Coventry University



DOCTOR OF PHILOSOPHY

Lostness: the impossible task of returning home in hyper-space Toward an ethico-onto-epistem-ologyof the digital image

Breen, Carol

Award date: 2022

Awarding institution: Coventry University

Link to publication

General rights Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

· Users may download and print one copy of this thesis for personal non-commercial research or study

• This thesis cannot be reproduced or quoted extensively from without first obtaining permission from the copyright holder(s)

You may not further distribute the material or use it for any profit-making activity or commercial gain

You may freely distribute the URL identifying the publication in the public portal

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Lostness: the impossible task of returning home in hyper-space.

Toward an ethico-onto-epistem-ology of the digital image.

Carol Breen

A thesis submitted in partial fulfilment of the University's requirements for the Degree of Doctor of Philosophy

January 2021





Certificate of Ethical Approval

Applicant: Project Title: Carol Breen

Lostness: the impossible task of returning home in hyper-space. Toward an ethico-onto-epsitemology of the digital image, through the artistictechnological process of remaking.

This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Low Risk

Date of approval: Project Reference Number: 11 Aug 2020 P93698

AUTHOR'S DECLARATION

I declare that this thesis is my own work and all the written work is my own, except where stated and referenced otherwise. This work has not been accepted or submitted for any comparable award elsewhere. I hereby give my consent for my thesis to be available for photocopying and for inter-library loan and for the title and summary to be made available to outside organizations.

> Content removed on Data Protection grounds

SIGNED

contents

a note on the appendix (5) abstract (6) introduction (8)

L~O~S~T~N~E~S~S

RE-METHOD (16) **RE-**METHOD-**RE** (23)

L~O~S~T~N~E~S~S

POST (38) POST-DIGITAL (45) POST-SCREEN (49) POST-INTERNET (58) POST-MEDIUM (63) POST-CONCEPTUAL (66) POST-TIME (69) POST-HUMANISM (72) POST-PHOTOGRAPHY (75)

L~O~S~T~N~E~S~S

RE-PRACTICE-AS-RE (84) RE-EVENT (109)

L~O~S~T~N~E~S~S

POST-CINEMA POTENTIALITY (121)

conclusion (128) list of figures (136) appendix (137) website documentation (143) exhibitions (144) bibliography (145)

A NOTE ON THE APPENDIX

A proliferation of re-makes has been created over the course of this study. This Appendix includes information on the material featured in each Lostness section within this thesis. The appendix consists of images and URLs documenting the online element of the thesis for readers without access to the Internet, and it provides information about the images and text used in each chapter throughout the thesis as well as online. The focus of my project is Lostness. I set up the potential for Lostness to occur, through an assemblage of various modes of writing, gifs, videos, images and poetry and I set up the conditions for your attention to be split and scattered between the thesis and the website. The online section can be viewed at lostness.net it is best viewed using the latest version of Chrome. At the beginning of each chapter in the Lostness sections, readers are encouraged to interact with the website and the lostness sections act as hyperlinks which take you to the website. These URLs are also included in the appendix to accommodate for a printed version of this document.

ABSTRACT

Technology is blurring the distinctions between humans and non-humans. The proliferation of new media, smart phones and the Internet has led to an increased disorientation. No longer are we able to define human existence by unique temporal and spatial coordinates. Considering proposals that we respond to this by changing the way we research digital technologies, and move towards sustained engagements with digital processes, this thesis examines the artistic-technological process of remaking. To examine the entangled temporal relationships that occur in practice between body, data, image and interface, I continuously re-make a set of digital video files in the form of generative video feedback loops. This seemingly simple task of returning and restarting in digital space allows me to consider the problems of locating oneself in artistic processes that merge the human and the technological over a sustained period of time. Lostness emerged from my inability to self-situate, and position my practice, in the current post-medium, post-digital, post-contemporary condition. Lostness enables me to destabilize binary positions in various meta-narratives concerning the ontology of the digital image. I examine philosophies and ontologies of the digital image and look at the entangled relationships that occur in a durational artistic technological process. This thesis looks towards an ethico-onto-epistemology, which is relational and plural. An assemblage of text, performative writing, short form video, gif, image and interface, it creates the conditions for a diffractive reading to occur so the reader might experience lostness.

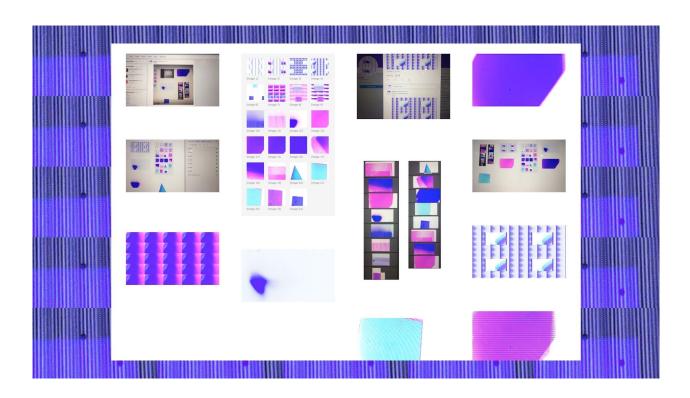


figure 1: litter rhythms.jpg

INTRODUCTION

This thesis examines the difficulties of situating an artistic-technological practice over a sustained period of time and reveals the complexities of working in a durational manner with digital images. It emphasises the importance of considering images as environments, as opposed to static objects. Digital images are part of shifting, entangled, networked environments in which practitioners are bound up. The project examines the difficulties of self-situating within a sustained artistic-technological practice in the context of the post-contemporary condition. The post-contemporary condition speaks to the effect new technologies are having on all aspects of our everyday lives (Avanessian and Malik 2016). Post-contemporary thinking emphasises our changing relationship to the historical: we are post-time, post-humanist, post-contemporary, post-Internet, and postdiscipline. I discuss the challenges these post-isms bring to positioning one's practice. I examine the effect new technologies are having on our ability to self-situate in a prolonged

digital artistic process and the problems of situating that practice within or beyond the post-isms. I highlight the difficulties of conveying situated knowledge which arises from a sustained creative technological process. This study demonstrates how the inability to locate oneself relates to the difficulties faced when documenting digital processes. The process of re-making used in this study is a type of diffractive practice. Diffractive practice focuses the attention on the intraaction within assemblages and sets itself apart from reflection-in-action. The thesis site sets the conditions for a type of diffractive reading to occur. In the book Meeting the Universe Halfway, new materialist Karen Barad (2007) discusses reflection and diffraction in the context of physics. Reflection as a metaphor for research inquiry is characterized as a mirroring of reality, which involves extracting objective representations from the world (Barad 2007). Diffractive practice escapes the cyclical realm of reflection. Diffractive experimentation focuses attention on various intra-actions within

assemblages, and on the pre-individuated 'practitioner' and 'other bodies'; whereas reflection-in-action separates the practitioner and others from what or whom she/he/they interacts with. Unlike reflection. diffraction is a critical practice of engagement. Diffractive practices aim to understand the world from within. Material objects and encounters are produced and reshaped through 'intra-action' their relation to one another. Barad argues that learning, knowing, measuring, theorizing and observing are all material practices of intraacting within the material world (Barad 2007: 90). Diffractive practice places emphasis on the performative dimensions involved in the production of the world rather than offering neutral objective descriptions of it.

This thesis is an assemblage, a collection of places that I am not, theories I could not find myself in, binaries that left me somewhere inbetween. This document might be puzzling, or unsettling. The structure might feel erratic to you, the reader. You might wonder why certain authors were given more attention than others, why specific quotes go unexplained. Over the course of this project I have spent time with cultural historians, artists, philosophers, media scholars, physicists and feminists some of these were important for the background theory of my project, while some interrupted my way of thinking at that time. This document points to the failures that can come when representative practices are tasked with conveying complex medial entanglements/events in time and space. Presence, embodiment and the coming together of different feelings, images,

9

experiences, texts, memories and actions are all part of the research process. Digitalized data is enmeshed in complex media ecologies, these ecologies are entangled connections between, body, data, image and interface. For example coming across one quote has at times progressed this study more quickly and efficiently than spending hours and hours re-reading one chapter. The time given to different ideas and authors in the pages of this document does not always relate to the level of importance that they play in this study. Different levels of attention were given to scholars cited throughout this document, however it must be noted that the work of Karen Barad and Donna Haraway are central to this project. In the site of this document I point to the coming together of different moments, ideas, feelings and images. I attempt to show the difficulties of separating these entanglements. Certain references might have had a huge impact on one image I re-made. Sometimes I introduce the background of scholars, sometimes I do not. I set up intra-actions between authors, artists and designers from disparate communities, some act as dialogic interlocutors, whilst others are not so closely affiliated with this project. Certain decisions and stylizations might appear to go against the academy's etiquette but I am pointing to other layers of meaning that we as scholars are constrained by. Layers of meaning are attached to academic stylizations, type setting, formatting, and referencing. These academic standards are often applied

but never questioned, they vary from peer reviewed journal to journal and institution to institution, but these systems are policed and enforced. Academic rules apply in relation to structure, language, and style and this is part of the image space of scholarly activity. This document is a site that plays with the various layers of representation and insists on highlighting typography as image. You might encounter language gone awry, it was often lost, or lacking, when it came to articulating some of the events that occurred throughout this study. This is a collection of leftovers from different times. The process of re-making which I discuss highlights the slippery nature of digital material. Re-making perpetuates dubious genealogies. The sheer vastness of digital material proliferated over the course of this study allows for a million possible representations of this study's own history. Histories were re-written, re-made, through a proliferation of digital images, twitter bots, videos, gifs, hypertexts, writing and notes. My process is a type of temporal continuum which is performed through all components of this thesis. This thesis is an assemblage which foregrounds my entanglement within the complexities of situating one's practice and oneself over time. This practice includes different modes of writing, both academic and non-academic, in the form of notes and hyper-poems. The document is punctuated with images and hyperlinks to lostness.net throughout. The post-contemporary condition speaks to the effect new technologies and networks are having on the primacy of human

experience and the difficulties accounting for, and locating, human experience, which have come about through a new organization of time. The abundance of post-isms is one of the symptoms of this condition and demonstrates new historical re-configurations resulting from these technological shifts. I argue that these new configurations make it difficult to categorize or place my artistic-technological practice in relation to any one theory or community of practice. I point to the difficulties that arise from describing or identifying one's own position when it is constantly mutating, shifting, and developing through intra-actions and events co-created by human and nonhuman phenomena. One effect, which arises because of my durational process, is lostness. Lostness is useful as it allows me to challenge some of the rigid categories that pertain to ontologies and philosophies of the digital image. Many ontologies and philosophies of digital media examine concepts of post-photography, post-media or the post-digital in relation to historical notions of how time operates and the aesthetics of temporality within film, photography, video and cinema (Mulvey 2007, Shapley 2011, Bosma 2013, Fowler 2013, Osborne 2010b, Groys 2008). The aesthetics of temporality are still considered in relation to historical meta-narratives. Often these debates fail to address how the connectivity of contemporary digital interfaces changes the relationships between once separate spaces and increases the complexities of the digital temporal (Barker 2012). This thesis

explores Scott Barker's ideas which eschew the traditional focus on object/viewer spatial relationships in digital practice (Barker 2012).

Post-disciplinary practices are described as porous, fuzzy-edged and indeterminate cultural hybrids. Post disciplinarity is emerging in the context of an evolving cultural narrative in which the notion of situated knowledge is emphasized (Wolmark and Gates-Stuart 2004). Digital technologies make a particular contribution to the erosion of disciplinary boundaries. While this can produce a fluid and intellectually exciting environment for research, it doesn't necessarily generate a shared and commonly accepted critical language. This thesis foregrounds lostness as one of the implications of trying to situate oneself in the current evolving postdisciplinary and digitized environment for research practices in art and design (Wolmark and Gates-Stuart 2004). Janneke Adema and Gary Hallnot argue "insufficient appreciation is shown for how digital technologies do not provide just a new way of storing, analysing, or presenting the human record, but are involved in the decentring of the human and, with it, the very idea of the human record" (Adema and Hall 2016: 2). These technologies are unsettling the power structures of the academy by allowing scholars to quickly and easily traverse institutional boundaries.

I use the Internet and networked technologies in my artistic-technological process. Thinking ecologically, rather than technologically, apps have evolved to occupy every technological, sociological, and

11

psychological niche that one could possibly imagine. Some apps are smaller versions of websites such as Facebook or eBay, others exist in their own right or were specifically created for smartphone technologies. I work with apps and networked technologies, as well as emerging technologies. I traverse many different software applications and interact with a wide range of Interfaces as part of my working process. I work in an environment of perpetual distraction, as do many noncreatives who are exposed to a constant stream of pings, pop-ups, notifications, and reminders. These distractions were created as part of the attention economy, designed by companies creating a race for human attention as economic commodity (Thompson 2019). My sustained creative technological process means I also engage with pop-ups, notifications, logins, password chains, media channels and push methods in both a pre-meditated and un-meditated manner. I constantly interact with different aesthetic simulations and representations of time, waiting for uploads, downloads, and video renders, engaging with the various symbols and icons in digital space, prompts and reminders to go in one direction or another. I proliferate digital material using an array of technologies. I also by-pass, certain queues and prompts for interactions in the software applications and social media platforms, ignoring elements of designed functionality in these spaces. I lose my way.

Lostness is also the name of a metric employed in UX design used to measure how

lost users are, and the scale ranges from zero to one. The metric is used to re-direct and push people forward to take certain routes and paths online. This points to the ways in which our behaviour is influenced, our routes and paths orchestrated, and decisions pre-empted (Doyle 2017). Our time and the way in which our time is spent locating home pages, products, or social interactions is, to a large extent, managed and controlled. How time is experienced is increasingly influenced by algorithms. Google's intelligent algorithms, like RankBrain, not only help best-fit results but also identify new signals that can be used to improve the search results and determine the best route for you to take. I use and mis-use Instagram, Youtube, Google, Twitter and Tinder in my process of re-making.

Algorithms are now central to how images, information and communications are located, retrieved and presented online. Twitter "follow recommendations", Instagram "this day on" and "suggested" Google map directions are some examples. These are not objective instructions but assume things about our present parameters, locations and values. This influences the difficulties of pinpointing what the digital material I work with is, or where it begins or ends, because digital material is relational. Data or metadata invariably always have other starting points as their beginnings (Gleick 2011). I speak about the difficulties of locating and positioning the material I work with and how the idea that everything is reducible to data is also affecting how our physical environments are perceived and influencing everyday relations. Michele proposes that

By delegating everyday practices to technological processes, with the resultant need to break down and reduce complex actions into a series of steps and data decision points, algorithms epitomise and encapsulate a growing tendency towards atomisation and fragmentation that resonates more broadly with an increasing emphasis on singularity, quantification and classification in the everyday (Wilson 2017)

These complex systems are now organized and controlled less and less by individual human agents. Humans are entangled in technologies, making it more and more difficult to locate, and extract, subjective human experiences from the infrastructures and networks of our societies. It is crucial that embodied human experience (which is often difficult to convey) and other forms of situated knowledge acquired from these entangled environments are accounted for, so that we might better understand how this entanglement is affecting the ways we locate ourselves and account for our own subjective experiences within these enmeshments. Lostness is one affect that can arise from these complex media ecologies. The lostness that has arisen from this study is also problematic because it poses difficulties for the ways in which artistic researchers make epistemological claims in the academy,

particularly those engaged in sustained artistictechnological processes. Research questions are commonplace in academic doctoral projects and are used as a means of distinguishing between research and artistic practice. In the UK, the main funding body for art and design, the Arts and Humanities Research Council [AHRC], rules that creative practice can be regarded as research, provided there are explicit research questions; it is clear what methods are being used and why, and that the outcomes of the research are disseminated to others (Biggs 2010). This project has produced hundreds of research questions, re-workings and iterations. I discuss this in the chapter Re-practice-as-re and draw from (Haseman 2006, Petelin 2014, Borgdorff, H 2006). There are many evolving questions that have arisen over the course of this research study, and the structure of this thesis aligns with methodologies that find their rhizomatic outlines in the postmodern critique of the notion of objective knowledge or absolute truths. Dynamic methodologies resonate with Paul Feyerabend's Against Method and his ideas relating to epistemological anarchy (Feyerabend 1993). Relational methodologies can be adaptive but also pay attention to semiotics, hermeneutics, pragmatics and meta-linguistics so that we might become aware of the possible consequences these could enact on a larger political, social, cultural and ecological level (Ferrando 2012). The primacy of the written text is discarded in this thesis and instead foregrounds how knowledge can be performed in different ways, and is inspired by multisited ethnography for its "diffuse time-space" approach (Marcus 1995: 96).

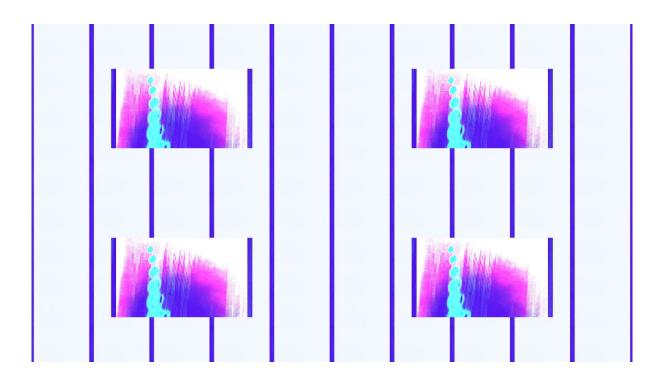
As such, this doctoral project looks towards an ethico-onto-epistem-ology of the digital image. The notion of "ethico-ontoepistem-ology" first coined by Barad points at the inseparability of ethics, ontology and epistemology when engaging in knowledge production. Barad's idea is that the world itself and its inhabitants - human and non-human beings - intra-actively co-constitute the world (Barad 2007: 90). This study examines the difficulties that come about when attempting to situate subjective experiences within post humanist frameworks in the academy, particularly in a digital artistic-technological practice. Although post humanist frameworks seek to unsettle the power given to the primacy of the text in the academy, there are age old structures, systems, hierarchies, formats, and meta-narratives in place in academic institutions and funding bodies. This thesis examines the difficulties of documenting the entangled shifting narratives that are co-created with myself and various technologies since embarking on an extensive period of research. Intra-actions of various phenomena are continuously occurring, and therefore this study embraces the new materialist notion of ontology. New materialist ontologies move away from the idea that there are all-powerful structures and systems at work: instead, there are endless "events" comprising of material effects of both nature and culture that, together, produce the world and human history. Lostness has arisen from intra-actions between my body and

the proliferation of digital material, philosophies and theories about the digital image, interfaces, networked space, hyper-text, every day and developing technologies. This thesis sets up the conditions for lostness to occur. It is an assemblage, of text, performative writing, short form videos, gifs, images, and the reader is asked to shift between this document and the web interface that accompanies this document. This thesis sets up the conditions for the reader's/spectator's attentiveness to be split.

(next page) figure 2: litter rhythms_1.jpg, figure 3: litter rhythms_2.jpg, figure 4: litter rhythms_3.jpg, figure 5: litter rhythms_4.jpg



L~O~S~T~N~E~S~S



RE-METHOD

re-re

The post-contemporary condition implies a new type of temporality has occurred, where we are re-positioning and re-configuring ourselves in new ways towards the historical. The German media theorist Wolfgang Ernst argues that "the grammar of language allows the expression of this shift" (Ernst 2017: 10). Julie Gaillard, a scholar who writes about philosophy, literature and art, argues that the prefix re- has the power to complicate linear models, which structure our relations between the past, present, future and open up errant temporalities (Gaillard et al. 2019). The prefix re-has the potential to change words, affect the direction that words operate in, and reorder how one might position themselves in relation to various terms. The term 'remaking' as all one word, as opposed to (re) making, when re is bracketed, or re-making, whereby re is separated with a hyphen. All imply different meanings, and these configurations position us in relation to making, in slightly different ways. The Oxford University Press Dictionary has a comprehensive section on the prefix re. Re, without a hyphen attached, is a case of, or ablative of RES. Re means concerning, or with regards to. Re- (with a hyphen attached) means

re-, red-, again, back and un-, and it forms part of a large number of compounded words. The Oxford University Press Dictionary calls it "a living prefix" (1964: M111). This means it is a productive prefix that has a widely understood meaning, as well as being used to form new words and become prefixed to any verb or verbal derivative. Some examples of common compound words, of which re is a part, would be 'recover' which means cover again, or 'recount', meaning count again. The hyphen is often used when a writer is attaching re to a simple verb, like re-pair meaning pair again, but here the re- is used to emphasize the idea of repetition such as make and re-make (Oxford University Press 1964: M111).

There are well known compound verbs that re is part of, these are 'ordinary senses' as a living prefix. This is where re implies: more, again, anew, afresh. Examples of these words are reaffirmation, revaluation, reassess, and reassign. There are also 'special senses' of re. The Oxford University Press provides examples of these 'special senses' and the dictionary attempts to describe how re functions in these compounds by creating specific categories for clusters of re in different special sense capacities. For example, the first category is called 'In return, mutually' and this contains words like react, reciprocal and recompense. The second classification is 'Opposition' and examples of compounds belonging to this are rebel, recalcitrant, recusant, reluctance, remonstrate, resist and revolt. The third grouping is 'Behind, after':

with words like relic and repugnant. Category four is 'Retirement, secrecy': of which words like recluse and reconcile are part of. The third grouping is particularly suggestive of temporal positioning. Behind is defined as to the far side of something, as to be hidden by it, and after is defined as the time following (an event or another period of time). The placing of both words together creates an odd time wormhole alluding to another type of time, born out of two separate temporalities. Taking the word 'research' as an example, we can think about what the word means (as a whole) in terms of temporal directionality and the direction of the action of looking for something new (Gaillard et al. 2019). But if we amend that word so that research becomes re-search, the term denotes more of an iterative activity, where 're-search' or in French 'rechercher' means 'to search again' (Gaillard et al. 2019). This suggests you are inhabiting a past action of the original 'search'. The 'search' is happening for the second time. But what is the difference between continuing the original search until you find what you are looking for? or deciding to re-search again? What part of the search would be inhabited or re-inhabited? Does the person, place or thing you were originally searching for, play any part in the action of re-searching? Searching implies a continuous motion, so re-searching means you are going backwards continuously, while looking to find something new. When we re-search are we returning to an action that is still? Or are we going forward - moving forward while searching backwards. What space does the hyphen represent? Is the hyphen

the gap between thinking and doing? Does the hyphen represent a place where we are stuck between forward and backward motion caught in a looping iteration, searching back and forth between the re- and the search? Technically, the hyphen should be used with the prefix re, only when re means again and omitting the hyphen could cause confusion with another word. However, there is some ambiguity to this application depending on style guides. The hyphen is a punctuation mark used to join words and separate syllables of a single word. The term derives from Ancient Greek contracted from uno ev (hypho hen), in one, or (literally 'under one')' (Douglas 2003). It originates from a time in language before the space was in regular use. Back then, the hyphen used to be a tie sign, which was written below two consecutive letters to indicate that they belonged to the same word. The English language does not have specific hyphenation rules, though hyphens are mostly used to break single words into parts, or to join ordinarily separate words into compound words. Although the hyphen is a joiner, and brings words together, it simultaneously places a divide between them. The inclusion of the hyphen can completely change a word's meaning, for example recreation means fun or sport, but re-creation means the act of creating again, retreat means (turn back), but re-treat means give therapy again.

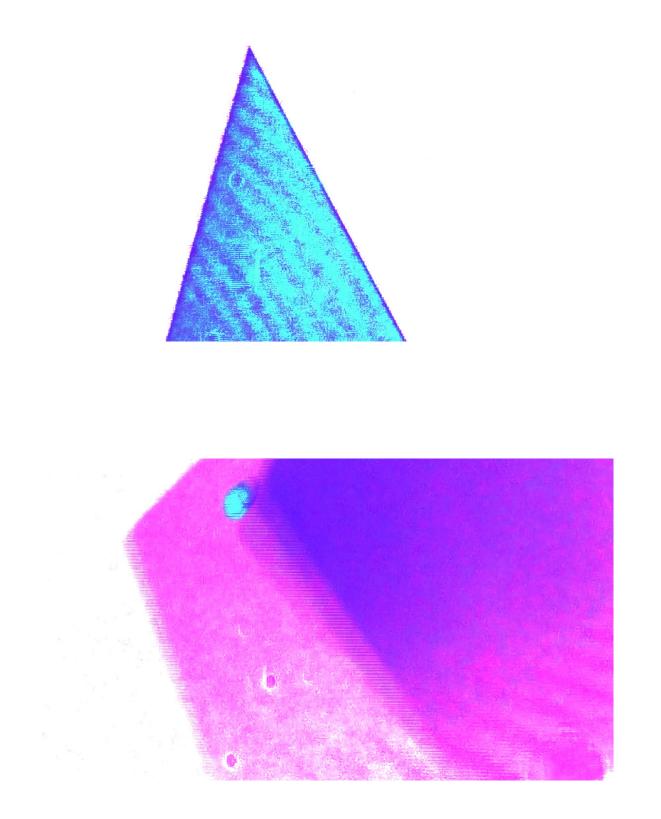
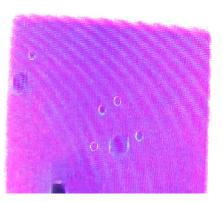


figure 6: litter rhythms_5.jpg

figure 7: litter rhythms_6.jpg

The inclusion of a hyphen can cause meaning to change. I use the term re-making, the hyphen is placed after re and before making. The effect this inclusion has on the meaning of making, forces me to think about how the various configurations of this term relate to my own practice of remaking and re-making because I use both of these words and do both of these things. As discussed previously, re- along with the prefixes pre - and post are symptomatic of our post-contemporary condition. It is a sign of how we are grappling to position ourselves in relation to the historical (however close to the present or part of the future the historical might be). Grammatically, when re- is placed before an existing word, it forces us to reconsider. Re-consider means I need to consider again what I was considering in the first place - or - is it that I re-think it, or think again about considering. This consideration is also different to the first considering because, now I have the hindsight of the first consider, I can re-consider in light of the first considering. In this study, I employ the term re-making, but it is a shifting signifier. These shifting signifiers are indicative of the post-time complex because meaning is constantly shifting which becomes inherent in the inconsistency of grammar. There are many variations or tiny shifts in spelling, various ways of arranging or positioning letters in a word so that they each have slightly different connotations. These time-shifts enable me to think more about re-making as a malleable term, as well as consider how the grammar of 'remaking' relates to the action of remaking, as opposed to the action of (re) making. Attaching

the 're' fully to 'making' closes the gap between two words that have the potential to contain separate concepts and affect each other in different capacities. All the concepts of re, hyphen and making can be influenced and affected by the separation or lack-of distance put between them, the meaning can change based on the punctuation placed around them, causing the dynamic of the word to be in flux. 'Re-', is both steady and quite unpredictable, overall displaying a type of positively erratic behaviour (Gaillard et al. 2019).



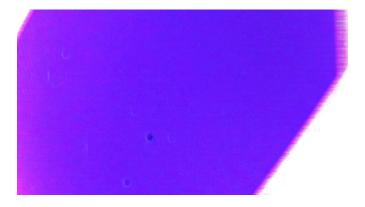


figure 8: litter rhythms_9.jpg figure 9: litter rhythms_10.jpg

re-making no beginning no end



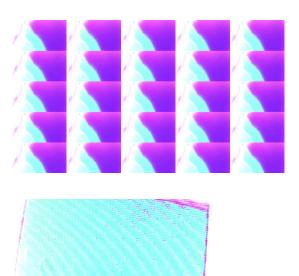
I am going to start here because I have to #begin somewhere. If I were to start anywhere else, I would end up with a completely different rationale for this project. So here I am. This all **#began** when I decided to generate video feedback loops. Feedback occurs when a video camera is connected to and pointed at, its own playback monitor. The delay in the scanning process between the input and visual output of the monitor causes visual loops to occur on screen. At the time I was not really aware of my entanglement in this process. I made the loops by reacting to the monitor with my own hand-held camera, little did I know that the frame rate of my camera, and the refresh rate of the monitor, were both affecting how the images appeared on screen. At the time I was more concerned with the live visual effects. What I did know was, depending on how I moved my camera, interesting colours, patterns and geometric offsets would appear on screen. I recorded the feedback with a second camera, set up on a tripod. This did not capture my image, just the visual results of the live process I was co-creating. This information was processed through my camera's image sensor and stored in a DCIM folder on the camera's memory card. I inserted that card in the SD slot of my Macintosh computer, and copied those files from the DCIM folder to another blue desktop folder. At a later point, after viewing and deleting some of those files, I attached the USB cable from my portable drive in the USB port of my computer, eventually moving the folder of videos on to my Samsung portable external hard drive (see A1)



figure 10: cornered a still from a video from an installation.psd

Throughout this doctoral study I have continuously re-made a set of digital video files in the form of generative video feedback loops. I do this to examine the entangled temporal relationships that occur in practice between body, data, image and interface. This seemingly simple task of returning and restarting in digital space has allowed me to consider the problems of locating oneself in artistic processes that merge the human and the technological and take place over a sustained period of time. Remaking means to "make (something) again or differently". Another configuration of this word is re-making (with the inclusion of the hyphen) (Oxford University Press Dictionary 1964). According to the Oxford University Press Dictionary this inclusion means an emphasis is placed on the repetition of the action. Repetition is an important part of my practice. I repeatedly return, in order to remake material over and over again. I go back and create iterations and versions of the source materials in the form of generative video feedback loops. I created the video feedback by pointing a camera at the screen displaying the camera's own output. This process creates what appears to be an infinite echo of images. One way of understanding this phenomenon is to think of the images as a chain of links. Each displayed video frame is one link. When an active camera lens is pointed at the monitor it is connected to, a delay occurs displaying the image's information. The time delay is incurred from the processing done by the camera sensor, which creates a temporal disturbance. This deferral travels outwards towards the

monitor, so it appears as though the original picture is moving further and further away. Each successive loop cycle moves the initial image from the display by an equal distance, causing a time delay and echo of images to occur. Through moving and changing the camera angle, zoom and position, you can play with the corresponding patterns and shapes caused by improvising during the process (Crutchfield 1984). I used a second camera to record the video feedback. Over the course of this study, I continue to re-make this material, creating hundreds of iterations resulting in an ongoing proliferation of material. By focusing on reproduction, I draw attention to the artistictechnological enmeshment involved in the reorganization of these images and the complex media relations these images are enmeshed in.



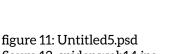


figure 12: spider web14.jpg



I have only mentioned some of the mundane steps involved in that process. **Back then**, I was not fully aware of any of them. I was not attentive to the in-betweens, the everyday habitual actions, not fully conscious of the prompts and instructions from the interfaces I interacted with. **Back then**, when it came to working with digital material, I relied on the muscle memory earned from the endless times I plugged cables in and out of hardware ports, copied files from folder to folder, converted RAW to jpg, batch processed hundreds of image sequences in Photoshop, or emptied the trash to clear memory on my SD card. There were many things about digital material I just accepted. Back then, I knew those video files existed on my portable drive. They had some kind of presence. I trusted they would still be there when I returned at a later stage to open them again. Back then (it was about three years ago), I was not thinking about the invisible process of data conversion, image compression, or the translation of live event into binary code. Back then I was more concerned with the memory I had of the beautiful pictorial representations of feedback loops on screen (See A2)

I am always pre- (in advance of) my next remake. I notice the impossibility of finding myself in my work. I shuffle between different media temporalities and struggle to have a dialogue with a post-humanist framework because I am confronted with the impossibility of locating the human in the post-human. In this study, the difficulties of defining a start or finish and the difficulties I face trying to locate myself is key to what I define as lostness. I remake images and move between the pre- the re- and the post-. Moments are forgotten in

these entanglements – lost in the process of re-making, but these times, and my time, are often lost in the making process, but how do I locate this absence, it is fluid and entangled and cannot be accounted for like dropped pin locations on a Google map.

figure 13: Storyboard.psd

RE-METHOD-RE

the difficulty establishing a beginning

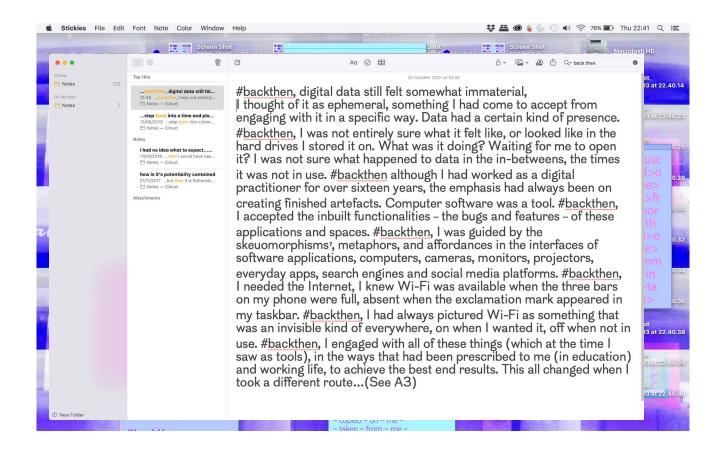


figure 14: *muscle.png

¹ Skeuomorphism is a term used in graphical user interface design that describes interface objects that mimic their realworld counterparts in how they look and/or how the user can interact with them. One example is the recycle bin icon used for discarding files.

Finding my way back is hard. Tracing where I went, remembering what way I was going, where I stopped off, why I did the things I did. When I open files and folders, they jog my memory in different directions. My notes from back then were written by another person. I think differently now. When I open the remakes, they are known unknowns. Some of these images used to be in my present, and some of them were made in a present I was very much absent from. Karen Barad notes: "We are not outside observers of the world. Nor are we simply located at places in the world; rather, we are part of the world in its ongoing intra-activity" (Barad 2007: 828). I could not situate this study in any one discipline or community of knowledge. By its very nature, my practice and I intertwine, continuously moving and evolving. Many intra-actions have occurred between my practice and theories and concepts from different linguistic traditions. This study encounters ideas and sets up intraactions between these meetings with the intention of displacing philosophical concepts so that new connections might be performed. This allows for binary positions often maintained in philosophies and ontologies pertaining to the digital image to be displaced. French philosopher Francois Laurelle uses quantum terminology from scientific discourse to rethink and refashion what happens in philosophy, and claims the right to use philosophical vocabulary non-philosophically (Laurelle 1989). In the following paragraphs, I examine the idea of absence and presence. The

theories in the following section relate to the lostness arising from my artistic-technological process. The difficulties I had situating myself meant new intra-actions between these disparate concepts perform the difficulties that come about when trying to situate this work in relation to any one philosophical concept. Instead, I wandered across these ideas, picking them up as they momentarily related to my process. I became pre-occupied with what it meant to trace one's way back in hyper-space. The lostness I experienced forced me to think about how present I was in my practice or how present I could be in an artistic-technological practice whereby images are proliferated. What are the implications of choosing to focus on one origin when there are hundreds more? How can you locate an origin when you are working in a relational environment? How do we reflect when reflective practices require us to "stand outside ourselves to get a more objective view" (Kitchener, 1983: 222). Is it possible to communicate complex material affects from within artistic-technological processes without enforcing humanist meta-narratives and privileging linguistic modes of meaning? How can we trust that reflection in artistic practice is ethical, that the constructed timelines of any given research process are authentic, sincere or haven't been done retrospectively? How can we account for the material affects that arise from sustained entanglements between human and non-human phenomena when subjective experience is lost? Elizabeth Grosz writes that "as living beings" we might yet

come to perform onto-ethical acts that "liberate and transform [the] material processes" in which we are enmeshed. What is needed is a "reframing of [the] systems of knowledge and representation" with which we conceive of the world and our relations to it. The systems by which knowledges are produced, and taught need to become more fully cognizant of and accountable for "the concepts, affects and sensations they produce" (Grosz 2017: 257)

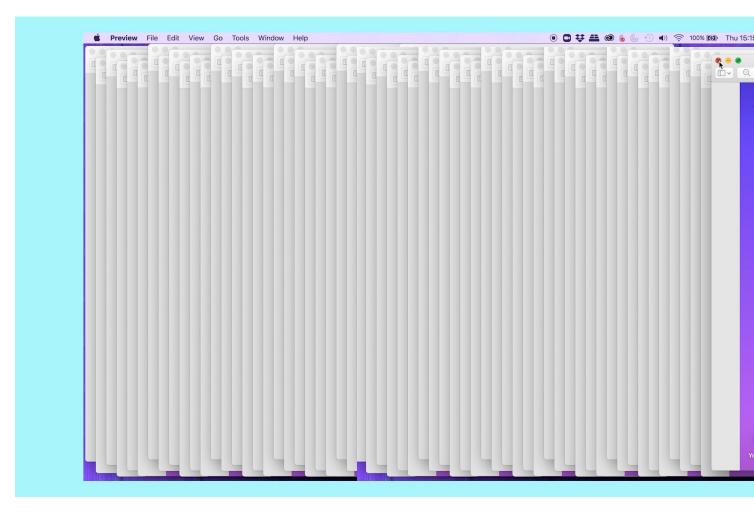


figure 15: muscle4.jpg

prior sense

In Edmund Husserl's essay the Origin Of Geometry (1936) the major thread in Husserl's reflections is the question of 'sense' and the beginnings or origins of that 'sense'. Prior sense relates to finding the beginning of knowledge, the origin of knowledge, and establishing where the start of that knowing begins. Derrida's notion of the trace, responds to a larger philosophical debate called the problem of "prior sense" (Shain 2016: 293). Responding to ideas from philosophers Immanuel Kant and Edmund Husserl. Derrida argues that one should establish the trace. Jacques Derrida describes the trace as being something that does not let itself be summed up in the simplicity of the present (Derrida 1997: 71). He defines it as the absolute origin of sense (Derrida 1997: 71). The author suggests that attempts at analysis are stymied by the impossibility of establishing this origin. Derrida's concepts of 'difference' were conceived in his work Of Gramatology (1997). Internal contradictions in philosophical and literary language were highlighted by Derrida through decentring texts. Derrida aimed to demonstrate the inherent insatiability of language and meaning, refusing words like analysis and interpretation. Stepping away from binary positions, commonly used in structuralist theory - and from the tendency to think in terms of oppositions, and the categorization of terms and concepts like reason/passion, man/woman, inside/outside or presence/absence. Derrida argued oppositions

were unstable and suggested that, ultimately, all structures overlap and clash, which, in turn, leads to the dismantling of meanings within texts. John Barrow proposes that the "Originary trace" is Derrida's alternative to "presence," playing an analogous role within a different approach to the problem of the foundation of knowledge" (Barrow 1986). By virtue of the Derridean concept of difference, meanings become boundless, they contradict and defer in endless chains of signification, moving from one signifier to another, giving way to endless meanings in the "traces" that are left between signifiers, but never reaching an absolute signified" (Derrida 1997). A trace is what a sign differs/defers from. It is the absent part of the sign's presence. In a traditional sense, the trace is left by the absent thing. Every present, in order to know itself as present, bears the trace of an absent which defines it. Derrida goes further than the trace with his ideas around Hauntology and the Spectre (Derrida 1997). The spectre conjures a present absence. Elizabeth Rottenberg notes its presence relies on the absence of what it presents:

> To be spectral is neither to be present nor absent; it is neither to be nor not to be. Indeed, the spectral, says Derrida, is what exceeds all ontological oppositions between absence and presence, visible and invisible, living and dead (Rottenberg 2005: 5).

Derrida admits that the concept of the spectre has much in common with previous concepts of trace, of writing and difference. The spectre, is neither alive nor dead, present nor absent, therefore every trace is spectral. Spectrality, is not simply when one experiences ghosts coming back or when we have to deal with virtual images. (Derrida 2001: 44). John Lechte argues that the image's main defining feature is its absence, its ability to not be present "like the trace, like time, like infinity and all those entities which never appear as such, the image, too, is not present" (Lechte 2013, para. 32). Hito Steyerl expands on Derrida's ideas and establishes what Steverl defines as "absence" with an e (Steyerl 2017: 117). Absence, as Steyerl explains, relates to digital writing, writing-by email or by chat - which she feels presents a contemporary complication of the historical practices of writing:

> the combination of (almost) realtime communication and physical absence creates something one could call absence, so to speak: the sensual aspect of an absence, which presents itself in (almost) real time. A live and lively absence to which the lack of a physical body is not an unfortunate coincidence but necessary (Steyerl 2017: 117).

Lostness relates to what Steyerl describes as the images "dubious geneology" (Steyerl 2009: 3). The proliferation of digital files a direct consequence of my process of re-making has created many different genealogies, strands which end up becoming traces of the various tangents of practice. If the trace can be seen as a "mark of the absence of a presence, an always-already absent present" (Derrida 1997: 17) when I re-open my image files from two years previous, do they contain the mark of the absence of a presence? Or am I cocreating the absence of presence with those images in a specific moment in time. Am I co-creating absence in the present moment? The images I re-open are part of genealogies, ecologies that contain text, written notes, hashtags, tweets, stickies, Instagram captions, tags, chats, emojis, gifs and attachments. I use social media platforms, apps and Internetrelated search engines, setting up profiles to pass images back and forth and re-make material. Working between various Instagram, Twitter and Youtube accounts with multiple profiles, here I encounter Steyerl's notion of absence. Steyerl refers specifically to digital writing. The author discusses the rhythms, flows, sounds and the temporalities of both interruption and availability. One Instagram account belonging to this project Still-Stillness still interrupts me, sends push notifications urging me to follow other accounts, there are current consequences of my past interactions. I am fascinated by the not present what not being present means in my own practice, what the relationship is between presence, absence and lostness in practice. How might I, or can I, re-embody the feeling of lostness, so that I can describe it. Arnold Berleant suggests that the embodiement means "the active presence of the human body in the appreciative experience" (Berleant 2003: 147).

#backthen #backthen #backthen #backthen

I wonder what it means to embody *lostness*? I get lost in places and non-existent spaces, I am absent in the cloud... now that I have remembered I was *lost*, does that mean I was never-not here, to remember? How do I re-embody a past memory of *lostness*? is it the same as emptiness? How can I be *lost*, and present in a partial re-presencing of my artistic-process? Do I even know what parts of myself I have *lost*? Was I ever really *lost*, or is *lostness* just a type of conscious lag, zoning out of the present while staring at the screen? Lostness is confusion, I am lost trying to locate the lostness I was *lost* in. *Lost* in – asynchronous time, making work in the post-medium condition, the interfaces ability to entangle temporal aesthetics, my process of going back, trying to re-make digital material, when digital material is always out of time, when I can never quite get back to the place I was before, this time, right here, before that time, just then, and on and on "Ariston, and on and on and Ariston" (Dean 1991) (See A4).

figure 15: lostness_back.png

litter rhythms

I am constantly interrupted by the rhythms of images and text in the networked workspace I inhabit. Constantly timed out, waiting for computer time to pass, watching simulated indicators of minutes transitioning while I render scroll and half watch, video playback. Algorithms enforce new rhythms and technological interruptions from media induced timings. These rhythms are becoming more and more integrated into the everyday, shifting us away from historical time, cultural time and our biological clock time. This reordering of time has a significant impact on our mind and bodies. Helga Schmid notes: "Our temporal existence is no longer in sync with natural circadian rhythms, now our temporality is re-configured by the temporal influences digital technologies cause to our rhythms." (Schmid 2017:98). Without always consciously intending to, we embody the rhythm and speed of digital life and the natural. Mechanical, machine, and algorithmic rhythms are in conflict with the natural rhythmicity of the human biological clock (Schmid 2017). Schmid suggests we move away from a linear concept of time to a rhythmic understanding, in an attempt to reflect upon today's temporal structures. This idea inadvertently mirrors the work of Henri Lefebvre and his study Rhythmanalysis in which he proposes that, by analysing social and biological rhythms, we can understand the interrelation of space and time in everyday life. Lefebvre was interested in a non-linear conception of time.

Lefebvre examines the complex relations between temporalities, interested in the notion of presence, the author explores the difference between the present and presence by examining rhythm. Litter Rhythms was one of the titles used and re-used to name some of the of remakes produced over the course of this study, the title refers to the throwaway-ness of digital images, priceless rubbish, trash which one can empty and forget. Lefebvre notes how the present can imitate or sometimes be mistaken for presence. For example, a portrait, a copy, or representation of someone or something can stand in for the actual presence of the person represented, and this is where, for Lefebvre, rhythm is key to understanding presence in the present moment. The author argues that presence only exists when a rhythm (a time) can be imposed. For example, the thing or object alone makes itself present but does not have presence. Lefebvre notes how rhythmanalysis integrates presence and present so that objects and non-human entities like tables, trees and walls have dramatic becomings together. This means that for Lefebvre the rhythmanalyst is close to a poet, the poet concerns himself with words and verbs the author argues... "This means that the act of rhythmanalysis transforms everything into presences, including the present, grasped and perceived as such. The act does not imprison itself in the idealogy of the thing." (Lefebvre 2004: 33). The analysis does not isolate an

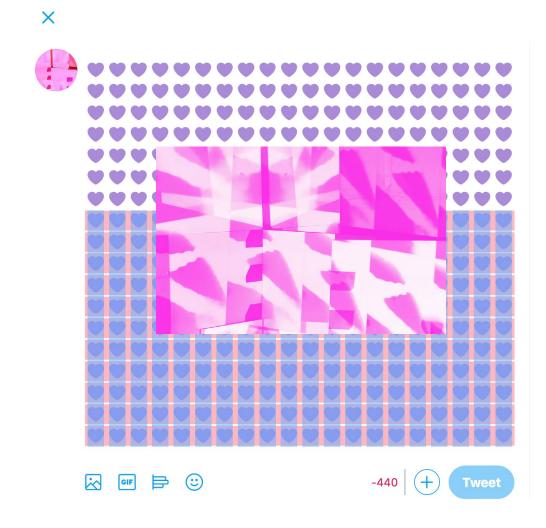


figure 16: Screen Shot 2019-09-10 at 20.14.40.png

object, or a subject, or a relation. It seeks to grasp a moving but determinate complexity (determination not entailing determinism) (Lefebvre 2004: 12). It is interesting to consider Lefebvre's notion of how rhythm functions in terms of presence in digital and networked space and the new rhythms that are evolving post-internet. Lefebvre's concept of rhythm concerns the repetition of a measure at a frequency suggesting two kinds of rhythms. Cyclical rhythm, described as simple intervals of repetition - for example, the fading of day into night, or night brightening into the day, or linear rhythms the flow of information from a television set. Additionally, rhythms may be nested within each other; for example, the broadcast of the local news at set intervals throughout the day, throughout the week, is an example of such a rhythm. Lefebvre asserts that rhythms exist at the intersection of place, time and the expenditure of energy. To observe rhythms outside of the body, the rhythmanalyst must use her or his own rhythms as a reference to unify the rhythms under analysis. The rhythmanalyst concerns themselves with relations and temporalities of relations within whole systems.

re-embody

The philosopher Arnold Berleant discusses embodiment in relation to aesthetics, defining the aesthetic experience as a distinctive sort of consciousness where there is no consciousness without body, no disembodied consciousness (Berleant 2004). Miranda Shaw, a feminist scholar from Harvard explains that

31

the Tantric tradition explores embodiment with precision. which is understood to be not a "soul" in a "body" but rather a multilayered mind-body continuum of corporeality, affectivity, cognitivity, and spirituality, whose layers are subtly interwoven and mutually interactive. This non essentialist self is seen not as a boundaried or static entity, but as the site of a host of energies, inner winds and flames, dissolutions, meltings and flowings, which can bring about dramatic transformations in embodied experience and provide a bridge between humanity and divinity. It is in the light of this model of a dynamic, permeable self without fixed boundaries that the Tantric Buddhist paradigm must be interpreted (Shaw 1994:11). Berleant describes embodiment as a complex concept with different meanings incorporating a range of factors like culture, history, and personal experiences. The author argues that the human body moves through untutored and preconscious actions and responses (Berleant 2016). Berleant explores embodiment in relation to artforms like painting and sculpture, but focuses on dance to explain his idea of the appreciative experience. Through the moving presence of the body, dance establishes a world, defining space and establishing the passage of time. This sense of embodiment, the active presence of the human body in appreciative experience conveys truths about all experience (Berleant 2016). Experience as always embodied, and in a unified rendering of humans as conscious organisms, emphasizes our actual presence.

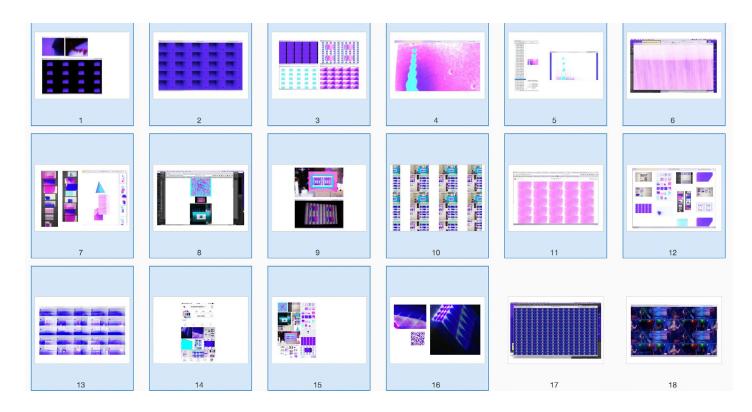


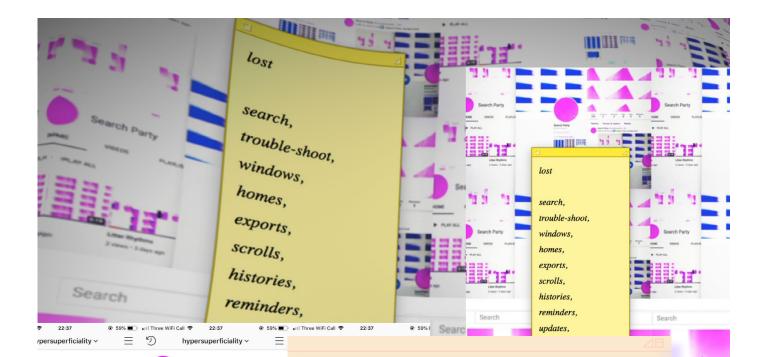
figure 16A: acrobat_interface.jpg

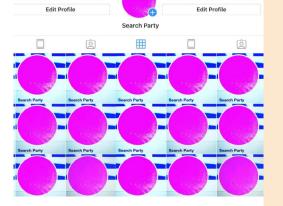
In embodiment, meanings are experienced rather than cognized. That is to say, we grasp them with our bodies, literally incorporating them so they become part of our flesh. We can speak, therefore, of encultured embodiment whose manifestation is physical, biological, and behavioural, and emphatically non-dualistic (Berleant 2016).

Irene Naude writes that when one reads a photograph, it is not just understood consciously, one uses the senses to recall sights, sounds and feelings, tastes and smells in association with that image. "Thus a photograph creates new memories which are mediated by our current context and by traces of the past" (Naude, 2008: 52). Theron Schmidt examines cognition and embodiment, exploring moments that are located in practice, specifically how theatrical moments are caught between act and re-enactment. Schmidt notes how recent studies use magnetic resonance imaging in order to locate where various impulses arise in the body and whether we are conscious of them as and when they arise. Researchers noted how different parts of the brain were activated when subjects were asked to pay attention to the urge to move, rather than to the movement itself (Schmidt 2015). Neuroscientist David Eagleman suggests there is a modelling centre within the brain that takes copies of impulses sent to the muscles and starts to imagine outcomes we are not aware of (Eagleman 2004: 1145). Suggesting intentionality itself might be something we retrospectively invent "an illusion arising from watching yourself ... make actions" (Eagleman 2004: 1146). Vivian Sobchack, an American

cinema, media theorist and cultural critic, explores corporeal engagements with film and media. Sobchack examines what it means to be embodied in multiple and shifting spaces of the world, not just the familiar spaces of our own making that we live in as a "given", but also spaces that seem "foreign" in their shape and value to us (Sobchack 2006:13). Sobchack highlights how experience emerges through our senses, how our bodies are sense-making, visual subjects. Viktor Mayer Schönberger discusses how digital remembering is a type of selective representation. Online, we can only ever represent certain elements of our bodies, only capable of saving partial histories as digital material. Our personalities can only be hinted at, yet our smell and our touch cannot be fully contained in digital representations. That is not to say that online representations do not have the potential to affect our physical selves (Schönberger 2009). Schönberger argues that our digital past is tied to our physical present. I experienced the erosion of time during my artistic-technological process, which was disorientating. I found it impossible to tell where I ended, and technology started. I cannot capture all the representations of my mediated movements, nor fully record or copy how I experienced my practice. The memory storage devices I used affected my own ability to recall moments in time. My experience of lostness and the lostness of that experience, are difficult to locate. It is not simply me zoning out while waiting for renders to complete, it is complex. When digital files are opened, they

I wonder what it means to embody lostness? I get <u>lost</u> in non-existent spaces. I am absent in the cloud....but **now** I remembered I was <u>lost</u>, does that mean I **was** never-not here to remember? How do I re-embody a **past** memory of lostness? Is it the same as emptiness? How might I be<u>lost</u>, yet **present** in the partial **re-presencing** of my artistic-process? Do I even know what parts of myself I have <u>lost</u> and if I can identify lostness in the gaps of my practice, the in-betweens of body and machine? **Was** I ever really <u>lost</u>, or is lostness just a type of conscious lag, a zoning out of the **present** while staring at the screen? Lostness is confusion, I am <u>lost</u> trying to locate the lostness I thought I was <u>lost</u> in. There are many factors, which cause me to feel like I am <u>lost</u>, asnynchronous time, making work in the post-medium condition, the interfaces ability to entangle temporal aesthetics, and my process of **going back**, of trying to re-make digital material, when digital material is always **out of time**, when I can never quite get back to the place I was **before**, this right **here**, **before** that time, just **then** (See A5)





24

68

24

237

237

lost, distraction in hyper-space, dragging time, reset the clock, recover files, peer through windows, minimize, trouble-shoot, unstable homes, waiting rooms, controlled touch, upload, export, delete, reminder, bookmark. clear. restricted permissions (See A6). are only ever small fragments of bigger artistictechnological relations, images are always pieces of larger digital and affectual maps. These images have been part of many different narratives, a million different re-orders, but the impossibility to trace the lineage of all the reordering and re-making brings up some bigger questions and points to our enmeshment in technological space.

Mark Graham, a professor of Internet Geography, suggests that we are never online or offline. Any time we use digital tools and technologies, we augment our physical world with data or algorithms, and mediate our activities with digital tools. Before I started my artistic technological process, I perceived the digital world as something separate from me. Graham writes how the metaphors used in technological environments distract us from the grounded material we co-create with the digital, embedded in our daily practices (Graham 2013). One example of grounded material co-created with technology is anxiety, for example, Internet addiction disorder. App developers keep us addicted to phones, described as "dopamine-driven feedback loops" (Haynes 2018, para. 1). Graham writes how we cannot continue to see ourselves as separate from the Internet. Graham discusses how many of the ways in which we discuss, imagine and envision the Internet rely on inaccurate and unhelpful spatial metaphors. One example he provides is the term 'cyberspace'. He argues that metaphors constrain and enable very distinct ways of imagining the interactions between people, information, code and machines through digital networks and they help hide or

mask the hidden power relations that control and influence our interactions (Graham 2013 :180).

re-making metaphors

The digital divide is often used to describe the divide that exists between people who have access to the Internet and those that don't. It also refers to the division between people born before the Internet was ubiquitous and people born never knowing anything but the Internet. It also implies that once "people are placed in front of connected terminals, 'the digital divide' becomes bridged and the previously disconnected are consequently able to enter 'cyberspace.' Those without access to 'cyberspace' are seen as segregated from the contemporary socio-economic revolution taking place" (Graham 2013) As Doreen Massey suggests, just because we have access to 'cyberspace' does not mean we escape the other power relations that influence us both online and off (Massey 1993).

Throughout this project everyday interfaces, were mis-used and re-appropriated, and the interface aesthetics became entangled in my process. I played with the icons employed for interaction, buttons, profile pictures, headers, footers were co-opted in the re-makes. Through a series of reconfigurations, common cues for interaction became de-familiarized. Metaphors employed by Instagram, Twitter Tinder, Google and YouTube merged with the aesthetics of video feedback loops resulting in the displacement of metaphors. Words like 'home' and 'search' became unfixed, through their multiplication and, as such, took on new meanings. Dave Collins writes how "metaphors allow the transference or mapping of knowledge from a source domain (familiar area of knowledge) to a target domain (unfamiliar area or situation), enabling humans to use specific prior knowledge and experience for understanding and behaving in situations that are novel or unfamiliar" (Collins 1995).



POST

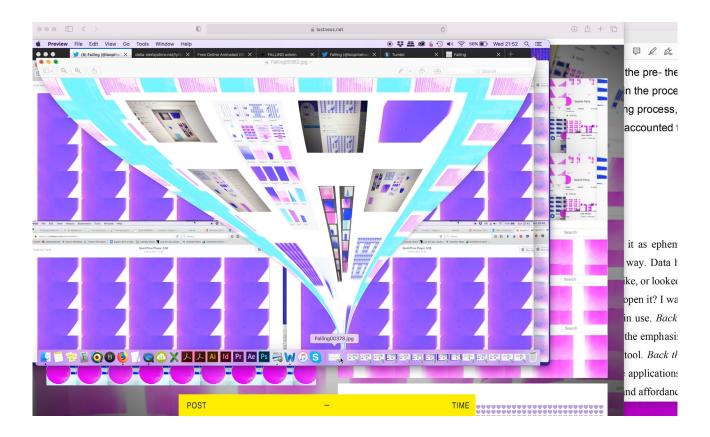


figure 18: screen_shot_from_now.jpg

introduction

The ubiquity of the prefix 'post' hints at new complex time-shifts. The term 'post' suggests our understanding of what is happening now, has some relation to, but is also disconnected from, seemingly historically given conditions (Avanessian and Malik 2016). There is a proliferation of post-prefixes, for example post-digital, post-Internet, post-photographic, post-contemporary, post-medium as well as the post-media condition. The following chapter is a glossary of post-isms that relate to medium, digital technology, the contemporary, photography and what it means to be human as they relate to my practice. The proliferation of these post prefixes is a symptom of a new time-complex, where art categories, aesthetics and theoretical concepts are simultaneously tied to, while also attempting to break free from the past (Barker, D. and Kuiper 2003). Nitasha Kaul writes how it is truly tempting to think of "post" merely in terms of a "past" temporal dimension, as a break, a discontinuity, that which comes after, but the "post" can be viewed in other ways, not simply as an end but a multifaceted creative re-examination of what has been already accepted (Barker, D. and Kuiper 2003:196). Kaul points out that the meta-narratives these post prefixes attempt to unfix, rely on binary structures, and post-isms attempt to make these binary oppositions fuzzy (Barker, D. and Kuiper 2003). Kaul discusses the difficulty in establishing what comes after the post and states:

The "post" achieves its purpose of making binary oppositions (e.g., colonizer- colonized, signifiersignified) fuzzy. While recognizing the ubiquitous nature of power relations, it foregrounds the possibilities for resistance and creative negotiation. One noteworthy thing about the various post theories is that they refuse and defy simple neat categorizations, an interesting and useful feature for theoretical forms which seek to deal with the multiplicity of interpretation and existence. However, this undoing of meta-narratives is also fraught with risk. It leaves the arena open for the question of what follows from the "post." Depending on how one views the signifier and in what context, there are different answers to what follows from the "post." For some, the implications of the gap opened in meta-narratives by the "posts" have not been accepted ... " (Barker, D. and Kuiper 2003: 196)

Throughout my own process of re-making, I have found postisms problematic, in order to define post-photography you also need to define photography, and this usually means referring to historical meta-narratives. Post as a temporal indicator is more attuned to a linear idea of temporality than re-. Post implies that we are past something else but in order to define that something relies on categorizing a past notion of the digital or a meta-narrative of photography. Post puts the past to bed but in doing so it neatly positions an idea of what the past was, whereas with re in my own practice of re-making it is a continuum of undoing and redoing. Undoing the idea that any past is final and re-making the past into something new, as such there are no clean lines between the past and the future because they are always in flux. In contradistinction to Nitasha Kaul, I propose these post categories also help keep binary positions alive. In our attempt to move past categories, we are forced to continuously re-engage with them or struggle to be clear about what it is they are moving past. Post-categories also rely on selective histories so that the post category can function. I talk about this in relation to post-photography, scholars discuss the notion of traditional photography in comparison to digital photography. The post photographic often refers to what traditional photography is not (Moreiras 2017, Sonesson, G 2012). The abundance of post categories has a snowballing effect which leads to a feeling of impatience or desire to overtake specific accounts of the past. In my own artistic-technological practice, I work with another prefix-re. I continuously re-make, and attempt to return to, a set of digital feedback loops. This allows for the possibilities of repetitions and multidirectional processes to arise. Continuously re-making means going back to go forward, and making something again but understanding what that 'something' is. Establishing where that 'something' begins and ends in digital space, is at the heart of this doctoral project (and at the heart of that is the difficulty of finding the beginning and ending of digital space so that I might situate myself). The act of returning in practice is complicated by the digital interfaces I use. I talk about the difficulties in establishing where the beginning and ending of these interfaces are, in relation to artistic content, image, information and body and the problems that come from orientating myself in relation to these, in an artistic-technological project.

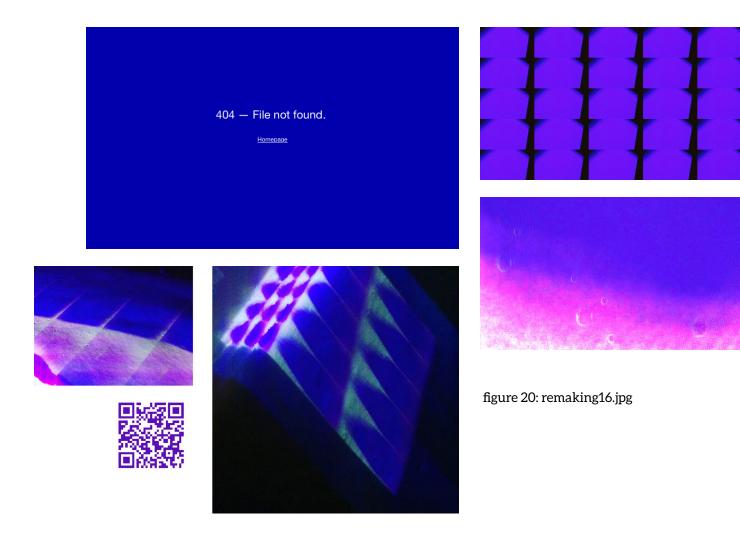


figure 19: search_party.jpg

Digital interfaces have merged the once separate spaces between film, photography, cinema, and video, and re-configured their temporal orders. This entanglement is transformative and makes situating my practice in relation to the historical very difficult. Historically, film, photography, cinema and video were seen as separate mediums. In the current post-medium condition where these spaces are entangled, how do I understand, let go of, forget about, or look past, historical notions of film, photography, cinema and video in the present post-medium condition? What effect does the diminished division have on placing myself in relation to these notions historically? Timothy Scott Barker defines media as relational: "mediation is a process that draws one media entity into a relationship with other pieces of media" (Barker 2012: 11). Scott Barker is not interested in the idea of old and new media, or in the idea that the Internet is a discreet new medium that mediates all other old media, rather he argues that the Internet puts media in new relationships with each other. Media are never stable (Barker 2012). Television has evolved to become part of a networked ecology. Now users access television shows online through new interfaces like Amazon prime, or Netflix, and television is influenced by its place in that ecology.

Mediation is not a flow between two pre-existent entities; rather, it is a process that re-presents or reconstitutes entities. In short, it is a generative process, setting the conditions for the becoming of entities. This is a temporal process, with technological processes generating particular conditions for becoming. (Scott Barker 2012: 12).

Trying to position my durational artistic-technological process alerted me to the difficulties of self-situating in practice. Memory is mediated by the affordances of digital apps. Snapchat plays with temporal fastness, disappearing content, and ephemerality, other apps like Twitter and Instagram perpetuate the notion of a continuous present. In my practice, I mis-use Twitter and Instagram by ignoring and by-passing prompts for social interactions. Instead, I engage with various online identities in order to continue my process of re-making. Inhabiting and looping in and out of these 'social' spaces, offered me the potential of having "real friends" but my profiles remain friendless. This allows me to take a different route.



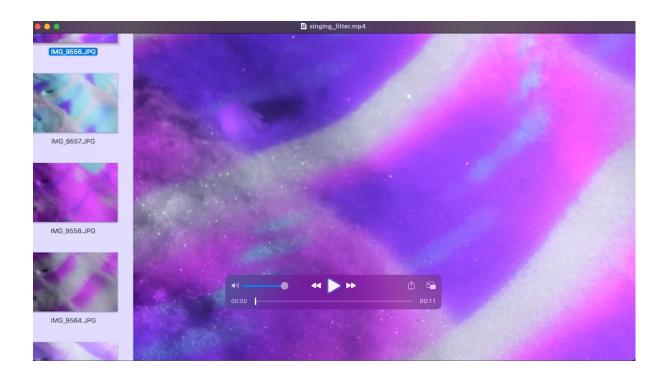
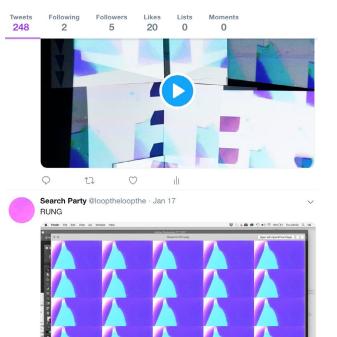




figure 21: IMG_9579.jpg



POST-DIGITAL

Post-digital denotes a world where the digital is not finished, but where it has progressed so quickly that a discreet breaking point has taken place between the first enthrallment with new tools and updates, to a new kind of complacency and lack of criticality with technological progression. Technology is ubiquitous and commonplace in everyday life. The term post-digital according to Florian Cramer means a type of contemporary disenchantment with digital information systems and media gadgets, whereby our fascination with the digital has become historical (Cramer 2014:3). For Cramer the prefix 'post' in the term post-digital is a continuation of the digital. Cramer draws parallels between how the prefix post is used in post-colonialism and how it functions in the term post-digital. Post-colonialism does not mean an end of colonialism, rather a reconfiguration, or continuation of new power structures. Cramer makes it clear that the term digital should not just be taken in a 'technical-scientific' or 'media-theoretical' sense, instead we should look to how the term presents itself aesthetically in the everyday. Cramer uses Google to provide such an example. Searching for the word 'digital', in a Google image search, yields results where the predominant colour in the photos is blue. This blue is thought to represent coolness and a high-fidelity cleanliness. One definition of post-digital is a type of opposition to a digital aesthetic that suggests a type of high-tech cold perfection. If post-digital aesthetics are

reactions to other digital pasts, or tired digital aesthetics, it would seem defining what the digital is, is imperative to understanding what constitutes a post-digital aesthetic. Greg Shapley proposes that the post-digital operates by disrupting the seemingly impenetrable digital surface. The author believes post-digital means looking beyond the 'shiny facade' of the digital (Shapley 2011: 5). Kim Casconne and Klein Thompson feel that post-digital artists are not interested in the 'surface' sound or look of the digital media. It is the fallibility and changeability of the underlying media makeup (and consequential endless possibilities) that intrigue them (Casconne 2004: 292–293 and Thompson 2004: 212). Ian Andrews argues that post-digital artworks reject the guise of the 'apparent' digital revolution, yet the post-digital can also simultaneously refer to a continuation of that very idea (Andrews 2000).

In Postdigital Aesthetics: Art, Computation and Design, labels like post-digital, post-Internet, and post-medium are described by David M Berry and Michael Dieter as belonging to a 'New Aesthetic' (Berry Dieter 2015). The 'New Aesthetic' was first outlined by James Bridle on his Tumblr page in 2011 (Bridle 2011). It showcases similar aesthetic developments as earlier exhibitions such as Post-Digital Painting which he did in 2002. The New Aesthetic captures the embeddedness of the digital in objects, images and structures encountered on a daily basis, as well as the

ways we understand ourselves in relation to them. It captures the process of seeing and being seen through digital devices. As a construct, the 'New Aesthetic' covers a broad territory, and the way it was framed - as a Tumblr, by its very nature emphasizes the constant 'now' of the image in flux, making it hard to identify its theoretical underpinnings and narrative. Christiane Paul and Malcolm Levy (2015) understand the 'The New Aesthetic' as a blurry picture, and compare it to Hito Steyerl's idea of the 'poor image', a 'copy in motion' with substandard resolution, a 'ghost of an image' and 'visual idea in its very becoming, an image that is of value because it is all about 'its own real conditions of existence' (Steverl 2009). I am unsure exactly what the post-digital means as a category of art. Or how artists find the impenetrable digital they need to break away from.

It is tricky to establish whether post-digital art relates to new aesthetics, interactions, conceptual ideas or proficiencies with new or emerging technologies. Ian Andrews writes how in one sense the postdigital refers to works that reject the hype of the so-called digital revolution whereby the familiar digital tropes such as purity images and perfect copies, are abandoned in favour of errors, glitches and artefacts. In another sense it refers to a continuation or completion of the same trajectory (Shapley 2011). Post-digital is also described as the aesthetics of failure and like glitch art, post-digital music is concerned with foregrounding the flaws inherent in digital processes. But glitches aren't necessarily failures. Jon Cates discusses how glitches are

actually sometimes continuums (Cates 2013). Cates talks about signals, more specifically the ratios of signal to noise, and the ways in which artists can intervene in systems and transcode signals to orchestrate and create what appear to be malfunctions (Cates 2013). Although glitches are known as the aesthetics of failure, in fact the system itself is not malfunctioning, it is actually functioning as it was designed to. Artists manipulate systems in order to bring about planned unexpected reactions on the part of those who encounter the artworks. The apparent glitches, are not flaws and do not lead to crashes, instead, they are part of the continuous flows of signals (Cates 2013). "Postdigital" work is described as the valorisation of what previously would have been seen as noise or mistakes, by-products or external relations to the work, becoming one of the characterizing marks of post-digital aesthetics (Andrews, I. 2002). There are different views on what the aesthetics represent. Andrews argues that if there is an aesthetic position, it is tied to the digital technological trajectory – the idea of digital progress. "This trajectory involves (in at least one of its channels) a teleological movement toward "perfect" representation. This is both a technological movement towards "transparency" and at the same time, a movement towards a more powerful illusion" (Andrews 2002: 1).

In The Future of Art in the Postdigital Age, Mel Luxenberg describes postdigital art as that which addresses the humanization of digital technologies, through various interplays between biological, cultural, cyberspace, real space, embodied media and mixed reality. Alexenberg discusses the interplays between visual, haptic, auditory, and kinesthetic media experiences,

> between web-enabled peerproduced wikiart and artworks created with alternative media through participation, interaction, and collaboration. The author argues that because of these interplays the role of the artist is redefined (Alexenberg 2011: 10).

Alexenberg discusses the different time-space relations in Hellenistic and Hebraic culture and how they relate to the future of our post-digital age. Interesting distinctions are made between what is described as the uni-linear structures that existed in the proto industrial age, and our current networked world. The central text of Rabbinic Judaism, *The Talmud*, and the primary source of Jewish religious law and Jewish theology was designed as a rhizome with networks of meaning. The author compares it to the Internet, a branching and rhizomelike structure with no "beginning and no end" (Alexenberg 2011: 24). Alexenberg argues that as we look forward to art in the post-digital age, we can draw on Hebraic space-time structures as the shift occurs "from static image to dynamic process, from passive appreciation to interactive collaboration, and from imitating the creation to imitating the Creator" (Alexenberg 2004: 24). Surfing the Internet is similar to studying *The Talmud* as it is a good

preparation for the type of navigation required for multidirectional options, hyperlinking and non-sequential organization.

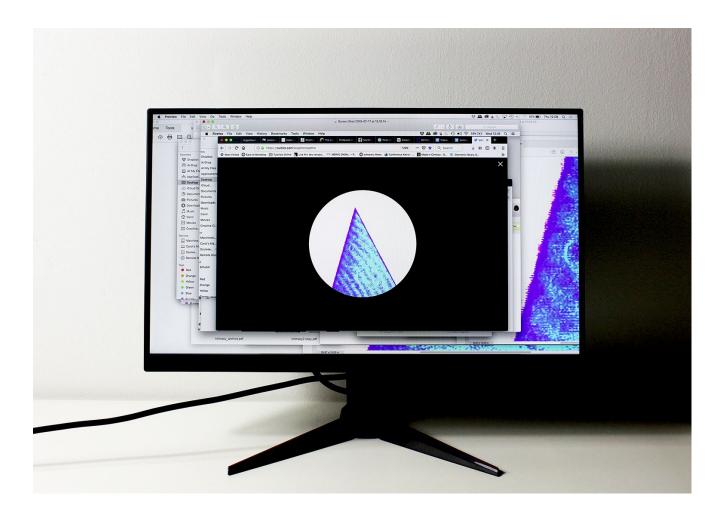


figure 22: still_stillness.jpg

POST-SCREEN

introduction

This section uses the artwork ForkBomb (Jaromil 2002a) as a case study to discuss the theory that post-digital is post-screen. I propose that the screen and screen-based aesthetics are relational and they are inseparable from what goes on behind the screen and to the persons or people interacting with them. To do this I explore some of the binary positions Josephine Bosma sets up in her analysis of ForkBomb (Jaromil 2002a) to do this I discuss theories from Joanna Drucker. Lev Manovich and Alexander Galloway. Josephine Bosma is a Dutch art critic and theorist working in the expanded field of art and new media. Bosma proposes that post-digital must imply a move past the screen and screen-based analysis of digital media in the context of art. Digital artworks are misinterpreted when the focus is placed on the aesthetics of the screen, and what goes on behind the screen is neglected. For Bosma the screen is visible but the programming and coding and how the network is operating are invisible, and so the author feels visualizations could be helpful in drawing viewers' attention to what she feels are the invisible qualities of media artworks (Bosma 2013: 1). Bosma uses an example of an encounter she had with Jaromil's artwork ForkBomb (Jaromil 2002a) to define the differences between a screen-based analysis and post-digital analysis. The author proposes that the critique of artworks like ForkBomb

(Jaromil 2002a), should operate differently and should instead explore what is happening, or what potentially could happen, beyond the screen. The author proposes new ways of visualizing the hidden and invisible qualities of artworks like ForkBomb (Jaromil 2002a) which would allow us to recognize what Bosma defines as the hidden techno politics operating beyond our desktops. He states: "What the ongoing screen-based analysis of digital media shows is that this causes the variability and techno-political issues of the digital in art and culture to go largely unnoticed" (Bosma 2013: 3). Joanna Drucker proposes that an "ideality of Code" exists (Drucker 2007: 142), in which code is considered to be more objective, more stable, and more important than the visual manifestation of that code. I am interested in the binary between the invisible code and programming and the visible screen aesthetics. I discuss this further in relation to Boris Groys who also sets up a binary between the invisible digital data of the image file and the visualization of the image. Through my own practice of re-making, I do not recognize this distinction of visible and the invisible, and, over the course of this section. I wish to draw attention to the importance of considering digital artworks in a more ecological fashion and why post-screen is not a category I could identify as a home for my artistic-technological process.

forkbomb

Jaromil is the artist hacker and theorist who conceived and created the piece in question. *ForkBomb* (Jaromil 2002a) is described by Jaromil as a poetic virus.

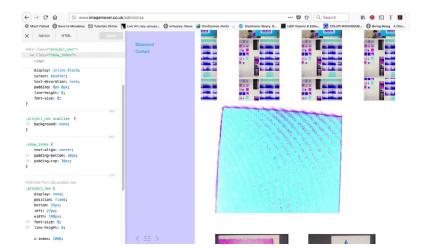
> If its visually attractive line of only thirteen characters is entered into the command line of a Unix system and the enter key is pressed, within seconds the computer will crash because the devious little program commands it to make multiple copies of itself, setting off a chain reaction and thus quickly exhausting the system's resources (Jaromil 2002c)

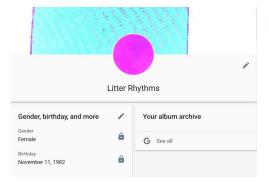
This description features on the website www. pOes1s.net. This website documents a previous publication and exhibition from 2004, a showcase of digital poetry. Jaromil considers the source code as a type of literature, depicting the virus as a type of 'poésie maudite giambi', which means a poet who lives outside of society (Jaromil 2002). Jaromil is trying to make a statement to those celebrating the Net as a supposedly safe space for bourgeois society. He claims that sometimes the digital domain produces a form of chaos, which can be fertile but also chaotic. Jaromil proposes "viruses are spontaneous compositions, lyrical in causing imperfections in machines made to serve and in representing the rebellion in our digital serfs" (Jaromil 2002c) ForkBomb was initially released in 2002 online and

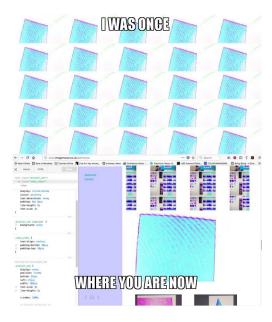
licensed as copyleft. On Jaromil's website it states that "The code :(){ :::& }:: provides arguably one of the most elegant examples of a fork bomb" (Jaromil 2002a). This elegance is evidently a core feature of the work. On initial release, it was accompanied by a text titled la bohème digitale. The text la boheme digitale is of huge importance to the work. The text provides a context to the code. The text written by Jaromil gives the audience a way in, to understand what political context Jaromil wishes to present the artwork in. Jaromil offers up this piece of coding as an act of rebellion, emphasizing the fact that while software is a means of creating art, software viruses "are a combination of rebellious poetic gestures, symptoms of politics or structure" (Jaromil 2002d). Jaromil set up the artwork as a provocation, quoting a passage from Hakim Bey taken from the book T.A.Z which explores poetic terrorism.

> If I were to kiss you here, they'd call it an act of terrorism—so let's take our pistols to bed & wake up the city at midnight like drunken bandits celebrating with a fusillade, the message of the taste of chaos (Bey 1991: 4)

Directly after this quote Jaromil challenges us to "now type in :(){:|:& };: on any UNIX terminal" (Jaromil 2002a). An invitation to cause political chaos. I found the above information about this artwork online, through Google image







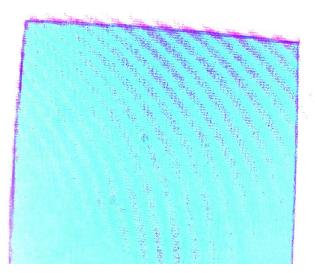


figure 23: i-was-once-5b8670.jpg

searches and online forums, and Jaromil's website. The screen has allowed me to find different histories about this artwork. This artwork is part of a complex digital ecology which is archived and commented on. It has many lives online and it has been shown in many ways at different times. The art piece can be typed in to a Unix system to cause havoc.

screen-based analysis

Bosma suggests we use the notion of the post-digital to establish new points of perspective and refine the analysis of digital media and digital technologies. In the context of art, Bosma argues that the digital realm tends to be perceived as screen-based. And that this tendency is validated by popular approaches in media art, most notably Lev Manovich's text The Language of New Media (Manovich 1999). Bosma tries to show the limitations of the screen-based approach through Alexander Galloway's analysis in The *Interface Effect (Galloway 2012). One could* argue that. Bosma creates a clear distinction between what is seen; the screen, and what is hidden; the techno politics behind it: "What is not directly visible is also less likely to be seen" (Bosma 2013: 1). Bosma equates screen-based analysis with a surface level approach and proposes that "Works of art whose structures or processes mostly escape the line of sight present a challenge for interpretation that has been explored from different perspectives" (Bosma 2013:1). This logic might be applied to all artworks not just digital artworks, there are hidden economic, political, structural

and systemic relations with all works of art because art is not separate from the environment in which it is created. Bosma aligns herself with Edward Shanken who proposes that no clearly defined method exists for analyzing the role of science and technology in the history of art (Shanken :44). Bosma proposes that developing ways to "see beyond the screen" should be one of the main goals of a post-digital analysis of art (Bosma 2013:3). In The Language of Newmedia, Manovich examines new-media from a semiotic perspective and reads new-media through a cinematic lens (Manovich 1999). Manovich focuses on the formal qualities of interfaces and the aesthetic properties of cinema, as opposed to examining cinema as part of a complex media ecology. Bosma equates Manovich's approach with that of screen-based analysis. Manovich's main argument is that new media is similar to film. But this sort of judgment has obvious flaws, flaws that have been pointed out by many scholars (Mark B. Hansen) (Diliger 2001) (Looy 2003), (McKenzie Wark 2015) and finally (Galloway 2012) whom Bosma discusses. Manovich attempts to demonstrate that features such as discreet representation, random access, and multimedia, are not unique elements of new media, and that these components were already present in cinema. Manovich sets about unravelling some of W.J. Mitchell's key arguments The Reconfigured Eye (Mitchell 1994), suggesting interactivity is not a new feature of New Media, Manovich claims

that calling computer media 'interactive' is too vague and at worst meaningless "it simply means stating the most basic fact about computers" (Manovich 1999: 71).

Bosma argues that the screen-based approaches by Manovich and other theorists do not go far enough in accounting for the new radical role of remediation in new media. Instead Bosma aligns herself with Galloway. Galloway is a writer and computer programmer known for his writings on software with books such as The Interface Effect (Galloway 2012) and essays on algorithmic culture. Galloway proposes that the computer does not only remediate other media, the computer "remediates the very conditions of being itself" (Galloway 2012: 21). The author argues that if viewers have more awareness of the implications of the code, this allows them to look past the visible dimension (Bosma 2013: 5). This could help spark our vision of what the potential of that code would look like once executed. Written examples are given of what one could imagine and ideas from various media scholars. are included. Bosma considers various visualizations of the artwork in the context of different theoretical underpinnings.

> We could imagine a proliferation of that string of code in the shape of maybe a family tree, much like the poetic Field experiments Florian Cramer describes ("Words Made Flesh" 94), but constantly splitting, moving, growing. We could, at the same time, see the hard disc

working away and filling up its design standardized so as to allow indeterminate applications and thus also viruses, along the observations in Matthew Fuller's Media Ecologies (Bosma 2013:5).

These imaginary visualizations depend not only on understanding the implication of the code's execution but also the various theoretical contexts. Bosma is visualizing the potential effects of the code work in action but there are other elements to this artwork, which go unexplored.

Galloway's views are more in keeping with what Bosma constitutes as post-digital perspectives on new-media. Galloway proposes digital technology does not only remediate other forms of media but the very conditions of being itself (Galloway 2012). For Galloway an interface is not a stable object; it is a multiplicity of processes. An interface is not just a laptop screen, a monitor screen, an LCD, or a television or a Windows 8 operating system or Mac OS X. Galloway observes how media studies scholars have too often privileged screens and displays and this disproportionate focus on visual interfaces ignores other critical objects, such as An interface, for Galloway, is "not a thing"; it is "always an effect" (Galloway 2012: 33) – a technique of mediation or interaction (Galloway 2012: 33). "nonoptical interfaces (keyboard, mouse, controller, sensor); data in memory and data

on disk; executable algorithms; networking technologies and protocols [...]."(Galloway 2006: 7). The theorist argues that interfaces are connected and relational and to privilege the screen without taking anything that surrounds it into account, is not acknowledging the complexities and relations of new-media technology. For Galloway, the limitation of Manovich's approach is how he treats new media as aesthetic objects that have essential qualities, and this obscures the circumstances of how people actually discuss, develop, and use new media in concrete artistic practices. Conceptually, Galloway moves away from the object-centred approach taken by media theorist Marshall McLuhan, for whom media objects are technological extensions of the human body. Friedrich Kittler contends that media objects carry their own technical logics that only sometimes intersect with human perceptions. Galloway promotes forms of thought that are open to ongoing interactions and unfold in complex systems. Thus, Galloway's ideas shift our attention from stable interface objects to dynamic interface processes.

visualizations

Bosma argues that developing ways to "see beyond the screen" is essential for postdigital critique. As a result of machine spaces and art practices merging together, the author suggests that this asks for a visualization method which is simultaneously applicable to science and art. The author offers up a new way to read digital artworks from a post-digital perspective. Bosma proposes a new method of visualization that draws from Rudolph Arnheim's Models of Theory (Arnheim 1997) and combines his ideas with concepts from a selection of media theorists. Bosma's main issue with screen-based approaches to new media artworks is that she feels they "cause the variability and techno-political issues of the digital in art and culture to go largely unnoticed" (Bosma 2013: 3). If we think about ForkBomb in relation to this provocation, one political aspect we must recognize is licensing. ForkBomb was released under copyleft - free for anyone to use or modify- an open-source work of code-art. Bosma does not mention this aspect of the work in her own critique. She focuses on her encounter of the wall painting at Transmediale festival specifically, but this was not the only showing of the work in question. On the Transmediale website an accompaniment to ForkBomb was published which states...

> It is, if not the shortest fork bomb possible, certainly an easy-to-apply script. Unlike the majority of the viruses permeating the Internet, anyone – also common users without profound knowledge of operating systems or computer networks – can type in the characters and experience the effect (transmediale.de).

This information is archived on the Transmediale website. It is common for festivals to introduce artworks in artistic programmes. Bosma equates the brevity and simplicity of the code design as being the simple visible dimension of the piece (Bosma 2013: 5). This refuses to take into account the role design plays in this artwork. The simplicity of the design is crucial to the functionality and novelty of the piece. The design allows for easy execution and the simplicity of the characters make it easy to remember, quote and copy. Aesthetically, the characters work together as a graphic composition which give the instruction balance. As the characters are a combination of everyday punctuation signs, they provide a recognizable, graphic quality to the code. These design considerations make ForkBomb appealing to a general audience who might otherwise have little knowledge of coding. The short combination of computer characters has become a 'sign' of rebellion and has subsequently been translated into many forms. The design involves simple punctuation marks, which convey a duality of meanings firstly as everyday punctuation marks, but when placed in this specific order operate as a ForkBomb virus. These marks are universal, but, together, they transcend normal everyday usage - forms like brackets, ampersands and semi-colons and this adds to the poetics of the piece. The simplicity and naivety of the characters used, is a contrast to the potential damage that could occur once the command line is executed. The design appears to emulate what's at the heart of Jaromil's manifesto, a provocation to become a revolutionary, an invitation to

revolt against the system, and anyone who dares, can run the code. Bosma's idea that people need visualization techniques in order to understand the invisible aspects of this piece seem to go against the spirit of rebellion that this artwork has come to represent. ForkBomb as a line of code has been shared across multiple platforms, and reformed itself through various mediums. The reproducibility of it that has taken place in its various forms mimics the actual effects of the virus once it infiltrates and multiplies when reproduced in different contexts. How would visualizing the potentials of the artwork make it more of a political piece? Bosma argues that developing ways to see beyond the screen seems to be one of the main goals of a post-digital analysis of art. And the merging of machine spaces and art practices asks for a visualization method that is at the same time applicable to both science and art.

In his book Visual Thinking, the psychologist and art theorist Rudolf Arnheim describes various forms of visualization, one of which happens largely in the mind. It boils down to 'seeing' things you know are there but which cannot or can barely be seen by the naked eye. It is not a form of imaginative construction of unreal events or phenomena. Galloway argues that the digital is a complex structure of forces obscured by a focus on the screen. The first limits a view of the digital to what is directly visible, while the second firmly places the construction of the screen within larger systems and barely or non-

visible practices. Bosma sees this as a break away from the screen and deems Galloway as being closest to a post-digital approach, arguing for an additional, visual layer to be added to the way post-digital works and practices are approached, which can help and enrich the way we see them. The sentiment that post-digital means post-screen is echoed by Ebrahim Poustinchi. 'In Post-screen: A criticism of Digital Screens', Poustinchi describes the environment of his studio. He conveys his love for doing almost everything digitally, and he cannot accept the things he and his colleagues make live only on screens, digital screens or monitors, and proclaims that they are post-screen: "we are POST-Screen!" (Poustinchi 2019, para. 1). His argument is that the screen now is an outdated interrupter of a possibly authentic digital, physical, hybrid experience and that the screen reframes all the digital "experiences," statements, speculations, visualizations, in the same way.

> It reduces our possible physical interactions with a digital "experience"/scene, to the touches of fingers, clicks of a mouse or presses of keys on a keyboard! Screens at their current stage, are banal immature Alice In Wonderland rabbit holes with an unsuccessful attempt to "connect" or create a hybridization! (Poustinchi 2019, para. 2)

This irritation with the screen is echoed by Bosma who wishes to visualize the hidden

elements that go beyond these visible tangible, material aspects of screens, that visualize the invisible. Andrew Galloway explores how seemingly 'invisible' aspects of digital ontologies are represented graphically, badly. Galloway highlights the failures of graphic representations in conveying the complexities and so-called invisible relations in ecologies that include data and networked information. He poses the question, are some things simply un-representable. Galloway picks apart the 'visualization' of data sets and networks, which tend to manifest in generic visual styles, and he highlights how this mode of visualization reveals the underlying assumption that data is objective. The visualizations Galloway explores are generic in their graphic objectivity, and do not accurately represent the in-betweens, the human relations, feelings or actions, that form maps or ecologies of networked data. Galloway points out that this blandness distracts us from the real material consequences of these structures. The general public is implicated in producing these ecologies and other consequences arise from the public's involvement, complex relations are co-created between human network and machine. Yet the 'objective'

graphic imagery Galloway explores is an

example of our inability to understand or

Graphic objectivity is dangerous when it

it allows us to separate human relations

locate the complexities of networks or data.

comes to conveying digital ontologies because

from these phenomena. There is a need to find new forms to describe these complex forces and relations – and stop objectifying these connections because excluding human relations within these structures is un-ethical. Galloway argues in favour of the need to bring these entanglements to the forefront by incorporating poetics. By doing so, he maintains we might stop relying on "relative perspicuity (or opacity) of data visualization" (Galloway 2011: 85). Poetics are useful here because data have no necessary visual form.

POST-INTERNET

The term Post-Internet art is used to describe art made in the context of a new phase of Internet. Post-Internet art is not a simple terrain, Brian Droitcour notes how the word 'Post' refers to an aura of historical significance, and the term "Post-Internet" manages to avoid anything resembling a formal description of the work it refers to, only alluding to a vague type of contemporary condition which implies work being made in the context of digital technology (Droitcour 2014: 1). Gene McHugh argues post-internet is about a change in the internet, which he relates to the rise of social networking and strides made in web design. This shifts the Internet from being a place for programmers and technologicallyminded people, to a place for everyone. Most importantly, he notes that the internet has become "not a thing in the world to escape into, but rather the world one sought to escape from" (McHugh 2011: 5). McHugh notes how a shift occurred from 'art on the internet' to 'post-Internet art'. Artists may not use the Internet as their 'medium' ('medium' in a formal sense) or by employing aesthetic tropes like gifs and memes, but all artists cannot escape the Internet as a distribution platform, or a "machine for altering and re-channelling work" (McHugh 2011: 6). On a more basic level, artists might not use the internet as their 'medium' but the Internet might be an integral part in the production of their practice - for example, purchasing materials for their art practice through online channels or promoting their artwork on Instagram and Twitter and so the

Internet infiltrates art practices in a multitude of ways.

McHugh argues for the use of the term post-Internet given our new historical relationship with the Internet which is changing constantly. The author proposes that post-Internet as a category says the same thing about the Internet that post-modernism says about modernism, that we are past modernism, yet Droitcour believes modernism is not gone, it is just familiar to us. Modernism is familiar, it's still alive, but its features are recognisable, and that's precisely why it can be repeated and reused. Droitcour clearly sees the post in post-Internet as a past that we have overcome. He agrees that the internet has changed drastically, and asks:

> Why assume that it can't change again? The internet is always changing. The internet of five years ago was so unlike what it is now, to say nothing of the internet before social media, or the internet of twenty years ago, or the internet before the World Wide Web. Why insist that the changes are over? (Droitcour 2014 :6).

For Droitcour post-Internet art is just a new aesthetics of administration. He draws comparisons from conceptual art from the nineteen sixties and nineteen seventies when artists explored the aesthetics of administration, producing charts and diagrams and photocopied texts that present viewers with the particulars of bureaucracy to post-Internet aesthetics now. Michael Connor considers the erosion of the "boundary between time spent online and off...with the proliferation of smartphones and the growing pressures of an attention-based economy" as a key condition of post-internet art (Connor 2014: 55). Jihoon Kim defines post-Internet art as an array of artistic production that focuses its attention on the cultural impact of the Internet and digital technologies that attempt to overcome the dualities of the material and the virtual (Kim 2019).

Nicolas Bourriaud argues that we have entered a phase of "postproduction" which refers to the dominance of recycling, refashioning, and recombining existing media information. Bourriaud argues that forms of postproduction, such as remaking, are influenced by the popularity of technical tools and information behaviours provided by the Internet and software applications. These forms encourage artists "to consider global culture as a toolbox, an open narrative space rather than a univocal narrative and a product line" (Bourriaud 2002: 93-94). Hito Steyerl expands on Bourriaud's concept by associating it with another application of the term postproduction – the array of technical procedures such as editing, mixing, 2D or 3D animation and modelling, and visual effects that are applied after the shooting of a film. In her ensuing polemical essay 'Too Much World: Is the Internet Dead?' Steyerl underlines how the capacities of postproduction techniques

to compose or re-edit worlds can serve as an intervention into the accelerated circulation of images in the digital environment and their incessant proliferation in our real space, experience, and subjectivity. Steyerl claims networked space is itself a medium (Steyerl 2013).

> It is a form of life (and death) that contains, sublates, and archives all previous forms of media. In this fluid media space, images and sounds morph across different bodies and carriers, acquiring more and more glitches and bruises along the way (Steyerl 2013: 443).

Marisa Olson has been credited with coining the term post-Internet (Vierkant 2010:2). Olson discusses the importance of addressing the impacts of Internet culture at large, which she claims can be done in both on-line and off-line environments (Olson 2008). This interplay between on-line and off-line is important in my own project. I am interested in how my body intra-faces between both environments and how I navigate between networked and 'non-networked space'. In reality my working spaces are always networked. Mark B Hansen theorizes the role played by technology in human agency and social life in the chapter 'All reality is mixed reality from Bodies in Code' (Hansen 2006). Hansen speaks about the paradigm coined mixed reality, a term he borrows from Monika Fleischmann and Wolfgang Strauss. Hansen discusses the

body's central role as being an "interface to the virtual" and the drive that exists to develop a more all-encompassing virtual reality by drawing attention to the central role the body plays in accessing three-dimensional virtual space. While virtual reality used to be about head mounted displays, mixed reality is a more all-encompassing space that has the potential to engage the full body. This draws attention to the central role the body plays in the bridge from two-dimensional to threedimensional space. Motor activity holds the key to what Hansen refers to as "fluid and functional crossings between virtual and physical realms" (Hansen 2006: 2). Hansen is talking about a mixed reality space designed to give people specific experiences in controlled environments using apps that can add virtual dimensions to flat surfaces. Clothes that can trigger virtual interactions. I think it is important to consider how we all live in a mixed reality environment in the everyday. What my artistic-technological practice draws attention to is the entanglement between the virtual and the physical, the enmeshments that come from traversing digital working environments. We are not on-line or off-line. instead. we are lost between.

In my own practice, I remake digital video files in a myriad of ways accumulating iterations of the videos as image sequences, videos, screenshots and gifs. This process made me aware of how nothing I worked with was in a fixed state, making it hard to retrace my way back or place myself in relation to any singular historical category of art. Artie Vierkant argues how the ubiquity of digital

devices and their interconnected nature means "everything is anything else" (Vierkant 2010:4). Vierkant is referring to art objects. The author discusses how, after the Internet, one type of art object was capable of becoming another. After digitization, objects could exist in flux between multiple instantiations (Vierkant 2010). I started to see how entangled I was in multiple instantiations. Artists like Oliver Laric and Seth Price have toyed with this idea by presenting multiple variations of the same art object–Laric's artwork Versions presents a series of sculptures, airbrushed images of missiles, a talk, a PDF, a song, a novel, a recipe, a play, and a dance routine. Vierkant notes how these works by Laric and Price are in keeping with older conceptual art pieces like Joseph Kosuth's 1965 One and Three Chairs. Kosuth's work is an arrangement of three versions of the same object, each signifying a "chair," it asserts the idea that art is in the idea, tied to the concept, not to object. My artistictechnological practice started to highlight my entanglement in the brevity of fixity of meaning attached to art objects in my own practice, as well as the entanglement of my body/mind in this brevity of fixity. Conceptual art interrogates the very concept of art as a phenomenon.

In One and Three Chairs (Kosuth 1965) Joseph Kosuth troubles our beliefs regarding concept and representation. Kosuth was one of the pioneers of conceptual art and installation art, initiating language-based works. As well as this, he employed appropriation strategies in the 1960s. His work explored the production and role of language and meaning within art. One and Three Chairs features a 'physical' chair, a 'photograph' of that chair, and the dictionary definition of a chair. Therefore Kosuth presents an object, an image and a text. The author didn't make the chair, take the photograph, or write the definition; but he selected and assembled them together. The question posed by this piece was which representation of the chair is most 'accurate'? By assembling these three alternative representations, Kosuth turns a wooden chair into a debate about representation and meaning, through his use of different media, which allows us to consider the meaning of 'chair' itself. Kosuth was attempting to demonstrate that the 'art' was not located in the 'object' but in the 'idea' or 'concept' of the work, and the piece implored the viewer to consider different layers of representation and subsequently question 'art' as a stable meaning maker. This undermined This undermined the 'preciousness' of the unique art object and its privileged place in the museum. Kosuth appeared to be implying that 'ideas' are stable and not contained in objects but by assembling various different objects together we can disrupt the notion that ideas belong to specific representations. Kosuth was rupturing notions of how concepts may or may not be contained in mediums and how various representations of the same concept might work together in order for us to challenge our notion of the concept itself.

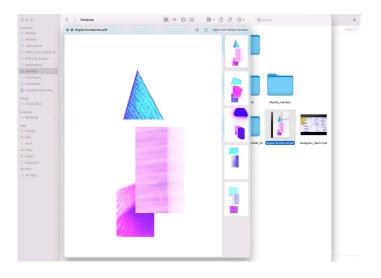


figure 24: digital_sculptures.png

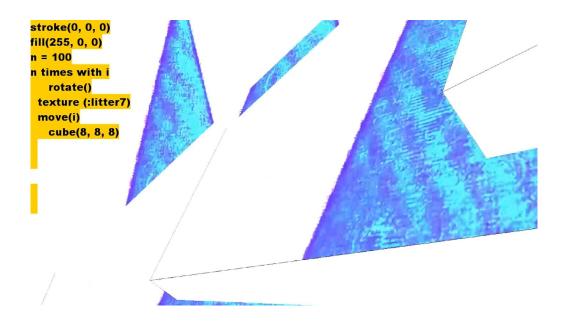


figure 25: Ago11.jpg

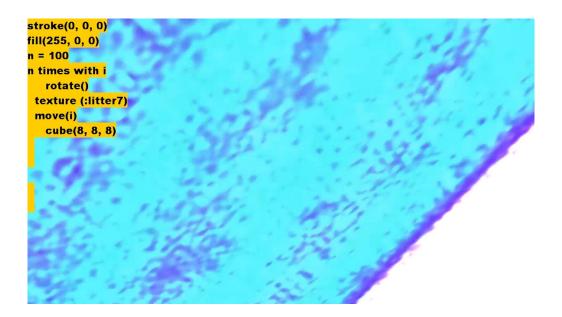


figure 26: Ago11.jpg

POST-MEDIUM

The notion of medium is synonymous with Gotthold Ephraim Lessing, a German writer, philosopher and art critic, and Clement Greenberg, a visual art critic closely associated with American Modern art. In Gotthold Ephraim Lessing's essay, 'Laocošn' (1962). Lessing uses the contrast between painting and poetry to explain his ideas regarding 'medium specificity'. He centred this debate on an insistence that poetry unfolds in time, yet painting exists in space. He refers to both media as "two equitable and friendly neighbours" making it clear that they can't "step past each other's boundaries" (Lessing 1962: 91). Lessing made the case that, in order for an artwork to be 'successful', it needed to adhere to the specific 'stylistic' properties of its own 'medium'. In Greenberg's essay 'Avantgarde and Kitcsh', the author claimed that the distinction made between 'content' and 'medium' came about because the 'content' of an artwork was prescribed by the person who commissioned it (Greenberg 1989: 16). As such, Greenberg deduced that the artist's 'content' used to be pre-determined and that meant the artists were free to concentrate on developing their chosen 'medium' (Greenberg, 1989). Historically, artists were positioned in relation to the medium in which they worked - painting, sculpture, drawing or printmaking. The mediums used within these categories were distinguishable from each other. A sculptor might have been created in the medium of bronze or marble; a painting in the medium of oil or watercolour. Traditionally,

a definition of medium meant a unique and proper area of artistic competence in a 'form' of art. In other words, the ability of an artist to manipulate those features that were unique to the nature of a particular medium. Artists became proficient with the artistic materials of a medium which enabled them to create a 'form' (Greenberg 2006). Immanuel Kant is associated with the historical origin of the modern term form and the question of aesthetic formalism (Kant 1987). Formalism in aesthetics has traditionally been taken to refer to the properties that make an artwork an artwork. Kant proposed an artwork's value was determined by how the artwork was accessible through direct sensation, by sight or through hearing. For example, in painting, a formalist critique would typically focus exclusively on qualities like colour, brushwork, line, form, and/or composition, picking apart key elements of an artwork where those qualities were specific to the 'medium'; a charcoal painting would have very distinctive qualities in comparison to say a bronze sculpture (Kant 1987: 225).

Conceptual art emerged as a movement during the nineteen sixties in response to this idea of pure formalism. Notions of medium were further complicated because the modern art movement established that artworks could be made from any material, so the categorization of art based on medium and the formal properties inherent in that medium, became irrelevant. Found or appropriated objects could be deemed as artistic material. When artworks could potentially be made from anything it was harder to relate the 'form' inherent in the work with the 'skill' of the artist working with that medium. Conceptual art challenged the ability to classify artworks based on what 'medium' was used to create it. Conceptual art required that the viewer look past formal and stylistic properties of mediums. Instead, conceptual work could be conceived as a set of strategies, which, when put in place, make us question the very notion of art itself.

> In conceptual art, the idea or concept is the most important aspect of the work. When an artist uses a conceptual form of art, it means that all of the planning and decisions are made beforehand and the execution is a perfunctory affair (LeWitt 1967).

'Workshop: Making Beyond the post-medium condition' is a performative study which examines the artists' relationship to medium beyond the complicated post-medium environment by Christine Ellison (Ellison 2017). This piece emerged from workshops carried out with students in art school spaces across Britain, workshops that considered the current status of technical workshops in this awkward territory where industrial, craft and avant-garde modes of making overlap. Through engagement with tools found within art institutions - some abandoned, some unfamiliar, some ubiquitous, Ellison attempts to visualize aspects of the myriad interpretations the current artist might have in relation to the notion of medium. Ellison adopts a 'post-medium' approach in her

workshop to discover the new potential of tools and she eschews their traditional use value to show that, depending on the context and framing of these objects, their traditional function in the context of traditional art practice is redundant, now they represent concepts. There is a questioning of how we consider material practice, and its mastery, after conceptualism, after institutional critique, and after the tech revolution that has divorced many modes of making from material engagement. The artist takes an improvised mode of making which draws on theory, performance, conversation, image and sound manipulation, appropriation, collage and documentary. My own study sets up a site where the possibility of new intra-actions can occur between the reader/user and/or the material/technology.

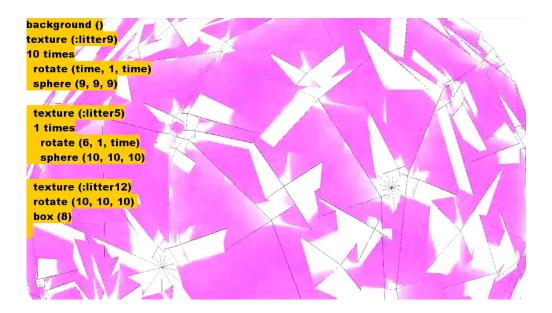


figure 27: Ago1.jpg

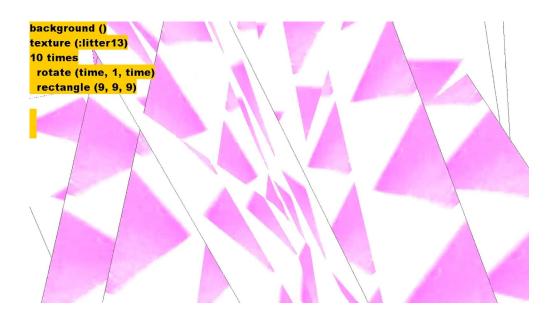


figure 28: Ago6.jpg

POST-CONCEPTUAL

Conceptual art is an umbrella term for many different art practices. One example of this is the contemporary conceptual artist Alexander Brener who labels himself as an "action artist" (Lord 2002: 2). Brener's actions include defecating in his pants in front of a Van Gogh painting in the Moscow Fine Art Museum while shouting "Vincent! Vincent!", or publicly masturbating on a swimming pool diving board. His most famous piece was taking place in the Stedelijk Museum of Modern Art in Amsterdam. Brenner spraypainted a dollar sign on a valuable abstract painting - Kazimir Malevich's Suprematism (1920-1927) (Lord 2002). Originally, conceptual art was known for questioning the nature of art itself, or as an anti-establishment response to the structures and economies of the art historical. However, as conceptual art moved into the contemporary, a shift occurred. Peter Osborne identifies six main features of the 'post-conceptual' character of contemporary art. Firstly, he believes that art is constituted by concepts: that it has an aesthetic dimension, but also an anti-aesthetic use of aesthetic materials. Post-conceptual art expands on the possible material means of art because it merges categories, which Osborne identifies as the liberating significance of the 'post-medium' condition, and post-conceptual art is also art that is radically distributive. Osborne refers here to a multiplicity of material instantiations and finally a historical malleability of the borders of this unity (Osborne 2010: 11).

Post-conceptual art makes way for a new space where the anti-aesthetic can be recognized as belonging to the conceptual, so the anti-aesthetic has in some ways become so commonly associated with conceptual art that now it is no longer an anti-aesthetic but a signification of conceptual art. Peter Osborne notes how the concepts of the contemporary are worth picking apart to think about time in relation to art. The idea of the contemporary is the coming together, the disjunctive unity of times. More specifically, it refers to the joining together of the times of human lives within the time of the living. Contemporaries are those who operate in the same time as each other. As a historical concept, the contemporary involves the application of a unifying notion over a totality of different times, of lives present to each other in some way, at some particular time in the 'now', since, according to Osborne, it is the living present that provides the model of contemporaneity (Osborne 2010a). The concept of the contemporary is a single historical time, the present, as a perceived living present even though it actually refers to separate alternative historical times of human lives. Modern society defines itself in relation to time. For example, in German the expression for modernity is *Nauset*, which means "new time." Modernity is the time of the new, the search for and the construction of a future. Elena Esposito writes how the continuity between the past and the future of traditional societies, and the assumption of an ultimate order ruling the (past, present, and future) universe is now

broken (Esposito 2012). The past continues to be useful in preparing for the future, but in the sense of discontinuity, not continuity. The future will be new, hence unknowable today, and the order of time, (if it can still be called an order) becomes much more articulated and complex (Esposito 2012). Babette Babich wonders is past contemporary art the referent for post-contemporary art? Bibich examines what she defines as the changeable coincidence of contemporary art with the contemporary moment, pop, and commercial art (Andina, Tiziana and Onnis 2019: 112). She points to the fact that the contemporary is always changing, and claims that the reference to the post in post-contemporary shifts towards what Babette defines as the most digital context of all, "remix thinking: adaptation, co-option, appropriation, and so on" (Andina, Onnis 2019: 112). Post-conceptual art builds on the history of Conceptual Art, where the concept or idea involved in the work takes precedence over aesthetic or material concerns. Post-conceptual art can be said in one sense to have begun with the Fluxus art group. Dick Higgins was an American artist, theorist and poet as well as co-founder of the Fluxus international artistic movement. Higgins discussed the notion of intermedia but this is now a term more connected to digital art production, where the computer code sets the conceptual rules for a physical production (Osborne 2013). Osborne suggests that "post-conceptual art is not the name for a particular type of art so much as the historicalontological condition for the production of contemporary art in general ..." (Osborne 2013).

The American post-conceptual digital artist, Joseph Nechvatal, creates computerassisted paintings and computer animations, often using custom-created computer viruses. Nechvatal has identified the postconceptual as: viractuality Nechvatal argues that conceptual artists 'de-materialized' the art object and instead began to produce timebased artworks. With digitization, the art object became flexible, and more malleable, and that malleability, coupled with semiotics and computer processing, resulted in a post-conceptual art object (Nechvatal 2010). Necthaval talks about this transmutation that has emerged in our current condition. Making art now means making art in an environment filled with floating signifiers and historical frameworks which are re-configured in this current networked world which is full of links. So, instead of the term post-conceptual (Nechvatal 2010), Necthaval argues that the biological, the technological and the static, are malleable.

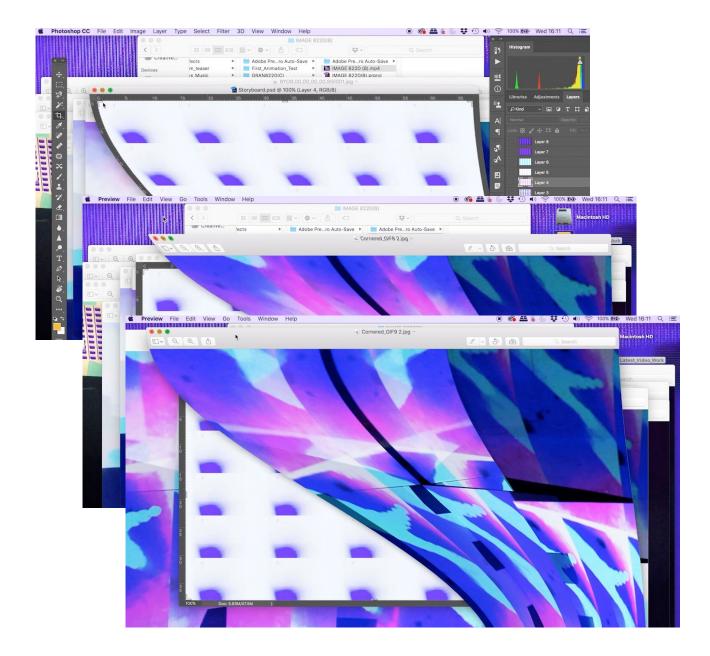


figure 29: windows_5.jpg

POST-TIME

The contemporary condition speaks to the idea there are multiple conflicting temporalities existing at the same time.

> Contemporaneity consists precisely in the acceleration, ubiquity, and constancy of radical disjunctures of perception, of mismatching ways of seeing and valuing the same world, in the actual coincidence of asynchronous temporalities, in the jostling contingency of various cultural and social multiplicities, all thrown together in ways that highlight the fast-growing inequalities within and between them (Antonio 2008: 8).

Ideas about the contemporary, pivot around ideas of the present or the present moment and are concerned with the temporal order of now. Discussions about what it means to be contemporary in the now, have occurred over time. In his book The contemporary composition, art writer Terry Smith points out that unlike every earlier period, today no meta-narrative, larger framework, or total world-historical orientation, can be strong enough to save us from having to find our futures entirely within the resources available to us now (Smith 2019). Smith talks about the acceleration of time, and how asynchronous time brings about clashes between various cultural and social multiplicities (Smith 2019). The main difference between the



figure 30: vernacular.jpg

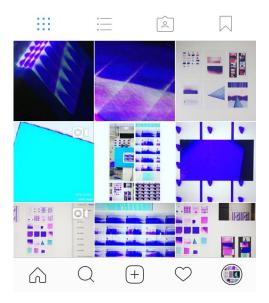


figure 31: IMG_8243.png



figure 32: IMG_7644.png



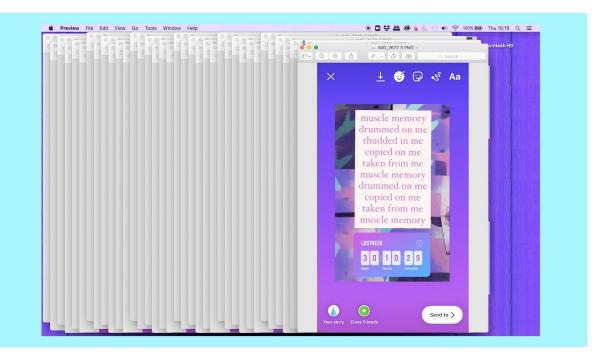
figure 33: IMG_7645.png

contemporary condition and the postcontemporary condition is that instead of it being explored from a human perspective, it is acknowledged that part of these new temporal shifts and the current accelerationism means it is harder to understand where human agency begins and machine time ends. Rhama Khazam, researcher and art historian, argues while the idea of the post-contemporary condition rejects some of the ideas of modernism it actually prolongs or builds on others. "[...] We are confronting a technological non-human future in which computers make decisions for us" (Khazam 2016: 2). This poses huge questions about how one understands, or locates where human agency begins or ends, as we become more entangled in technology. In addition, the post-time complex is the time signature of the post-contemporary condition and places an emphasis on generating new, speculative and constructive hypotheses, pointing to how the historical is branching and pluralist, rather than existing as a simple linear path of development. Theories relating to the post-contemporary condition argue for a re-constructive, global, human ethos. One symptom of this is what Austrian philosopher, literary theorist, and political theorist Armen Avanessian calls the new 'time-complex', the subsequent non-linear temporalities that the prefixes 'post', 're' and 'pre' refer to (Avanessian and Malik 2016). These prefixes have become ubiquitous signs of the post-contemporary condition, symptomatic of this re-ordering of time in relation to the historical. New

technologies, networks, machine learning and artificial intelligence, coupled with the ability of new interfaces to house new technological temporalities side by side, are causing profound shifts in how we normally experience time. These new technological systems, infrastructures and networks mean that in the everyday construction of meaning, human agency is losing its primacy. Artificial intelligence is affecting how politics, culture and society are organized and controlled. The shift in time from linear to speculative time has meant that historical touch points are becoming unstuck. How we position ourselves in relation to cultural time periods is coming undone. The post-contemporary condition acknowledges time is changing (Avanessian and Malik 2016). Time is not only speeding up and accelerating, time is re-configured. This means the order of time is no longer linear. The past is not followed by the present and future, because now the future happens before the present, and time arrives from the future

(Avanessian and Malik 2016). The future is predicted which has enormous impact in how we grapple with the present.

figure 34: muscle.jpg



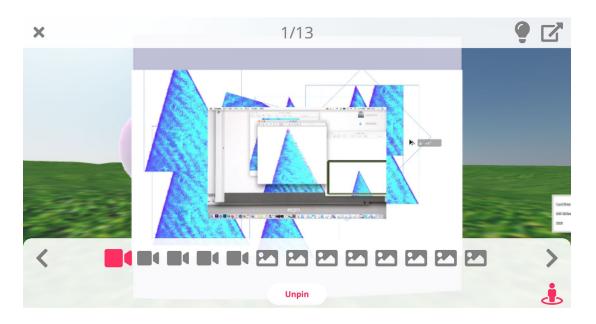


figure 35: pikseldocumentation.jpg

POST-HUMANISM

Post-humanism has many definitions, but at the heart of the idea is that a person or entity can exist in a state beyond being human. Steven Umbrello notes that "In general, it can be diluted to the decentring of the 'human' from the privileged place that classical theology and the long philosophical history handed down from Plato has traditionally positioned it in" (Umbrello 2018: 1). Pramod Nayar argues it is a result of a radical decentring of the traditional, coherent and "autonomous human and demonstrates that the human is always evolving with, constituted by and

constitutive of multiple forms of life and machines" (Pramod 2014: 2). Advancements in technology are creating new types of entities and closing the gap between man and machine. One consequence of this human decentring is the idea that multiple forms of life and machine exist and evolve in a type of moving enmeshment. Ecological thinking is associated with this type of networked form, a type of peripheral being belonging to a larger system. Ecological thinking moves towards the fringes of thought regarding the human subject to include non-human entities on an equal ontological level. Object oriented thought is dedicated to exploring the reality, agency, and private lives of non-human (and non-living) entities-all of which it considers objectscoupled with a rejection of anthropocentric ways of thinking about and acting in the world. Badminton argues that posthumanism is as much posthumanist as it is post-humanist (Badmington 2003: 13). This should not be read as a regressive or reactionary gesture. To engage with humanism, to acknowledge its persistence, is not necessarily to support humanism. In the binary logic of universal Humanism, subjectivity is understood as universal consciousness, rationality and ethicality. Rosi Braidotti pays heed to antihumanist heritage and extends her scholarly aim and praxis beyond the anti-humanist moment. She writes:

> Anti-humanism consists in delinking the human agent from this universalistic posture, calling him to task, so to speak, on the concrete actions he is enacting. Different and sharper power relations emerge, once this formerly dominant subject is freed from his delusions of grandeur and is no longer allegedly in charge of historical progress (Braidotti 2013 :29)

Braidotti argues that a Humanistic residue remains at the core of anti-humanist thought. Humanism has advocated for solidarity, social justice, principles of equality, secularism and a respect for science and culture. It has also argued against the authority of religious texts and dogma (Braidotti 2013: 29). Braidotti argues that this Humanistic residue is not problematic, rather it raises the necessity of being able to include Humanist ideas like freedom and emancipation into a critical analysis without falling back on a generalised idea of the Human and the problematic exclusions this standard entails. Braidotti wants to move beyond these lethal binaries (Braidotti 2013: 37). The author borrows from feminist theory, race theory, ecology and environmentalism, as well as from the work of Gilles Deleuze and Felix Guattari and constructs a complex and deeply relational worldview, in which diverse strands of thought connect. Within this worldview the posthuman subject emerges as multiple and inherently differentiated. Humanism is a vast field, containing both secular and nonsecular schools of thought (Willemien. Otten Leiden 2004). But at the heart of Humanism is the idea that the world is only understood through human critical inquiry and logical reasoning. Human agency is a primary concern in this field, with an emphasis placed on critical thought. Critical thought from a humanist perspective positions the mind as a disembodied entity. Joanna Zylinska is a media theorist and artist, working on digital culture, artificial intelligence, photography, ethics, and the planetary ecological crisis. Zylsinka wishes to step away from a humanist approach to photography, and instead welcomes a posthuman approach. She argues that a humanist approach to photography implies the human mind has the ability to rise up above "networks of data and images" while simultaneously assessing everyone else's entrapment in them (Zylinska 2017: 29). Zylinska highlights a lack of sustained engagement with media and technological processes, which goes hand in hand with outdated traditional philosophical discourses (Zylinska 2017).

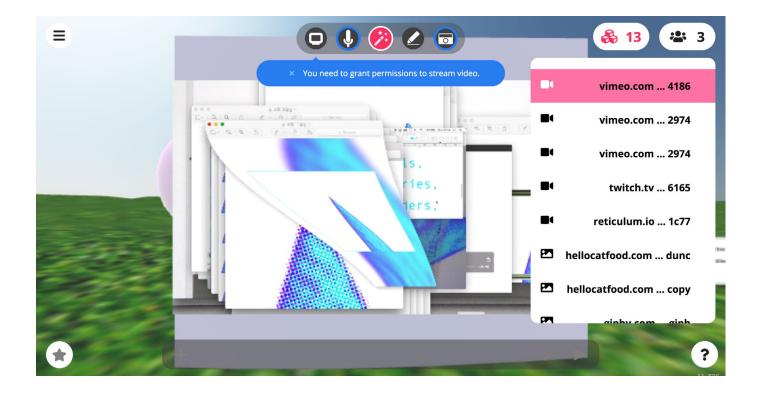


figure 36: piksel2.png

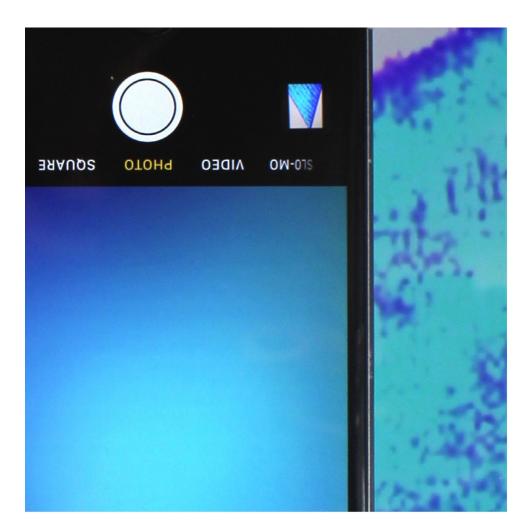


figure 37: picture1.jpg

POST-PHOTOGRAPHY

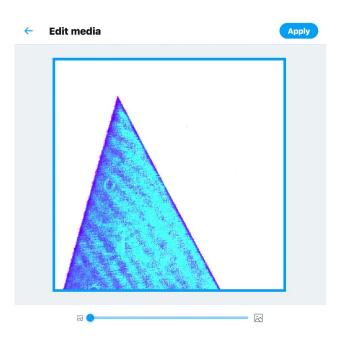
The term photography is an umbrella term for a large number of historic and contemporary image-making practices. There are so many aspects to photography as a practice. Jiri Benovsky (2011) asks are photographs concrete spatio-temporal entities like prints, or are they universals, since there can be many 'printsinstances' of the same photograph (Benovsky 2011: 25). Traditional photography is often considered a mechanical process, the result of a technical device but simultaneously seen as a natural organic process which probably derives from its beginnings. William Fox Talbot, invented salted paper and calotype processes, which were precursors to photographic processes of the later nineteenth and twentieth centuries. In the essay 'The Pencil of Nature', Fox Talbot correlates the photograph with a sketch of nature. This link with the organic is also attributed to Fabricus, an alchemist who discovered that the sun's rays would darken certain silver compounds (Turner 1987). A paper presented at the Nuremburg Academy of Natural Philosophers *A noteworthy experiment of the Action of the Sun's Rays,* describes how Fabricus accidentally came up with a mixture of silver nitrates that darkened when exposed to rays and became the first proof that the sun could be used to imprint energy, as such the process of developing has been linked to nature and truth (cited in Hirsch 2017).

At the heart of many debates about analog photography is the idea that the world leaves a trace of itself on the photograph. The trace has been explored by (Benjamin 1972), (Peirce 1931-58), (Sontag 1978), (Bazin 1967) and (Barthes 1981). The photographic index has been a topic of consideration for (Wollen 1978) (Davies 2011), (Sonesson, Göran 1989) and (Osborne 2010b). The concept of the index begins with a consideration of Charles Sanders Peirce's sign theory. Semiotics, the study of sign processes, is any form of activity, conduct, or any process that involves signs. A sign is anything that communicates a meaning, a meaning (that is not the sign itself), to the interpreter of the sign. In her paper *Epistemic* Function and Ontology of Analog and Digital Images Aleksandra Lukaszewicz Alcaraz (2015) explains that an 'Indexical character' should be understood as pointing to 'The Real' without saying anything about it. Alcaraz argues that Pierce's perspective is consistent with his semiological concept that "signs refer to other signs within a web of relations, but finally lead to the thing in itself," (Alcarez 2015) this takes

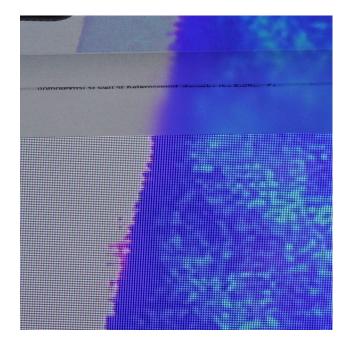
the form of Firstness. "Firstness is a condition of unmediated, unreflexive access. Thus Firstness cannot have any iconic representation" (Alcarez 2015). Alcaraz argues there cannot be any direct representation of the world, and even photography, with its specific imagery, cannot assume this role. Photography points at reality but its indexical character does not extract the one and only truth on its iconic level, however photographs are used as evidence, as proof of events that have really happened. Used in court, in newspapers, they stand as a type of testimony to reality.

Jiri Benovsky discusses the particularities of how analog and digital photographs are made and uses a diagram to demonstrate the steps that occur when light passes through digital and analog cameras. When the photographic process was digitalized it meant an image was stored as binary code on an image sensor and no longer as a latent image on a film negative. Benovsky notes how the analog photographic process allows light to pass through the lens into the camera body and onto the unprocessed film inside. The negative is then removed from the camera, and developed with chemicals. These negatives are enlarged using a photographic enlarger and exposed to photosensitive paper and finally fixed with chemicals which means multiple prints can be made by exposing the film negative. On a digital camera, light passes through the lens into

² A raw file is a collection of unprocessed data. This means the file has not been altered, compressed, or manipulated in any way by the computer. Raw files are often used as data files by software programs that load and process the data.







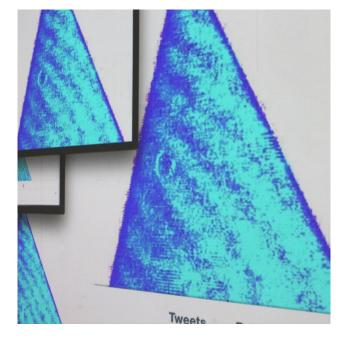


figure 38: rectangle_prints5.jpg figure 39: polaroid_9.jpg figure 40: polaroid_10.jpg figure 41: polaroid_15.jpg the body of the camera where it hits the image sensor. Benovsky notes that this is a RAW file² and additional in-body software turns this into an image file, which allows for the potential of multiple prints to be made. The 'steps' laid out by Benovsky are simple and clear, but the transformation from analog film to digital sensors was monumental for photography as a whole.

The term post-photography occurred in tandem with digitization. Once digital cameras and scanners became affordable, profound changes happened which including the mass adoption of the application Adobe Photoshop, and with it retouching and digital manipulation. The photographer Joan Fontcuberta notes how this "shook the ontology of the image and metaphysics of visual experience" (Fontcuberta and Mois de la photo à Montréal (Organisation) n.d.: 11). Fontcuberta claims that truth, for the first time became an option in photography and this disrupted the social contract photographs once had to indexing reality and being held to account as truthful documents (2015). W.T.J Mitchell's work, The reconfigured Eye: Visual truth in the post-photographic era (Mitchell 1994) is one of the earliest texts on post-photographic theory and delves deep into the issues Fontcuberta identifies. Mitchell argues that the onset of digital manipulation brought with it much doubt regarding the 'truthfulness' of the photographic image. Ambiguity entered the collective consciousness in relation to whether anyone could trust photographic images as documents indexing reality, or whether they were, in fact, manipulated fictions. For Mitchell

when photographs became digital, they lost

their validity in terms of their visual truth function. Mitchell built his argument around how the notion of indexicality (associated with traditional photographic practices) was ruptured by new developments in digital image processing. Cultural theorist Lev Manovich examines contemporary global culture using data science methods, and also examines cinema after digitization, artificial intelligence and digital humanities. Manovich approaches post-photography from a semiotic perspective and sets up 'traditional' and 'digital' photography as a binary. Both Mitchell and Manovich approach post-photography from a humanist perspective. The frameworks that Mitchell and Manovich employ relate to what Joanna Zylinksa describes as an art historical method. An art historical lens usually examines objects of art through their historical developments and stylistic contexts, looking at them in terms of their genre, design, format, and style. Zylinska identifies issues with approaching photography from this perspective. This approach objectifies photographs in the sense that "photographs are positioned as discreet objects that yield themselves to being framed and displayed" (Zylinksa 2017: 3). Photographs are analysed in terms of their aesthetic, semiotic and economic terms.

Joan Fontcuberta steps away from a 'humanist versus machine' approach and ventures past the argument that regards photographs as trustworthy objects of visual truth. He identifies a second paradigm in the development of post-photography, which occurred at the turn of the millennium, the digital revolution. This brought with it the prominence of the Internet, social networks and smartphones and describes a type of dematerialization which took place as a result (Fontcuberta 2015). Fontcuberta argues that post-photography is not a style, movement or period, but a way of re-establishing what photography is and who we are as subjects (Fontcuberta 2015: 12). Fontcuberta is concerned with the explosion of images and the ubiquity of "automated gizmos for capturing graphic information" (Fontcuberta 2015: 11). The artist identified a shift in the production of photography where image making became an everyday thing for ordinary people and this access to image making apps and devices at a low cost has ensured that an "infinite visual avalanche" started to occur (Fontcuberta 2015: 11). A type of hypervisibility, pointed to the need for examining not just the image and its specific condition but the management, dissemination and control of images. The politics of images suddenly lay not only in their excess, but their ability to be controlled, to vanish, to be censored and discarded. Hito Steyerl, the artist and media theorist, explores control and censorship in relation to this new type of networked image connectivity in Duty Free Art (Steyerl 2017)

Camila Moreiras, visual artist and scholar, whose work centers around surveillance culture, acknowledges how postphotography is not reducible to one definition or beholden to any one medium. Moreiras

suggests one may refer to a post-photographic practice as glitch art, new media, or even video art (Moreiras 2017: 58). For Moreiras, the field of post-photography is about structures of information, and how these structures accumulate and are accumulated. For Moreiras. this is more important than simply looking to aesthetics. In her essay 'Joan Fontcuberta: post-photography and the spectral image of saturation' (2017), Moreiras discusses postphotography in relation to the exhibition entitled 'From Here On' (2012) which comprised of works by thirty-eight artists. All works included were curated under the umbrella of post-photography. Moreira critiques Fontcuberta's piece 'Googlegrams' (2005) which explores protocological systems in relation to the over-saturation of imagery. The author explores how 'Googlegrams' (2005) positions the hyperopic within reach of the myopic. Fontcuberta's 'Googlegrams' (2005) are photomosaics that use Google to blindly cull images from the Internet by controlling search engine criteria. Fontcuberta assembles them together using another computer programme, and a larger photomosaic image is constructed using a freeware photomosaic connected online to the Google search engine. The result is ten thousand images online, which demonstrates "the line between a totalising protocological system, and the saturation of an expository society through a post-photographic discourse" (Moreiras 2017:11). This method highlights the constraints and control embedded in archival systems. Patricia Keller has noted

that 'Googlegrams' (2005) disrupts the neat codification and representations of history that archives are supposed to offer, noting that rather than conceiving of the archive as a site or a body of knowledge that makes visible a fixed relationship between photograph, document, and history, in 'Googlegrams' (2005) we have an example of the exact opposite. These relationships are based on the temporality of the document and its tenuous connection to the past and present, as a floating signifier.

> Since these images not only depend on, but also are determined by, a database of information that is in constant flux...each Google-based photograph becomes, however problematically, not a container of static knowledge but now a living, fluid testament to the ways in which images are themselves dynamic systems of the ever-changing flow of information (Keller 2011: 134–35)

In acknowledging a need to understand 'Googlegrams' (2005) through a different conception of the archive, Keller calls for seeing images as information over documentation. With this assertion, the implicit understanding is that information is never static and always on the move. Alexander Galloway claims that the standardised way computer protocols are implemented govern how specific technologies are used by people around the world (Galloway 2004: 7). Post-internet there is a complete lack of representational fixity, (Olson et al. 2014). Arne Vierkant writes: "Nothing is in a fixed state, and everything is anything else. Such is the malleability of digital material that any object is capable of becoming another type of object, or one object can exist in flux between multiple instantiations. This uncertainty coupled with whatever pre-disposition a viewer may bring ensures that 'objects' postinternet is slippery material" (Vierkant 2010). Photography is constantly being re-defined, increasingly automated, and networked. Constant Dullaart argues that

> Images now published on social media are valorized in terms of distribution and quantifiable interactions, particularly when triangulated with data about a user's online purchases or social media behaviour. This process shapes visual representations of human identities into 'data images' outside the control of the person the data originates from (Dullard 2019: 1).

Gaia Tedone sees technology as an inseparable part of economic, social, and cultural processes, and argues we are now in the midst of a new type of historical moment, which Tedone refers to as "image capitalism, platform capitalism or computational capitalism" (Tedone 2019: 4). In response to this, a host of artists are responding with art that investigates "the social, ethical

and political implications of AI and the materiality of its computer vision algorithms" (Tedone 2019: 4). Kate Crawford and Trevor PA Glen point out that datasets are influenced by what is supposed to be description but is subjective judgment and these judgements get codified into images. Artificial intelligence starts operating as a value extracting industry. With these new paradigms, complex image platforms and networked graphical interfaces, we have seen an expansion in photographic definitions. Peter Osborne offers up one of the most expansive definitions of photography and suggests photography includes the historical totality of photographic forms, or types of images produced in one way or another by the inscription of light: predominantly, until recently, chemical photography, of course, but also film, television, video and digital photography, as well as photocopying and scanning, and even microwave imaging, infra-red, ultraviolet and short-wave radio imagery (Osborne 2003). In After the artefact: Post-digital photography in our post-media era, Greg Shapley, artist and writer on visual culture, claims photography is dead due, in part, to the fact we are not only in a post-digital era, we are in a post-media era, where digital technology has erased boundaries between all mediums, effectively making the notion of photography redundant. Shapley argues, however, that the soul of photography lives on, and by this he refers to "its cultural, social and linguistic development" (Shapley 2013: 6).

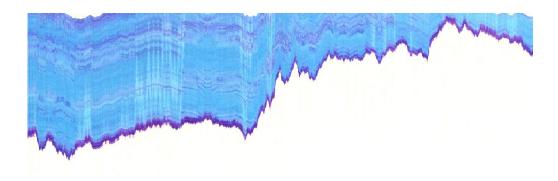
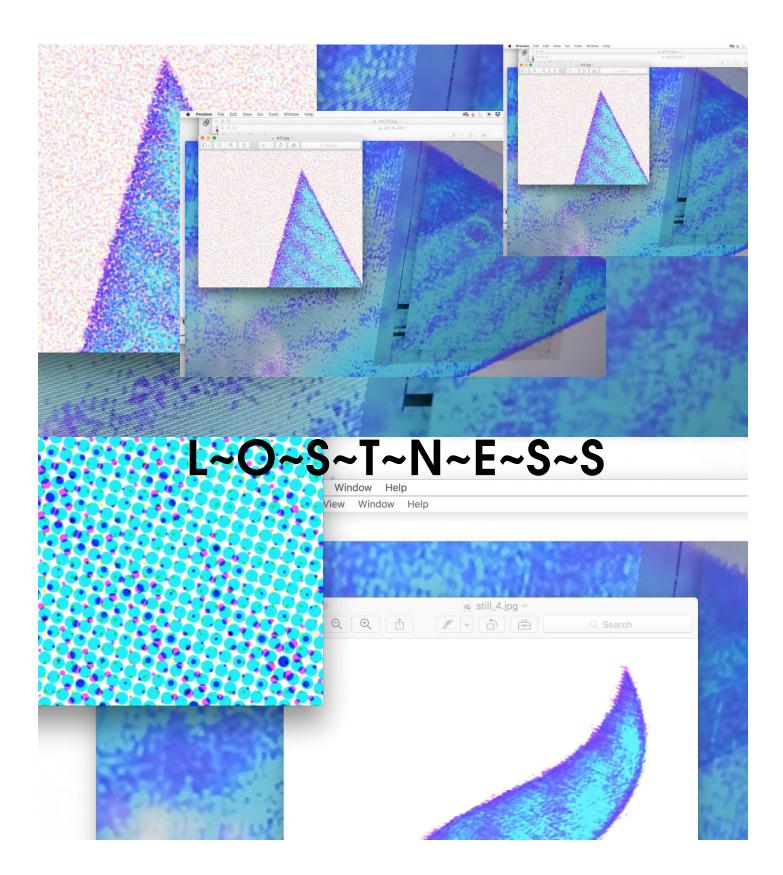
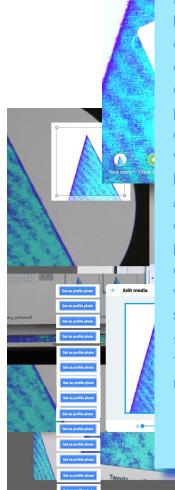
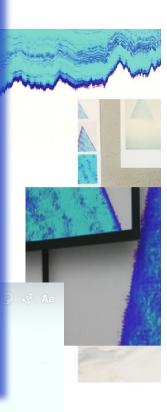


figure 42: slit scan still.jpg figure on next page: figure 43: still_stillness_2.jpg





I can't find the **#beginning.** The point in time this all began. The moment it started. The start was the end of an application to #begin. I have a practice of searching, questioning, through practice, but that is different to questioning after practicing everything. I don't know if I practiced a question, in or out of practicing? Did I question an encounter through practice, or imagine the encounter with a question? Theoretically any *#realbeginning* gets lost when I 'talk' through the practice of writing. Talking begins again in writing. The practice of writing didn't begin as a practice of talking. I don't talk out loud when I am practicing. I don't think I do...I might think about what I am questioning (in theory). Maybe it was in the practicing of writing that the theoretical talking began, but I have not started yet, It is here, in me, somewhere...if only I could find #mybeginning I might get closer to other locations, but there are so many **beginnings outside** of me. Connected to many endings inside my **#beginnings**.



Send to >

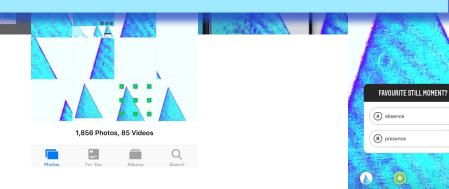


figure 44: still_stillness_80.png

RE-PRACTICE-AS-RE

introduction

The term practice-as-research gives the impression practice is dressing up as, or playing the part of, research. In a study of Higher Education Institutes the terms practice-asresearch, practice-based-research and practice-through-research were found to be commonly used (Nelson and Andrews, S. 2003: 4). Reflective practice is often employed in studies such as these. Artistic-research methodologies often perpetuate binary positions between different elements of artistic studies, such as, ordinary art versus artistic research, artistic process versus art object, research questions versus embodied knowledge, intent versus intuition, text versus image, and technology versus the human. These terms require that artist's position themselves in relation to their artistic practice (Borgdorff, Henk 2012, Candy 2006, Jarvis 1998, Leavy 2008, McNiff 1998, Reason and Bradbury 2001, Niedderer, Skains 2018, and Roworth-Stokes 2007, Jarvis 1998).³ This chapter looks at how the effects of contemporary technologies are forcing us to rethink how we find the identities of the human in complex media environments. Phenomena are in constant on-going intra-action with each other, and various subjectivities were produced over the duration of the study. It is impossible to stand outside of one's own practice and position oneself as an outsider looking in. At the *#beginning* lostness was troublesome, it forced me to re-consider the various ways artistic researchers make epistemological claims in the academy. This chapter presents some of that confusion. In the *#beginning* I accepted reflection as a method. It is widely adopted by creative practitioners (Candy 2020), applied in various Doctoral studies (Malins and Gray 1995) and incorporated into various art and design BA(Hons) Degree Courses at Universities in the United Kingdom (Karnitta, Woodcock and Super 2013)). When I tried to apply reflective iterative cycles to my own durational artistic-technological process I got lost. Linda Candy suggests we must expand the current definitions of the creative reflective practitioner to include different types of digital

3 This refers to debates surrounding practice-led research and practicebased research about where the knowledge originates from, for example-is the practice used to 'test' certain hypothesis or is the knowledge inherent in the practice itself? Or is practice a type of action research and/or one of many other methods? As well as the preoccupation with what comes first? Does practice follow a research question? It also relates to how the artistic practice must also be 'documented'. This is noted in **Reflective Practices in Art Education** Burnard and Hennessey (2006).



4 For example action research is used in health research (De Chesnay 2015) and in law (Bhat 2020) and education (Sampson 2020)

figure 45: IMG_2278.jpg

creative practice. Candy identifies digital practice as a tool, mediator or partner (Candy 2020). Attempting to locate where tools, mediation or digital partners started or ended in my own durational artistic-technological process led me to question whether reflective practice merely highlighted sameness. Hill notes how "reflective methods produce static representations of a reality that is assumed to be pre-existing and stable" (Hill 2017:3).

The many terms used to describe the ways practice is positioned in artistic doctoral research investigations hints at the uneasiness and difficulties that come from situating art beside disciplines with much longer histories of knowledge production within the academy. Identifying the implications these terms pose for research is the subject of ongoing debates (Borgdorff 2012) (Butt 2017) (Candy 2006), (Candy and Edmonds 2018) (Haseman 2006) (Piccini 2002), (Sjöberg 2009) (McCleod 2000). The Practice as Research in Performance Project provides examples of practice-based research outlining common understandings between different modes of 'practice'. Dance practitioner Sarah Rubridge suggests practice-as-research is more of an umbrella term (Rubridge 2004: 4-5) describing how artistic research can be conducted as both "Research into Practice" or "through Practice" (Rubridge 2004: 29). At first this might appear to be a simple distinction but when one is practicing and trying to establish where the research begins and the art ends, it becomes more complex. In 'What is it to move a photograph? Artistic tactics for destabilizing and transforming images' the methodological approach allows for both research 'in' and 'through' practice (2015). In Cerezo's framework practice takes the form of action research, as well as artifacts (Cerezo 2015). Action research has different histories, and applications, and it does not always take the form of artistic practice.⁴ Mc Niff suggests "Action research is a name given to a particular way of looking at your practice to check whether it is as you feel it should be" (McNiff 2013). Carr and Kemmis (1986) maintain there are specific conditions that lay the foundations for action research, firstly that a

project's subject-matter is a social practice, or a form of strategic action susceptible of improvement; secondly, if the project moves forward through cycles of planning, acting, observing and reflecting, and each of these activities are systematically and self-critically implemented and interrelated; thirdly if the practitioners involved are widening participation in the project to include others affected, and maintaining collaborative control over the process (Carr and Kemmis 1986: 165-166). What both of these definitions have in common is self-criticality, a way of looking at your practice and applying systems to it. In Cerezo's study reflective practice is employed, and the parameters for initial artistic experimentations set out, and subsequent results and findings described as artistic data (2015). The original aims and parameters, are refined and developed through reflection-on and in action, through iterative cyclical systems (2015). Through further reviews, previous understandings are challenged and new insights emerge (Cerezo, 2015: 13). Cerezo draws from scholar Kim Vincs who makes distinctions between a practice that attempts to answer and explore a number of issues, or practice that works inevitably and deliberately to disrupt or go beyond research questions (Carter et al. 2009).

In Genevieve McGill's artistic research a distinction is made between practice-based and practice-led research, practice-based research is about "employing the conventional methods of art and design practice in the studio or workshop and using them to explore research questions" (McGill 2013). The scholar defines her own approach as research through the development of practice, with an emphasis on what can be communicated to others, so they can build upon her contribution (McGill 2013:7). Another practice-based study puts more emphasis on practice. Practice manifests the research findings. However here the practice must be viewed in conjunction with the written component of the thesis and the practice is purposefully positioned at the front of the thesis (Millett 2013). A practice-as-research strategy is used in 'The screen as a site of division and encounter' which offers up a series of intimate screen-reliant performances, the works are analysed and developed through the use of autoethnographic

a specific intentionality and establishes a key difference between a practitioner-researcher and an 'ordinary' artist (Marchevska 2012: 136). I wonder if scientists use the term ordinary scientist. Marchevska

focused on the process. Research of this kind involves

mentions specific intentionality, this means the reader will be tasked with trusting the researchers intentions. Applying reflection to a practice means we look for proof of that reflection and the systemic iterations and cyclical processes, in the artist's documentation of their practice. Documentation might only allow for a tiny snapshot of that practice. Documentation is then edited and through that process new narratives are formed. Specific aesthetics might be favoured, and patterns formed, so that a practice is seen to fit with and build on an existing community of practice. When it comes to contextualising one's own practice, any community of practice that we might explore has both visible and invisible histories, in any given artistic community some artists exist but might not be visible, or their finished artworks might be well documented but not the process of making them. Whatever has been documented is a version, translated in to another form, a film, an artist's blog, an exhibition or a published in a peer reviewed publication. Whatever is documented and published is more likely to be referenced, selected and seen within and outside the academy⁵. Artistic processes are complex, much of the messiness that

5 This is a subject of books such as Women in Graphic Design, which shows how Women have been written out of Graphic Design histories (Breur and Meer 2012). Guerrila Girls the artist-activist group set up in the nineteen eighties also challenge the dismal representation of women in the art world they highlight how the art historical excludes Women. processual strategies. Artists are selected and reviewed so that work presented in the study can be situated in a specific context of practice which the scholar maintains allows for cumulative, comparative knowledge and a rich theoretical framework (Marchevska 2012: 20). Here the artistic practice is not the sole method in this study but one of many, some of which derive from different disciplines.

My research contributes to the PaR field that is

occurs cannot be documented and therefore remains unseen. particularly in a durational artistic-technological process such as my own. This is not to suggest that any of the studies encountered here are inauthentic, nor am I suggesting that artists cannot be self-critical of their own work, reflect on, or refine the same art object to make something more innovative than an already benchmarked standard. Yet documentation of practice only presents specific snapshots of the historical and cannot always account for, or represent, complex entanglements, moments when technology and humans are enmeshed. How can we apply human-centred approaches to practice if we ourselves are entangled in digital environments. How can we become a type of disembodied critical eye which can rise above its material arrangements and make pronouncements about it (Zylinska 2017). How can we truly understand that we fit within communities of practice if the communities we belong to are not visible and/or if the moments we are truly interested in fitting into are unrepresentable.

digital creative reflective practice

The idea of the reflective practitioner is set around the idea that the creative process happens inside of us, emerges and enters out into the external world which manifests as artefacts, or in the form of taking action to make things happen (Candy 2020: 14). This clear separation between what is inside and outside appears to feature in reflective practice theories and presents a challenge when artists have to document, record, reflect, and write about their own work, as if the work itself is separate from the body, the technology or environment. Linda Candy examines reflective practice in artistic research, and uses a definition of practice-led research similar to how Baz Kershaw defines practice-based research.

I take practice-based research to refer to research through live performance practice, to determine how and what it may be contributing to in the way of new knowledge or insights in fields other than performance (Kershaw, 2002: 132).

Candy claims that practice-led researchers use practice to make contributions to fields outside of the practice itself, and therefore the research project need not include any creative practice, as all new knowledge gained can be described entirely through a written component. Candy argues how in practiceled research the practice becomes a type of "action-research" (Candy 2006: 1) and the practice is employed to "prove or test a theoretical hypothesis" (Candy 2006: 1). The author maintains this is different from practice-based research where the creative artefact itself is the basis of the contribution of knowledge. The art practice assumes different positions in relation to knowledge production, and the artist appears capable of situating their practice in a variety of ways to make it work for their research goals. One could say this implies practice is a tool in a research operation, which can be steered, situated, or used in different ways to prove a hypothesis, or discover answers to specific questions that were formed outside of that practice.

In artistic research, practice is used as a way to collect data, practice can operate as one method among other methods that are taken from different disciplines. The practice is subjected to analysis by the practitioner using reflective practice, these reflections are condensed and communicated through text. Candy (2020) builds on Donald Schön's variations of reflective practice and extends on the original concepts proposed by Schön. A contemporary dimension is added to the digital and it is positioned as having different functions, a tool, a mediator, a medium or partner. *The Creative Reflective Practitioner* emphasizes reflective practice in artistic research and proposes that by focusing our attention in a deliberate way, reflection enhances our ability to break from habitual patterns of thought. It follows that through sharing our experience of creative works, practitioners contribute to reflective thinking more broadly

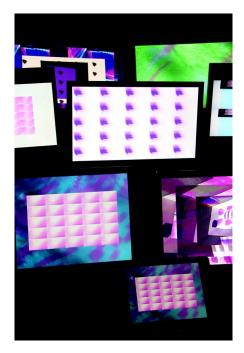


figure 46: IMG_2283.jpg



figure 47: IMG_2283.jpg

(Candy 2020: xiv). According to Kathryn Grushka, "the act of writing about one's own work immediately positions the work as object and an interpretative position is established. The artist is now critical interpreter of her art-making, relative to the world" (Grushka 2005: 361). Candy considers the specific ways digital creative practice might differ from other forms of creative practice. Candy argues digital technology amplifies creative processes and artistic artefacts (Candy 2020:178). The author suggests reflective practice is influenced in different ways, depending on the type of technology and the practitioner's relationship with that technology in practice. Candy acknowledges the immense influence digital technology has on creative practice as a whole but understands it from a human centric position/perspective. Candy proposes creative practitioners view the technologies they use: as tools for making objects, as mediators between thinking and action, as media for making or as partners to interact and perform with. The author offers up case studies for each category, one of which features the artist David Hockney whom Candy places in the category 'digital as a tool'. Hockney uses the ipad to draw. The artist claims that being able to replay his own drawings, through a drawing replay tool on the device allows him to reflect on his art-making in a new way. When asked if looking at his drawing process gave him new insights, he replied that by looking back on the drawing he could improve upon his process "I think I could be more economical" (Hockney cited in Candy 2020: 183). Candy identifies Hockney's experience with the drawing replay tool as an example of how reflection in the moment can be facilitated by seeing an action immediately after it has taken place, and in real time.

Recording the pen movements as they happen, and then replaying the action afterwards, can stimulate reflection, as the artist sees himself drawing and can observe what is happening close to the action, but at arms' length, so to speak. In a sense, he is coming as close to reflection in the making a drawing, a process which usually leaves little room for stopping to reflect in a considered way (Candy 2020: 184).

My own artistic-technological process ensures that I continuously work with screen recordings. Watching my mediated keyboard and mouse movements captured using the screen recording function in Quicktime. Candy believes the replay tool can stimulate reflection as the artist watches a recording of himself drawing as close to the moment as it happens yet these screen recordings only represent a particular mediated version of Hockeny's process. Candy maintains that iteration is essential to Hockney's exploratory and improvisatory way of working. Iteration operates very differently in my own durational artistic-technological process. Iteration is not a honing, or improving on the past, it is a re-versioning, an ongoing renewal, and I am lost between the past and the present. If I watch a mediation of part of my process on screen, I understand that there are hundreds of other relations excluded from that particular representation, and, therefore, looking at that mediation cannot stimulate a reflection because my body was tangled up in the creation of that mediation. Candy suggests digital technologies enable mediation between a practitioner and an environment and she sees mediation as a relationship between two or more parties. Here technology works for the person. Candy explains Hockney's watching back over the technologically mediated part of his drawing process as "reflection in action" but one could argue he is merely watching a recording of the screen. One visual snapshot representation of a complex event. Candy makes the distinction that this is reflection at arms' length. Here there is the inference we are capable of removing ourselves from technological enmeshments. This study emphasises the messiness and complications from working with technology and echoes Zylinksa's suggestion that we cannot merely rise above technology. Instead this study leans towards what is known as critical attention.

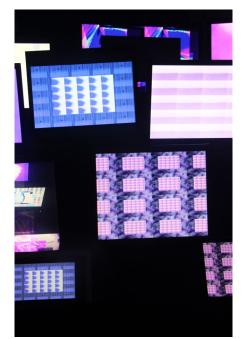


figure 48: IMG_2284.jpg



figure 49: IMG_2291.jpg

Critical attention "[...]transcends human-cantered intentionality by foregrounding the 'entangled state of agencies' at work. In any event, it is a disposition that entails an ethical openness to the world, but also a mindful and corporeal embeddedness in it. In this mode, the view of the situation always comes from within the enfolding of matter (at hand)" (Zylinska 2017: 29)

performative research

Brad Haseman introduces a performative research paradigm to artistic scholarship. The author describes performative research as that which is expressed in nonnumeric data, research that exists in forms other than words. This includes material forms of practice, still and moving images, music and sound, live action or digital code (Haseman 2006).

Certainly, performative research is derived from relativist ontology and celebrates multiple constructed realities. Its plurivocal potential operates through interpretative epistemologies where the knower and the known interact, shape and interpret the other (Haseman 2006: 8).

In a performative paradigm practice is not used to prove a theoretical hypothesis, instead practice performs the hypothesis. Mafé suggests practice-led research methodologies underestimate the significance of epistemological uncertainty (Mafé 2009). Universities place pressure on artists to deliver clear findings and show how art can be understood and integrated into academic research.

It is unavoidable that research has explicit questions. However, even asserting something as simple as that seems to be confrontational to some people from CCI [Cultural and Creative Industries]. It is common that they become uncomfortable when asked to name the central question in their investigation (Balkema and Slager 2004: 157–179).

Mafé suggests this idea of artists' discomfort is displaced and the urge not to answer specific questions indicates something important for creative practice. In Research Methods in Theatre and Performance (Kershaw et al. 2011) note that the main research funding bodies in the United Kingdom require applicants to state the questions and problems solved by their proposed projects. They acknowledge that many artistic researchers encounter hunches or intuitions that spur them on, rather than a research question (2011). Performative researchers progress their studies by employing variations of reflective practice, participant observation, performance ethnography, ethnodrama, biographical/autobiographical/narrative inquiry, and the enquiry cycle from action research (Haseman 2006: 7). In contradistinction Mafé suggests performative research functions as qualitative research in the Academy "When research findings are presented as such utterances, they too perform an action and are most appropriately named Performative Research. It is not qualitative research: it is itself" (Haseman 2009: 6).

Mafé finds flaws in the performative paradigm and argues that practice-led research artwork always needs to be supplemented with discursive exegetical information, therefore the artwork itself does not perform as a self-sufficient research finding performative research (as defined by Haseman) is not performative at all. In actuality practice-led research paradigms emulate other models of research in order to be seen as valuable in the academy (Mafé 2009). A fraught relationship also exists between theory, text and practice (McCleod 2000). In artistic research text might be used to position the researcher's own practice in relation to geographical, historical, cultural, contemporaneous concerns. The written text contextualizes the work so that it allows for an appropriate understanding of the artwork. The text communicates analysis, and is used to critically review art and design in order to contextualize the submitted art practice; and give a precise provenance, which allows for an informed and appropriate reading of it in a context which the researcher they themselves devises (MacLeod 2000). MacLeod examines how far the text can be said to explore, demonstrate or communicate research. The functionality of the text is discussed in relation to theory within practice; the adaptation and renewal of theory through practice and the production of new theories. MacLeod and Lynn Holdridge point to the self-consciousness of the artist researcher as an issue because this is bound into the research inquiry which poses problems as the artists identification might determine its initial critical evaluation (Macleod and Holdridge 2006: 3). Hyper-text forces us to consider how text is linked to other texts, hypermedia can include graphics, video and sound. Documents are image spaces. We access text as image via scanned copies of books on Monoskop, editable PDF's, online publications we view images of on platforms like Locate or Proquest. Text is image; screenshotted, scanned, embedded, cut and copied. Image Objects by Arte Vierkant explored the increasingly fluid boundary between the physical object and the mediated digital image Image Objects consisted of writing, images and sculptures. Each work in the Image Objects series originates as a digital file, which is then printed on aluminium panels and cut to appear three dimensional, when documented the Vierkant alters the documentation in order to new variations which differs from the gallery object pointing to the fact everything is in a fluid state and that any object is capable of becoming another type of object.

95

displacing reflective practice

Karen Barad intends to displace reflection as a dominant model of inquiry. Barad aims to: "disrupt the widespread reliance on an existing optical metaphor - namely reflection - that is set up to look for homologies and analogies between separate entities" (Barad 2007: 88). Barad is concerned with specific material entanglements. Barad's diffraction is situated within what Barad terms agential realist ontology. Agential realist ontology does not assume pre-existing ontological categories, but rather proposes that reality is continuously re/constituted through material entanglements. Agential realist ontology deals with the nature of being and describes a set of concepts and categories in a subject area or domain that shows their properties and relations between them. Diffractive practice positions the researcher within these relations. Joanna Zylinska suggests humanist approaches make the foolish assumption that the human mind has the ability to rise up above "networks of data and images" while simultaneously assessing everyone else's entrapment in them (Zylinska 2017). Instead, Zylinska considers how objects have agency, not just humans, and leans towards new types of sustained engagements with technological processes (Zylinksa 2009). Reflection is a method employed in practice-as-research by artists to help them identify how the production of knowledge emerges through practice over a period of time. In my own attempts at self-situation, I realized I was lost. This disorientation forced me to consider how my own attentiveness related to the digital images' ontology. Rick Dolphijn and Iris van der Tuin state that diffraction is a physical phenomenon that occurs when a number of waves encounter an obstacle upon their path, and/or when these waves overlap themselves (Dolphijn and van der Tuin 2014). In feminist theory, diffraction is often employed figuratively, to denote a more critical and difference-attentive mode of consciousness and thought. Both literary theorist Trinh Minh-ha and feminist science studies scholar Donna Haraway have applied the

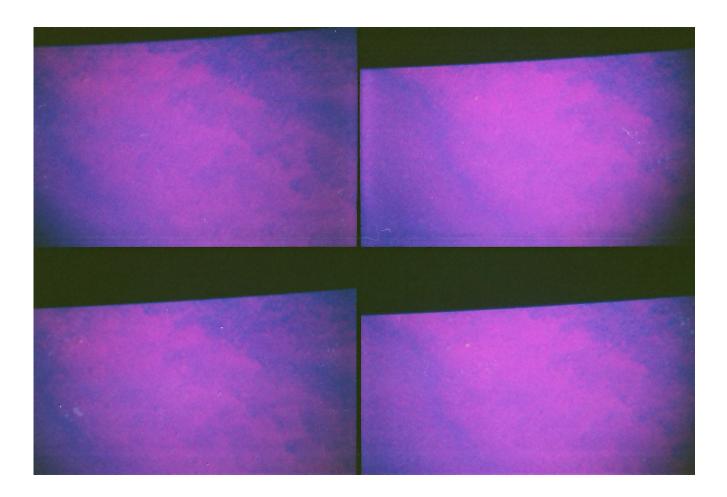


figure 50: r001-007.jpg

metaphor of diffraction in their work in relation to thought, difference(s), and alterity.

In Haraway's The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others (2004) Haraway explains:

Diffraction does not produce "the same" displaced, as reflection and refraction do. Diffraction is a mapping of interference, not of replication, reflection, or reproduction. A diffraction pattern does not map where differences appear, but rather maps where the effects of difference appear (Haraway 2004).

intra-action

Barad proposes that Agency is not an individual property (Barad, 2003: 827). Phenomena represent the inseparability of an object and observations of it.

In summary, the primary ontological units are not "things" but phenomena – dynamic topological reconfigurings/entanglements/relationalities/(re) articulations of the world (Barad, 2003:818).

Barad's reformulation of the terms - "agency" and "realism" provides an understanding of the role of human and nonhuman factors in the production of knowledge. Her theory shifts the thinking and implicates the researcher in the production of knowledge (Barad 2007: 70). In art production, representational analysis detaches the art object from its methods of production. The analysis of art often detaches the analyser from the object. I am continuously re-making digital material. There are no finished art objects, just continuous re-workings. The central idea is that "the thing" "we" research, is enacted in entanglement with "the way" we research it. This is an onto-epistemological offset:

Practices of knowing and being are not isolable; they are mutually implicated. We don't obtain knowledge by standing outside the world; we know because we are of the world. We are part of the world in its differential becoming. The separation of epistemology from ontology is a reverberation of a metaphysics that assumes an inherent difference between human and nonhuman, subject and object, mind and body, matter and discourse (Barad, 2007: 185).

The notion of "ethico-onto-epistem-ology" was first coined by Barad to point at the inseparability of ethics, ontology and epistemology when engaging in knowledge production. Barad's idea is that the world itself and its inhabitants – human and non-human beings intra-actively co-constitute the world (Barad, 2007, p. 90). Barad's work is rooted in and inspired by the work of Jacques Derrida, Emmanuel Levinas and Haraway, as well as feminist science studies traditions that emphasise the need for accountable and just knowledge production. Barad's belief that one cannot but ethically engage with the world has a central place in Barad's theory of agential realism (Barad, 1999/1998, 2003, and 2007).

Agential realism is an epistemological and ontological framework that extends Bohr's insights and takes as its central concerns the nature of materiality, the relationship between the material and the discursive, the nature of "nature" and of "culture" and the relationship between them, the nature of agency, and the effects of boundary, including the nature of exclusions that accompany boundary projects

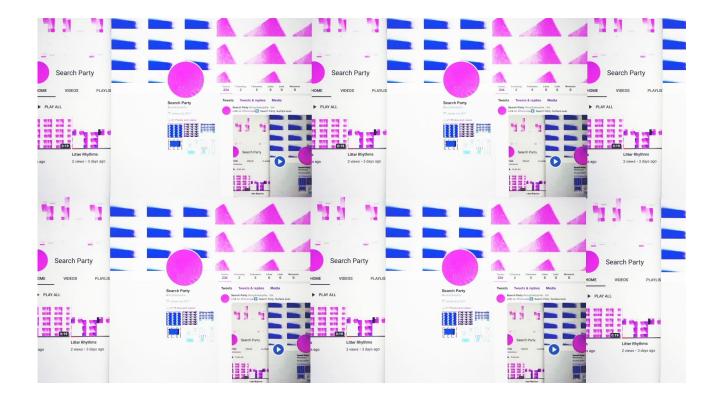


figure 51: search_party.png

Barad's ethico-onto-epistem-ology can be regarded as a type of quantum entanglement that maintains we are part of the world, no longer innocent bystanders. Barad coined the theory agential realism, which reconceptualizes the process by which objects are examined and knowledge is created. Barad argues that agential realism is both an epistemological theory and an ontological theory as it describes how reality is shaped.

representation and new materialism

Media theorist Niall Flynn points out how a lot of newmaterialist theory calls for the outright denial of representation (Flynn 2015). An increasing number of scholars in a variety of fields have begun to re-emphasize the importance of matter in their exploration of the world (Dolphijn and van der Tuin 2014). New materialism has been characterized in part as a reaction to the linguistic turn during the latter years of the twentieth century (Breu 2018). The linguistic turn stands accused of overemphasizing the cultural and semiotic dimensions in how we understand the universe. New materialist theory destabilizes the figure of the subject through a re-emphasis on exploring how matter has the capacity to pose its own questions. Such critique engages a growing concern for embodied modes of agency that exceed the intentions of human subjects (Roberts 2012). Embodied knowledge is discussed by Merleau-Ponty (1945, 1962) who conceived of the body as comprising of two layers: one is the 'habit-body' and the other is the 'body-at-this-moment'. The habit-body, comprises of complex patterns of habit, and responds skilfully to a given situation. In Phenomenology of Perception (1945: 962), Merleau-Ponty explains the habit-body using the example of knowing how to touch type:

To know to touch type is not, then, to know the place

of each letter among the keys, nor even to have acquired a conditioned reflex for each one, which is set in motion by the letter as it comes before our eye... It is knowledge in the hands, which is forthcoming only when bodily effort is made, and cannot be formulated in detachment from that effort (Merleau-Ponty 1962: 144)

I talk about how the habit-body relates to my own artistictechnological process in the section 'Re-making: no beginning no end'. I often navigate through technology automatically without thinking. Habit kicks in when I open and close files, crop and save images, name folders, add keyframes in After Effects, search through presets, drag and drop animation effects on the timeline. I am often not present for minutes at a time, but my body is working as it needs to, automatically navigating around the interfaces of all the various software applications I use. The habit-body in an artistic-technological process is partially responsible for the lostness born out of a durational technological process such as my own. I offer up lostness as a material affect that comes from working with, and being enmeshed in, these socio-technical assemblages. I am lost in layers of representations, algorithmic and networked digital image environments. How can I hope to locate myself in my own image-making environment in order to analyse, explain or argue for my practice? I explore the notion of location by returning. I attempt to return to the same place and start again. I try to return to a beginning, and in that returning, and the multiplicities of re-workings produced through those returnings and re-makings, a proliferation of material emerges and as a result reveals the representational unfixity of machinic, algorithmic temporalities, which cause what a type of lostness to occur. Through re-making, I cannot help but re-order the aesthetics of temporality. These re-workings show layers of representation as partial understandings. In this doctoral project, representation and performativity are intertwined. I align myself with Federica Timeto (2015) who argues that



figure 51: r001-007.jpg

developing performative and material practices does not have to be part of an anti-representational move or act as a refusal of representation.

6 In 1962, Guido Schneeberger published texts which focus on Martin Heidegger and his links to National Socialism during the years 1933-1934. Michael. E. Zimmerman (1974) writes about the ethics of including Heidegger. I found out about Heidegger's politics through a response to an Instagram story I posted a screen shot of Heidegger's writing another artist informed me. There are 132,508 full texts related to Heidegger on the Universities Locate system and 85,586 peer reviewed papers. I reject Heidegger's politics. I reject all forms of anti-Semitism and racism. How can I accept parts of someone's thinking and ignore their politics? I struggled over including or not including Heidegger but I am trying to point my enmeshment in the academic system and my various subjectivities over the course of the study, my own short sightedness. I will never use or quote him again should these texts be destroyed? How do we extrapolate his influence, from the Academy?

An articulation of vision and representations as highly mediatized practices certainly seems more appropriate for performing the articulations of contemporary technospaces, being, and making them in turn, contingently practicable as well as imaginable. In technospaces, the social and the technical, humans and machines, enmesh in reciprocal mediations and assemble in only partially connected formations; thus, they are always open to change. In this respect, technospaces are a privileged field from which to observe the effectivity of performative representations that envisage and re-materialise the creative capacity of sociotechnical assemblages (Timeto 2016 :153 -154).

Niall Flynn notes how a refusal of representation in new materialist thinking is itself a move immanent to representationalism (Flynn 2015). Refusing representation helps set up other binary positions: representation versus performative practices, or representation versus embodied practices. Examining the practice of re-making as constituted as a series of events in my own practice allows me to step away from the idea that images are stable objects, and this study refuses the binary positions set up in digital image ontologies and philosophies.

Martin Heidegger⁶ argues that representation places the thing of contemplation as an object for man to point at and objectify. For Heidegger, representation places a division between man and the world. Man is positioned on the outside looking in and pointing at the world. Heidegger proposes that the world announces itself most closely and mostly as a handy or useful world, as the world of common, average everyday experience (Heidegger 1962: 74). The everyday understanding of a computer mouse is not simply the material substance it is constructed from, the everyday conception of a computer mouse in my own artistic technological practice is a useful and essential thing that enables me to interact with work on the screen. The mouse acquires meaning in relation to and between intra-actions with the computer and my body. Heidegger describes an "Umwelt" or "environment" which consists of the relations between things (Heidegger 1962: 65). The philosopher insists we thrust aside our interpretative tendencies which negate or exclude our lived everyday experience of the world and attend much more closely to that which shows itself and it can show itself through our exploration of it as a 'handy' thing (Heidegger 1962). Heidegger talks about the defamiliarization that can come about when objects are encountered in ways that are unfamiliar to the user. The normative history of using an object is often accepted by the average user. However, removing objects from their usual environments can cause an aesthetic rupture to occur which highlights how our understandings of objects are tied to the particular environments we use them in and we have come to accept them for particular purposes. Artists also demonstrate examples of these ruptures or what Heidegger describes as un-ready-to-hand, evident in the work of artist Peter Puklus. Puklus takes objects and places them in new and unusual contexts and environments. Puklus juxtaposes objects in unusual pairings and arrangements. These arrangements rupture our own predispositions, as we expect phenomena to function in specific environments. The ways in which we merge the concept of their function to the objects aesthetic comes undone. In ILOV-EYOU(2012) Puklus takes a pineapple and places it on a map of the world, sticking candles on each side of the fruit. This arrangement /or new environment that Puklus places the pineapple in, forms a type of discombobulation where the function is displaced from the environment we would normally recognise and/or find this object in and it forces us to encounter this phenomena anew, as

well as de-familiarize the phenomena. Puklus's work highlights how the aesthetic and the functionality of objects relate to each other and are normalized through our habitual encounters with them.

Re-making has resulted in aesthetic ruptures to occur. Re-making displaces the buttons and symbols of the interfaces I use from their function. Thse entangled representations that arise from this process which also relates to Heidegger's notion of concernful dealings

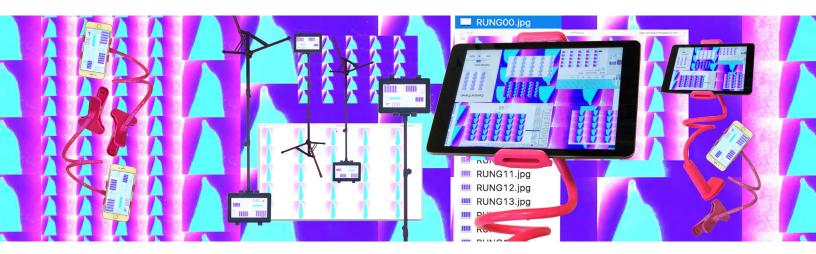
In our concernful dealings, however, we not only come up against unusable things within what is ready-to-hand already, we also find things which are missing which not only are not 'handy' ["handlich"] but are not 'to hand' ["zur Hand"] at all. Again, to miss something in this way amounts to coming across something un-ready-to-hand. When we notice what is un-ready-to-hand, that which is ready-to-hand enters the mode of obtrusiveness The more urgently [J e dringlicher] we need what is missing, and the more authentically it is encountered in its unreadiness? (Heidegger 1962: 74).

Digital aesthetics from the interfaces I work with become entangled, the ways in which the functions of the icons relate to the environment and the aesthetics and metaphors in that digital environment are displaced. Through my artistictechnological process, I bypass the normative functionalities of social networking apps such as Tinder and Twitter. I remake material in these apps which causes the aesthetics from the video feedback loops to entangle with the aesthetics of the interfaces of these applications. As a result, the aesthetics of these apps and how they relate to their functionality are displaced, all that is left is a re-ordering of the aesthetic properties of these interfaces. This draws attention to the ways in which metaphors are embedded in the functionality of these spaces, reminding us that these aesthetics are designed for particular types of encounters. Our handling of these applications is enmeshed with our understanding of the aesthetics and their connection to functionally. Barbara Bolt discusses how new understandings arise through handling, and operate on a different register from those belonging in a representational paradigm (Bolt 2004). Bolt argues that through practice, shifts occur from representation as a mode of thought, to representation as bodies in process (Bolt 2004). Bolt draws from Heidegger's idea that the world is full of handy things that hang together as a whole, which are meaningful and relate to each other. Heidegger establishes that the human is completely immersed in the world, suggesting our lived experience is overlooked by scientific inquiry because it presupposes a binary, and that being is the distinction between mind and reality.

In the article 'Visualization and Social Reproduction', the French philosopher Bruno Latour discusses representation (Latour 1988:15), describing two very different regimes of representation. The first regime relates to early Christian and medieval understandings. Here re-presentation means presented anew, as if for the first time. He equates the second regime with Cartesian understandings, where representation stands in place of an absent object. In the first regime, there is a feeling that representation is the thing itself. The second regime proposes a gap exists between the thing and its representation. In our society it is the standing in for that has come to dominate our understanding of what representation means. I experience both regimes the standing in for and the re-presenting anew. I am constantly confronted with different regimes of meaning in relation to thought, theory, writing, making and moving. In my own artistic-technological practice, I am negotiating between many modes of knowledge.



L~O~S~T~N~E~S~S



introduction

A common theme in philosophical discussions pertaining to the nature of the digital image is how digitalisation has had a huge influence on the concept of medium and the circulation of art. Peter Osborne and Boris Groys discuss how these changes pose possible and/or perceived threats to the ways in which we assign value to all art objects made postdigitalisation. Boris Groys discusses what he defines as the event of visualization in relation to the digitalisation of images (Groys 2008). Groys proposes curators hold a more powerful position because digitalisation has eradicated the value of the artist's process, given that much of the artist's labour is automated. After digitalisation occurred, more value was given to the curator and what Groys defines as the event of visualisation (Groys 2008) whereby the unveiling of digital images must be done by a gatekeeper of the museum. Events of visualisation attempt to make each unveiling of digital images in the museum, unique moments, otherwise digital art would decrease the value of all art objects. Groys believes this affords more power to curators because it is they who turn the invisible data into the visible image. Groys is trying to draw attention to the ways in which digitalisation has not eradicated the hierarchies in the art economy, just shifted them. Attempting to locate where events of visualisation happen in my own process allows me to trouble some of the binary positions perpetuated in philosophies pertaining to the digital image.

Peter Osborne builds on Groys' notion of the event of visualisation by introducing the event of capture (Osborne 2010). The concept of the event of capture examines at what point, an image becomes an image post-digitalisation, and speaks to the effects digitalisation has on relations of exchange. Osborne argues that the attachment of the anxiety of the real to digital photography is misplaced.

> This anxiety appears irrational which is, of course, no more than to acknowledge it as an anxiety: a free-floating anxiousness about the real that has 'latched on' to digital photography as a cultural site in which to invest, because of the social importance but current uncertainty about the various documentary functions of photography. The basic source of such anxiety has nothing to do with photography itself. Rather, I would speculate, it has to do with the nature of the abstraction of social relations characteristic of societies based on relations of exchange; and, in particular, the relationship between social form and the value form (in Marx's sense) - that peculiar sense in which, in the parlance of current journalistic

commentary, the most decisive sectors of the capitalist economy, associated with finance capital, are not 'real' in relation to photography, given that digital images need not always be the result of photographic captures (Osborne 2010: 64).

Over the coming sections I examine both the event of visualisation, and the event of capture in relation to my own practice. I do this because my artistic-technological process allows me to think about the difficulties of locating these events in a durational artistictechnological process.

event of visualization

Groys proposes each time an image file is turned from binary code into an image it is an original occurrence (Groys 2008). The author establishes two sides to the digital image, the image file as data an invisible phenomenon, and the event of visualization the visible; when the image has been visualized. Groys proposes the digital image obliterates time, which gives curators the opportunity to become performers of the digital image. Curators act on behalf of museums and institutions, unveiling the visual to the audience for the first time, revealing the previously hidden binary data in its visual form. Groys proposes that while digital images were first thought to be an escape from the museum, they have now become part of the museum system – resulting in a new type of confinement. Yet digital images are

"strong" because they can be shown without institutional context, and according to their own nature. The original data of the image is invisible, therefore each time one sees a digital image it is being "performed" [...] "the digital image is a copy-but the event of its visualization is an original event" (Groys 2008

visualization is an original event" (Groys 2008: 84). Yet "the digital copy is a copy that has no visible original" (Groys 2008: 84). Groys is focused on the effect digitalization is having on relations of circulation in the art market and the ways in which hierarchies have shifted due to the perceived effects digitalisation has had on the material value of artworks. The curation, selection and unveiling of the events of visualization are necessary because they add an importance and formality to a substance that is free and ubiquitous – binary code.

Groys maintains that the curator rises to a point of great historical importance, for "the curator does not simply show an image that was originally there but not seen..." instead the curator "turns the invisible into the visible" (Groys 2008: 84). This in part implies that data is neat, an invisible entity located "behind" the "digital image" (Groys 2008: 84). Groys draws on examples from religious iconography and refers to the million different representations that exist of Jesus Christ. Christ as a religious icon is the opposite of a "strong image" or stable representation. The proliferation of appearances, (the many different versions of this iconic imagery), stand in place of Jesus Christ the invisible higher power. John Lechte a philosopher who writes extensively on the subject of the image, also compares the nature of digital images with holy iconic imagery-arguing how the multiplication of appearances - the essence, the holiness and the untouchability, of Christ's Iconicity is similar to the invisible data of the digital image file (Lechte 2013). As well as the distinctions between the 'digital image' and the 'digital image file' he establishes binaries such as weak versus strong images, free versus confined, copy versus original, invisible versus visible. Groys believes that the image data is the invisible strength 'behind' or 'inside' the visible digital image (Groys 2008: 84).

event of capture

Peter Osborne expands on Groys' idea and proposes the event of visualization is obscured by another event; the "event of capture" (Osborne 2010: 60). Osborne argues that the act of digital photographic capture is the moment when the light captured is translated to the sensor and converted to binary code, this occurs during the event of taking a digital photographic image (Osborne 2010: 63). The production of, or visualization of a digital image, need not necessarily be related to an act of photographic capture, this is because there are other ways to make digital images. Osborne argues that the very distinctiveness of the digital image lies in its potential to become an, "infinite multiplication of visualizations" (Osborne 2010: 60). For

example, a digital image file could be created entirely using Adobe Photoshop as opposed to captured by a photographic device or camera. This means that a digital image need not have come through the use of a DSLR camera. Osborne adds to the discussion of the event of visualization with the addition of the event of capture, the digitalization of the act of photographic capture, and what this means for photography and art on a larger scale. Many types of images are used in my own process using a DSLR, an iPhone, or screen-shots, 35mm in a film camera, developed and scanned in Adobe Photoshop. Osborne talks about what the event of capture means post-digitization. The photographic act of capture is the translation of the distribution of the intensities of light on the sensor into the binary code of the data file, and the event of visualization is the digital production of an image from a data file – the 'digital image'. Osborne points out that these two processes need not necessarily be connected, since the data from which a digital image is produced, need not necessarily be a result of a photographic act of capture. The digital image is not always photographic in nature. It is hard/impossible to establish whether an image is a result of a photographic capture or it has been digitally created. It is the disjunction between these two events that raises the possibility that manipulation or transformation of 'photographic' data, might have taken place. This according to Osborne generates ontological concern - anxiety - about the "no longer indexical" character of digital

photographs. The digitalization of the act of photographic capture retains both the causal and deictic aspects of photographic indexicality – and hence its crucial function of grounding reproducibility (Osborne 2010: 63).

Walter Benjamin proposed that the key to the icon was not resemblance but reproducibility, grounded in its means of reproduction (Benjamin 1968: 217-252). Both Groys and Osborne make reference to Benjamin who proposes that traditional artwork loses its aura when it is transported from its original place to an exhibition space, or when it is copied (Benjamin 1936: 22). Groys suggests the loss of the aura is especially significant in the case of the visualization of the digital image file. If a traditional "analog" original is moved from one place to another, it still remains part of the same space, the same topography, the same visible world. But this is not the same for the digital original (Groys 2008: 84). The file of digital data—is moved from a space of invisibility, from the status of "non-image" to the space of visibility. This implies traditional photographs are part of a visual world. Groys implies that digital images operate outside this visual world residing in a place of invisibility. A place inaccessible to many.

ontological anxiety

Osborne understands the ontological anxiety about the real, generated by the digital photograph, to be misplaced. Instead

the author suggests this anxiety relates to the lack of continuation between the two stages of the photographic process. This separation is also a feature of traditional chemical photography, the disjunction between the negative and the print - means both digital files and photographic negatives are both open to manipulation (Osborne 2010). In relation to photography, digitalization places traditional photography within the generic field of the digital image. This generically digital-based field is the closest thing there is to a material medium of the generic concept of 'art', which Osborne feels is characteristic of the postconceptual artistic field. The author argues that the a new unity exists within the field of contemporary art. In contradistinction to popular belief the digitally mediated representation of art works, does not equate to a type of 'dematerialization'.

> Digital imagery, one might say, plays the role projected for language – but which language could not play – within analytical conceptual art. This is not a 'dematerialization' of art (or photography), however – always a misunderstanding of art's conceptual character – but a materially specific medium of generation of an in-principleinfinite field of visualizations (the data file) (Osborne 2010: 66).

If there is a meaningful site of

'dematerialization' it does not lie in the data file, nor in the conceptual dimension of the work, which is actually always tied to specific materializations but it lies in the image itself not the data according to Osborne (Osborne 2010). This binary used by both Osborne and Groys, between the invisible and visible parts of the digital image is difficult to understand, because data is relational there is no such thing as raw data (Gitelman 2013). Groys is specifically talking about the curator as performer and situates his ideas in the context of a traditional exhibition, the influence digitization has had on curation is an interesting thing to consider. The digitalartist as curator is commonplace, as new relationships develop between galleries' online and offline spaces. Audience's reposition work from inside the gallery to their own network of friends through social networks and apps. The networked digital image unsettles boundaries between the curator, artist and audience. Christiane Paul notes:

> When Internet art officially came into being with the advent of the WWW in the early 1990s, it immediately inspired a variety of dreams about the future of artistic and curatorial practice, among them the dream of a more or less radical reconfiguration of traditional models and 'spaces' for accessing art (Paul 2006: 1).

Groys sets up binary positions in relation to the digital image. The messiness and potential

subjectivities that come about from digital artistic-technological processes and the subsequent affect this has on how we factor in the time of the artistic labourer and its relationship to the attention economy which I discuss in detail further on in this chapter. The inclusion of situated knowledge of practitioners working in socio-technological environments is absent from more general meta-narratives that relate to digital ontologies. The in-betweens, nuances, relations and messiness understood, from working with digital images and data, make "the event of visualization" an interesting concept to reconsider (Groys 2008: 85). Groys argues that digital art changes artistic labour (Groys 2008: 88).

> This explains the traditional superiority of the consumer, the viewer, the collector over the artist-craftsperson as a supplier of paintings and sculptures which had to be produced through arduous physical labour (Groys 2008: 88)

Both Groys and Osborne are talking about the effect digitization has had on art and subsequently on the hierarchies of exchange and exchange value. Osborne thinks about relations more than Groys yet both fail to give much weight or inclusion to the effect digitization is having on artistic labour. For example if artists' labour was 'seen' what are the subsequent implications? Artistic

technological processes produce a messy kind of labour, a messy in-between that cannot be easily accounted for. Digital artists spend large amounts of time working in complex, entangled digital environments. There are ethical issues in relation to durational digital engagements. We are losing our ability to manage privacy online, our personal data is constantly mined and shared to third parties without our knowledge. I am the price of the free software I use on my machine. Lostness is the lost time between machine times, the lost attention given to the technological interruptions that occur from working between asynchronous time, and clock time. It is the loss of boundaries between the space one works in and lives in. The loss of beginnings and endings, the loss of privacy and our right to be forgotten, the loss of medium. Soshanna Zuboff writes more about our entanglements online, on the topic of surveillance capitalism argues, "all aspects of human experience are claimed as raw-material supplies and targeted for rendering into behavioural data" (Zuboff 2019:44). The mechanisms of surveillance capitalism are designed to operate outside the awareness of the data subject - to be done surreptitiously, to be surrounded by deceit and obfuscation. Behavioural surplus data is data that goes beyond an online product and service usage. It is information taken from behavioural patterns online. This can include information related to location, age, profession, lifestyle, habits, and a range of personal and professional preferences. Many companies have the ability to track our actions online, take this information and use it to predict

other potential behaviours. This information is sold to sell people products by establishing customer profiles. The data trails, the traces of our actions online, are left behind. The behavioural surplus that I expend through engaging in my own artistic practice with the use of apps and social media platforms is extraordinarily valuable material (Zuboff 2019). The more engaged I am online, the more companies know about me, and the more they know, the more they can predict my behaviour. My body, in practice, is the site of raw material extraction, and companies can extract profit from that information. The behavioural surplus from my artistictechnological process has the potential to be re-used by companies without my consent, and this threatens the ethics of my practice.

Internet geographer Mark Graham argues that it is a total misnomer to separate notions of online and offline spaces, and futile to think there are specific places we can transport ourselves to online. The idea that 'online' is an ontologically sound place is also disputed by Kat Braybrooke and Tim Jordan who note there are a "myriad of hybrid ways that digital experiences intersect with lived practices" (Braybrooke 2017, Jordan 2016). I am interested in how these digital experiences intersect artistic practice and how Lostness is born out of these entanglements between machine time, body time and networked time. Sticking to a dualistic offline/online worldview can depoliticise and hide the very real and uneven power relationships between different

people implicated in these networked spaces (Braybrooke 2017). When we allow for the fact there is no boundary or demarcation between online and physical space, then we can begin to think how our bodies and our own lived temporalities intersect with the aesthetics of the temporalities within artistic-technological processes. Graham argues we are never simply 'online' or 'offline'. Any time we use digital tools and technologies we are augmenting our world with data or algorithms (Graham 2017), technologies mediate our activities and our data is extracted from behaviours and actions online and off (Zuboff 2019).

visible copies

In the essay 'In defense of the poor image' Hito Steyerl the artist and media theorist discusses another aspect of the digital copy, which Steyerl calls the poor image (Steyerl 2009).

> The poor image is a rag or a rip; an AVI or a JPEG, a lumpen proletarian in the class society of appearances, ranked and valued according to its resolution. The poor image has been uploaded, downloaded, shared, reformatted, and reedited. It transforms quality into accessibility, exhibition value into cult value, films into clips, contemplation into distraction. The image is liberated from the vaults of cinemas and archives and thrust into digital uncertainty, at the expense of its

own substance. The poor image tends towards abstraction: it is a visual idea in its very becoming (Steyerl 2009: para 3).

Steverl describes the poor image as "an illicit fifth-generation bastard of an original image with an untrustworthy genealogy" (Steyerl 2009: para 3). Steyerl uses the binary of "original" and "copy" in relation to digital images. Sites like 123 movies or Putlocker contain illegal copies of films. These uploads are usually poor quality low-resolution versions of more high resolution films. Many digital copies are poorly compressed files. Steyerl points to the politics behind these exchange relations, and the influence social relations have on images. Steyerl is talking about image resolution, which refers to the number of pixels and density of those pixels in an image. The resolution of images is related to the ways in which they are shared online. Whether images are shared by institutions, or illegally, on torrent sites, or peer to peer platforms. There are various copies of images with different compression rates, circulating online. Taking cinema as an example, in commercial cinemas we are sold time-limited access, or pay per view for high definition screenings of films, yet more affordable copies, illegal bootlegs of these films exist elsewhere "derivatives of the same images circulate as DVDs, on broadcast television, or online as poor images" (Steyerl 2017: 33).

Poor images are poor because they are heavily compressed and travel quickly. They lose matter and gain speed. But they also express a condition of dematerialization, shared not only with the legacy of conceptual art but above all with contemporary modes of semiotic production (Steyerl 2017: 41).

It could be argued that part of the reason illegal copies of art and experimental films occurred was due to state cinema and free public access to archives being dismantled by the state. Peer to peer sharing of low-resolution copies is one way of bypassing the state systems of control. That is not to say that the circulation of artist's films for free is necessarily beneficial to artists. However, with the dismantling of public access to experimental film, the illegal circulation of low resolution or poor images means that potentially, people from lower socio-economic backgrounds might have access to more specialized forms of film. Steverl also notes that "poor images" are essentially dematerialized images that have lost matter due to compression. This depends on how you understand dematerialization and matter, and where the measurement of that matter begins and ends, because matter is relational. The film's full material potential is not solely contained within the data file or the compressed image file. These films are part of larger systems and entanglements that operate on many levels. A low-resolution avant-garde film still symbolizes a break from the normative/popular film means of

production. The visibility of alternative film practices, reminds us that other narratives exist outside of the norm, that alternative filmmaking economies are possible and a discourse can exists regardless of whether the material is lowresolution or not, it matters. Evidently once files are compressed they might take up less space on a computer, however, these poor images can still have significant material affects. As such one could argue that "matter" should not be measured by file size. Downloading copyright protected materials from peer-to-peer torrent sites is illegal, there are potential material consequences for anyone who downloads "poor images" from certain sites, so in one respect the act of obtaining these poor images could be conceived as a political act of anarchy.

artistic labour

Groys talks about artistic labour in relation to the ways digitalisation has brought about changes to artistic production. He discusses the ways in which digital cameras produce moving images, as well as record and distribute those images, without the artist having to spend time doing so. The author proposes this reduces the artistic labour involved in artistic production (Groys 2008). Groys notes how traditionally artists spent much more time creating artworks, this meant the spectator occupied a place of privilege in relation to the artist and the artwork, because the viewer was time rich and by contrast the artist was time poor... "the viewer was then allowed to consume this work without effort and with one glance" (Groys 2008: 88). This explained the traditional superiority of the consumercollector over the artist-craftsperson. The artist traditionally produced paintings and sculptures through arduous physical labor, but the relationship between the artist and spectator changed with the introduction of photography and the readymade technique. For the first time the artist was placed at the same level of the viewer in terms of temporal economy. Groys lists a plethora of ways digitalized images might potentially be shown or screened, for example, played on a video recorder, projected on a screen, broadcast on a television, or sat within the context of a video installation. on the monitor of a computer, or cell phone. The author argues the abundance of "ways of viewing" is another core characteristic of digitalization-its ability to reproduce, circulate and distribute "itself freely" on all of these technological accessories (Groys 2008: 86). Human relations are missing from these concepts, the labour involved in transferring, showing, screening, broadcasting, or live streaming on these apparatuses - the time, the attention and the skill are excluded from these events. Capturing an image is a complex process and the particularities vary when a picture is taken on a DSLR camera the light sensor records the light from the event of capture as code on the sensor. The memory card needs to be taken from the camera and transferred to a computer, or sent over wifi, or shared via Bluetooth. Prior to that if the picture was opened in the camera viewfinder is this an event of visualization?

117

Can an event of visualization happen if there is no audience? If a curator views the image prior to the exhibition is this a pre-event of visualization? And how does the curator know what images they would like to perform without trusting that there is some correlation between copies of digital files? RAW camera files are transferred from camera to desktop, re-saved as JPGs and PSD files: what do these acts count for? In practice I perform images in new contexts frantically, in my everyday artistic-technological process opening and exporting, transferring, attaching, passing, uploading, saving. The connection between digital images and interfaces is not discussed by Groys, it is almost as if data files have no connection to interfaces, memory cards, HDMI cables, no outings prior to the curators first performance of the event of visualization for a public audience. Groys considers 'visual' aspects of the image and the 'invisible' aspects of the image. It is unclear what relationship the image file icon on the computer desktop for example has to the invisible data 'behind' the image. Digital image data files can be hacked, glitched and are manipulated so where does the 'invisibility' start and end? The terminal port on our computers?

Osborne talks about the de-realized image noting how the digital image contains the potential for an infinite number of derealizations and re-realizations to occur which he claims abstracts the value of the image in the art economy. Osborne is not talking about how the value of the digital image itself (or what it represents) deteriorates after being infinitely copied, instead he refers to how in principle, there is no way of attaching value to the means of production because it is hard connect or trust the way a digital image was produced to the digital image. Osborne argues that this distrust and abstraction of value comes from the lack of visual 'resemblance' between the digital data and the printed form of the image it generates (Osborne 2010). In some respects Osborne agrees with Groys that it makes sense to talk of a digitally produced image as some kind of 'copy' of the data out of which it is made - a visible copy of an invisible original, since it is the digital data that plays the role of the original here, rather than the situation or event that is depicted, because this is a more distant, visual shadowy source (Osborne 2010). But what if events in practice are not mere distant shadowy sources, not visible copies of invisible data? Osborne goes on to say that the role of the negative is to act as the mediator between the act of photographic capture and the print. The contiguity of these two processes is ruptured by the ontological peculiarity, or self-sufficiency, of digitalized data. (Osborne 2010) But we must remember that data is not self-sufficient.

In 'Digital Ontologies: The Ideality of Form in/ and Code Storage-or-Can Graphesis Challenge Mathesis?' visual theorist Johanna Drucker writes how the digital image is (popularly and fundamentally) conceived as a truth of another kind. One that is premised on a deep conviction about the relations of reason and truth, a rational link between mathematics and form, in which the identity of a mathematical formula is supposed to

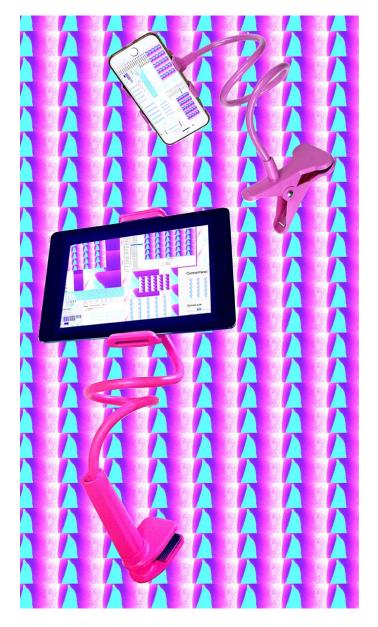


figure 52: RUNG_WEB.jpg

exist as an indisputable truth. This relates to a belief that mathematical code storage is equal to itself, based on identity, irrespective of material embodiment (Drucker 2007). Osborne implies that the core difference between the photographic negative and corresponding image, and digital data and the corresponding image, is that digital data has the potential to produce an infinite numbers of forms. Osborne, like Groys, puts the emphasis on the data as the original, the starting place, because for Osborne it has a less shadowy past than the event the data represents (Osborne 2010). Opening and closing images is a repetitive and commonplace act. That is not to say that opening and closing digital image files is not a very important part of a digital artistic practice, or an artistictechnological practice. However locating where events of visualizations start and finish in a digital practice is difficult. Visualizations are part of the flow of practice that comes from working towards realizing ideas, but ideas are both visual and felt and working in a digital process means you are constantly interacting with non-human phenomena, mediating your movements.

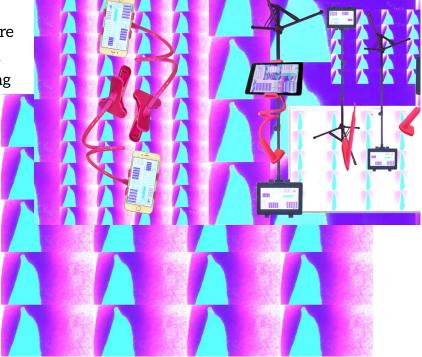
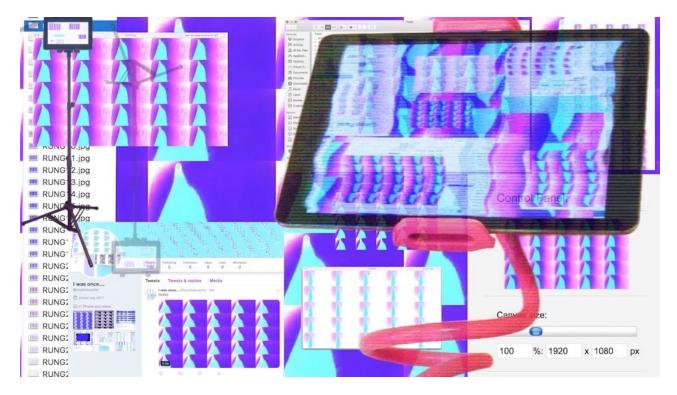


figure 53: hyperhyper.jpg





POST-CINEMA POTENTIALITY

(...) our relationships to the world change when we can touch things that can't touch us back (Paulsen 2017: 6)

introduction

The aesthetics of temporality refers to the ways in which we associate the aesthetics of time to different mediums. Laura Mulvey argues that however historical the moving image might be, it is bound into an order of continuity and pattern, literally unfolding into an aesthetic structure that (almost always) has a temporal dynamic imposed on it. Mulvey sees film as durational whereas photography is instant by nature. The temporal order of film is placed in direct opposition to that of photography (Barthes 1982, Neale 1985, Shapley 2011, Wollen 1984). Wollen argues that, "the aesthetic discussion of photography is dominated by the concept of time. Photographs appear as devices for stopping time and preserving fragments of the past, like flies in amber" (Wollen 1984: 108). Traditionally photographs were seen as objects that stopped time. These notions have been disrupted and complicated by technologies influence on our relationship to time, media, and the networked image. The transition from analogue to digital in both film and photography brought about new discussions regarding filmic and photographic time and their aesthetics. New graphical interfaces disrupted the spaces between these mediums. As discussed in Reevent digitalisation meant artistic mediums were seemingly reduced to a baseline: binary

code, and a type of dematerialization was perceived to have taken place. The adoption of digital technologies by artists disturbed the traditional temporal distinctions relating to mediums. Digital technology replicated the functions of physical tools - re-creating and replicating the aesthetics of traditional art instruments and materials. Artistic distribution models were completely redefined, this also changed the reception and exhibition of film and photography. The more images became networked and interconnected, the harder it was to place and locate aesthetic references in relation to specific mediums. Even in contemporary discussions pertaining to the post-medium condition, scholars still insist on historical ideas in relation to the aesthetics of time in film and photography. Binaries like stillness (commonly associated with photography) and movement (commonly associated with film) are perceived as being inherent qualities of photography and film respectfully.

currency of attention

Medium has always been discussed in relation to time-and what amount of time as viewers-we expect to part with in order to experience it. This relates to the currency of attention – how long we are willing to sit with an artwork. The aesthetics of temporality in relation to film, photography and movingimage are explored by (Fowler 2013, Groys 2008, Koch 1974, Mulvey 2007, Shapley 2011, Wollen 1984). Pre-digitization, certain traits and characteristics were more commonly associated with specific mediums and expected to relate to time in certain ways. Roland Barthes famously said in relation to cinema... "I don't have time" because for Barthes cinema lacked pensiveness. "I don't have time in front of the screen, I am not free to shut my eyes; otherwise, opening them again, I would not discover the same image (Barthes 1981:81). Peter Wollen suggests photography is like a point - film like a line (Wollen: 76) and Greg Shapley asks what happens to the references within the post-media landscape (Wollen 2011). Shapley suggests the body of the photograph can easily be subsumed in the post-media colossus, but the soul of the photograph lives on. Shapley finds the soul of the photograph in other formats like video (Shapley 2011). Fowler discusses time as it relates to medium and the aesthetic interplays that might occur between cinematic time, photographic time and real time. An overarching theme from Fowler and Shapley is how mediums relate to aesthetic signifiers, and how as a result of digitization, these aesthetic signifiers have become loosefree and detached from their referents. This binary between photographic time and filmic time is a common way of distinguishing between mediums, post-medium. These traits

are discussed as oppositions. It is clear that stillness is considered or remembered as part of the inherent nature of photography whereas movement belongs to film.

The artists David Claerbout, Tacita Dean, John Cale, Andy Warhol, Anri Sala, Bill Viola, Yoko Ono and Dan Graham are known for playing with viewers' expectations of time as it relates to medium. This in turn has an effect on the viewers' attentiveness. Shapely(2011), Fowler(2013) and David Green(2004) speak about this relationship between stillness, movement and attentiveness. Stillness, depending on where it is located in an artwork, has the power to test the viewers' patience, attentiveness. or time (Fowler 2014). David Green writes how David Claerbout's piece Ruurlo, Bocurloschweg (1997) takes place in a space of "undecidability" and writes how the work is like a photograph that unfolds in time (but is not a film), and a film that is stilled in time (but is not a photograph) (Green 2004: 42). The characteristics of stillness and movement are also discussed in relation to viewers' attentiveness. My own attentiveness is split in practice, lost somewhere between the multipletemporalities that occur in my working environment and the aesthetics as they relate to different histories of film, photography and artists' moving-image practices. Time as it relates to attentiveness in these discussions is often divided into categories such as photographic time, filmic time or real time. The viewer's time tends to manifest in these discussions as a homogenous category, and the

artist's time and their relationship to the artistictechnological process is not always included. Shapley argues that stillness and permanency are core characteristics of photography and a key feature of the photograph is "its continued existence" (Shapley 2011). The photograph is described by Shapley as motionless and the films that Shapley discusses are understood by their capacity to present photography's core traits in another format. Shapley discusses movies that play with our expectations of the medium. The author describes how expectations might be ruptured with movies that minimize movement, in a format that usually demand action, photos that go on for hours, or movies that exist in single moments, like a photograph (Shapley 2011: 6). Shapley also finds the photographic soul in films capable of feigning stillness within the formats intense motion (Shapley 2011: 9). Artists play with the aesthetics of time based on our expectations of how mediums behave aesthetically and rhythmically. New juxtapositions are created between photographs "stilled in time" versus the usual films that unfold (Green 2004: 42). Shapley claims that the photographic soul lives in-between places of stillness and movement. Shapley divides mediums in to different timeframes in order to locate the soul of the photograph. Shapley locates photographic imagery between the films stillness, mixed with the 'raw media' he argues that this creates an experience where one's mind jolts back and forth between evidence of media (grain, scratch, dust etc.) and what he defines as near-static imagery (Shapley 2011). Shapley argues here, there are two, conflicting time frames occurring concurrently: the stillness

of the intended imagery whose changes can be measured in hours, and the erratic fervour of the media, whose changes are measurable up to eighteen times per second (Shapley 2011). Therefore, the soul of the photograph is located in a type of transcendence, which arises from the clash of these rhythms. Shapley sees media, matter and image as separate phenomena.

In my own process it is impossible to separate media, matter and image because they are all entangled and I am entangled in them.

Shapley also discusses beginnings and endings, and focuses on the seamless looping in Robert Wilson's Video Portraits. The author finds contrasts between the motionless photographic and the banal filmic, there is no discernible beginning or ending to these pieces which he defines as a type of "endless framed work of art" (Shapley 2011: 14). This lack of a beginning and an ending creates a type of permanency which Shapley deems similar to the way we encounter photographs. The looped video endures, and boundaries are lost in the continuation of the loop. A counter argument is, accessing Wilson's video portrait on YouTube would disrupt that permanency whereby one has the power to stop the loop or the loop is looping and it gets interrupted by advertisements.

In Boredom and Danger Dick Higgins examines the cognitive boundaries dividing self and work, or work and surroundings and how these might temporarily, fade out, or be displaced (Friedman 1998). It is, in other words, an attempt to formulate the possibility of getting 'lost', he argues that immersion renders the Cartesian divide between subject and object as uncertain or shifting and deframes the subject's 'outlook' on to the world (Friedman 1998). The Fluxus artists reversed previous understandings of time in relation to moving image and photography. These artists used the moving image to evoke the still within movement by employing a sparseness that disorientated the viewer. This went against previous understandings of how these mediums operated in relation to aesthetic signifiers and visual resolution (Shapley 2011:7). John Cale's work Police Car(1966) is described by Shapley as reductive, simplistic and with a lack of narrative and structural devices. Together these characteristics manifest stasis and a type of movement that barely moves is found in Yoko Ono's work Eyeblink (1966) which has the ability of feigning stillness. In the previous paragraphs I have explored various notions of how time is thought to operate in relation to medium and viewers expectations of medium.

I cannot find stillness. I sometimes feelstillness. Photographs and videos work insideme, they sit momentarily. Frantic timeframesbegin, software ends, interface begins. Scrolling endless rhythms, encounters with them, strangely unique events.

post-cinema

Catherine Fowler explores the notion of post-cinema potentiality in relation to work by artists David Claerbout, Tacitca Dean and Anri Sala. Fowler argues potentiality within these artworks is constituted in various ways. Post-cinema-potentiality might make us look for something where there is seemingly nothing, or looking for that which is not entirely present. Post-cinema potentiality takes place in between representations of natural time and filmic time, composition is sued to obscure what we might expect to see with what we think we see, what we actually with what we expect to see. It takes place in states of becoming on film and it occurs through the creation of visual conundrums as well as in filmed disappearances in progress (Fowler 2013). I am interested in how Fowler uses the notion of post-cinema potentiality as a way to explore the various aesthetics of time and their juxtapositions. I continuously visualize and capture images in my artistic-technological process potentiality is not only related to the invisibility of the digital data "hidden behind the screen" but exists somewhere in-between. representation and embodiment, and I get lost trying to find exactly where that is.

potentiality

Fowler draws from Giorgio Agamben's theories on potentiality and Mary Ann Doane's analysis of 'cinematic time'. When cinema was first invented it was a completely new phenomenon, therefore no matter what was captured and recorded in cinema was unique, the subject matter was interesting because it had never been mediated before. Mary Ann Doane points out that cinema risked becoming meaningless, as a way to counteract this, cinematic time emerged. Cinematic time related to the cinematic 'event'. This essentially meant 'real' time happenings gradually evacuated from cinema screens and were replaced by something expected (an event), intended (the director or cameraperson's framing and editing), or feared (anticipation and suspense set up by the former two elements) (Doane 2002). This way of measuring how close to reality film was, relates to the age-old debate of whether traditional cinema, or photography were forever altered once they moved from a photochemical medium to a computational medium (Davies 2011).

Doane argued how the implementation of 'the event' was a key part of what made cinematic time unique from early cinematic actualities, which were thought to denote segments of 'real life' filmed in real time' (Doane 2002). Events were introduced into cinema through the use of film language, which Doane categorizes as 'cinematic time'. Early actualities by the Lumière brothers showed 'real', everyday events; such as people eating, working, and walking. These "attractions" became commonplace, then the "medium" was faced with the problem of "endowing the singular with significance"; and to counteract this problem it did so by manufacturing events. Fowler proposes that Dean, Claerbout and Sala's work, might well be compared to early cinematic actualities given that they use real time, but are actually examples of what Fowler defines as postcinematic potentiality. The author denotes 'potentiality' as a way of designating shifts in 'imageness', which follow on from the transition from analogue moving-image through to its electronic digital transformation (Fowler 2013: 65). Much of what Fowler discusses within these artworks are aesthetic interplays between representations of real time and cinematic time, within histories of cinema, photography and film. Fowler argues it is in the capacity for these works not to pass into actuality that classify them as examples of post-cinema potentiality (Fowler 2013). Fowler refers to the ways in which these works contain elements of natural time juxtaposed with other temporal aesthetics. Post-cinema potentiality takes place in the un-decidability between movement and stillness.

Timothy Scott Barker describes this type of time play as Re:presentation (Barker 2012: 75). Barker uses the term "re:presentation" to link the idea of representation with time and emphasizes the artistic act of presenting again, or presenting for a second time. Barker uses it in the sense of presenting time through technological mediation - in a way that it is qualitatively different from the original (Barker 2012). Fowler and Shapley maintain there is a sliding scale from real, actual films of real life, and set up events. This infers, in order for a piece of film work to be 'real', artists' intervention must means to have a privation. And potentiality be minimal or non-existent. The artists' time and experience in the artistic process is interesting to consider in relation to these notions of time. Time outside the frame remains uncaptured, the negotiations and relations between what is in the frame and outside is lost. Artists work to re-present time and decide what slice of time will be captured. The concept of the actuality neglects this entanglement between human and non-human elements. There is a sliding scale of artists intervention applied in these arguments. Positioning the camera in a static shot for a long period of time is defined as 'minimal intervention' (Shapley 2011) editing sequences of that, at the same time, do not exist as actual shots is a major intervention (Shapley 2011). The artist's role is considered in relation to specific parts of the process.

Fowler sets a sliding scale from actuality to potentiality with actualities being the closest representations to real life on film. Greg Shapley considers early cinema and stillness, by examining pre-digital and post-digital work, he too thinks about our expectations as a spectator in relation to how time operates in both mediums. It is interesting to think about these observations from a new materialist perspective. Potentiality is explored by Fowler, who draws on metaphysical debates from Aristotle and Agamben. Aristotle's dialectic from actuality to potentiality in relation to the verb "can" (potere) is essentially to say that "I can", requires a recognition of the possibility that one can't

therefore a dualistic/binary relationship forms the basis of these definitions. "To have a faculty is not a logical hypostasis but the mode of existence of this privation" (Fowler) There are two forms of potentiality according to Aristotle. The first concerns something being possible, the second implies less of possibility, more of a proven capacity "an existing potentiality" (Agamben 1999: 179). Once again, the possibility of privation exists here, to have a capacity, to be able or knowledgeable, does not necessarily mean that one will act on that ability or knowledge. Daniel Heller-Roazen argues potentialities or capacities present themselves above all as things that exist but things; they are present, yet they do not appear in the form of present things (Agamben 1999: 14). Ultimately, Heller-Roazen concludes, "potentiality and actuality, what is capable and what is actual, what is possible and what is real, can no longer strictly be distinguished" (Agamben 1999:18). Although Fowler acknowledges this point by Heller-Roazen it is unclear exactly what the position is, Fowler maintains it is in the capacity of the works in question "not to pass into actuality" that make them examples of "post-cinema potentiality" (Fowler 2013: 65).

Potentiality is a 'becoming' that lingers in the visual and temporal elements of David Claerbout's work Untitled (Single-Channel View), a video loop; a picture of a classroom

where the children look forward, through an overexposed window. Sunlight streams into the room which projects white squares (presumably the outlines of the window pane) onto the wall behind the children, each containing the silhouette of a tree. The trees move very subtly. Fowler suggests two readings of the work, a literal reading; simply a classroom where teaching takes place, or a reference to structuralism and modernist cinema. Fowler argues that within this piece an imaginative dimension takes place which bears a "haunting resemblance to Plato's cave" (Fowler 2013: 69). Different states are identified in the installation video, opaque abstraction (the window), shimmering visibility (the children) and shadowy presence (the trees) and a ghostly dimension that makes what she calls the "imperceptible visible" (Fowler 2013). Fowler argues that the trees are "materially absent in the frame yet are given a spectral presence through their silhouettes on the back wall" (Fowler 2013: 67). The back wall effectively shows us something inside that is really outside, and reveals something 'invisible', as this same silhouette of the trees cannot be seen by the boys looking out of the window. This reveals a sensory gap between the absence (of actual trees) and presence (of the silhouetted or potential trees). When Fowler uses the word potential she refers to how the shadow inside is an index to the real trees outside the classroom. An assumption is made that the sun shadow in the frame. is a result of the sun and trees outside of the frame leave their mark in the shot. Fowler believes the trees are materially absent in the frame, but have a ghostly presence. The shadow "shows us something invisible" (Fowler

2013 :7). Peter Osborne talks of a different type of potentiality. Osborne identifies the uniqueness of the digital image in terms of its potential to become an infinite multiplication of visualizations, and this is where the distinctiveness lies (Osborne 2010). Osborne is talking about potentiality and the relations surrounding the digital image, Fowler talks about the potentiality within the interplays of references and representations within the digital image.

(next page) figure 54: hyper.jpg

CONCLUSION

summary

Potentially digitalized data can generate an infinite number of visual forms. I examine the consequences of proliferating these forms in practice. Digitalized data is enmeshed in complex media ecologies, these ecologies are entangled connections between, body, data, image and interface. The structure of this study highlights the difficulties of locating where artistic technological practices begin and end, and the struggle to locate oneself in a durational artistic technological process. The attempt to locate my practice in the post-contemporary, post-medium, post-human landscape, as well attempting to locate my own subjectivities over the course of this study caused lostness to occur. I am still lost. I cannot replicate nor represent the same experiences in time and space that I was lost in over the course of this study. Lostness allowed me to question various ontologies and philosophies of the digital image, many of these ontologies do not account for messy subjectivities. Representation falls short in its attempt to convey certain kinds of embodied experiences which arise from entanglements between human and machine. I offer up a diffractive site which looks towards an ethico-ontoepistem-ology of the digital image. This document presents some of the relations which have arisen from a sustained artistic-technological process. Digital images were felt, used, observed, made, moved, remembered, picked up, destroyed, read, understood, discarded, copied, iterated, stored and proliferated over the course of this study. This durational proliferation of digital images draws attention to the affectual nature of lostness and this diffractive space sets up the conditions for lostness to arise in the reader/viewer/user. Lostness is fluid and shifting, this thesis highlights the dificulties of locating this affect and demonstrates why the difficulty of locating it is important. The

study looks toward an ethico-onto-epistem-ology of the digital image. The process of re-making meant this study was in and out of relations with various concepts theories and aesthetic histories. The lostness that arose through my attempts at locating myself and position my practice was both helpful and problematic. Problematic because it foregrounded the difficulties of applying a linear cyclical reflective practice in an artistictechnological processes such as my own, a process where human and non-human phenomena are entangled. As such this study demonstrates the ways in which reflective methods pre-suppose humanistic approaches to artistic research in the academy whereby it is assumed one can extrapolate oneself out of complex digital image environments. I examine the challenges of applying an iterative cycle of reflection to a nonlinear artistic-technological iterative process.

Lostness was also helpful because it allowed me to challenge binary positions that philosophies and ontologies pertaining to the digital image perpetuate. These narratives put forward the idea it is possible to stand outside of, and remove ourselves from the complex media environments images. I did not recognise my own subjective experience in such theories pertaining to the digital image. Lostness allowed me to recognize the ways in which meta-narratives relating to the digital image often exclude situated embodied knowledge and do not account for the difficulties that come with locating embodied knowledge in hyper-space. The inclusion of embodied knowledge from durational artistic technological practices such as my own is important to consider in light of the effects technology is having on our everyday lives. I emphasise why this is particularly relevant to digital artists who work with networked technologies. The nature of the process of remaking as a diffractive practice borrows from Barad's idea that intra-acting components are ontologically inseparable, instead they are, "intra-acting material-discursive relations and practices: dynamic topological reconfigurings, entanglements,

relationalities, (re)articulations, en/foldings of the world" (Barad, 2007, p. 141). Lostness is not a static phenomenon, it has emerged from the process of re-making. Undergoing this process over a sustained period of time had consequences, one of those was the proliferation of digital material, this drew attention to the implications of representational unfixity in a durational artistic process such as my own. This unfixity related to the ways in which I interacted with relational aesthetics and theories because the work was constantly being re-made, hundreds of iterations drew my attention to the ways in which we might attach concepts to material through the process of reflection.

'Post' is a collection of historical re-orderings brought about as a result of new technology and digitalisation. The categories I collected are indicative of the new ways in which we are re-positioning ourselves in relation to the historical. These categories show a new type of temporal re-ordering. Some of the theorists I draw from in this chapter see post as an ending with the past, or post as a continuation of what has gone before, others as a new beginning. I found it difficult to position myself in any one of these categories and propose that many of these concepts force us to re-engage with linear narratives. I examine the term post as it relates to different concepts such as the human, the Internet, photography and time. These phenomena all relate to how an artistic-technological process might be contextualized. Re-methodology looks toward an ethico-ontoepistem-ology of the digital image, and ethical approaches that displace modern dualisms and hierarchical legacies. The need to move past humanism and anthropocentrism is discussed and the problems posed through lostness when artistic-practice requires the researcher to position themselves in relation to their practice. This chapter explores the difficulties of defining categories and rules for methods and methodologies in a practice which encounters different disciplines, histories and aesthetics. Methods and methodologies for the most part require researchers to define a framework and a set of rules to be followed, so that one might find the answer to a research

question or set of questions. Instead this study draws from post-humanist methodologies which are adaptive and relational Barad (2007), Feyerabend (1975) and Haraway(2004). The structure of the thesis shows the importance of including various histories and subjectivities created over the duration of this study. This study points toward an ethico-onto-epistemology, of the digital image which is relational and negotiated. In this study intra-actions occur between disparate communities of knowledge, data, body, text and image. Diffractive practices do not suppose the ontology of the world is already constituted. Artistic-durational process in the Academy are discussed, lostness is relevant because human agency and experience are losing their primacy as the complexity and scale of technological influence becomes more and more ubiquitous in the everyday.

In 'Re-event' various concepts of the event are examined as they relate to the digital image and it draws from Barad's understanding of the apparatus. An apparatus according to Barad is more than a tool or a device instead it as an arrangement of phenomena. The apparatus accounts for different modes of materiality, different levels of organisation and what takes place within this type of apparatus is therefore a series of events. These arrangements can be interface, code, writing, performance, usage, texts, ideology, writers, readers, "Apparatuses have a physical presence or an ontological thereness as phenomena in the process of becoming." (Barad, 2007: 210). I discuss two concepts in relation to my own process; the event of visualisation by Boris Groys and the event of capture by Peter Osborne. These theories examine the ways in which digitalisation has affected art. The event of visualization examines circulation, and the event of capture examines hierarchies in art, and I discuss how this relates to the art economy, drawing from my own attempts at locating both the event of visualisation, and the event of capture in a durational artistic-technological process. A plea is made for the value of situated knowledges within these debates and a

more process based philosophical understanding of the digital image. I discuss Fowler's concept of post-cinema potentiality which examines the notion of the event as it relates to the aesthetics of filmic time and photographic time. Historical notions of medium as they relate to various concepts of how time operates in film and photography are explored. Postphotography and post-cinema still deal in historical conceptions of medium which is troublesome in the post-contemporary. Lostness is introduced as a way to trouble these categorizations and examine how digitalisation is bound up in different notions of potentiality. I conclude that the digital images potential as discussed by Osborne (2010), Bosma (2013) and Fowler (2013) is often a negotiation between human and non-human factors, therefore, aesthetic discussions, as they relate to film and photography, need to acknowledge these entanglements. These entanglements create new events that are intra-actions between body, data, image and interface. Lostness is one affect that relates to new types of enmeshments between film time, photographic time, digital interface and the body.

"I speak as an "I," but do not make the mistake of thinking that I know precisely all that I am doing when I speak in that way" (Butler 2005: 84)

This thesis is a performative multi-modal site which adds to a field of study that explores what it means to locate subjective experience in the posthuman. Lostness is a material affect which arose from my own attempts at locating myself in a durational artistic-technological process and situate my practice in the current posthuman condition. I discuss how various philosophies and ontologies of the digital image exclude subjective experiences and perpetuate unhelpful binaries. By insisting on a multi-modal assemblage, I de-center the privilege afforded to linguistics in the Academy. This thesis foregrounds complex intra-actions that take place between, aesthetics, writing, thinking and embodied knowledge and examines how these complex constellations have the power to create material affects. This study proposes the material capacities of our human bodies are mutating across a host of contemporary sites. In the folding of mind and matter, such entanglements redefine the conditions for thought. The landscape is uncertain, as we split ourselves between times, clock time, real time, biological time, natural time, asynchronous and simulated time. To make sense of these shifting positions and timeframes many theorists are turning to processual and relational ontologies such as (Barker 2012; Goodman, 2010; Manning, 2009; Massumi, 2011; Shaviro, 2009). Barker turns his attention to the process of the digital encounter taking the focus away from aesthetic artefacts, and instead emphasizing digital encounters which provide the conditions for whatever aesthetics may arise, and where all phenomena are in a constant state of flux (Barker 2012:32). The proposal is that thinking needs to shift from privileging aesthetic artefacts and technical architecture to highlighting techno-aesthetic processes. Through my own process of re-making technical architecture becomes entangled with artefact and perpetuates representational unfixity, this causes

defamiliarizations to occur within image spaces. This highlights the instability of digital images, these defamiliarizations that occurred rupture interfaces as navigational devices. Through re-making form and function are seperated, cues for interaction become undone. When words like home, search, and security are repeated and taken from their usual context it becomes more apparent how these image spaces are set up to move us along certain routes.

Durational engagements with artistic-technological processes also expose the linearity of certain digital image ontologies. These ontologies neglect to account for the problems and difficulties that arise from our entanglement in image environments. I show how lostness is a material affect produced from within these entanglements. Defamiliarizing everyday interfaces and image spaces ruptures our ability to see these simulated environments as trustworthy or stable representations of reality. Re-making is a type of regurgitation of relations which creates diffractions and interferences. The instability of digital material means it is hard to untangle or distinguish where technical architecture, content, concept, design, image, body, and data begin and end. Barad notes that while Cartesian epistemology is built on the cut between subject and object,- ethico-onto-episte-mology, is entangled. New materialist inquiries are explorations in how differences are made and remade, stabilized and destabilized (Barad 2012). Through re-making I was alerted to unfixed and fluid relations between body, data, images and interfaces I work with. I was lost. Through the constant destabilization and the defamiliarization of the material I began to questioning what it was I actually worked with; medium, content, interface, image, body or data? What is medium post-medium? Re-making forced me to return to habitual engagements, repeating them over and over again. Getting lost between what I thought I knew, what I actually knew and what I did automatically (using muscle memory). Re-making meant regurgitating aesthetics, folding them back

in to the same places they had come from. As such aesthetics became unfamiliar, interface icons were divorced from their functionalities and I started to lose my way. Did I know when an image became an image? How could I hope to locate myself and my ideas in the midst of an entangled working relationship with technology. What part of me was mixed with data, what residues of myself have I left online, can I point others to the moment my body switched to auto mode. What part of me is mixed with data, where do I leave residues of myself online, am I every offline or always on, where did my body switch to auto mode. What part of **ME was mixed With data**, where did I leave residues of myself in the searches I made Online, how could I show others where **My body** had switched to in auto mode.

L~O~S~T~N~E~S~S

list of figures

figure 1: litter rhythms.jpg figures on next page. figure 2: litter rhythms_1.jpg, figure 3: litter rhythms_2.jpg, figure 4: litter rhythms_3.jpg, figure 5: litter rhythms_4.jpg figure 6: litter rhythms_5.jpg figure 7: litter rhythms_6.jpg figure 8: litter rhythms_9.jpg figure 9: litter rhythms_10.jpg figure 10: cornered a still, from a video, from an installation.psd figure 11: Untitled5.psd figure 12: spiderweb14.jpg figure 13: Storyboard.psd figure 14: *muscle.png figure 15: muscle4.jpg figure 15: lostness_back.png figure 16: Screen Shot 2019-09-10 at 20.14.40.png figure on next page figure 17: BYOB.jpg figure 18: screen_shot_from_now.jpg figure 19: search_party.jpg figure 20: remaking16.jpg figure 21: IMG_9579.jpg figure 22: still_stillness.jpg figure 23: i-was-once-5b8670.jpg figure 24: digital_sculptures.png figure 25: Ago11.jpg (created using **Open-Source software Improviz** created by Guy John) figure 26: Ago11.jpg figure 27: Ago1.jpg figure 28: Ago6.jpg figure 29: windows_5.jpg figure 30: vernacular.jpg figure 31: IMG_8243.png figure 32: IMG_7644.png figure 33: IMG_7645.png

figure 34: muscle.jpg figure 42: slit scan still.jpg figure on next page: figure 43: still_stillness_2.jpg figure 44: still_stillness_80.png figure 45: IMG_2278.jpg figure 46: IMG_2283.jpg figure 47: IMG_2283.jpg figure 48: IMG 2284.jpg figure 49: IMG_2291.jpg figure 50: r001-007.jpg figure 51: search_party.png figure 51: r001-007.jpg figure 52: RUNG_FinalA.jpg figure 52: RUNG_WEB.jpg figure 53: hyperhyper.jpg figure on the next page figure 54: hyper.jpg

appendix

- A1: #realbeginning: an excerpt from my personal notes.
- A2: #backthen: an excerpt from my personal notes.
- A3: Back then: an excerpt from my personal notes.
- A4: The image drum: this semi-poem evolved from the moment when I realized images are stored in our muscle memories.
- A5: Lost: Random notes that show me attempting to grapple with what the concept of lostness. The end section is a quote from the advertisement "Ariston and on and on" this was an advertisement for appliances that was so catchy, a looping rhyme, that goes round and round, it shows how rhythm is as much part of the advertisement as the pitch or the tone of the song or video. I then related this to the end of a song by the artist Kojaque. I think this song is a great example of how concepts can be events that occur in-between different materials: somewhere between the music, between the words, the accent of the singer who is singing those words, or lyrics, in between rhyme."You can't describe them then. Your safest memories are the ones you never really think about because the more you think about something you have a memory of thinking of the memory so it changes them" (Kojaque 2018)
- A6: A poem made on my desktop in stickies.
- A7: Thoughts.
- A8: Uniform Resource Locator for each L~O~S~T~N~E~S~S hyperlink....

L~O~S~T~N~E~S~S (15) https//lostness.net/re-make-me

L~O~S~T~N~E~S~S (37) https//lostness.net/re

L~O~S~T~N~E~S~S (82) https//lostness.net/still-stillness

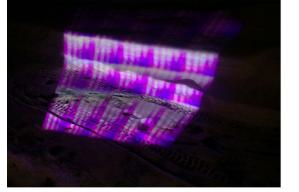
L~O~S~T~N~E~S~S (108) https//lostness.net/

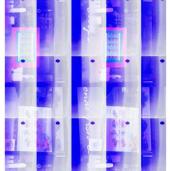


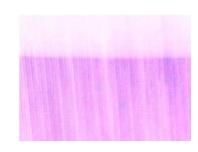
I am *lost* in the ending.I am missing in the searches to find your beginning.

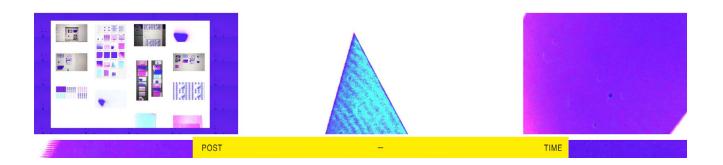
POST



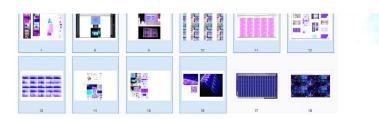




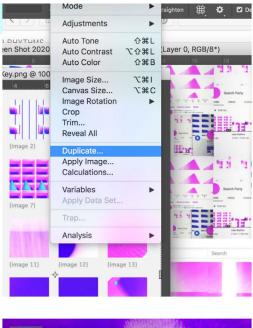




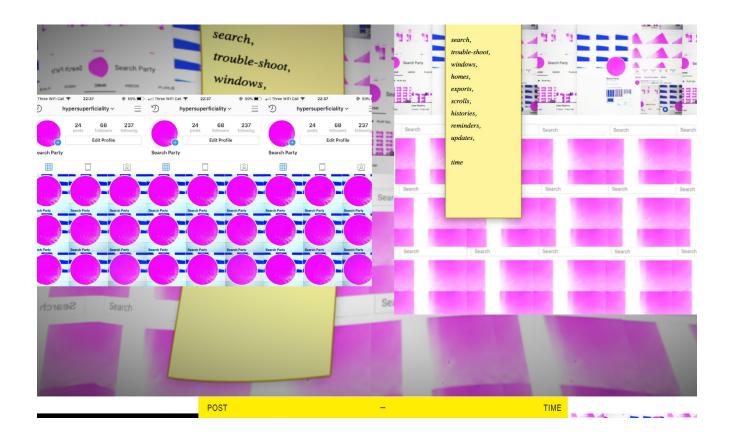




the prointeration of new media, smart phones, and the internet has led to an increased disorientation. No longer can we define human existence by unique temporal and spatial coordinates. In light of proposals that we respond to this by changing the way we research digital technologies, and move towards sustained engagements with digital processes, this thesis examines the artistic-technological process of re-making. In order to examine the entangled temporal relationships that occur in practice between body, data, image and interface I continuously re-make a set of digital video files in the form of generative video feedback loops. This seemingly simple task of returning and restarting in digital space allows me to consider the problems of locating oneself in artistic processes that merge the human and the technological over a sustained period of time. Lostness emerged from my inability to self-situate, and <u>position</u> my practice, in the current post-medium, post-digital, post-contemporary condition. Lostness is useful and problematic; useful as it enables me to destabilize binary positions in various meta-narratives

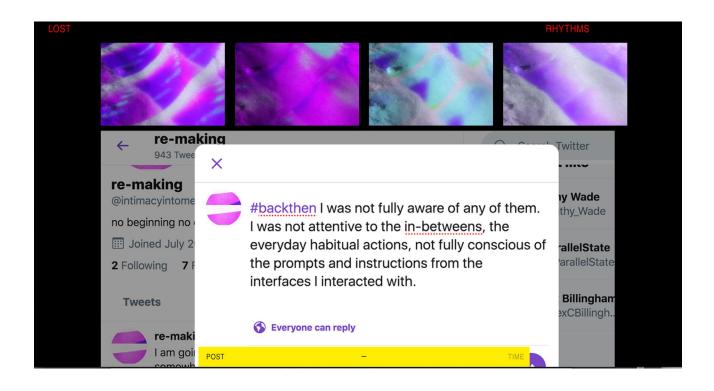


Al Forts (AM Forts)		ENGLISHING STREET		
Adda W Construct Opt Adda W Construct	Albertus Medium Regular	Size 44	💭 Repeat - Ti	tle
	you. I am loo <mark>POST</mark>	-	ТІМЕ	







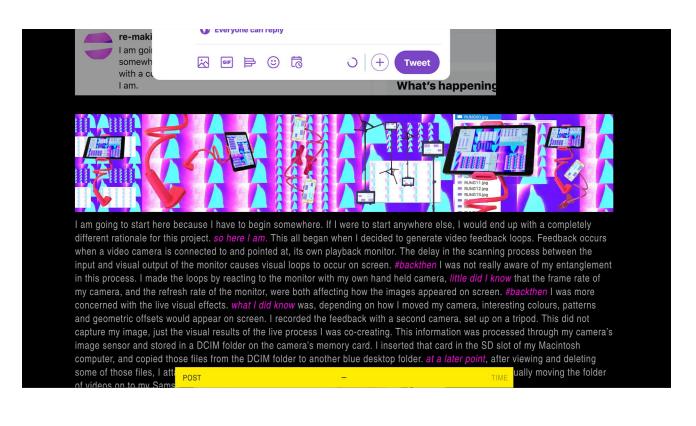


LOST

RHYTHMS



website documentation





exhibitions

A note on the exhibitions: there are hundreds of versions of re-makes. The following exhibitions contain versions of my re-makes which I have then re-made to be included in the website.

09 | 2020

• Copy/Paste Ars Electronica. Garden BERGEN curated by Antonio Roberts. LINZ, AUT.

03 | 2020

• Copy/Paste Piksel. NOR, DE.

12 | 2019

• Re:Photography Then and Now The Herbert Gallery. Cov, UK.

09|2019

• Algorave, Llawn Arts Festival. Curated by Antonio Roberts. WLS, UK.

04|2019

• Hyper-superficiality. Cheap Cheap Gallery, The Lombard Method. BHAM, UK.

06 | 2019

• Hyper-superficiality RUNG magazine. Issue 02. BRIS, UK.

09|2018

• Black Hole Club Online. Vivid Projects, BHAM, UK.

08 | 2018

• Litter Rhythms: g_URL 2.0 techno-utopia screening at Sluice Art Gallery. LON, UK.

03 | 2018

• Litter Rhythms: Black Hole Club Launch, Vivid Projects. BHAM, UK.

bibliography

- Adema, J. and Hall, G. (2016) 'Posthumanities: The Dark Side of the Digital'. The journal of electronic publishing 19 (2) Agamben, G. (1999) Potentialities: Collected Essays in Philosophy. ed. by Heller-Roazen, D. Stanford University Press Alcarez, A.L. (2015) 'Epistemic Function and Ontology of Analog and Digital Images'. Contemporary Aesthetics [online] 13 (11), 1–14. available from <http://hdl.handle. net/2027/spo.7523862.0013.011> Alexenberg, M. (2011) The Future of Art in A Postdigital Age. UK, Chicago, USA: Intellect Andina, Tiziana and Onnis, E. (2019) The Philosophy and Art of Wang Guangyi. ed. by Andina, Tixiana and Onnis, E. Bloombsbury Academic Andrews, I. (2002) Post-Digital Aesthetics and the Return to Modernism. Antonio, N. (2008) Contemporaneity Between Modernism and Postmodernism. ed. by Smith, T., Enwezor, O., and Condee, N. Duke University Press Apprich, C., Berry Slater, J., Iles, A., & Lerone Schultz, O. (Eds.). (2013). Provocative Alloys: A Post-Media Anthology. ve Alloys: A Post-Media Anthology Edited by Clemens Apprich, Josephine Berry Slater, Anthony Iles & Oliver Lerone Schultz Post-Media Lab & Mute Books. http://www.metamute.org/sites/www.metamute.org/files/u1/apost-media-anthology-mute-books- 9781906496944-web-fullbook.pdf Arnheim, R. (1997) Visual Thinking. London, England: University of California Press Avanessian, A. and Malik, S. (2016) The Time Complex Post-Contemporary Armen Avanessian and Suhail Malik, Eds. available from http://namepublications.org/ wp-content/uploads/2016/06/post-contemporary_intro_sample_small.pdf> Badmington, N. (2003) 'Theorizing Posthumanism A'. Cultural Critique [online] (53), 10–27. available from http://www.litandwriting.umb.edu/littheory/fall07/ documents/BadmingtonPosthuman.pdf> Balkema, A.W. and Slager, H. (2004) Artistic Research. Rodopi Barad, K. (2007) Meeting The Universe Halfway [online] Duke University Press. available from <https://ebookcentral.proquest.com/lib/coventry/reader. action?docID=1169310&ppg=1>[15 February 2019] Barad, K. (2014) 'Diffracting Diffraction: Cutting Together-Apart'. Parallax 20 (3), 168–187 Barker, D. and Kuiper, E. (2003) Toward a Feminist Philosophy of Economics. London: Routledge
 - Barker, S. (2012) Time and the Digital Connecting Technology, Aesthetics, and a Process

Philosophy of Time. Dartmouth College Press

- Barnow, J. (1986) 'Peirce and Derrida : " Natural Signs " Empiricism versus " Originary
 - Trace " Deconstruction'. Poetics Today 7 (1), 73–94
- Barthes, R. (1981) Camera Lucida Reflections on Photography. New York: Hill and Wang
- Bazin, A. (1967) What Is Cinema. University of California Press
- Breuer, J., Freud, S. and Gw (1999) 'Jentsch_uncanny', Anna Freud ua, S. Fischer(1906), pp. 75–311. doi: 10.2307/1412663.
- Benjamin, W. (1936) The Work of Art in the Age of Its Technological Reproducibility [online] Second. available from https://monoskop.org/images/6/6d/
- Benjamin_Walter_1936_2008_The_Work_of_Art_in_the_Age_of_Its_ Technological_Reproducibility_Second_Version.pdf> [25 July 2017]
- Benjamin, W. (1972) 'A Short History of Photography'. Screen 13 (1), 5–26
- Benovsky, J. (2011) 'What Photographs Are (and What They Are Not) *'.
 - Disputatio IV (31)
- Berleant, A. (2004) 'Aesthetic Embodiment'. in Re-Thinking Aesthetics, Rogue Essays on Aesthetics and the Arts. vol. 4. Farnham, UK & Burlington, VT: Ashgate, 143–157
- Bey, H. (1991) Temporary Autonomous Zone. ed. by Pacific Publishing Studio
- Bhat, P. I. (2020) Idea and Methods of Legal Research. ebook. Oxford University Press.
- Biggs, M.. (2010) 'The Role of the Artefact in Art and Design Research'. Working Papers in Art and Design 3
- Bolt, B. (2004) 'Heidegger, Handlability and Praxical Knowledge'. School of creative arts Seminar series, University of Melbourne [online] available from <http:// www.sca.unimelb.edu.au/research/seminar_papers/2004/B.BOLT/ BOLT_052004.pdf>

Borgdorff, H (2006) The Debate on Research in the Arts. KHiB

Borgdorff, Henk (2012) The Conflict of the Faculties. Leiden University Press

- Bosma, J. (2013) Post-Digital Is Post-Screen: Arnheim's Visual Thinking Applied to Art in the Expanded Digital Media Field | a Peer-Reviewed Journal About_ [online] available from <http://www.aprja.net/post-digital-is-postscreen-arnheims-visual-thinking-applied-to-art-in-the-expanded-digital-media-f ield/> [6 December 2017]
- Bourriaud, N. (2002) Postproduction: Culture as Screenplay: How Art Reprograms the World. Ed. ed. by Schneider, C. New York: Lukas & Sternberg Braidotti, R. (2013) The Posthuman. Cambridge: Polity Press

- Breu, C. (2018) 'The Humanities as Contradiction: Against the New Enclosures'. Humanities 7 (3), 70
- Burnard, Pamela Hennessy, S. (2006) Reflective Practices in Arts Education. Springer Netherlands.
- Butt, D. (2017) Artistic Research in the Future Academy. intellect
- Candy, L. (2006) Practice Based Research: A Guide [online] available from http://www.creativityandcognition.com [10 March 2017]
- Candy, L. (2020) The Creative Reflective Practitioner: Research Through Making and Practice. Routledge
- Candy, L. and Edmonds, E.A. (2018) 'Practice-Based Research in the Creative Arts: Foundations and Futures from the Front Line'. Leonardo 1, 63–69
- Carter, P., Bolt, B., Perry, G., Reid, D., Iggulden, A., McLeod, S., Vincs, K., Goddard, S., Stewart, R., Barrett, E., Haseman, B., and Barrett, E. (2009) Practice as Research. ed. by Barrett, E. and Bolt, B. I.B Tauris London

Cates, J. (2013) Gl1tchyStøries.

- Cerezo, B. (2015) What Is It 'to Move' a Photograph? Artistic Tactics for Destabilizing and Transforming Images [online] available from <http://irep. ntu.ac.uk/id/eprint/28032/1/Belen.Cerezo-2015.pdf> [28 April 2017]
- Chesnay, M. de (2015) Nursing research using participatory action research methods in nursing. Springer Publishing Company.

Connor, M. (2014) 'Post-Internet: What It Is and What It Was'. in You Are Here:

- Art after the Internet. ed. by Kholeif, O. Manchester Cornerhouse, 56–64
- Crutchfield, J.P. (1984) 'Space-Time Dynamics in Video Feedback'. Physica
- Davies, D. (2011) 'Digital Technology, Indexicality, and Cinema'. Rivista di estetica [online] (46), 45–60. available from http://journals.openedition.org/estetica/1655> [8 February 2018]
- Derrida, J. (1997) Of Grammatology. United States of America: The John Hopkins University Press
- Doane, M.A. (2002) The Emergence of Cinematic Time : Modernity, Contingency, the Archive. Harvard University Press
- Dolphijn, R. and van der Tuin, I. (2014) New Materialism.
- Droitcour, B. (2014) The Perils of Post-Internet Art Art in America [online] available from https://www.artinamericamagazine.com/news-features/magazines/the-perils-of-post-internet-art/>
- Drucker, J. (2007) Digital Ontologies : The Ideality of Form in / and Code

Storage : Or : Can Graphesis Challenge Mathesis ? 34 (2), 141–145

Ellison, C. (2017) 'Workshop Making Beyond the Post-Medium Condition'. Visual Culture in Britain [online] 18 (2), 133–162. available from https://doi.org/10.1080/14714787.2017.1353438

Ernst, W. (2017) The Contemporary Condidion. Sternberg Press

- Esposito, E. (2012) The Construction of Unpredictability [online] available from <https://bb9.berlinbiennale.de/the-construction-of-unpredictability/> [30 December 2020]
- Ferrando, F. (2012) 'Towards a Posthumanist Methodology: A Statement'. Journal of Literary Studies 25

Feyerabend, P. (1993) Against Method. Verso

Flynn, N. (2015) Performativity and Metaphor in New Materialist Media Theory. 9 (1), 1–13

- Fontcuberta, J. and Mois de la photo à Montréal (Organisation) (n.d.) La Condition Post-Photographique.
- Fowler, C. (2013) 'Obscurity and Stillness: Potentiality in the Moving Image'. Art Journal [online] 72, 64–79. available from http://dx.doi.org/10.1080/00043249.2013.10791022>

Friedman, K. (1998) Fluxus and Company.

Gaillard, J., Baldacci, C., Giusti, F., Nicastro, C., Tas, B., Reeve, D., Sforzini, A., Vandeputte, T., Proctor, H., Reeve, D., Frey, C., and Sforzini, A. (2019) RE- An

Errant Glossary [online] ed. by Christoph, H. and Wedemeyer, A. ICI Berlin. available from http://library1.nida.ac.th/termpaper6/sd/2554/19755.pdf

- Galloway, A. (2006) 'Language Wants To Be Overlooked: On Software and Ideology'. Journal of Visual Culture 5 (3), 315–331
- Galloway, A. (2011) 'Are Some Things Unrepresentable?' Theory, Culture & Society 28 (8), 85–102
- Galloway, A. (2012) The Interface Effect [online] Polity Press. available from http://art.yale.edu/file_columns/0000/1404/galloway_alexander_r_-the_interface_effect.pdf
- Gitelman, L. (2013) Raw Data Is an Oxymoron. MIT Press
- Gleick, J. (2011) The Information: A History, a Theory, a Flood. Harper Collins
- Greenberg, C. (1989) 'Avant Garde and Kitsch'. Art and Culture: Critical Essays 3-21
- Groys, B. (2008) 'From Image to Image File and Back: Art in the Age of Digitalization'. Art Power 83–91
- Grushka, K. (2005) 'Artists as Reflective Self-Learners and Cultural Communicators: An Exploration of the Qualitative Aesthetic Dimension of Knowing Self through Reflective Practice in Art-Making'. Reflective Practice 6, 353–366 Hansen, B.N.M. (2006) Bodies in Code. Routledge

- Haseman, B. (2006) 'A Manifesto for Performative Research'. Media International Australia incorporating Culture and Policy, theme issue "Practice-led Research (118), Alexander, C., Ishikawa, S., Silverstein, M. (19
- Haynes, T. (2018) Dopamine, Smartphones & You: A Battle for Your Time [online] available from http://sitn.hms.harvard.edu/flash/2018/dopamine-smartphones-battle-time/> [4 January 2021]

Heidegger, M. (1962) Being and Time. Oxford UK & Cambridge USA: Blackwell

Jaromil (2002a) ASCII Shell Forkbomb [online] available from <https://jaromil.dyne. org/journal/forkbomb_art.html> [16 December 2017]

Jaromil (2002b) Forkbomb.

- Jaromil (2002c) Http://Www.P0es1s.Net [online] available from <http://www. p0es1s.net/en/projects/jaromil.html> [24 January 2019]
- Jaromil, D.R. (2002d) Https://Jaromil.Dyne.Org/ [online] available from <https://jaromil.dyne.org/> [20 December 2020]
- Jarvis, P. (1998) The Practitioner Researcher. New York: Wiley, 1998
- Kant, I. (1987) Critique of Judgment. Indianapolis/Cambridge: Hackett Publishing Company
- Karnita, R., Woodcock, A. and Super, K. (2013) 'A matter of questioning: A comparative study of reflective practice in graphic design courses in the UK and Indonesia', The 7th International Technology, Education and Development Conference, (May 2014), pp. 1805–1812. Available at: https://library.iated.org/view/KARNITA2013AMA.
- Keller, P. (2011) 'Joan Fontcuberta's Landscapes Remapping Photography and the Technological Image'. Journal of Spanish Cultural Studies 12, 129–53
- Khazam, R. (2016) Contemporary or Post-Contemporary?
- Kim, J. (2019) 'Postinternet Art of the Moving Image and the Disjunctures of the

Global and the Local'. Comparative Literature and Culture 21 (7)

Koch, S. (1974) Stargazer. Calder & Buyers

Kosuth, J. (1965) One and Three Chairs.

Leavy, P. (2008) Method Meets Art. Second Edi. New York: The Guilford Press

Lechte, J. (2013) Beyond the Ontology of the Image.

Lessing, G.E. (1962) Laocošn; An Essay on The Limits of Painting and Poetry. ed. by

McCormick, E.A. Indianapolis: Bobbs-Merril

LeWitt (1967) 'Paragraphs on Conceptual Art'. Artforum 5 (10), 79–83

MacLeod, K. (2000) 'The Functions of the Written Text in Practice-Based PhD

Submissions'. Working Papers in Art and Design 1

- Mafe, D. (2009) Rephrasing Voice: Art, Practice-Led Research and the Limits and Sites of Articulacy. [online] 1–140. available from http://eprints.qut.edu. au/32131/1/Daniel_Mafe?_Thesis.pdf>
- Malins, J. and Gray, C. (1995) 'Appropriate research methodologies for artists, designers & craftspersons: research as a learning process', The Centre for Research in Art and Design, pp. 1–11.
- Manovich, L. (1996) 2/14/12 Lev Manovich | Essays : What Is Digital Cinema? 1-16
- Manovich, L. (1999) The Language of New Media.
- Manovich, L. (2001) The Language of New Media. MIT Press
- Marchevska, E. (2012) The Screen as a Site of Division and Encounter [online] University of Northampton. available from http://nectar.northampton. ac.uk/6130/7/Marchevska20136130.pdf>
- Marcus, E.G. (1995) 'Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography'. Annual Review of Anthropology 24, 23
- McGill, G. (2013) Moving Image, Montage and Memory: The Development of a Critical Documentary Practice, Exploring Irish Identity through an Exploration of Found Film Archives and the Cinematic
- Treatment of Time and Memory. [online] available from <http:// ualresearchonline.arts.ac.uk/5888/1/GenevieveMcGill_Thesis2013.pdf> [28 April 2017]

McHugh, G. (2011) Post-Internet. LINK Editions

McNiff, S. (1998) Art-Based Research. London: Jessica Kingsley Publishers Ltd.

- Millett, J. (2013) Anticipated Retrospection: Manifesting Pastness in Moving Image, an Art Practice Enquiry [online] available from http://ualresearchonline.arts. ac.uk/5649/1/JMillett_PhD_Thesis_(online_version).pdf> [28 April 2017]
- Mitchell, W.J. (1994) The Reconfigured Eye: Visual Truth in the Post-Photographic Era. First MIT. Cambridge, Massachusettes: MIT Press
- Moody-Hickey, A. and Wilcox, M. (2019) 'Entanglements of Difference as Community Togetherness: Fiath, Art and Feminism'. Open Access Journal 8 (9), 1–21
- Moreiras, C. (2017) 'Joan Fontcuberta: Post-Photography and the Spectral Image of Saturation'. Journal of Spanish Cultural Studies [online] 18 (1), 57–77.

available from <https://www.tandfonline.com/doi/full/10.1080/14636204. 2016.1274496> [12 January 2018]

- Mulvey, L. (2007) Death 24x a Second: Stillness and the Moving Image. Second. London: Reaktion Books Ltd
- Nechvatal, J. (2010) Emergence of the New Paradigm: Viractuality [online] available from https://www.eyewithwings.net/nechvatal/Viractuality/Viractualism.html
- Nelson, R. and Andrews, S. (2003) Practice as Research: Regulations, Protocols and Guidelines. [online] Palatine. available from http://78.158.56.101/ archive/palatine/files/903.pdf>
- Niedderer, K. and Roworth-Stokes, S. (2007) 'THE ROLE AND USE OF CREATIVE PRACTICE IN RESEARCH AND ITS CONTRIBUTION TO KNOWLEDGE'. in IASDR07. held 2007

Olson, M., Mchugh, G., and Vierkant, A. (2014) POST-INTERNET.

- Osborne, P. (2010a) Contemporary Art Is Post-Conceptual Art. 1-19
- Osborne, P. (2010b) 'Infinite Exchange: The Social Ontology of the Photographic Image'. Philosophy of Photography 1 (1), 59–68

Paulsen, K. (2017) Here/There. MIT Press

- Petelin, G. (2014) 'Begging the Question: Performativity and Studio-Based Research'. Arts and Humanities in Higher Education 13 (3), 189–200
- Poustinchi, E. (2019) Post-Screen: A Criticism of Digital Screens [online] available from <https://archinect.com/features/article/150127525/post-screen-acriticism-of-digital-screens> [30 December 2020]
- Pramod, N.K. (2014) Posthumanism. Cambridge: Polity Press
 - Reason, P. and Bradbury, H. (2001) Handbook of Action Research
- Participative Inquiry and Practice. London: SAGE

Rottenberg, E. (2005) Inheriting the Future. Stanford University Press

- Rubridge, S. (2004) Artists in the Academy: Reflections on Artistic Practice as Research » Ausdance | Australia's Professional Dance Advocacy Organisation [online] available from http://ausdance.org.au/articles/details/artists-in-the-academyreflections-on-artistic-practice-as-research> [23 May 2017]
- Sampson, J. R. (2020) 'Evolving understandings of practitioner action research from the inside', Educational Action Research, 29(3).
- Schneeberger, G. (1962) Gleanings on Heidegger. Documents on his life and thinking. self published.
- Shain, R. (2016) 'Derrida, Husserl, and the Problem of Prior Sense'. Cosmos and History 12 (1), 292–308

- Shapley, G. (2011) 'After the Artefact: Post-Digital Photography in Our Post-Media Era'. Journal of Visual Art Practice [online] 10 (1), 5–20. available from <http://www.tandfonline.com/doi/abs/10.1386/jvap.10.1.5_1>
- Sjöberg, J. (2009) 'Transfiction.' Screen Work: Screen Media Practice Research 2
- Skains, R.L. (2018) 'Creative Practice as Research: Discourse on Methodology'. Media Practice and Education [online] 19 (1), 82–97. available from https://www.tandfonline.com/doi/full/10.1080/14682753.2017.1362175>
- Smith, T. (2019) The Contemporary Composition. Cambridge Massachusetts: Sternberg Press
- Sonesson, G (2012) 'Post-Photography and Beyond'. From mechanical reproduction to digital production, ... [online] (1), 1–31. available from http://www9. georgetown.edu/faculty/irvinem/theory/Sonesson-PostPhoto.pdf>
- Sonesson, Göran (1989) Semiotics of Photography On Tracing the Index. [online] available from http://faculty.georgetown.edu/irvinem/theory/Sonesson-Semiotics_of_Photography.pdf> [19 January 2018]
- Sontag, S. (1978) On Photography. London: Allen Lane
- Steyerl, H. (2009) In Defense of the Poor Image Journal #10 November 2009 - e-Flux [online] available from https://www.e-flux.com/
 - journal/10/61362/in-defense-of-the-poor-image/>[14 September 2018]
- Steyerl, H. (2017) Duty Free Art. London: Verso
- Timeto, F. (2015) Diffractive Technospaces. First. Routledge
- Turner, P. (1987) History of Photography. ed. by Laslett, J. Middlesex: Hamlyn Publishing
- Umbrello, S. (2018) 'Posthumanism a Fickle Philosophy?' Con Texte [online] 2 (1). available from https://pubs.biblio.laurentian.ca/index.php/contexte/index
- Vierkant, A. (2010) The Image Object Post-Internet [online] available from <http:// www.jstchillin.org/artie/pdf/The_Image_Object_Post-Internet_us.pdf>
- Weibel, P. (2012) The Post-Media Condition [online] available from https://www.metamute.org/editorial/lab/post-media-condition> [31 December 2020]
- Willemien. Otten Leiden (2004) From Paradise to Paradigm: A Study of Twelfth-Century Humanism. Boston
- Wilson, M. (2017) 'Algorithms (and the) Everyday'. Information, Communication & Society 20 (1), 127–150
- Wollen, P. (1978) Screen Photography and Aesthetics. (September)
- Wollen, P. (1984) Fire and Lce//1984.
- Wolmark, J. and Gates-Stuart, E. (2004) 'Cultural Hybrids , Post-Disciplinary Digital Practices and New Research Frameworks : Testing the Limits .' Pixal Raider2. Shefield Hallam University, UK. (Pixal Raider2. Shef. Hallam

Univ. UK.), 1-9

Zimmerman, E. M. (1974) 'Heidegger, Ethics and National Socialism', Southwestern

Journal of Philosophy, 5.

Zuboff, S. (2019) Surveillance Capitalism. PublicAffairs

Zylinska, J. (2017) Nonhuman Photography. Cambridge, Massachusettes: MIT

~ lostness ~