to *test and evaluate retreat as a strategy to understand and reimagine networks, through the production of a series of networks as artworks*, by reflecting on an artwork created to enact a retreat to everything, everywhere, whilst recognising that my everything and everywhere is limited. This

[334] McClellan, "Nondual Ecology."

[335] McClellan.

[336] McClellan.

builds on previous chapters, in which I have explored retreat to notional spaces, such as the subjective, or the local, and found both unsatisfactory.

To explore this type of retreat, I produced the artwork *Project for a New Physical World*, a twenty-six-minute online video, composed of a journey captured on Google Street View, and expanded to include numerous other objects along the way. This video is hosted on a server in my home along the route in a case also sourced from the route itself. I then reflected on the work in a series of short texts that use different elements as jumping off points. During these texts, I draw on the writings of Graham Harman, Ian Bogost and others, as a framework, through which to make sense of how a network of everything, everywhere might be approached.

One of the key challenges of this part of the research was to find a way exploring a retreat to everything, everywhere, when, obviously, due to my human limitations, it is impossible to include everything and be everywhere. I found that Harman's approach to OOO, and Bogost's development of SR, provided a lens through which I could understand how a speculative network could be presented as a new metaphoric object, in the form of an artwork. What was surprising about this development is the re-emergence of selectivity as a characteristic of the network. In the previous chapter, I had drawn on Wendy HK Chun's description of networks as diagrammes of 'allegedly unrepresentable interactions'[337] that provide the illusion of orientation in the fragmented and disorienting postmodern world. The network, as a concept, is reliant on a process of selecting what can be in, and what is out of the network. My initial response was to agree with Chun and to consider this selectivity as a problem that leads to networks being deployed as ideological tools. I imagined networks as strategically stimulating consumers into the habitual satisfaction of their desires, whilst harvesting their interactions, in order to inform the network's next iteration. I sought to trouble this streamlining by considering what else was feeding into the network, the sun as a source of power, the geological foundations on which our telecommunications mast stands, and so on. It soon became apparent that these networks spill outward infinitely, once this process is started, and some type of

[337] Chun, *Updating to Remain the Same: Habitual New Media*. 39.

limitation is required and unavoidable. What then becomes evident during this final chapter is that this process of selection need not be manipulative, but can, instead, help us to 'be with' our surroundings.

This 'being with' is explored in this chapter, through the principles of SR and OOO, which suggests that all objects are withdrawn from one another, and can only make contact by 'means they know internally…in relation to the qualities in which they bathe.'[338] We are bound to anthropomorphism. We can only look at the world through human eyes, and apply human originated qualities to the objects we see. Yet, this needn't resolve to anthropocentrism, we can speculate about how objects might network together in our absence. It just so happens that we are limited to the senses and languages that our human form provides. Ian Bogost draws on Jane Bennett's suggestion that this anthropomorphism 'works against anthropocentrism; a chord is struck between a person and a thing.'[339] My caricature of a network in *Project for a New Physical World* tries to recast the concept of a network as a process, through which humans can use selectivity to 'be with' the objects that are indisputably alien to us.

What also arose, during the retreat into this network of everything, everywhere was how one can work with a concept that operates across scales and times. Timothy Morton's writing around the mesh provided an image of an all-encompassing structure, which allowed me to think about *Project for a New Physical World* as a portal or viewpoint into which a tiny portion of this mesh becomes apparent, albeit in metaphorical form. The fact that 'there is no way to make a perfect translation of a metaphor'[340] allows a gesture to the expanse of the mesh, without pinning it down, or floating off into it.

---

[338] Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 66

[339] Jane Bennet, *Vibrant Matter: A Political Ecology of Things* (Durham, N.C.: Duke University Press, 2010); quoted in Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*. 65.

[340] Harman, *Object-Oriented Ontology. A New Theory of Everything*. 65

Through thinking about how other artists had used Street View, such as Jon Rafman's *9 Eyes* project, I came to understand that my approach differed slightly. Due to my sensing abilities, I could access a small and crowded portion of Morton's mesh, but, unlike Rafman, I was less interested in a Cartier Bresson-esque decisive moment, in which the images resolve themselves into one of many categories, preferring instead to draw attention to the endless details that are agitating amongst themselves in each image and across the work. An analysis of Peter Greenaway's film *Vertical Features Remake* provided a strategy for alluding to this endlessness, by colliding two types of vision that have ambitions to sum-up the world, the systematic machine and the singular human. Yet, in coming together, they both fail and consequently present the world as irresolvable.

The practice and research in this chapter also contributes to the thesis by introducing speculative networks as a location to which a new type of retreat can take place. It differs from the previous chapters, as it proposes retreat as neither focused on the established tropes of the lone hermit/individual, nor the unified monastic collective, but as a gesture that, perhaps, borrows from both traditions, yet is as open as possible. This type of 'open' networked retreat was put into practice in isolation, during national lockdown, by exploring existing networks, such as the road network via Street View, and embracing Google's Page Rank search algorithm to generate object descriptions. Revisiting these tools after a period of working with limited geographical networks allowed me to move away from anthropocentric and biocentric spaces, such as the subjective and local to a more technobiotic, speculative space in which my own limited version of 'everything, everywhere, for all time,' is accommodated. I then examined Google Street View as a container for such a world, and considered both it (the cameras, the Street View Cars, the servers) and me (my home, my devices, my journeys) and others (driveway, Ferris wheel, KFC) as equal elements, with our own varied ways of contacting one another. This encouraged a 'being with' the network that had not occurred in previous chapters.

On reflection, one of the limitations of this study is that this 'being with' objects does not go far enough. Relying exclusively on descriptions gathered from Google search does not give as much insight into relationships between elements in the Street View

image, as they tended to be quite dry and factual. There are hints at the wider activity of these elements, such as how species of plants like Buddleia or Japanese Knotweed migrate across the globe. However, there is probably a richer story to be told from this perspective than a Google search can provide. In future iterations, I would enjoy trying to be more poetic in how these networked elements speculatively speak of their interactions, through my own writing, or quotations, perhaps. I also became aware of the text-based quality of much of the artwork as something of a limitation, and the other ways in which interactions between elements can be caricatured, perhaps through approaches, such as speculating on sounds that objects make together when they come into contact.

Fittingly, this chapter begins to speculate on how a retreat to a speculative network might look, sound and feel. Nevertheless, it is by no means resolved. In future, it would be useful to think about how speculative networks operate in different environments, or across environments. One of the more confusing aspects of researching and reflecting in this chapter has been this shifting between different networks. For example, the internet appears as an abstract network 'elsewhere' that includes Google data centres and Street View cars, whereas it appears as more present, and less abstract in the road network outside my window, the intimate network of my home and the 'visible' part of the internet in the form of a server on a shelf and a laptop on a table. There is also myself, as an sensing and information processing node with my own internal networks and contact points. While the whole point was to somehow try to let everything in, it would be useful, in future, to ask how the speculative network can be more discriminating, and what this achieves. I have already begun building a solar-powered, audio streaming platform, which will broadcast from my studio in Toxteth, Liverpool. Initial ideas revolve around working with artists, who are able to translate hidden elements into sound, the sun that powers the platform, the electromagnetic field that the platform emits, the signals that pass-through plants that grow in the area, and so on.

Chapter 5 – Conclusion

This thesis set out to test and evaluate retreat as a strategy to understand and reimagine networks, through the production of a series of 'networked retreats' as artworks. In our acceptance of global platforms, such as Outlook, Google Maps, Facebook and TikTok, what we experience as networked platforms is shaped by a relatively small circle of designers and engineers. These platforms are undoubtedly entertaining and useful, but this thesis proposes that it is important for artists to continue exploring what networks can be, and do, by building them. It also suggests that the act of retreat can be an enduringly useful strategy with which to distance oneself from these global platforms, and experiment with alternative forms.

I established a situated approach, borrowing the term from Donna Haraway to describe a way of exploring a subject by acknowledging one's own partial viewpoint, being present in the situation, yet open to other points of view. To do this, I built three networked platforms in different locations, but rather than focus on the content that the platform carried, I expanded this discussion to the material components of the network and the locations themselves. The process of making, within the different parameters of each situation, revealed aspects of networked platforms I had previously taken for granted (such as an audience, other signals, power etc). In the next part of this conclusion, I will briefly recap on what emerged from each of the situations, to provide a summary, but also to engage with the process of reflection one final time, as this repeated consideration has proved valuable throughout the research as a way of finding and excavating new connections.

The first approach to networked retreat took the form of a move to an isolated studio on a mountainside in the Highlands of Scotland to build a Wireless Local Area Network. This type of retreat echoes those undertaken by many others throughout history, from the early Christian Desert Fathers to hermits like Henry David Thoreau or Agnes Martin. What did this type of retreat achieve? The act of retreat initially revealed gaps in my everyday experience of networked platforms. The first gap was that the portion of the electromagnetic spectrum that carries 4g and Wi-Fi signals was empty, so I could

not connect to an audience. The absence of this audience allowed me to reflect on how I ordinarily engage with existing networked platforms. I realised that networked platforms are geared towards a particular type of exchange. This usually requires the constant maintenance of established connections, and the creation of new ones. Maurizio Lazaratto calls this 'immaterial labour.' The chapter outlines how I came to understand that this form of labour as facilitated by a particular set of standardised conditions, of seamless access across devices and networks, through shared technical protocols, and the continuous feed of constantly shifting information, to which I am compelled to contribute. I outline how the compulsion is generated by a shift in how habit operates, as suggested by Wendy HK Chun, from a behaviour that is persistent, to one that is consistent. The key difference is that persistence suggests an ongoing adaptation to external shifts, whereas consistence suggests the repeated satisfaction of shifts generated internally by our own desire. This desire is continually and uniformly stimulated by the network, using the conditions discussed above. On the mountainside, this stimulation was absent, so I could look for other shifts that, perhaps, required attention. I discuss this in relation to the short film that I created, which recalled memories of my mum, who died in 2009. This film was broadcast on the mountainside network. Reflecting on these decisions, it became apparent that the retreat had created a different type of private networked space, using the air gap of the forest, which allowed me to explore subjects that I would not usually engage with on digital platforms. Not only that, but due to the relative emptiness of the portion of the electromagnetic spectrum reserved for 4g and Wi-Fi signals, I was also able to experience the network in a different way. I describe how viewing the video itself was a relatively clumsy affair but, importantly, also how I was drawn to the wireless radio waves as a more evocative and intangible manifestation of that which was lost.

Fundamentally, the first networked retreat provided a realisation that networks are complex systems made easy for the end user by those who design them. This ease encourages a particular type of interaction that is shallow, but continuous, and can be geared towards specific agendas, using suggestibility. Yet, as an end user, we ordinarily have little access to using or shaping these interactions (our feeds can only ever be ordered within the parameters set by the platform, and the suggestions that we receive are determined by hidden algorithms). Building an isolated, but networked

platform in a forest, which, effectively, nobody connected to, gave me the opportunity to build and experience these elements in a new way. Where there was usually continuity, there was a pause. Where there was usually audio/video stimulation, there was a small screen that was hard to operate in the dampness of the forest, and I became more interested in the affective quality of the radio waves instead. The retreat also provided the opportunity to begin to consider my own context for the network, as perhaps more familial or supportive than managerial and administrative. What tempered these discoveries around the network was an understanding that this type of retreat has many historical precedents that were often related to a somewhat masculine desire to prove oneself as self-made, and not reliant on family or community. This lineage, I suggested, runs from the early Christian desert ascetics to loners in cabins, such Henry David Thoreau and the Unabomber, Ted Kaczynski. I aimed to address this in the next chapter, in which I described a retreat to a local community, to see what I could learn from building a networked platform in that context.

Chapter 3 revolved around another networked platform, built alongside a physical platform in a train station. This type of retreat aimed to be more communal, building on the historical precedent of cenobitic monasticism, in which consensual activity allowed for the formation of a space in which other modes of being could be explored. During the residency, with Metal at Edge Hill Station in Liverpool, I worked in their permaculture garden to build a mast that broadcast a Wireless Local Area Network in to the station. The location, as part of the rail network, and its history as the first intercity passenger train station in the world, encouraged me to think about this retreat to the local in the context of the global. It was interesting to use Latour to consider how this global had become discredited, and Morton's hyperobjects to consider how global systems are now becoming more legible as a result of large-scale computing. I enjoyed considering how hyperobjects flowed out of small interactions with devices, such as my smartphone, and this influenced my practical work in the garden. Faced with a lack of mains electricity to power my network, I began to explore solar power, and this, in turn, began to make me aware of the complex arrangement of networks that met in the garden across multiple scales. This was a key moment in the thesis, because Chun's outline of the network as having an ideological dimension that

streamlines the complexities of the world according to the agenda of its builder, aligned with my emerging understanding that the networks in the garden were equally complex and resisted this streamlining.

Concepts, such as the local, and even the network itself, began to feel inadequate. Instead, Latour's *Terrestrial* emerged as having potential, as it suggested that the 'Critical Zone,' the ground that we encounter, was an alternative location. It was a place that was present and stable, yet not fixed. Multiple interpretations of the terrestrial were possible from different viewpoints. My initial ideas to build a conventional network, essentially aping the role of administrator, gave way to something more open, but awkward, with plants, soil, radio waves, stars and lots of other things seeping into the network that I built. Looking back to the previous project, on the mountainside, I began to realise that this isolated location was, in fact, densely crowded with other networks and only isolated from a human perspective. This confirms my suspicion that the 'lone male in the wilderness' trope, be it a desert or forest, contains and stubbornly 'heroic' and androcentric streak that potentially limits rather than expands the network.

In the station, this raised the question about how I could work with a diverse range of elements without circumscribing them. The location/mast/hardware/network arrangements that I had built acted as a starting point, and I used Ian Bogost's writing around the ontograph as a starting point. I began to explore the slideshow as the visual equivalent to a list. It was useful to think about what occurs when the connections within a structure are taken away, be it coordinating conjunctions in a sentence, the presenter in a PowerPoint presentation, or the links in a network. Does it remain a network? A key issue with this network's less pronounced connections is finding a way to prevent it from becoming a random set of elements. It feels like I began to get around this by tying the networks to the specific locations, whilst only recognising them as partial representations, from a particular viewpoint. It strikes me that Latour's terrestrial supports Haraway's call for situated knowledges, in that both recognise the importance of a process that analyses how each of us makes contact with our own object of study, acknowledging our position and partial viewpoint, whilst accepting and integrating, the partial viewpoints of others. It was with this in mind that I chose to

include the final case study, an attempt to move beyond the notion of a retreat that limits to a retreat, which then expands into to a much broader network.

The final practice-based work to be explored was *Project for a New Physical World*. This chapter departs from previous chapters, as it does not have as its basis an existing type of retreat. Instead, it, instead proposes a new type, a retreat to everything, everywhere, for all time. This was necessary, as I had found the previous types of retreat limited. The retreat to isolation in the forest felt like the spectacular production of a network, with the artist at the centre. Whilst it was useful, as it began a process of revealing what constituted the network, its limitations, perhaps, lay in its very narrow capacity to connect objects. Simply scaling this up to a local context in the Station Garden was also helpful, as it allowed me to think further about how connections multiply, when one begins to look more closely. Again, the local context was limiting. Making *Project for a new Physical World* under the conditions of a national lockdown, ironically, allowed me the opportunity to really escape from notions that try to circumscribe the world, such as the subjective or the local. Instead, I tried to collide Latour's *Terrestrial,* outlined in the previous chapter with Morton's *Mesh*, in order to see the network as a temporarily situated window into the expanding, congested infinity of all space and time. This also gave me a chance to address my own position within this network by using Harman's ideas around the viewer as the only accessible real object in any given situation, who can create new objects through metaphor. These new objects, which Bogost describes as *caricature*, do not claim to be the world, but rather allow for speculation on how other objects interact with, and within, one another. This is supported by drawing on two artists, Stephen Shore and Peter Greenaway, whose work troubles the idea of a coherent reading in favour of amplifying the complexity of a site, be it an LA street corner, or a grid square of an OS map of the English countryside.

Bogost's writing around 'phenomenological carpentry' set him apart from his SR/OOO counterparts, Timothy Morton and Graham Harman. As well as the concepts he outlines, I enjoyed the breadth of Morton's writing. His ranging across 1990s indie music to quantum physics in his book *Hyperobjects* encouraged me to think and to write more broadly about networks. Similarly, the way in which Harman was able to

apply his OOO thinking to a range of things, such as events, galvanised me into considering the network's relationship to time, and how moments themselves could become objects. However, it was Bogost's insight into practice that helped me shift perspective *in practice*, to begin working with how objects present themselves to one another. This expanded what, in practical terms, constituted the network, and allowed me to consider how my own networks might appear. In *Alien Phenomenology,* Bogost describes *I am TIA*, an experiment he made that provides a caricature of how an Atari VCS perceives data on screen. Earlier in the book, alongside these relatively neat experiments, yet he also discusses *mess* as a methodological concept. On reflection, while making *Project for a New Physical World,* I was trying to apply this idea of messiness (of my location, my Google searches, the internet, etc) to a similar, but less restrained, practice-based approach to Bogost.

This focus on 'letting in as much as possible' reframes the issue of selectivity in networks from a negative 'streamlining,' described by Chun as a neoliberal vehicle for giving the illusion of coherence in an incoherent world, to the production of something more positive, inclusive and expressive. The power in this type of activity comes from its quality of incompleteness, coupled with an ability to connect. *Project for a New Physical World*, hopefully, communicates its temporariness and incompleteness, but, in also describing itself as a situated network, it can connect to other networks. In doing so, perhaps it gestures towards what Haraway, quoted in Chapter 1, describes as 'an earth wide network of connections…among very differentiated communities.'[341] However, as with any push to an opposing pole, there is a chance that one will go too far. In hindsight, I wonder what *Project for a New Physical World* reveals about the 'differentiated community' I am part of. Although the work is anchored in a place, a journey through Liverpool, a server on a shelf along the route and so on, do the scattershot choices of objects and their googled descriptions say enough about my relationship to them, or their relationships between each other? I conclude Chapter 4 by suggesting that the reliance on Google is taken too far perhaps, and the breadth is too wide. Perhaps there is room for caricatures to emerge of relations between a more

[341] Haraway, "Situated Knowledges: The Science Question and the Privilege of Partial Perspective." 580.

deliberate network of objects, from other sources beyond what the Page View algorithm generates, my own interpretations, sensors, testimony, materials and so on.…

This research contributes to the field of networked art, through using an art practice to make contextualised networks through the act of retreat. This contextualisation is important, as it poses an alternative to the contemporary logic of modularity, in which fragmentation is imposed by an invisible other and context is lost. This loss is visible in contemporary node and link visualisations of networks that selectively privilege certain elements and connections over others. The very lack of context around networks has been a problem from the outset of this research. I have found myself switching between various terms to describe the network, digital networks, and the internet throughout the thesis. I initially thought this was a failure to adequately specify the network I was interested in, but, on further reflection, I am more inclined to think that this difficulty is, partly, a product of this process of decontextualization. To focus on these available contexts, for example the Facebook network, the online gallery network, etc, would be to slip back into accepting the modularity that I am trying to avoid.

In turn, the act of retreat in turn also offered a rich range of other contexts such as material, subjective, social, spatial and historical, through which to view the network. Again, the breadth of this has encouraged me to think about networks in many ways, the relationship between the mast and the hardware, the mast and the community, the individual and the radio spectrum, and so on. Yet, it was useful to subject these approaches to retreat to more careful consideration, and I discovered that they too contained agendas that privileged certain actors, the heroic male, or the connected, but disconnected neoliberal subject. It was important to test these in practice, but it was only on formulating my own version of retreat, to everything, everywhere, did it feel as if real progress had been achieved.

The research, in general, adds to the body of knowledge that refuses to accept the network as a banal inevitability, by using an art practice to draw attention to an expanded modularity that is incomplete yet located, and can grow through the

inclusion of diverse communities. One question this raises is how these expanded modules might connect? The Facebook network is made from user generated social networks that can connect that join other user generated social networks, but how might more than one contextualised network connect to another, from a different context, if there is no common protocol?

Another limitation in my consideration of networks is my use of a relatively dated technical approach, using apache webserver (first released in 1995),[342] and protocols such as DHCP (first defined in 1993),[343] when newer, web 3.0 technologies exist, such as blockchains, and distributed file systems, that can connect users in other ways. I acknowledge that these provide value, in that they shift the data that was monetised by dominant platforms back to those who contribute to the networks (as has happened with NFTs). And I have begun to engage with them through the use IPFS to share the documentation of this project. Along with these new frameworks comes the potential for the development of 'decentralised autonomous organisations' (DAO's) in which communities can use smart contracts; a predefined set of computer protocols that execute a contract without a human arbitrator, to manage themselves. Interesting work has already been done to imagine how these DAOs could include non-human actors. This includes Paul Seidler's, Paul Kolling's and Max Hampshire's *terra0*[344] project, whereby in which, in simple terms, the wood of a forest is turned in to data that then manages and owns itself, using a smart contract.[345]Although a relatively high level of technical is expertise is required to set up a decentralised platform, such as a blockchain, I imagine tools will arrive that simplify the process, just as they have for setting up self-hosted web servers. With this perhaps comes the wider opportunity for users to establish new networks with different contexts. Yet, this technology's roots in

---

342 "About the Apache HTTP Server Project - The Apache HTTP Server Project," accessed September 3, 2021, https://httpd.apache.org/ABOUT_APACHE.html. "About the Apache HTTP Server Project - The Apache HTTP Server Project."

343 Internet Systems Consortium, "The History of DHCP," September 29, 2020, https://www.isc.org/dhcphistory/.

344 terra0, "Terra0," accessed September 3, 2021, https://terra0.org.

345 See chapter 'terra 0 – Can an Augmented Forest Own and Utilize Itself?' in Ruth Catlow et al., eds., *Artists Re:Thinking the Blockchain* (London: Torque Editions ; Furtherfield, 2017).

libertarianism and the discussion around tokenisation, immutable contracts, and proof, that accompanies the technology of web 3.0, recalls images of fixed, isolated modules beholden to rules around a set of abstracted, numerical values.[346] I wonder about the relationship between Jo Freeman's essay 'The Tyranny of Structurelessness' and web 3.0. Maybe this 'new web' points to how, for Freeman, structurelessness 'becomes a smokescreen for the strong or the lucky to establish unquestioned hegemony over others.'[347] Does reducing a forest to its timber yield on a blockchain, as happened in *terra0* mentioned above, simply enact a type of modularity that circumscribes this forest at the cost of its complexity? This is, perhaps, a question for the future.

Undertaking this research and writing this thesis has been an incredibly rich learning experience. I have learned many new technical skills around digital networking, but more importantly, I have come to realise how the networks I use daily privilege certain elements and promote certain types of interaction. The practice-based component offered me the opportunity to experience building networks in artworks in different and provocative locations. The complications and histories that these locations have offered have provided many of the key moments of the research. I have also found the historical elements around retreat and asceticism fascinating. Nevertheless, I have come to understand them as, also, having embedded agendas that bear closer scrutiny.

If the research has provided me with one key realisation as an artist, it is that location is vital, but complex. This is somewhat surprising to me, as, before this research, I had never made work about a particular place, and had not considered how networks might relate to specific locations. I now understand that the relationship between locations and networks can be mutually beneficial, in that the location provides a point from which one can begin to speculate on what is connected, moving or resting in it,

---

[346] For a further perspective see Ian Bogost, "Cryptocurrency Might Be a Path to Authoritarianism," The Atlantic, May 30, 2017, https://www.theatlantic.com/technology/archive/2017/05/blockchain-of-command/528543/.

[347] Jo Freeman, "The Tyranny of Stucturelessness," accessed September 3, 2021, https://www.jofreeman.com/joreen/tyranny.htm.

whilst the network provides the opportunity for this to spill outwards (or inwards) and to connect further. During a global pandemic, when climate crisis and the results of isolationism are daily headlines, and biodiversity is declining, it has been genuinely useful to consider how *here* relates to *there.* I intend to explore further how I can work with located networks that can operate according to different contexts, offering partial viewpoints that can gesture towards an always incomplete whole.

Image Sources

Anonymous. *Spiritsurfers.Net*. 2008. Website. http://www.spiritsurfers.net/.

Beste, Peter. *Old School Saxon Tribute Vest*. Digital Photograph. Accessed September 8, 2021. https://www.kerrang.com/features/the-10-best-styles-of-metal-battle-vest-by-photographer-peter-beste/.

Bewersdorf, Kevin. *Self Portrait in CD*. 2008. Digital Photograph. https://shareyoursorrow.tumblr.com/tagged/photography.

British Pathé. *Around The Maypole (1929)*, 2014. https://www.youtube.com/watch?v=vjd5M_bOnng.

Rhizome. "Catalog of Internet Artist Clubs." Accessed February 21, 2020. http://rhizome.org/editorial/2016/mar/30/catalog-of-internet-artist-clubs/.

Desjardins, Jeff. "Interactive Map: The Flow of International Trade." *Visual Capitalist* (blog), December 15, 2016. https://www.visualcapitalist.com/interactive-mapping-flow-international-trade/.

Facebook Places: Here's How It Works - CNN.Com. Accessed September 8, 2021. http://www.cnn.com/2010/TECH/social.media/08/19/facebook.places.explain/index.html.

Fra Angelico. *Thebaid*. Circa 1420. Tempera on wood, 208 x 73.5 cm. https://commons.wikimedia.org/wiki/File:Angelico,_tebaide.jpg.

Google Maps. "Edge Hill Station." Google Maps. Accessed September 8, 2021. https://www.google.com/maps/@53.4028931,-2.9474216,68m/data=!3m1!1e3.

———. "Pier Head to Liverpool John Lennon Airport." Google Maps. Accessed September 8, 2021. https://www.google.com/maps/dir/Pier+Head,+Liverpool+L3+1DP/Upper+Parliament+St,+Liverpool/Asda,+Smithdown+Road,+Liverpool/john+lennon+airport/@53.373897,-2.9962139,17355m/data=!3m3!1e3!4b1!5s0x487b2053f43cdaeb:0xf83d308c5c5d3910!4m26!4m25!1m5!1m1!1s0x487b212d3b0afab3:0xb6de5921e773521d!2m2!1d-2.9971916!2d53.4045748!1m5!1m1!1s0x487b20e204499c09:0xbd1d8176c7cc505!2m2!1d-

2.9628145!2d53.3967682!1m5!1m1!1s0x487b205476b18c89:0x46e13bfc6e846673!2m2!1d-2.9362333!2d53.3934751!1m5!1m1!1s0x487ae040a0b71767:0x62cb025e20649746!2m2!1d-2.8550475!2d53.3358627!3e0.

"Google Street View." In *Wikipedia*, August 15, 2021. https://en.wikipedia.org/w/index.php?title=Google_Street_View&oldid=1038855828.

Google Street View. "Mini Amsterdam." Google Maps. Accessed September 8, 2021. https://www.google.com/maps/place/Mini+Amsterdam/@53.3914028,-2.9319018,3a,75y,250.44h,78.99t/data=!3m6!1e1!3m4!1s2JY5dFSIexy4oJtjzqmdSQ!2e0!7i16384!8i8192!4m5!3m4!1s0x487b2051972000af:0xab9b367861e5be73!8m2!3d53.3913881!4d-2.9320286.

MTAA. *Simple Net Art Diagram*. 1997. Animated GIF. https://anthology.rhizome.org/simple-net-art-diagram.

"Network-Map-DR-Update-24317.Pdf." Accessed September 8, 2021. https://d11vpqhghel6qd.cloudfront.net/images/maps/2017-12/Network-map-DR-update-24317.pdf.

Northern Network Map. Accessed September 8, 2021. https://d11vpqhghel6qd.cloudfront.net/images/maps/2017-12/Network-map-DR-update-24317.pdf.

"Photo Galleries | Valmont Structures." Accessed September 8, 2021. https://www.valmontstructures.com/resources/photo_galleries.

Posenenske, Charlotte. *Small Series E Drehflügel*. 68 1967. Expanded plastic slab coated with aluminum plates, spray painted matt grey, revolvable on 4 axes, 100 x 100 x 100 cm. https://wentrupgallery.com/en/exhibitions/the-other-space#lg=1&slide=7.

Rafman, Jon. "Jon Rafman: Photo." Accessed September 8, 2021. https://9-eyes.com/image/636827634082496512.

Shore, Stephen. *Beverly Boulevard and La Brea Avenue, Los Angeles, California, June 21, 1975.* 1975. Chromogenic color print, 43.2 x 55.2 cm. Museum of Modern Art. https://www.moma.org/audio/playlist/45/709.

Stark, Peter. *The Artist (Francis Bacon) in His Studio*. 1973. Silver Gelatin Print, 21.4 x 16.5 cm. https://www.bonhams.com/auctions/24613/lot/10/.

Unknown. *Camp Grounded - Digital Detox 10*. Digital Photograph. Accessed April 8, 2020. https://www.digitaldetox.com/experiences/camp-grounded.

———. *Saint Simeon Stylites. Icon of 16th Century*. Sixteenth Century. Painting. https://commons.wikimedia.org/wiki/File:Saint_Simeon_Stylites.jpg.

Bibliography

"5 Things You Need To Know About Aluminosilicate Glass | BodyGuardz." Accessed August 4, 2020. https://www.bodyguardz.com/blog/5-things-to-know-about-aluminosilicate-glass.html.

"About | Edge Hill Station." Accessed August 18, 2020. http://www.edgehillstation.co.uk/about/.

"About the Apache HTTP Server Project - The Apache HTTP Server Project." Accessed September 3, 2021. https://httpd.apache.org/ABOUT_APACHE.html.

"Accelerationism Without Accelerationism – The Pinocchio Theory." Accessed August 2, 2021. http://www.shaviro.com/Blog/?p=1328.

Agamben, Giorgio. *The Highest Poverty: Monastic Rules and Form-of-Life*. Palo Alto: Stanford University Press, 2013.

Conifer. "Archived Page from the '9 Eyes' Collection on Conifer." Accessed April 13, 2021. https://conifer.rhizome.orgdespens/9-eyes/20180103102123/http://artfcity.com/2009/08/12/img-mgmt-the-nine-eyes-of-google-street-view/.

"Around the Antenna Tree: The Politics of Infrastructural VisibilityLisa Parks / UC Santa Barbara – Flow." Accessed August 27, 2020. http://www.flowjournal.org/2009/03/around-the-antenna-tree-the-politics-of-infrastructural-visibilitylisa-parks-uc-santa-barbara/.

"Artie Vierkant // The Image Object Post-Internet." Accessed August 25, 2021. https://jstchillin.org/artie/vierkant.html.

"Ben Kafka on Jussi Parikka's Geology of Media." Accessed April 14, 2021. https://www.artforum.com/print/201509/jussi-parikka-s-geology-of-media-55519.

Bennet, Jane. *Vibrant Matter: A Political Ecology of Things*. Durham, N.C.: Duke University Press, 2010.

Berardi, Franco. *Heroes. Mass Murder and Suicide*. Brooklyn. NY: Verso, 2015.

Bewersdorf, Kevin. *Spirit Surfers*. Brescia: Link Editions, 2012.

Bishop, Claire. "Digital Divide." *Art Forum*, no. September 2012 (2012): 434–42.

Blackman, Lisa. *Haunted Data. Affect, Transmedia, Weird Science*. London: Bloomsbury, 2019.

Blake, Megan K., Jody Mellor, and Lucy Crane. "Buying Local Food: Shopping Practices, Place, and Consumption Networks in Defining Food as 'Local.'" *Annals of the Association of American Geographers* 100, no. 2 (March 31, 2010): 409–26. https://doi.org/10.1080/00045601003595545.

Bogost, Ian. *Alien Phenomenology, or What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press, 2012.

———. "Cryptocurrency Might Be a Path to Authoritarianism." The Atlantic, May 30, 2017. https://www.theatlantic.com/technology/archive/2017/05/blockchain-of-command/528543/.

Born, Erik. "A Little History of the Wireless Icon." Medium, April 1, 2018. https://medium.com/palais-des-beaux-arts-wien/a-little-history-of-the-wireless-icon-b50741b01da6.

Bourdieu, Pierre. *Outline of a Theory of Practice*. Translated by Richard Price. Cambridge: Cambridge University Press, 1977.
"Brometheanism | Alexander R. Galloway." Accessed August 2, 2021. http://cultureandcommunication.org/galloway/brometheanism.
Brown, Michael J. I. "When You Look up, How Far Back in Time Do You See?" The Conversation. Accessed July 28, 2021. http://theconversation.com/when-you-look-up-how-far-back-in-time-do-you-see-101176.
Brown, Peter. "The Rise and Function of the Holy Man in Late Antiquity." *The Journal of Roman Studies* 61 (1971): 80–101.
Bryant, Levi. *The Democracy of Objects*. Ann Arbour, Michigan: Open Humanities, 2011.
"Buddleia: The Plant That Dominates Britain's Railways." *BBC News*, July 15, 2014, sec. Magazine. https://www.bbc.com/news/magazine-28196221.
Burrington, Ingrid. "On Local Networks & Internet Freedom." *SFAQ / NYAQ / LXAQ* (blog). Accessed October 8, 2018. http://sfaq.us/2014/11/on-local-networks-internet-freedom/.
Cartier-Bresson, Henri. "The Decisive Moment - An Excerpt." In *Photography in Print. Writings from 1918 to the Present*, edited by Vicki Goldberg. Alburquerque: University of New Mexico Press, 1988.
Rhizome. "Catalog of Internet Artist Clubs." Accessed February 21, 2020. http://rhizome.org/editorial/2016/mar/30/catalog-of-internet-artist-clubs/.
Catlow, Ruth, Marc Garrett, Nathan Jones, and Sam Skinner, eds. *Artists Re:Thinking the Blockchain*. London: Torque Editions ; Furtherfield, 2017.
Chun, Wendy HK. *Updating to Remain the Same: Habitual New Media*. Cambridge, Massachusetts: MIT Press, 2016.
Valmont Structures 2018. "Concealment." Accessed September 17, 2020. https://www.valmontstructures.com/products-solutions/communications-structures/concealment.
Consortium, Internet Systems. "The History of DHCP," September 29, 2020. https://www.isc.org/dhcphistory/.
De Young, Raymond, and Thomas Princen. "Bringing Out the Best in People." In *The Localization Reader. Adpating to the Coming Downshift*, edited by Raymond De Young and Thomas Princen, xvii–xxvi. Cambridge, Massachusetts: MIT Press, 2012.
———. "Introduction." In *The Localization Reader. Adpating to the Coming Downshift*, edited by Raymond De Young and Thomas Princen, xvii–xxvi. Cambridge, Massachusetts: MIT Press, 2012.
"Definition of LOCAL." Accessed August 21, 2020. https://www.merriam-webster.com/dictionary/local.
DeGroot, Jocelyn M. "MAINTAINING RELATIONAL CONTINUITY WITH THE DECEASED ON FACEBOOK*." *OMEGA: Journal of Death and Dying* 65(3) (2012): 195–212.
Deleuze, Gilles. "Postscript on the Societies of Control." *October* Winter, 1992, no. 59 (1992): 3–5.
Detox, Digital. "The Camp Grounded® Experience from Digital Detox®." Accessed April 8, 2020. https://www.digitaldetox.com/experiences/camp-grounded.

Downing, Douglas A., Melody Mauldin Covington, and Michael A. Covington. *Dictionary of Computer and Internet Terms*. 10th ed. Hauppauge, NY: Barron's Educational Series, 2009.
"Facebook Demetricator | Benjamin Grosser." Accessed August 25, 2021. http://bengrosser.com/projects/facebook-demetricator/.
Finkel, Michael. "Into the Woods: How One Man Survived Alone in the Wilderness for 27 Years | Michael Finkel." the Guardian, March 15, 2017. http://www.theguardian.com/news/2017/mar/15/stranger-in-the-woods-christopher-knight-hermit-maine.
Rhizome. "Five Years Later, Kev Has a New Website." Accessed February 24, 2020. http://rhizome.org/editorial/2014/may/30/five-years-later-new-website-kev-bewersdorf/.
Foster, Hal. "An Archival Impulse." *October*, no. 110 (Autumn 2004).
Foucault, Michel. *Discipline and Punish. The Birth of the Prison*. Translated by Alan Sheridan. New York: Vintage, 1995.
———. "Technologies of the Self." In *Technologies of the Self*, edited by Luther H. Martin, Huck Gutman, and Patrick H. Hutton, 16–50. London: Tavistock Publications, 1988.
———. *The Foucault Reader*. Edited by Paul Rabinow. London: Penguin, 1984.
———. "The Subject and Power." In *Michel Foucault: Beyond Structuralism and Hermeneutics*, edited by Hubert L. Dreyfus and Paul Rabinow. Chicago: University of Chicago Press, 1983.
Freeman, Jo. "The Tyranny of Stucturelessness." Accessed September 3, 2021. https://www.jofreeman.com/joreen/tyranny.htm.
Fuller, Matthew. *Media Ecologies. Materialist Energies in Art and Technoculture*. Cambridge, Massachusetts: MIT Press, 2007.
Galloway, Alexander R. *Protocol: How Control Exists After Decentralisation*. Cambridge, Massachusetts: MIT Press, 2004.
———. "The Anti-Language of New Media." *Discourse* 32, no. 3 (2010): 276–84.
Galt Harpham, Geoffrey. *The Ascetic Imperative in Culture and Criticism*. Chicago: University of Chicago Press, 1992.
Garrett, Marc. "DIWO (Do-It-With-Others): Artistic Co-Creation as a Decentralized Method of Peer Empowerment in Today's Multitude." *Turning Art into Real Life - Marc Garrett* (blog), February 12, 2014. https://marcgarrett.org/2014/02/12/diwo-do-it-with-others-artistic-co-creation-as-a-decentralized-method-of-peer-empowerment-in-todays-multitude/.
Gere, Charlie. *I Hate the Lake District*. Unidentified Fictional Objects. London: Goldsmiths Press, 2019.
———. "The History of Network Art." In *Network Art: Practices and Positions*, edited by Tom Corby. Innovations in Art and Design. London, New York: Routledge, 2006.
Goriunova, Olga. *Art Platforms and Cultural Production on the Internet*. Abingdon: Routledge, 2012.
Greenaway, Peter. *Vertical Features Remake*. BFI, 1978.
Hantelmann, D. von. "The Experiential Turn." *Living Collections Catalogue* 1, no. 1 (June 30, 2014).

https://walkerart.org/collections/publications/performativity/experiential-turn/.
Hantelmann, Dorothea von. *How to Do Things with Art*. Zurich: JRP|Ringier, 2010.
Haraway, Donna. "Situated Knowledges: The Science Question and the Privilege of Partial Perspective." *Feminist Studies* 14, no. 3 (Autumn 1988): 575–99.
Harman, Graham. *Object-Oriented Ontology. A New Theory of Everything*. London: Penguin, 2018.
Harvey, David. *A Brief History of Neoliberalism*. Oxford: Oxford University Press, 2005.
Hayek, von A. *Law, Legislation and Liberty*. Chicago: University of Chicago Press, 1982.
Herbert, Martin. *Tell Them I Said No*. Berlin: Sternberg Press, 2016.
Horst, Heather A, and Daniel Miller, eds. *Digital Anthropology*. London, New York: Berg, 2012.
"How Google Search Works | Our Mission." Accessed January 3, 2021. https://www.google.com/intl/en/search/howsearchworks/mission/.
Hume, David. *A Treatise of Human Nature*. Edited by David Fate Norton and Mary J. Norton. Oxford: Oxford University Press, 2000.
IDC: The premier global market intelligence company. "IDC's Global DataSphere Forecast Shows Continued Steady Growth in the Creation and Consumption of Data." Accessed August 24, 2021. https://www.idc.com/getdoc.jsp?containerId=prUS46286020.
"Info Shale - How Is It Formed?" Accessed December 17, 2020. https://www.artistictile.net/store/info-shales.html.
Gene McHugh. "Interview with Kevin Bewersdorf." Accessed February 21, 2020. https://night.house/interview-with-kevin-bewersdorf.
Jameson, Frederic. "Cognitive Mapping." In *Marxism and the Interpretation of Culture*, edited by Cary Nelson and Lawrence Grossberg, 347–57. London: Macmillan, 1988.
———. *Postmodernism, or the Cultural Logic of Late Capitalism*. Durham, N.C.: Duke University Press, 1991.
"Jon Rafman." Accessed December 1, 2020. https://9-eyes.com/?og=1.
Jonsson, Annika, and Tony Walter. "Continuing Bonds and Place." *Death Studies* 41, no. 7 (n.d.): 406–15.
Jurgenson, Nathan. "The IRL Fetish." *The New Inquiry* (blog), June 28, 2012. https://thenewinquiry.com/the-irl-fetish/.
Lagerkvist, Amanda, and Yvonne Andersson. "The Grand Interruption: Death Online and Mediated Lifelines of Shared Vulnerability." *Feminist Media Studies* 17, no. 4: Affective Encounters: Tools of Interruption for Activist Media (June 2017): 550–64.
Latour, Bruno. *Down to Earth. Politics in the New Climatic Regime*. Cambridge: Polity, 2018.
Lazzarato, Maurizio. "Immaterial Labor." In *Radical Thought In Italy: A Potential Politics*. Minneapolis: University of Minnesota Press, 2006.
Lipton, Sara. "Monastery Chic: The Ascetic Retreat in a Neo-Liberal Age." In *Evil Paradises: Dreamworlds of Neoliberalism*, edited by Mike Davis and Daniel Bertrand Monk, 241–50. New York: The New Press, 2007.

Manovich, Lev. *The Language of New Media*. Cambridge, Massachusetts: MIT Press, 2001.
Mattern, Shannon. “Using PowerPoint, Artists Ask How Performative Presentations Shape Our Thinking.” *ARTnews.Com* (blog), February 5, 2020. https://www.artnews.com/art-in-america/features/artists-using-powerpoint-critique-rhetorical-strategies-tan-lin-tony-cokes-david-byrne-1202676971/.
McClellan, John. “Nondual Ecology.” Tricycle: The Buddhist Review. Accessed June 8, 2021. https://tricycle.org/magazine/nondual-ecology/.
McCoy, Victoria E., Erin E. Saupe, James C. Lamsdell, Lidya G. Tarhan, Sean McMahon, Scott Lidgard, Paul Mayer, et al. “The ‘Tully Monster’ Is a Vertebrate.” *Nature* 532, no. 7600 (April 2016): 496–99. https://doi.org/10.1038/nature16992.
McHugh, Gene. *Post Internet. Notes on the Internet and Art 12.29.09 > 09.05.10*. Brescia: Link editions, 2011.
McLuhan, Marshal. *The Gutenberg Galaxy: The Making of Typographic Man*. Toronto: University of Toronto Press, 1962.
McPherson, Tara. “‘Why Are the Digital Humanities So White?’ Or Thinking the Histories of Race and Computation.” Debates in the Digital Humanities. Accessed September 1, 2021. https://dhdebates.gc.cuny.edu/read/untitled-88c11800-9446-469b-a3be-3fdb36bfbd1e/section/20df8acd-9ab9-4f35-8a5d-e91aa5f4a0ea.
Mollinson, Bill. *Permaculture Two: Practical Design for Town and Country in Permanent Agriculture*. Tasmania, Australia: Tagari, 1978.
Morton, Timothy. *Hyperobjects, Philosophy and Ecology after the End of the World*. Minneapolis: University of Minnesota Press, n.d.
———. *The Ecological Thought*. Cambridge, Massachusetts: Harvard University Press, 2010.
Nelson, Robin. *Practice as Research in the Arts. Principles, Protocols, Pedagogies, Resistances.* Basingstoke: Palgrave Macmillan, 2013.
Popula. “Neodymium.” Accessed August 4, 2020. https://popula.com/2018/07/30/neodymium/.
NET ART ANTHOLOGY: EverythingIveEverWantedtoKnow.com. “NET ART ANTHOLOGY: EverythingIveEverWantedtoKnow.Com,” October 27, 2016. https://anthology.rhizome.org/everythingiveeverwantedtoknow-com.
NET ART ANTHOLOGY: Simple Net Art Diagram. “NET ART ANTHOLOGY: Simple Net Art Diagram,” October 27, 2016. https://anthology.rhizome.org/simple-net-art-diagram.
“Netless. a Network without The Net.” Accessed April 18, 2019. https://k0a1a.net/netless/.
“Nirvana - Territorial Pissings Lyrics | AZLyrics.Com.” Accessed September 28, 2021. https://www.azlyrics.com/lyrics/nirvana/territorialpissings.html.
“Occupy.Here / a Tiny Self-Contained Darknet.” Accessed April 18, 2019. http://occupyhere.org/.
“Ofcom Spectrum Map Page.” Accessed July 8, 2021. http://static.ofcom.org.uk/static/spectrum/map.html.
Liverpool cotton history. “Origins of the Liverpool Cotton Market.” Accessed July 29, 2021. https://www.liverpoolcotton.com/origin.html.

O'Sullivan, Simon. "Ten Concepts Following Cathy Wilkes' Practice." *Afterall*, no. 12 (2005): 65–70.
Real Life. "Out of Network." Accessed May 2, 2019. https://reallifemag.com/out-of-network/.
"Outlandia." Accessed May 4, 2020. /air/outlandia.
"Physics beyond the Standard Model." In *Wikipedia*, July 28, 2021. https://en.wikipedia.org/w/index.php?title=Physics_beyond_the_Standard_Model&oldid=1035999701.
"Plutonium-239." In *Wikipedia*, July 21, 2021. https://en.wikipedia.org/w/index.php?title=Plutonium-239&oldid=1034630214.
Postel, John. "RFC 791." IETF Internet Engineering Task Force, 1981. http://www.ietf.org/rfc/rfc0791.txt.
Rafman, Jon. "IMG MGMT: The Nine Eyes of Google Street View." Art F City, August 12, 2009. http://artfcity.com/2009/08/12/img-mgmt-the-nine-eyes-of-google-street-view/.
Ravaisson, Felix. *Of Habit*. Translated by Claire Carlisle and Mark Sinclair. London: Continuum, 2008.
Recinos, Alec. "Towards a Postinternet Sublime." Rhizome, 2018. http://rhizome.org/editorial/2018/jan/04/towards-a-post-internet-sublime/.
Robles-Anderson, Erica, and Patrik Svensson. "'One Damn Slide After Another': PowerPoint at Every Occasion for Speech." *Computational Culture*, no. 5 (n.d.).
Rouvroy, Antionette. "Technology, Virtuality and Utopia: Governmentality in an Age of Autonomic Computing." In *Law, Human Agency and Autonomic Computing : The Philosophy of Law Meets the Philosophy of Technology*, edited by Mireille Hildebrt and Antionette Rouvroy, 136–57. London: Routledge, 2011.
"Share Your Sorrow." Accessed February 24, 2020. https://shareyoursorrow.tumblr.com/?og=1.
"Soil." In *Wikipedia*, May 23, 2021. https://en.wikipedia.org/w/index.php?title=Soil&oldid=1024624651.
Soulellis, Paul. "The Post as Medium." In *The Art Happens Here: Net Art Anthology*, edited by Connor Michael and Aria Dean. New York: Brooklyn, 2019.
Spufford, Francis. *The Chatto Book of Cabbages and Kings: Lists in Literature.* London: Chatto and Windus, 1989.
Srnicek, Nick, and Alex Williams. *Inventing the Future. Postcapitalism and a World Without Work*. Brooklyn. NY: Verso, 2015.
"Standard-Gauge Railway." In *Wikipedia*, August 13, 2020. https://en.wikipedia.org/w/index.php?title=Standard-gauge_railway&oldid=972689683.
Stengers, Isabelle. *Power and Invention: Situating Science*. Minneapolis: University of Minnesota Press, 1997.
Sterling, Bruce. *The Epic Struggle of the Internet of Things*. Moscow: Strelka Press, 2014.
Stiegler, Bernard. *Symbolic Misery Volume 1: The Hyperindustrial Epoch*. Cambridge: Polity, 2014.

Stimilli, Elettra. *The Debt of the Living*. New York: SUNY Press, 2017.
Sutton, Theodora. “Disconnect to Reconnect: The Food/Technology Metaphor in Digital Detoxing.” *First Monday*, June 1, 2017. https://doi.org/10.5210/fm.v22i6.7561.
Tate. “‘Water Towers’, Bernd Becher and Hilla Becher, 1972–2009.” Tate. Accessed January 3, 2021. https://www.tate.org.uk/art/artworks/bernd-becher-and-hilla-becher-water-towers-p81238.
terra0. “Terra0.” Accessed September 3, 2021. https://terra0.org.
Testa, Bart. “Tabula for a Catastrophe: Peter Greenaway’s The Falls and Foucault’s Heterotopia.” In *Peter Greenaway’s Postmodern/Poststructuralist Cinema*, edited by Paula Willoquet-Maricondi and Mary Alemany-Galway, 79–112. Lanham, Maryland: The Scarecrow Press, 2008.
“The End of Human Experience.” Accessed April 14, 2021. https://artreview.com/summer-2015-opinion-jj-charlesworth/.
Plastic EDU. “The Problem with Disposable Cups,” December 26, 2019. https://plastic.education/the-problem-with-disposable-cups/.
“The Project Gutenberg EBook of The Lives of the Saints, Vol. 1, by Rev. S. Baring-Gould.” Accessed June 14, 2021. https://www.gutenberg.org/files/46947/46947-h/46947-h.htm#Page_249.
“THE USES AND ABUSES OF OBJECT-ORIENTED ONTOLOGY AND SPECULATIVE REALISM Andrew Cole.” Accessed April 14, 2021. https://www.artforum.com/print/201506/the-uses-and-abuses-of-object-oriented-ontology-and-speculative-realism-andrew-cole-52280.
Thoreau, Henry David. *Walden*. London: Penguin, 2016.
Turkle, Sherry. “Opinion | The Flight From Conversation.” *The New York Times*, April 21, 2012, sec. Opinion. https://www.nytimes.com/2012/04/22/opinion/sunday/the-flight-from-conversation.html.
“UK Government Pumps £5 Billion into Broadband Sector - Telecoms.Com.” Accessed September 28, 2021. https://telecoms.com/503027/uk-government-pumps-5-billion-into-broadband-sector/.
“Understand | Origin and Meaning of Understand by Online Etymology Dictionary.” Accessed August 6, 2021. https://www.etymonline.com/word/understand.
Walter, Tony, Rachid Hourizi, Wendy Moncur, and Stacey Pitsillides. “Does the Internet Change How We Die and Mourn? Overview and Analysis.” *OMEGA - Journal of Death and Dying* 64, no. 4 (2012): 275–302.
Watts, Duncan. *Six Degrees: The Science of a Connected Age*. New York: Norton, 2003.
Weber, Max. *The Protestant Ethic and the Spirit of Capitalism*. Oxford University Press, 2010.
“What Is IPFS?” Accessed September 27, 2021. https://docs.ipfs.io/concepts/what-is-ipfs/.
Wilmot, Claire. “The Space Between Grief and Mourning.” The Atlantic, June 8, 2016. https://www.theatlantic.com/entertainment/archive/2016/06/internet-grief/485864/.

Appendix A - Outlandia

Photographic Documentation

Outlandia - Glen Nevis - Scotland - August 14th to 20th 2017

Forest path to the studio

Exterior of the studio

Interior of the studio.

The mast and forest floor

The mast supported by twine

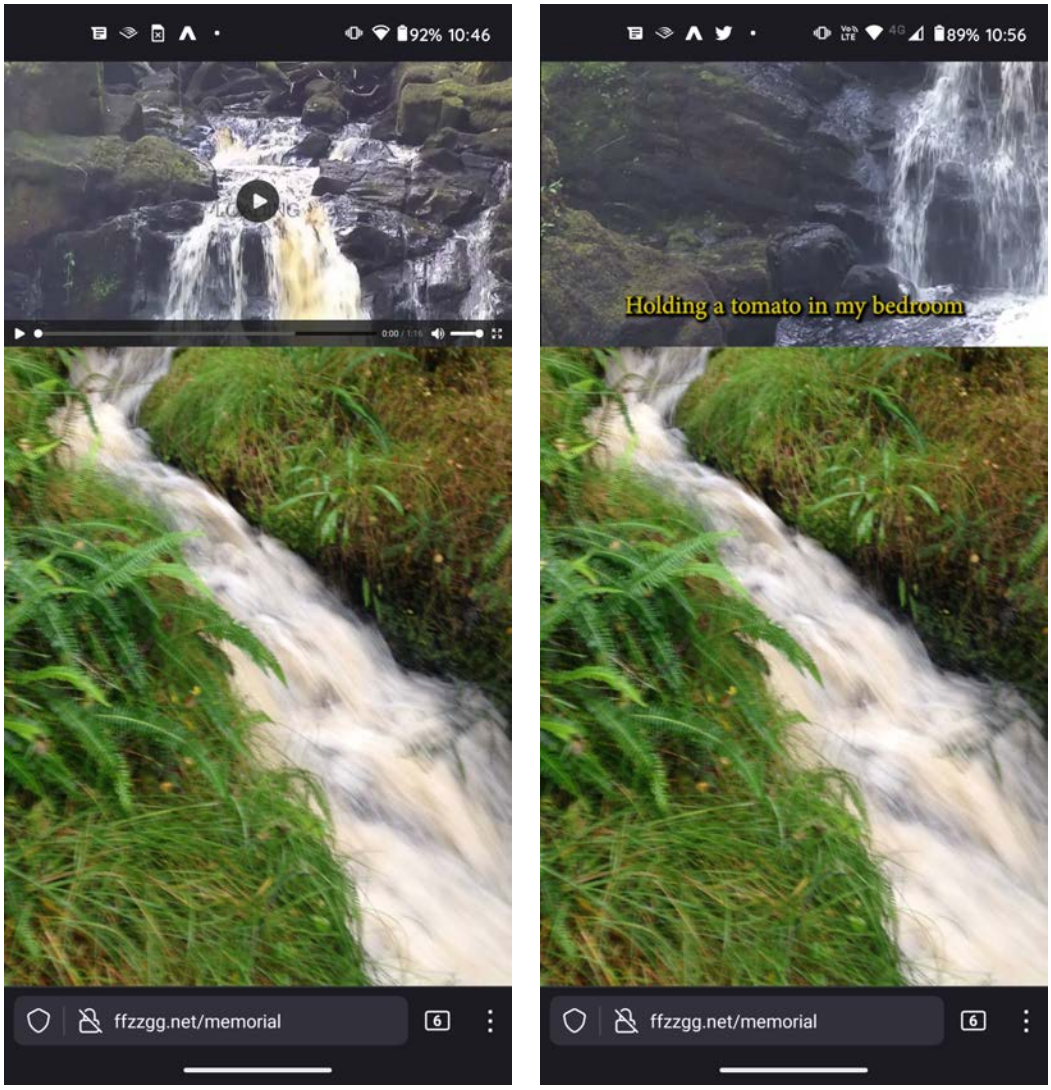
The mast and the underside of the platform

Close up of the platform containing the Raspberry Pi 3b and battery.

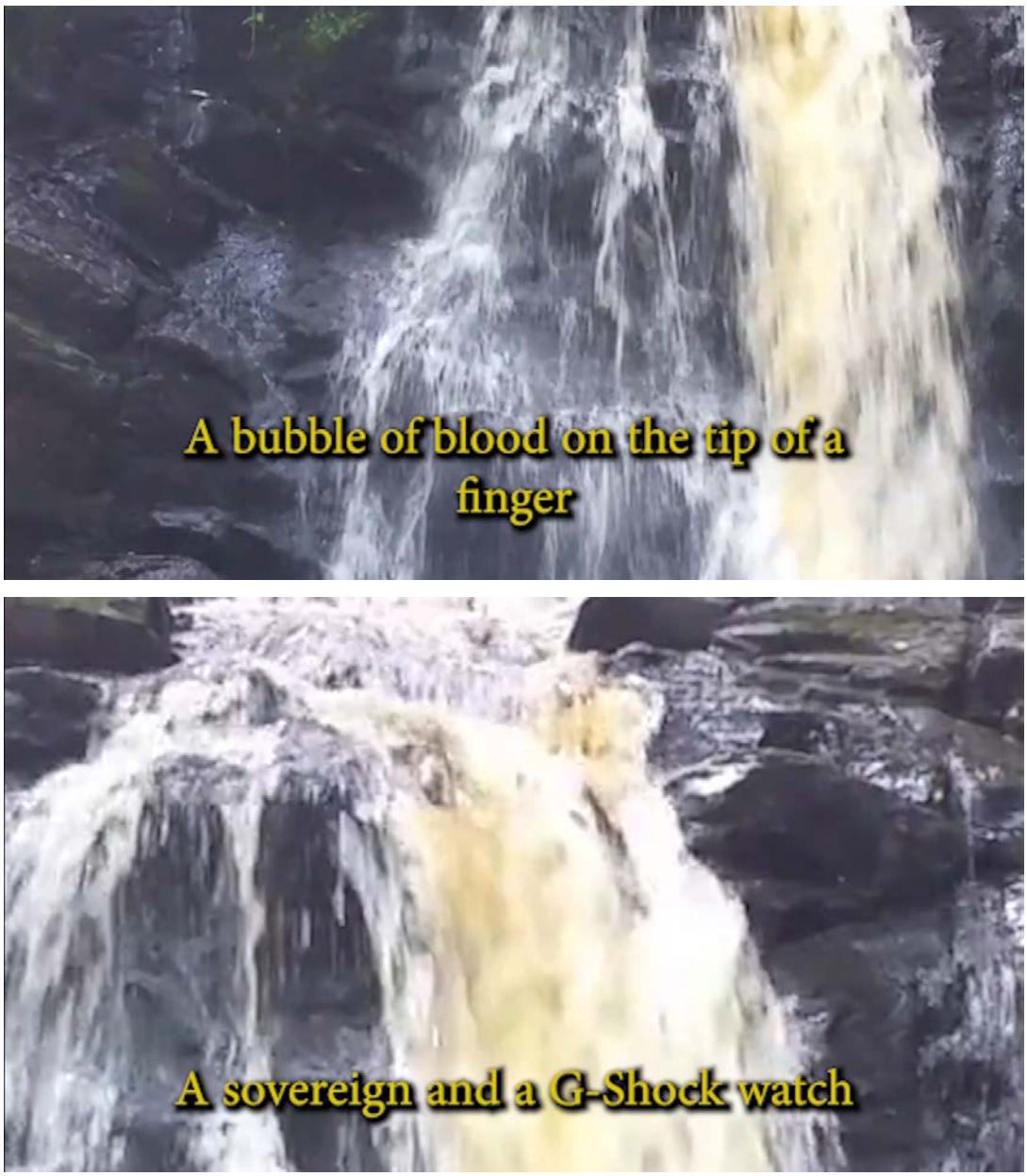
The platform, made from sticks collected from the forest floor tied together with twine. It contains a battery and Raspberry Pi 3b

The inside of the platform that hung from the top of the mast, showing the battery and Raspberry Pi 3b.

Screen Captures



Screen grabs of the webpage broadcast from the masts shown as it appeared on a mobile device.



Selected video stills from *Memorial*

Selected video stills from *Memorial*

Appendix B – Edge Hill Station Garden

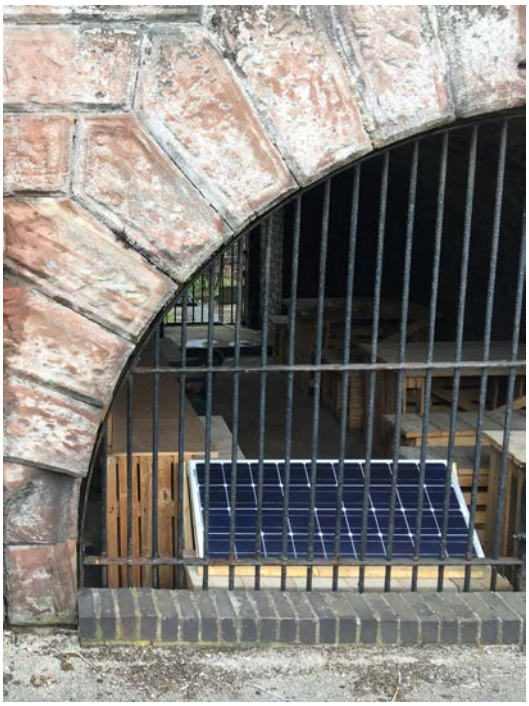
Photographic Documentation

Edge Hill Station – Liverpool – December 2018 to April 2019

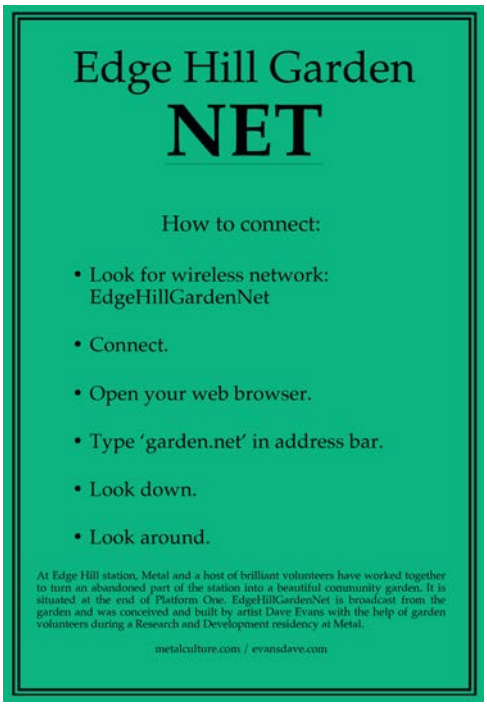
Platform 1, Edge Hill Station

The permaculture garden behind Platform 1

The mast and hugel bed under construction



The first solar panel installed in a railway arch



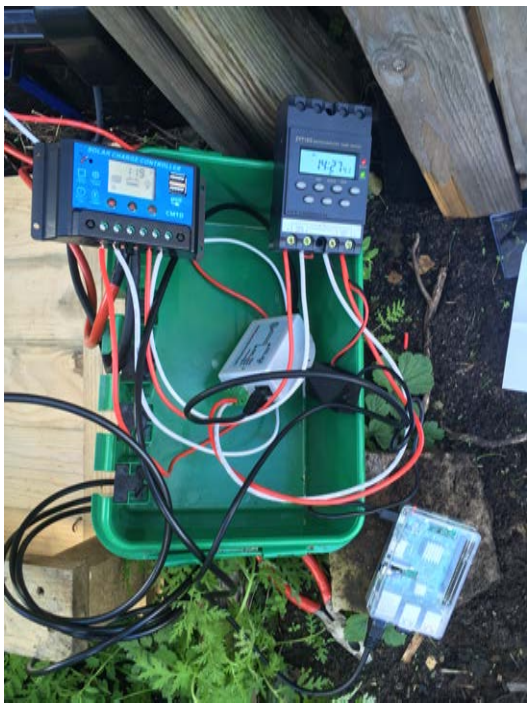
Poster used to direct commuters to the network in the station

Signage made during a volunteer session building the mast

Garden view including the first version of the mast

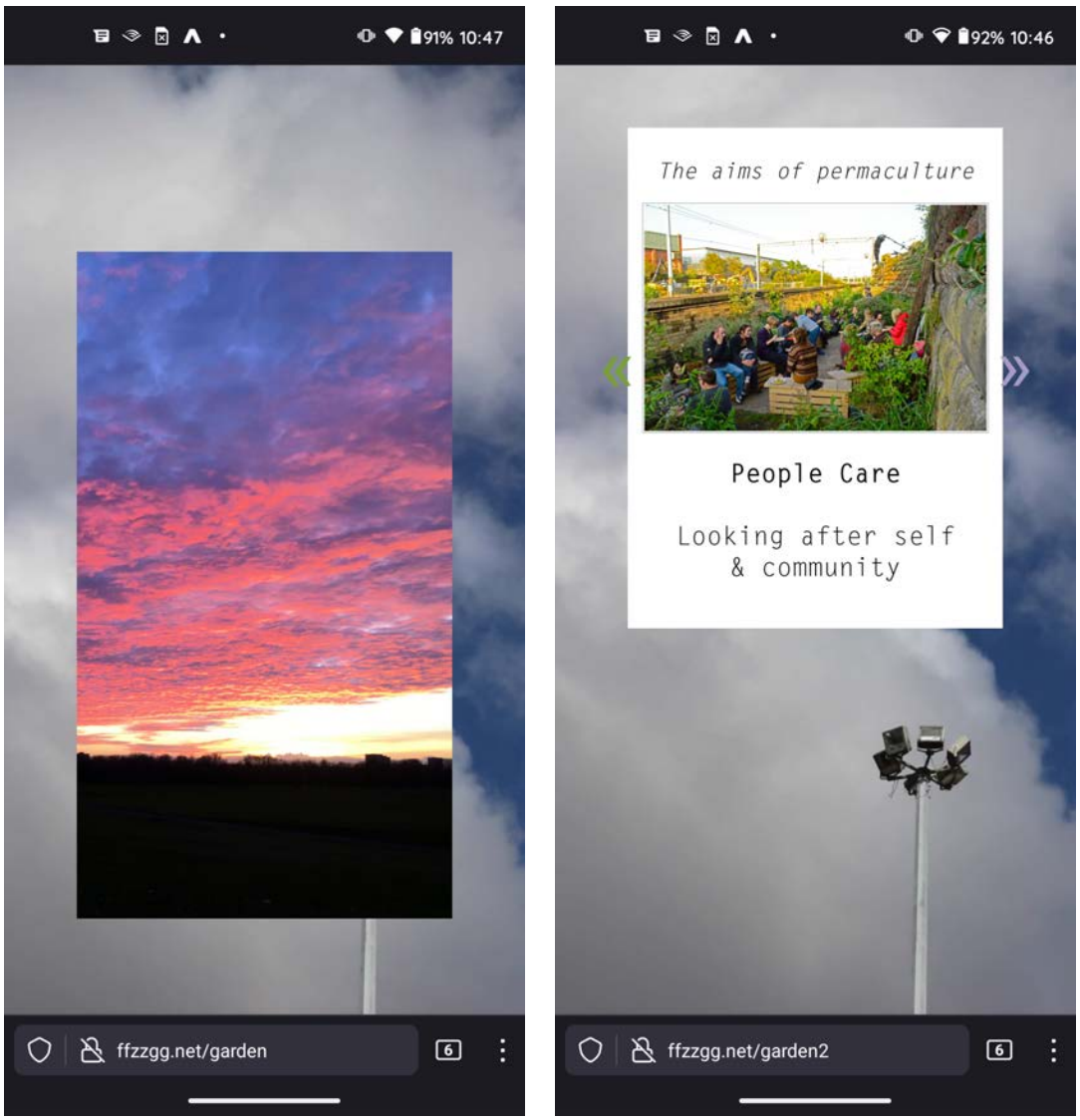
The second version of the mast with a smaller and more efficient solar panel.

Recycling wooden pallets into planters



The internal hardware, solar controller, timer, PoE injector, Raspberry Pi 3b.

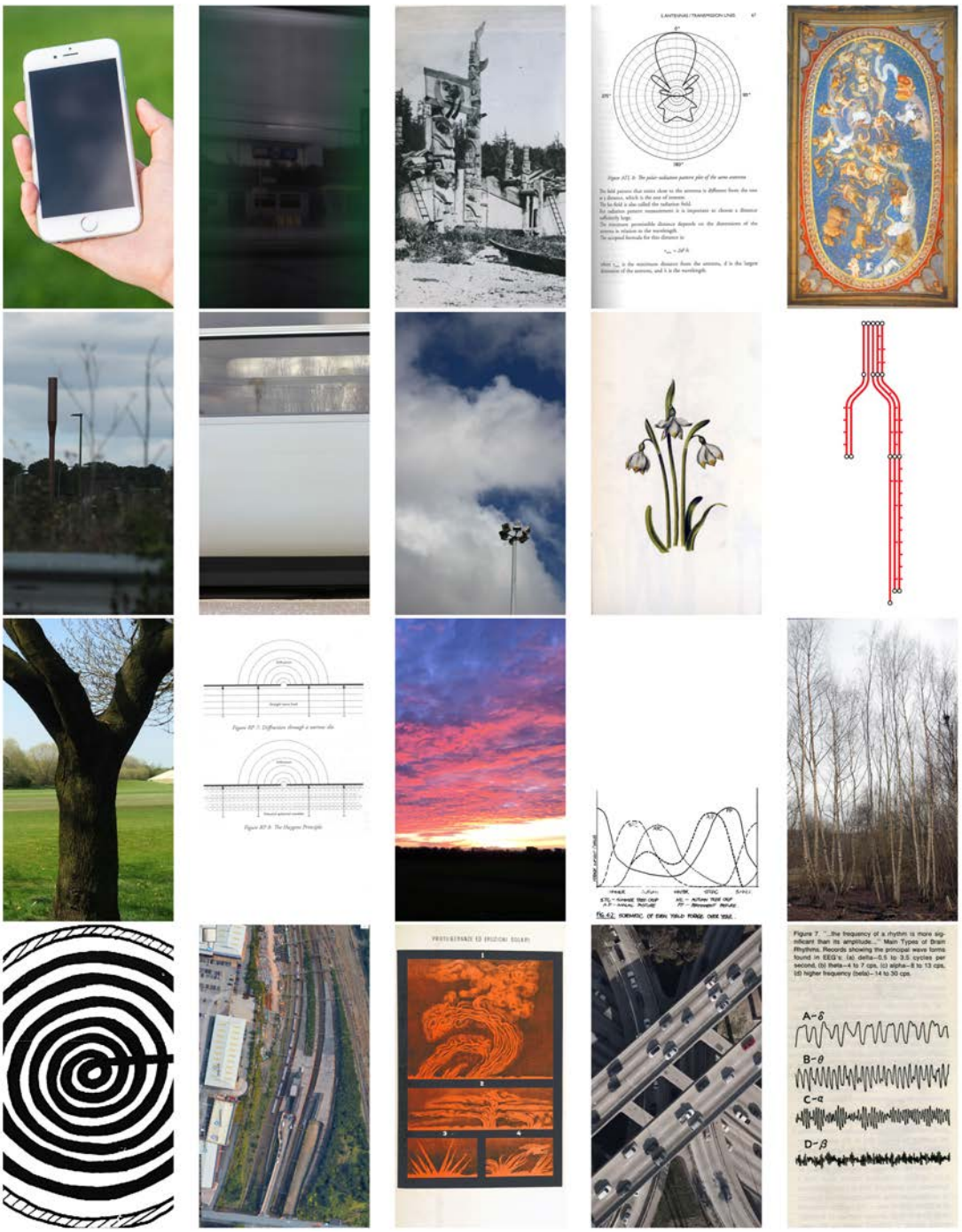
The final version of the mast with planters.



Screengrabs of the webpage broadcast from the mast shown as it appeared on a mobile device.

Selected Images from Test Slideshow

Selected Images from Slideshow 1



Selected Images from Slideshow 2

PERMACULTURE DAY

Metal's garden
Edge Hill Station

Saturday 15th September

What is permaculture?

The aims of permaculture

Earth Care

Rebuilding natural capital

The aims of permaculture

People Care

Looking after self & community

The aims of permaculture

Fair share

Setting limits & redistributing goods

Permaculture tackles a lot of causes:

Environmental - like sustainable food & energy production or waste reduction

Social - like integration, health and education

Economic - like equality and fair trade

It teaches you how to…

… use your local sites and conditions to grow food - your garden, your balcony, or empty spaces in the city!

It teaches you how to…

… reuse, recycle, and reduce your impact on the environment

It teaches you how to…

… get involved in projects in your local community

What we're doing: compost

Compost is general organic waste - food or liquids - that has been decomposed.
It is very beneficial for the land and a very efficient fertiliser!

What we're doing: Hugelbeds

"Hugelbeds" are raised garden beds filled with waste wood.

They provide a very fertile soil, resistant to drought, and double the growing space available for plants!

Extract from a Conversation between Andrea Ku and Dave Evans

Andrea Ku is Director of B4BioDiversity, and organisation that promotes the importance of biodiversity in the urban area. Dave Evans is a artist interested in making sustainable, small scale networks. Both are based in Liverpool.

DE: It's crazy that you studied art originally in Manchester then began the shift away from art to working like you do now, how did that start?

AK: I did an M.A. in landscape architecture at Leeds.

DE: Before that, did the gardening and the landscape feature much in your early art practice, while you were studying?

AK: When I did fine art I was thinking, "I hate it", and then I left. Then I did landscape architecture and now I think, "I don't like landscape architecture, I like fine art." It must be some meeting between the two somewhere. I'm still finding out what it is I want to practice in.

DE: It's interesting that you think of it as a practice, working in the city, in gardens and with the bees and so on.

AK: Yes I guess it's a practice of sorts. Working with bees, I've tuned in now, down from general landscape architecture, down to plants, pollinators and bees and looking at how I can create something using that, using those mediums, if you can think of bees as a medium.

I've got a project up I'm working on in Sefton libraries called Beehives and Bookworms. The idea is to get people to look at their local environments; even smallscale stuff like pots, as well as gardens, all the way up to large-scale stuff. like parks, then think about how we can see a place in one way, but through bees eyes it's different. How you can create that bigger picture.

DE: It's interesting in the context of the station and the station garden, most people just think of it as the place they come to catch the train, but it can be known in lots of different ways by different people, and in yet another way again by animals and insects.

AK: Grafitti is a good example. If you did a graffiti map there would be a bit of link between graffiti activity and bee activity. It could be that there's a lot of brown field lands there. Just land where buildings have been knocked down, graffiti artists might work there and plants have just taken over too, pioneer plants, and they've just grown. People usually just consider them as weeds but they're really good for birds or bees or other insects and they become hotspots.

It's interesting looking at the relationship between neglect, graffiti and wildlife compared to the relationship between manicured parks and wildlife. Parks can often be a desert for wildlife because they're just big open spaces. They might become abundant for a few weeks then nothing for a while.

Like here at the station, looking at he spaces along the train line that have been left, they're full of wildlife. Loads and loads of it.

DE: Acres of space is not necessarily a good thing then? A relatively small area where you can have a lot different stuff can be more useful?

AK: Yes. I wrote my MA about Liverpool 8, Lodge lane, Upper Parliament st and Kingsley road, asking loads of people what they thought nature was in the city. A lot of people said that they didn't think nature was there, it was somewhere else. I found the gardens, even just a row of terraces down one street, could be more abundant, and usually was more abundant, than part of the park which is a bigger area.

DE: What would be causing that abundance within those residential areas?

AK: People planting loads of different stuff. Stuff that was good for wildlife, some people just left their garden, some seasonal stuff, just stuff that the residents get growing through the year…

DE: That makes sense rather than a park that is administered by the council or whatever where they just come in with a load of stuff, the same sort of stuff and plant it across the whole area. These residential areas don't have that. I see how it doesn't have that diversity. Because one of the things I'm interested in is, how small scale is important, how locality is important, but I'm interested in the internet and technology rather than gardens and the landscape. It's expanding and it's everywhere and it's huge. I wonder what impact that growing vastness has. I don't know whether there's analogy between how things can become homogenised as they get bigger because in order to support something massive, things have to be standardized, don't they, I guess to a degree?

If you're going to create something massive, synthetically, it couldn't be massive and completely diverse, it would be too hard to maintain, right?

AK: To manage and encourage diversity you need something massive broken into lots of small things and then those broken down smaller again. Like a garden, isn't it really? You've got the whole garden but you have yourself certain patches where certain care needs to be taken. It has to be treated differently.

DE: And with a smaller space you can be attentive to that sort of thing, whereas you've got a massive space, then it becomes harder, doesn't it, to focus on small areas. If you had thousand small areas, to work it would become really hard, wouldn't it?

AK: Yes it's like what you said about your allotment. It's a big space. Parts of it will be different, rainfall might affect a puddle in one part or I don't know, the soil might be different from one part to another. Just little things like that really determine what you're going to do in that space.

DE: It takes a lot to get to know that as well, I think, because now we've had a winter in the allotment, we realise that there are bits of it that do get flooded. It's that knowledge that you pick up over a longer period. I think the things that I'm interested in are things that happen over longer periods and perhaps on a smaller scale rather than things that happen quickly on a massive scale.

Like Facebook, it’s a short interaction and it’s done, a quick thing on a massive network. What does it mean to make a longer experience on smaller network?

AK: I suppose it’s a bit like a commuter and their small experience of the station on the way to work.

DE: I wonder whether it's because the station part of a big network and it's just seen as a transitional space where you're on your way to or from somewhere. The idea of actually stopping and thinking, it’s slightly counter to the nature of the whole space isn't it?

AK: Yes.

DE: I think that's why the garden here in the station is interesting because it shifts that time-frame. It works to a seasonal rhythms rather than a daily one like trains and commuters. Add to this the rhythms that I work with, of Wi-Fi signals, that shift direction 2.4 billions times per second, then how you see or imagine these rhythms, that appear to be getting massively quicker, becomes a problem. Do you have an image in your mind of what you've got to do when in the garden over the course of the year? Or do you just respond to what you see when you come?

AK: No. I've got an idea because with any garden, for me anyway, you do take a mental snapshot of it. I don't know how to explain it but you know what’s there and which space you're intending to work with and you would know, seasonal-wise, what's growing.

It's like maybe a graphic equalizer or something and parts of a song when you know someone’s singing and it goes up the middle and when they're not singing maybe the bass or treble comes up. It's like you know the parts of the song and sort of when they're going to happen.

It's like with the garden, you know, what it's going to look like and what's growing because I've been here nearly a year now. The same as you and your allotment, this has been my first winter here, but I do get to know quite quickly what is where.

It's not a particularly big garden either. As I say there is light and there's dark so you do know the dark side is going to look after itself because it's evergreen and all it needs is trimming and cutting back a bit. There's a lighter side as well. There's a lot of movement with that as a lot will grow because of the light.

DE: It's quite interesting how there isn't a one a one size fits all solution for the space, it takes knowledge of the spaces within the space

So in terms of how you experience the rhythm of it, it doesn't have a singular rhythm, it has lots of different rhythms happening all at the same time.

AK: Yes because on the lighter side of the garden, the sunnier side, it's mostly annual seeds so you sow your seed that flower, it'll be gone the next year. Whereas the darker side, it's evergreen and it just seems to be quite-- a lot of bulbs, a lot of climbers which you just cut back and they look after themselves. But the lighter side, the food and annuals, you do have to re-sow and re-sow and tend to it a little bit more as well.

DE: What's at the root of that in terms of them as plants out in nature? Is it that the ones that exist in the shade are hardier and more self-sufficient?

AK: Probably a bit more self-sufficient because you'd imagined a woodland with a dense canopy. It can get quite sparse on the grounds but the woodland, it has its own system where it feeds itself, you get fungus that grows in there that symbiotic and the water.

Like a rain forest for example, everything is symbiotic, it's got its own weather system, it has got its own heat and its own rain and everything feeds everything else. So it looks after itself in that way. I suppose you had a woodland like an English Woodland, there's an element that it does feed itself.

DE: On the light side, then you've got the other stuff that you said needs a little bit more attention, why is that not as self-sustaining as the dark side, what makes that system different?

AK: In a darker area, you've got only so much that will grow, very few species will grow there because it's darker and those species have got used to the elements being like that. Whereas in the light you get a lot more things that would grow in the light. There are more species that need light, that need water, that need care and attention that we do in the garden.

So that's why you'll get a lot of other stuff that will grow there. A lot more weeds will grow in there because it's favourable. Whereas in the dark side of the garden you won't get as much because they can't survive, less will survive in that space.

DE: So, it needs more care to keep it from just going crazy, you think on the light side?

AK: Yes. Definitely. Because everything grows and loves the light and they just want lots and lots of it. Just getting a sense of the different types of cycles that occur in different parts of the garden; one side that's hardy and is able to do its own thing and then this other side that is cramped and needs more attention.

On the lighter side, there's a lot of cycles within cycles. It's like a lot of cogs within a machine. On the darker side, it seems like a slower cycles within cycles because things are growing slower and they're hardier, they're a bit more woodier. They can just survive better through the winter on the dark side. Lots within the darker side are evergreen as well, so they're making use of all the light through winter when they can.

DE: I grew up in suburbia with a lawn that I had to mow and my dad put plants in pots every spring, and if I'm honest, I have never really been that interested in plants or gardens. So understanding that there are different speed life cycles and rhythms is interesting for me in relation to thinking about how we experience time, how it can be fast and productive in one way, or slow and productive in another, as that's at the root of my research. I think there's all this pressure to be doing more things faster and I think social media and the Internet all seems to be geared towards making you more productive all the time. It's just interesting to hear that there are very productive cycles that happen very quickly in conditions of abundance but burn out and need lots of attention and also slower cycles that are a bit more self-sufficient, resilient and occur in more limited conditions.

Appendix C – Project for a New Physical World

Asphalt	Asphalt concrete used for roads is a combination of refined bitumen and aggregate, the mixture of sand, stone and pitch can be varied according to the intended use of the road. Smoother roads use more sand and less stone or gravel, such as motorways.
Stratocumulus Clouds	Stratocumulus clouds are low-level clumps or patches of cloud varying in colour from bright white to dark grey. They are the most common clouds on earth recognised by their well-defined bases, with some parts often darker than others. They usually have gaps between them, but they can also be joined together
Arrow	An arrow is a fin-stabilized projectile that is launched via a bow, and usually consists of a long straight stiff shaft with stabilizers called fletchings, as well as a weighty arrowhead attached to the front end, and a slot at the rear end called the nock for engaging the bowstring.
Ferris Wheel	A Ferris wheel is an amusement ride consisting of a rotating upright wheel with multiple passenger-carrying components (commonly referred to as passenger cars, cabins, tubs, capsules, gondolas, or pods) attached to the rim in such a way that as the wheel turns, they are kept upright, usually by gravity.
Drain	A highway gully is a drainage pit covered by an open metal grating located on the road edge. Its purpose is to drain rainwater from the highway into the sewerage system.

Human	Human being, a culture-bearing primate classified in the genus Homo, especially the species H. sapiens. Human beings are anatomically similar and related to the great apes but are distinguished by a more highly developed brain and a resultant capacity for articulate speech and abstract reasoning
Grass	Grass is a monocotyledon plant, herbaceous plants with narrow leaves growing from the base. A common kind of grass is used to cover the ground in a lawn and other places. Grass normally gets water from the roots, which are located in the ground.
KFC	KFC is an American fast food restaurant chain headquartered in Louisville, Kentucky, that specializes in fried chicken. It is the world's second-largest restaurant chain after McDonald's, with 22,621 locations globally in 150 countries as of December 2019
Glass	Glass is a non-crystalline, often transparent amorphous solid, that has widespread practical, technological, and decorative use in, for example, window panes, tableware, and optics. Glass is most often formed by rapid cooling (quenching) of the molten form; some glasses such as volcanic glass are naturally occurring.
Brick	A brick is building material used to make walls, pavements and other elements in masonry construction. Traditionally, the term brick referred to a unit composed of clay, but it is now used to denote rectangular units made of clay-bearing soil, sand, and lime, or concrete materials.

Bike	A bicycle, also called a bike or cycle, is a human-powered or motor-powered, pedal-driven, single-track vehicle, having two wheels attached to a frame, one behind the other. A bicycle rider is called a cyclist, or bicyclist.
Church	A church building or church house, often simply called a church, is a building used for Christian religious activities, particularly for Christian worship services.
Railing	A railing is a type of fence made of one or more usually metal or wooden bars attached to posts, often along the edge of a path or at the side of stairs for safety and to provide support.
Japanese Knotweed	Japanese Knotweed is a large species of herbaceous perennial plant of the knotweed and buckwheat family Polygonaceae. It is native to East Asia in Japan, China and Korea. In North America and Europe, the species has successfully established itself in numerous habitats, and is classified as a pest and invasive species in several countries.
Mono Pole	Monopole masts are a common part of the Urban street scene as they are a compact, visually unobtrusive, method of providing infill coverage, increased capacity or 'just' general coverage to an area. Most modern monopoles are produced by Hutchinson Engineering or Alifabs.
Ionic Column	The Ionic order is one of the three canonic orders of classical architecture, the other two being the Doric and the Corinthian. Of the three classical canonic orders, the Ionic order has the narrowest columns. The Ionic capital is characterized by the use of volutes.

Sycamore Tree	The Sycamore tree is a flowering plant species in the soapberry and lychee family Sapindaceae. It is a large deciduous, broad-leaved tree, tolerant of wind and coastal exposure. The sycamore establishes itself easily from seed and was introduced to the British Isles by 1500, and is now naturalised there.
Phone Box	A telephone booth, telephone kiosk, telephone call box, telephone box or public call box is a small structure furnished with a payphone and designed for a telephone user's convenience. Such a booth usually has lighting, a door to provide privacy, and windows to let others know if the booth is in use.
Shadows	A shadow is a dark area where light from a light source is blocked by an opaque object. It occupies all of the three-dimensional volume behind an object with light in front of it. The cross section of a shadow is a two-dimensional silhouette, or a reverse projection of the object blocking the light.
Steel	Steel is an alloy of iron with typically a few percent of carbon to improve its strength and fracture resistance compared to iron. Many other additional elements may be present or added. Because of its high tensile strength and low cost, steel is used in buildings, infrastructure, tools, ships, trains, cars, machines, electrical appliances, and weapons.

Dandelion	The dandelion is a large genus of flowering plants in the family Asteraceae. The genus is native to Eurasia and North America, but the two commonplace species worldwide were introduced from Europe and now propagate as wildflowers. Both species are edible in their entirety. The common name dandelion, from French dent-de-lion, meaning "lion's tooth", is given to members of the genus.
Tyre	A tyre is a ring-shaped component that surrounds a wheel's rim to transfer a vehicle's load from the axle through the wheel to the ground and to provide traction on the surface over which the wheel travels. Most tires, such as those for automobiles and bicycles, are pneumatically inflated structures, which also provide a flexible cushion that absorbs shock as the tire rolls over rough features on the surface
Thermoplastic Paint	Thermoplastic road marking paint, also called hot melt marking paint, is a kind of powder paint. When applied as road surface markings, a hot melt kettle is used to heat it to 200 °C to melt the powder, after which it is sprayed on the road surface. The coating then becomes a hard, polymer line after cooling.
English Elm	The English elm was, before the spread of Dutch elm disease, the most common field elm in central southern England, though not native there, and one of the largest and fastest-growing deciduous trees in Europe.
Speed Camera	A traffic enforcement camera is a camera which may be mounted beside or over a road or installed in an enforcement vehicle to detect motoring offenses,

	including speeding, vehicles going through a red traffic light, vehicles going through a toll booth without paying, unauthorized use of a bus lane, or for recording vehicles inside a congestion charge area.
Oven Glove	An oven glove, or oven mitt, is an insulated glove or mitten usually worn in the kitchen to easily protect the wearer's hand from hot objects such as ovens, stoves, cookware, etc. Fabric gloves consist of heat insulation surrounded by cotton fabric, usually consisting of decorative patterns.
Head Stone	A headstone, tombstone, or gravestone is a stele or marker, usually stone, that is placed over a grave. It is traditional for burials in the Christian, Jewish, and Muslim religions, among others. In most cases, it has the deceased's name, date of birth, and date of death inscribed on it, along with a personal message, or prayer, but may contain pieces of funerary art, especially details in stone relief.
Sauna	A sauna is a small room or building designed as a place to experience dry or wet heat sessions, or an establishment with one or more of these facilities. The steam and high heat make the bathers perspire.
TV Antenna	A television antenna is an antenna specifically designed for use with a television receiver to receive over-the-air broadcast television signals from a television station. Terrestrial television is broadcast on frequencies from about 47 to 250 megahertz in the very high frequency

	band, and 470 to 960 megahertz in the ultra high frequency band in different countries.
Asda	Asda Stores Ltd. trading as Asda is a British supermarket retailer, headquartered in Leeds, West Yorkshire. The company was founded in 1949 when the Asquith family merged their retail business with the Associated Dairies company of Yorkshire.
Buddleia	Buddleia is a genus comprising over 140 species of flowering plants endemic to Asia, Africa, and the Americas. The generic name bestowed by Linnaeus posthumously honoured the Reverend Adam Buddle, an English botanist and rector, at the suggestion of Dr. William Houstoun.
Drainpipe	A Drainpipe is a pipe that carries rainwater from the roof of a building to the ground
Estate Agents	An estate agent is a person or business that arranges the selling, renting, or management of properties and other buildings. Estate agents are mainly engaged in the marketing of property available for sale, and a solicitor or licensed conveyancer is used to prepare the legal documents.
Privet Hedge	A privet is a flowering plant in the genus Ligustrum. The genus contains about 50 species of erect, deciduous or evergreen shrubs, sometimes forming small or medium-sized trees, native to Europe, north Africa and Asia. Some species have become widely naturalized or invasive where introduced.

Rucksack	A backpack—also called knapsack, rucksack, rucksac, pack, sackpack, booksack, bookbag or backsack—is, in its simplest frameless form, a cloth sack carried on one's back and secured with two straps that go over the shoulders, but it can have an external frame, internal frame, and there are bodypacks.
Rail Network	The railway system in Great Britain is the oldest in the world. The first locomotive-hauled public railway opened in 1825, which was followed by an era of rapid expansion. Most of the track is managed by Network Rail, which in 2017 had a network of 15,811 kilometres of standard-gauge lines, of which 5,374 were electrified.
Cherry Tree	Wild cherry is a species of cherry, a flowering plant in the rose family, Rosaceae. It is native to Europe, Anatolia, Maghreb, and Western Asia, from the British Isles south to Morocco and Tunisia, north to the Trondheimsfjord region in Norway and east to the Caucasus and northern Iran, with a small isolated population in the western Himalaya.
Ladder	A ladder is a vertical or inclined set of rungs or steps. There are two types: rigid ladders that are self-supporting or that may be leaned against a vertical surface such as a wall, and rollable ladders, such as those made of rope or aluminium, that may be hung from the top.
Exhaust Fumes	Exhaust gas or flue gas is emitted as a result of the combustion of fuels such as natural gas, gasoline, petrol, biodiesel blends, diesel fuel, fuel oil, or coal. According to the type of engine, it is discharged into the atmosphere

	through an exhaust pipe, flue gas stack, or propelling nozzle. It often disperses downwind in a pattern called an exhaust plume.
Penny Lane	"Penny Lane" is a song by the English rock band the Beatles that was released in February 1967 as a double A-side single with "Strawberry Fields Forever". The lyrics refer to Penny Lane, a street in Liverpool, and make mention of the sights and characters that McCartney recalled from his upbringing in the city.
Litter Bin	A litter bin is a container, usually in a street, park, or public building, into which people can put rubbish.
Garden Pansy	The garden pansy is a type of large-flowered hybrid plant cultivated as a garden flower. It is derived by hybridization from several species in the section Melanium ("the pansies") of the genus Viola, particularly Viola tricolor, a wildflower of Europe and western Asia known as heartsease.
Helium	Helium is a chemical element with the symbol He and atomic number 2. It is a colorless, odorless, tasteless, non-toxic, inert, monatomic gas, the first in the noble gas group in the periodic table. Helium is the second lightest and second most abundant element in the observable universe.
London Plane	The London plane is a large deciduous tree growing 20 to 30 meters, exceptionally over 40 meters tall, with a trunk up to 3 meters or more in circumference. The bark is usually pale grey-green, smooth and exfoliating, or buff-brown and not exfoliating.

The 86.	The 86 bus has 32 stations departing from Liverpool South Parkway, Garston and ending in Liverpool One, Liverpool. It normally starts operating at 06:34 and ends at 23:17.
Fire Station	A fire station (also called a fire house, fire hall, firemen's hall, or engine house) is a structure or other area for storing firefighting apparatus such as fire engines and related vehicles, personal protective equipment, fire hoses and other specialized equipment. Fire stations frequently contain working and living space for the firefighters and support staff.
Stratus Clouds	Stratus clouds are low-level layers with a fairly uniform grey or white colour. Often the scene of dull, overcast days in its 'nebulosus' form, they can persist for long periods of time. They are the lowest-lying cloud type and sometimes appear at the surface in the form of mist or fog.
Common Holly	The common holly is a species of flowering plant in the family Aquifoliaceae, native to western and southern Europe, northwest Africa, and southwest Asia. It is an evergreen tree or shrub found, for example, in shady areas of forests of oak and in beech hedges. In the British Isles it is one of very few native evergreen trees.
Soil	Soil is a mixture of organic matter, minerals, gases, liquids, and organisms that together support life. Soil consists of a solid phase of minerals and organic matter (the soil matrix), as well as a porous phase that holds gases (the soil atmosphere) and water (the soil solution).

Plum Cherry	Plum Cherry is a broadleaf deciduous tree and one of the first Prunus species to flower in spring. It can grow to 8m. Its bark is dark grey and develops fissures with age, and its twigs are green and covered in a fine down when young.
Kerb Stone	A concrete kerb has several uses, with its main purpose being to neatly create separation and visual delineation of walkways and other trafficked areas. They can also help direct surface water into drainage systems; indicate where a person's driveway is and promote traffic calming.
Double Glazing	Double glazing refers to a window that has two panes of glass. The main component of the window is the double glazed sealed unit, also known as an insulated glass unit (IGU) which sits in a frame of uPVC, aluminium or timber. The IGU comprises of two sheets of glass separated by a spacer bar to create an air gap which is filled with an insulating gas.
Flag	A flag is a piece of fabric (most often rectangular or quadrilateral) with a distinctive design and colours. It is used as a symbol, a signalling device, or for decoration. The term flag is also used to refer to the graphic design employed, and flags have evolved into a general tool for rudimentary signalling and identification, especially in environments where communication is challenging
Driveway	A driveway is a type of private road for local access to one or a small group of structures and is owned and maintained by an individual or group.

Common Hawthorne	Common Hawthorne is a species of flowering plant in the rose family Rosaceae. It is native to Europe, northwest Africa and West Asia but has been introduced in many other parts of the world.
The Central Reservation	The central reservation is the reserved area that separates opposing lanes of traffic on divided roadways, such as divided highways, dual carriageways, freeways, and motorways. The reserved area may simply be paved, but commonly it is adapted to other functions; for example, it may accommodate decorative landscaping, trees, a median barrier or railway, rapid transit, light rail or streetcar lines.
Mock Tudor House	Tudor Revival architecture (also known as mock Tudor in the UK) first manifested itself in domestic architecture in the United Kingdom in the latter half of the 19th century. Based on revival of aspects that were perceived as Tudor architecture, in reality it usually took the style of English vernacular architecture of the Middle Ages that had survived into the Tudor period.
Bracket	A bracket is an overhanging member that projects from a structure (such as a wall) and is usually designed to support a vertical load or to strengthen an angle
Roadside Memorial	A roadside memorial is a marker that usually commemorates a site where a person died suddenly and unexpectedly, away from home. Unlike a grave site headstone, which marks where a body is laid, the memorial marks the last place on earth where a person was alive – although in the past travellers were, out of necessity, often buried where they fell.

Alder	Alders, with a few exceptions, are deciduous, and the leaves are alternate, simple, and serrated. The flowers are catkins with elongate male catkins on the same plant as shorter female catkins, often before leaves appear; they are mainly wind-pollinated, but also visited by bees to a small extent.
Silver Birch	The silver birch is a species of tree in the family Betulaceae, native to Europe and parts of Asia, though in southern Europe, it is only found at higher altitudes. Its range extends into Siberia, China, and southwest Asia in the mountains of northern Turkey, the Caucasus, and northern Iran.
Puddle	A puddle is a small accumulation of liquid, usually water, on a surface. It can form either by pooling in a depression on the surface, or by surface tension upon a flat surface. A puddle is generally shallow enough to walk through, and too small to traverse with a boat or raft.
Vest Top	A vest top is a sleeveless top; a top with thin shoulder straps