

Rupturing Virtual Space

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgments), nor material which to a substantial extent has been accepted for the award of another degree or diploma or a university or institution of higher learning.

Signed

A handwritten signature in black ink, appearing to read "Ratema Rex Wayne Nathan". The signature is written in a cursive style with a large initial 'R' and 'N'.

Ratema Rex Wayne Nathan

10th July 2018

Abstract

This document details the research and ideas which have informed the development of my art practice. My practice is concerned with the implications of persistent mediation by the ubiquitous technologies of the virtual environment. My chosen medium is the screen-based device which enables access and participation in this 'virtual space'. In this document I explore how my art practice can create a rupture in the relationship between the user and the 'virtual space' they inhabit.

Theorising 'Virtual Space'

i. Introduction to conceptual framework

Since I first began to develop my art practice I have always been fixated on the same subject matter. That is, the way that media and communication technologies pervade and mediate our lives. I live within these systems of mediation, just as those around me do. Yet unlike many I have always felt oppressed by them. And always felt the distance between myself and others which is constructed by virtual modes of communication, definitions of self and manifestations of presence. In my practice I seek to challenge virtual mediation, not by acting within the realm of the virtual but by subverting its influence and the technology which constructs its presence. I see an intimacy, a bond, an affinity between ourselves and the technology. This bond often seems stronger than the bonds we share with each other. My practice is about challenging this relationship, and the idea that the technologies of the screen are a mirror of ourselves. For to see this technology as an extension of ourselves is to see ourselves as virtual. If we see and perceive ourselves as virtual then we no longer seek to situate ourselves here and exist within this physical world.

In the early stages of developing my critical stand point and the elucidation of the subject matter I wished to pursue. I had been researching 'posthumanism' and its relationship to cybernetics. In my Honors Exegesis I posited that we are in the process of transition to a 'posthuman' state described as "the philosophical critique of anthropocentrism" (Roden 2014, 13). I interpreted this as a yearning to separate from our animal origins and physical being. Thus I took the 'redundance/conflation of embodied/virtual reality' as a subject which I wished to explore in my practice. My chosen aesthetic was informed by an idea of representing *all* physical phenomena as code and data. This was in response to my research on cybernetics which – as a field of development – had led to the inscription of all things as information in systems theory. My impetus to develop interactive work was compelled by research in to the concept of 'reflexivity' which is defined as "the movement whereby that which has been used to generate a system is made, through a changed perspective, to become part of the system it generates" (Hayles 2008, 8). This spurred my thoughts on the relationship between myself, my audience and my work as a feedback-loop. In which I could discuss the idea of humanity being caught up within a feedback-loop in the systems of virtual technologies. Being both in and of the technology, as creators and as subjects, unable to escape. My chosen subject matter centered on the disembodied potential of virtual interaction and mediating devices.

My current line of research centers on the technology and the objects themselves. I am thinking about our relationship with virtual technologies and how to define a space of rupture in that relationship which can create a space for considering the implications of being in a 'virtual space'. For the purpose of this document I shall define 'virtual space' as the space which one enters and occupies within a media device which possesses a screen. I will define 'occupation of the device' as being more present in the screen than in one's physical surroundings.

ii. Programming culture

Our increasingly intimate relationship with media technologies has been fostered in the development of computing and user interface systems. Wendy Chun examines the historic development of computing and its parallels with the construction and facilitation of socio-cultural regimes. In her essay *'On software, or the persistence of visual knowledge'*(2013) She points out that "For computers to become transparent machines, the fact that they compute- that they generate text and images rather than merely represent what exists elsewhere- must be forgotten" (Chun 2013, 65).

This act of forgetting has occurred relatively recently, and as a result of user focused progress in interface design which began with WYSIWYG (What You See Is What You Get) style interfaces. This style of interface conceals the unnecessary information pertaining to the functions and actions between a click and a result, i.e it conceals what the computer is doing so that the user does not have to think about it. Chun notes the positive effects – perceived by the user – of being freed up to act: "Not surprisingly, having little to no contact with the actual machine enhances one's ability to think abstractly rather than numerically" (Chun 2013, 73). Thus the computer takes over the work load and we are no longer required to think or have the knowledge to achieve the task we know the computer can perform so well. As Chun points out we feel empowered to achieve more yet we have also empowered the machine: "This absolute power enabled through the agency of a program reveals the contradictory status of agency, namely the fact that agency refers both to one's ability to act and the ability of someone else to act on one's behalf" (Chun 2013, 77).

The situation could be paralleled with the idea of the master and the slave. The master has power because 'he' (the patriarchal authority) has someone capable to act on his behalf. It could be assumed that the general purpose of the computer is to drastically reduce the work load involved in human activities, and thus to broaden the possibilities available to human kind by enabling creativity and development which would not be possible without having a highly capable 'worker' to perform all the difficult, time consuming and bothersome tasks which come between an idea and an outcome.

Chun draws attention to the fact that this slave and master dynamic is one which computing was built on, stating that "The transition from human to mechanical computers automated differential power relationships" (Chun 2013, 70). This statement can be illuminated in part by the fact that early computers were barely automated in any way and required 'technicians'(male) and 'operators'(female) to laboriously program inputs to run the computations. Chun reports that this was the norm in 1940's computer labs. "During ww2 almost all 'computers' were young women with some background in mathematics" (Chun 2013, 70). By 'computers' she refers to the type of job given to these young women who were employed as 'operators' to perform the physical task of performing the operations dictated by their male programmers. These operations would later be actually programmed in to the computer to perform itself as "software became software when commands shifted from commanding a "girl" to commanding a machine" (Chun 2013, 70). In these early days of computing it is easy to see how gender power dynamics were embedded in the concept

of automated computing. Chun also notes that the 'girls' were referred to as 'slaves' in documentation of the computing sessions. This term stuck and continued to be applied to the processes once performed by the 'girls' now performed by the computer (Chun 2013, 77).

The power relationship evident in the foundations of computing could also be seen as mirroring the power structures in society. Capitalism and other socio-political regimes are imbedded in our culture and often pervade all that we produce. So it is plausible to suggest that the use of a computing device (smartphone, laptop, ipad etc) imbues the user with a sense of power that is embedded in the nature of the devices function. The user owns a slave machine that will do an innumerable amount of biddings on their behalf, in many cases fulfilling all their needs within – what is becoming – the defined space of shared wants and needs in society.

iii. 'Virtual Space'

Conceptualising the shared 'virtual space', is of primary importance in my practice. Most cultures have always existed in a defined space in which the society must operate in order to sustain itself. It is also nothing new for these defined spaces to be virtual, in that they are often prescribed by and adhere to an abstract construction of what the space should be (space being physical or social etc). What is new is that our emerging virtual 'space' is defined by the bounds of a screen. Physical space seems to have been demoted in the hierarchy of importance.

This hierarchy of the digital/virtual over the physical/lived/present is something I attempt to challenge when I conceive my art works. I want to challenge that 'virtual space' and sever our connections to it – even for just a moment – by alienating my audience from the technology and disrupting their sense of trust and familiarity. In this way I hope that we can see the space beneath the online/virtual arena. That which the programming occupies, the guts inside, the hidden space which mediates all our actions and connections. Maybe there, in that space, there can be some reflection or resolution of our relationship with these technologies and virtual spaces.

This 'virtual space' conceals far more than it reveals. Just like the computers that generate it. Yet there seems to be a general – and voluntary – blindness to these facts. And a general blindness to the power being exerted over those who operate within the screen. Conversely this blindness is generated by the mediation of sight – or the act of looking – by the screen and its content – the images – which construct the virtual space. Virtual space pervades all aspects of life, as the image pervades all aspects of life. The image is a virtual construction which predates the internet but also forms nearly all aspects of its makeup.

In Johnathan L.Beller's essay on the 'Cinematic Mode Of Production'(2013) he describes how the image constructs our society and vice versa. How 'cinema'(and all forms of media which followed) has constructed and defined our lives. And how we uphold it in our act of spectatorship, as workers/slaves in the regime of images and virtuality. He states that "By some technological sleight of hand, machine-mediated perception is now inextricable from your psychological, economic, visceral and ideological dispensations" (Beller 2013, 249).Beller may be slightly over stating the extent of our mediation (those who chose not to participate may be outside of the common circle) but it is true that the filter/mediator/lens/screen/image through which we navigate our lives is more

pervasive than we care to imagine, our mediation is approaching the absolute. This transition seems to have happened without us noticing, and perhaps this is where the sense of blindness comes from, we have entered in to a way of being without making the choice and thus wish to deny that it has happened or that it is anything different from before. Indeed as Beller points out cinema and other forms of screen based media initiated this mode of being in and of the screen. But now that our screen-time is exponentially increasing there is a level of power and potential in this 'virtual space' that is far greater than before. This power is of course harnessed and capitalised on by those who control the 'virtual space'. They recognise that there is a captive labour force at hand almost all waking hours of the day. As Beller notes "At the moment, in principle, that is, in accord with the principles of late capitalism, to look is to labor" (Beller 2013, 249). Spectatorship has always been monetized, and looking is seldom free for long. Many may argue that their screen activities are predominantly free of charge. But this can be seen as a surface reading which characterises the partial blindness effecting most users, in which they do not consider the wider picture of how online activity can generate revenue or the fact that their own time has value.

Beller describes how "The cinematicization of the visual, the fusion of the visual with a set of socio-technical institutions and apparatuses, gives rise to the advanced forms of networked expropriation characteristic of the present period. Capitalized machinic interfaces prey on visibility" (Beller 2013, 249). There is currently an awareness of the fact that online activity is exploited, tracked, watched. This is part of a general awareness of the prevalence of surveillance technologies and issues around privacy. But I believe that many people like to think of these as isolated instances occurring in specific locations defined by malicious activity, as in the surveillance of those who watch illegal content, or the threat from those who hack emails or steal account information. This is due to the wide distribution of information on these topics due to the fact that these threats also threaten the revenue streams of financial and government powers. The general exploitation of internet user and their time is not a topic which is beneficial for these powers to discuss. Thus it is made easy for many to disregard the idea of their online activity being exploited as the stuff of conspiracy theorists and scaremongering luddites.

Social-capital is invested in the image and vice versa "The more an image is watched, the more value accrues to it" (Beller 2013, 266), a proposition which anyone familiar with 'YouTube' can attest to. The more recent potential of 'YouTube' as a platform for generating massive revenue has changed its landscape drastically, what was once merely a platform which enabled the freedom to self-publish videos – and was constituted of endless user made home videos – is now the primary site for the monetization of all moving image. Surely the correlation between spectating and revenue generation should be evident. Alas "as the circulation of programmatic images increases, there's more unconscious around" (Beller 2013, 257). It seems that when your action sustains a system it becomes invisible to you by the mere fact of its perceived normality. We may be too deep in the system of images and their production to see out. Our dependency on the content and media provided in 'virtual space' seems to be verging on the absolute. Where the primary compulsion of 21st century, late Capitalist – Global our society is to consume, and it appears that the image is the easiest and most palatable substance that can be consumed at speed and in vast quantities. Owing to this apparent satisfaction of societies primary compulsion and the seemingly endless supply, it is no wonder that there is a willingness to remain in service to a 'virtual space' which enables such complete satisfaction.

Beller parallels our current situation to the – not so utopian/transhumanist – future presented in "The Matrix"(1999) movie. Like the unknowingly enslaved human-batteries in "The Matrix" we too

are contributing “Whatever life energy we put into the world [to be] converted into the energy to run the image-world and its illusory logic while we remain unknowingly imprisoned in a malevolent bathosphere intuiting our situation only through glitches in the program” (Beller 2013, 251). While we may not quite be imprisoned or completely subjugated as of yet, there are certainly signs that we could easily fall into this predicament. Consider the case of many young people who spend the majority of their time in MMO’s (Massively Multiplayer Online) games, millions of people who choose to subsist in their physical reality as a means of maintaining their online life. To a lesser extent, avid social media users also place their ‘lived’ experience as second to the image which is created of them. Beller observes that “The image structures the visible and the invisible, absorbs freeing power and sucks up solidarity time” (Beller 2013, 250). ‘Virtual space’ and its titillating collection of images wins out as the preferred space for expression, representation, entertainment, presence and being. We all seem to want to live there and be our virtual selves.

Post-virtual art practices

Many contemporary artists have been producing work which addresses the implications of new communication technologies, data networks, virtual identity/presence, and the state of being in and of a virtual structure created in a space which has come to be defined by the internet. This type of work is often described as ‘Post-Internet Art’, because it responds to a world which has been

dominated and reformed by the internet and its development. As opposed to instances of 'Net-Art' which often reflected the utopian visions evident in pre-millennial conceptions of what the internet would or could become: a space of infinite possibilities and unlimited new modes of expression.

Some artists (including myself) have tasked themselves with dispelling some of the quixotic infatuations with the internet by generating a discourse which elucidates the various implications of its current state. I believe that by attempting to stand outside of the virtual realm and look back in, we situate our work in a 'Post-virtual' space of reflection.

Amalia Ulman's work "Excellences & Perfections" 2014-15 is an exercise in the construction of online presence and a demonstration of how social media defines the parameters of online identity and virtual self. That is, an image of self, a virtual representation which follows the guidelines of what constitutes the idealised self in virtual space. Cadence Kinsey (in an article on Ulman written for the BBC) describes how Ulman "presented herself online as an 'Instagram Girl'. Using popular hashtags from micro-celebrities on the popular social network, Ulman created a three-part performance work that explored how women present themselves online" (Kinsey 2016). In this performance she sought to expose what she has defined as a "glitch" in the supposed intentions of social media, that is, the potential for separation between the 'real' self and the online performance of self.

In the early days of social interaction online it was an accepted norm to experiment with various online persona or avatars. Virtual forums, games and networking platforms facilitated these actions by providing a multitude of opportunities for anonymity and very little incentive or rules to dictate the construction of any truth or sincerity in the manifestation of identity. This would seem to be the allure for many users, who may have been unhappy (or bored) with their life and identity in offline reality. Here in the multitude of virtual environments, they are free to be whoever they choose. This condition of freedom of identity is still mostly true for all online games and many forums and other network platforms which are still running. However this overlooks the fact that truthful (trackable) identity information is now mandatory when signing up to these services. Which can certainly define the offline self as being embedded in a way which benefits those who exploit personal data. These trusted keepers of secrets seem to approximate a kind of pastoral relationship with users who must trust them to keep their data in confidence only to be shared with the gods of virtual space.

Despite this obvious underlying compulsory sharing of 'true' identity the 'public' (user reviewed) façade is open to interpretation. A 2013 review commissioned by the UK Government (Miller 2013) details how the major social media sites have changed the way online identity can be constructed: "The Internet initially appeared to expand the field of anonymity, which meant people could explore new forms of identity, shift identity, or secure multi-identities with relative freedom. By contrast, Facebook has been associated with not just the loss of anonymity but as a threat to all aspects of privacy" (Miller 2013). It is the case, that sites like Facebook have removed the possibility for online anonymity, and in doing so secured social capital and imprisoned its users in a virtual space which they must inhabit in order to maintain a sense of self, an image of self which is accessible and consumable.

In service of the regime of virtual space: “Subjects [must] assert themselves in the liquidation of other subjects by taking these others as images. ... with the deepening penetration of materiality by media, a process which really means the intensifying mediation of materiality, a dematerialisation of the object world occurs” (Beller 2013, 260). All of our being must be constructed within – and mediated by – the virtual space. The alternative is to cease to exist in society, for society now seems to exist in the virtual. As Ulman demonstrated: in order to inhabit this space one must inhabit an image, and this image will be defined by that space. Her online persona gained popularity and – by relation – credibility by “Relying on a character and a narrative that had been seen before [which] allowed ‘people to map the content with ease’ (Ulman). The more someone performs according to prescribed behaviors, the more ‘likes’ and ‘shares’ they will receive” (Kinsey 2016). This affirms the notion that online identity is prescribed by the virtual social space which it inhabits, one must conform – and perform – or go unnoticed. “Rewarding behavior in this way is fundamental to the business model of social media” (Kinsey 2016). The social media giants define how people must represent themselves, and in this way they define that users must become virtual in order to ‘be’. For to go unseen in virtual space is to cease to exist. Being unseen means not becoming image, not constructing content, and therefore not perpetuating and upholding the system for production of media. The system – based primarily on search engine programming – decides what is relevant and what is not, what is ‘liked’ or ‘trending’ and what is destined to fall to the bottom of the barrel and no longer exist. It decides what can be monetized and what has no value in virtual space.

Here again I see an opportunity for my work to enact a rupture, a moment which severs the connection with one’s ‘virtual self’. I am interested in exploring what could occur in this moment. Where will the ‘self’ reside? Will it be lost (meaning that the virtual self is the only self)? Will there be a separation of ‘selves’ indicative of a duality of ‘offline’ and ‘online’ being? There is potential in this rupture to discern where we reside or inhabit and what power – if any – is exerted over our ‘being’ by ‘virtual space’.

Despite the apparent blindness of internet users, the topic of data collection is becoming more mainstream, and the fact that “Sites such as Facebook and Instagram rely on selling information about their users”(Kinsey 2016) can no longer be denied. Addie Wagenknecht’s *‘Data and Dragons’*(2014) series is composed of several sculptures which capture anonymous data from nearby wifi signals. These sculptures instantiate material representations of data networks, embodying that which is not visible in order to conceptualise the nexus which amalgamates social capitals.

Her work *‘XXXX.XXX’*(2014) is an arrangement of several complex wall mounted panels resembling futuristic telecommunications switch boards, these are connected by an entangled array of data cables analogous to bunches of curling hair. This work is driven by specifically designed hardware and packet sniffers which seek out live data in the vicinity. This data is visualized through an array of flashing LEDs connected to the panels. These panels are reminiscent of the multitude of servers associated with the internet and the housing and distribution of data. Much like the ancient computers with they’re exposed circuits – discussed previously – they are a physical representation of the processes in action behind online activity. This could be seen as an act which gives ‘virtual space’ a physical form or enables a way of looking directly at the body – or space – which underpins its invisible materiality.

This sense of embodying the network is affirmed in the mode of presentation: though the panels themselves are upright and even, the mess of wires constitutes a kind of untamed nature or sense of life in the snaking arteries and blinking eyes of the sculpture. Addie's intention confirms this: "Indirectly, the piece was about phones and computers becoming almost anthropomorphic, extensions of our arms and self, like a 'black box' of cultural capital and social currency. I wanted [to] encapsulating it in a way that society can parse"(Ihaza 2014). This form of representation enables a form of haptic connection with the system which may enable an audience to conceptualise the subject in a way which they could not when examining it in its invisible form.

In my practice I seek to make the *invisible – visible* by presenting my devices in plain sight and making clear their connections to each other to elucidate the functions of my setup. Using wired as opposed to wireless connections permits the viewer to discern how the system functions and emphasizes the links and networks between devices literally. Also the arrangement of wiring and devices – hidden, exposed, tangled – can contribute to the reading of the work and direct attention to the subject, which in my case is the devices themselves, not just their outputs. I believe that by describing 'virtual space' with physical forms one opens up an area where discourse can occur outside of the virtual screen and thus be not so confined by its conditions or rules, in essence it can facilitate a step back to gain some distance from the subject.

The work of Simon Pyle often facilitates this stepping back, especially in his series of 'Screen' works, where he addresses the "awareness of the screen as an image and as an absence" (Pyle n.d.). He draws attention to the materiality of the screen and its function of producing transcoded virtual images, emphasizing the difference between spectating via the screen and viewing physical space in situ, unmediated by technology. In his work 'I Looked Up To The Screen Above' (2015)- a rooftop installation at Lillstreet Art Center – the artist captures an image through a smartphone which is then photographed through a microscope. This close up of the smartphone screen is displayed at large scale on the roof top of the building, such that when passers-by look up, they observe the image in relation to the actual sky behind it. This process reveals the abstraction which is captured, generated and displayed by the smartphone's camera and screen. "Through a focus on visual loss, the work considers what is discarded in a world dominated by representation and simulacra" (Pyle n.d.).

In drawing attention to what is lost, the artist creates a space for the viewer to consider the technology outside of its perceived function as a window. Smartphones are designed to appear transparent, they are designed to diminish the sense of mediation between the user and her/his task, to not be seen but seen through. Simon attempts to rupture this illusion in his work, observing that "It can be difficult to see the screen's image and the screen itself at the same time. Flickers and gaps can help us attain that state of awareness of the screen" (Pyle n.d.). These flickers and gaps, or glitches and inconsistencies are tools which I also employ in my practice as a means of disrupting the relationship between the user and device, between the viewer and the screen. By creating instances of interference which could be described as a type of techno-culture jamming I hope to create a space within the rupture of user-machine unity which I have previously mentioned.

Practice and Development of concept

My theoretical research helped me to form new thoughts and considerations about how to approach my practice and what it was that I sought to convey and discuss in the work I produce. While thinking about the power of 'virtual space' and the vast all-consuming net of its ubiquitous systems, which do not just mediate us but completely consume our being in a quite uncontrollable way. I realised that to enact – and perform – mediation in order to discuss it was perhaps not the best way to challenge a tendency towards the virtual. Situating my audience in a 'virtual space' – as I had done in my early video-call works – was perhaps perpetuating their connection to the sublime powers of the technology in a way which might override my intentions. My focus moved towards creating 'rupture' in our relationship with the virtual. I decided that I wanted to privilege the object/device and not the virtual image it produces, in order to make the technology visible. I felt that situating meaning in the devices/objects I employ in my art making could create a concrete space for thinking about 'virtual space'. That allowing the devices to perform and have agency – as opposed to forcing my audience to perform in them – could be a way to create rupture and facilitate a moment to step back from being consumed by the virtual state of being.

i. The Video call

My current project is born of a series of experiments and iterations which test the potential of video calling to be re-purposed as a tool for subverting media devices. As a means to enter a discourse on virtuality and mediation. My first experiments with video calling centered on smartphones. I took them to be a very literal representation of how we mediate our experiences. In that they are the type of screen which is most often placed between us and a subject. The very idea of the screen as a window-to-the-world, was the concept which I sought to challenge. I needed something to draw attention to the screen itself and cause some disacquaintance with it.

I had always found the idea of 'Skyping' (video calling) to be ridiculous, and therefore had some creative possibilities for me. With its shoddy video quality, the out of sync delays, the signal being dropped at least once every session. The idea was that you would feel far more present with the person on the other side, as if you were at some kind of virtual prison visitation-booth. But due to the poor quality of technology available (several years ago), the experience generated a sense of overwhelming mediation and the unpleasant and jarring presence of technology. This then was an ideal program – or filter – to apply to the devices in order to draw attention to the screen's materiality and the act of mediation itself. I experimented with linking multiple smartphones in a group video call and observed that – when grouped in the same space – they generated an array of audio/visual feedback effects. I decided that the shared-video-call had potential as a medium, which could be re-purposed to subvert the experience of media devices (such as smartphones). My initial experiments involved smartphones being mounted in headsets which were worn by participants. I used a video-calling platform called 'Google Hangouts' which could link multiple video feeds and automatically switch between them based on which 'feed' exhibited the most audio/visual activity. This tendency in the program had the potential to generate multiple perspectives of self and other which created a sense of disembodiment and a confusion of self as both spectator and subject in a heavily mediated environment. This work seemed to enact the kind of 'rupture' I was looking for, one which could alienate people from both the technology and its images, and provide a space for discourse on virtual modes of communication, representation and presence.

ii. Incorporating new media

Following my experiments with video linked smartphones I began to incorporate other devices in to my setup. I decided to place cameras within the space in which participants would perform with their headsets. The incorporation of these extra cameras emphasized the spectator/subject duality and helped to create more feedback effects and a wider range of video feeds for the video-calling program to choose from and display. I decided that I should use projectors to display the video feeds to enable those without a headset to be part of the experience and performance of the work (fig.1). The projector setup I had designed to fill the room paralleled my arrangement of webcams in the space. This meant that the webcams looked across the space at the projected images on each

opposing wall. In this arrangement the webcam would remediate the image being projected. Because one of the images being projected is the image recorded by the webcam, there was a chance that the webcam could begin to mediate its own image. The result was unexpected. Visual feedback effects were generated which included the obvious multiplication of the image but also the colours began to shift and a kind of flashing and pulsating occurred. This was somewhat of a revelation for me and I saw how the act of pointing the camera at its own image could create the kind of 'glitch' which could reveal a sense of agency in the machine itself and generate a sense of fallibility in the production of virtual imagery. The metaphor of forcing the image to look at itself also appealed to me. If the machine can look at its own reflection and see an image then maybe displaying this image has some potential for us to see the machine, the image, the 'virtual space' and its **otherness, thus causing** the rupture I had been searching for.

iii. Indeterminacy

I have been heavily influenced by Nam Jun Paik's early work which was particularly driven by chance, indeterminate outcomes and the temporary. I believe that this way of working with technology allowed him to truly utilise his medium. To him the television was not just a two-dimensional screen to display images, it was an object which could be melded in to new forms and completely unhinged from its intended use. He drew "attention to the iconoclastic act and the spectacle of the object in use" (Kaye 2007, 41). I seek to form a similar relationship with my medium, to experiment with the devices I employ in a way which deconstructs their facades and reconstructs the meaning to situate the spectacle of virtuality within the objects themselves. As my project progressed I would also discover that indeterminacy was a key aspect in the work I was producing. The free-forming nature of the work could create a sense of life and embodiment of the virtual, in that the machines became anthropomorphic. Thence gaining an appearance of agency and the ability to be performative in and of themselves, separate from the audience. These discoveries were driven by being open to the 'mistakes' and 'problems' which arose in my various arrangements of devices and gear.

iv. Privileging the Image

In my practice I see the importance of thinking about how the device/object can manifest itself as the spectacle. There can be a tendency with multimedia works to see the objects as the mode of production or display and not as the medium itself. Multimedia artist Christopher Handran considers how the device/object can manifest itself as an art object or apparatus in his Thesis "*Looking into the light : reinventing the apparatus in contemporary art*"(2013). He defines "the apparatus as an object that simulates thought, as distinct from tools and machines, which both simulate actions of the body" (Handran 2013). This idea empowers the apparatus/object, positioning it closer to the 'icon' or 'fetishized object', in that it has great meaning invested in it, and is thus a conveyer of ideas

rather than a mere tool for their production. Handran points out that to consider these devices as “‘media’ suggests that the apparatus is itself the medium, both in the sense that it provides the material support for the work, and in that it frames and mediates the viewer’s experience in the work.” (Handran 2013). I believe my apparatus is indeed my medium, and it is important that I convey this in the way I present my work by positioning the objects not just as mediators or tools of production, but as performers and physical locations of meaning. In order for my apparatuses to become the spectacle I must place them at the focal point, and relegate the virtual image to the background.

v. Sound

Since I first discovered the reactive sound aspects of my video-call setups I have always been uncertain of how – and if – to control them. My proposed methodology of chance method, indeterminacy and allowing the work to develop and perform itself, compels me not to intervene in the way it chooses to produce its audio effects. Like the visual feed-back, the audio feedback is part of imbuing agency in virtual mediation and creating that space were the action of mediation become the spectacle. It should also be noted that: the program which interprets and prioritises video feeds in the call relies heavily on sound to determine which feed to prioritise. As it is of course set up to facilitate conversation in a video conference call. This means that the sound influences how and when the imagery is generated and vice versa.

vi. Agency in the machine

Generating the appearance of a kind of agency in the devices was of particular importance to me. I may have partially blinded the participants by encouraging them to don the headsets, but the program and devices decided how the participants should see and relate to each other. Here I see the formation of indeterminacy in the work. The work is of course indeterminate in that it is interactive and participatory. But is also indeterminate because I have no control over how the devices perform. This way of working could be paralleled with the production of ‘Generative Art’ which relies on computer algorithms to generate visual phenomena, which are indeterminate yet also predictable and highly controlled. In my case I feel more in tune with Paik’s conclusion that his medium could be “indeterministically determined” (Paik 1993). The difference here is that Paik’s early work was not bound by time or an endpoint, and in this statement he infers that the technology could be set on a particular path or influenced in a particular way but the outcome could not be determined. The aspect of time in this idea of indeterminacy means that the work can be continuously changing and never settle on a particular form. To me this imbues the work with a form of life and agency.

The ‘glitch’ is a common and familiar indicator of fallibility in a computer system. As I have stated before, a ‘glitch’ can be a way of disrupting the relationship between a user and their device, making it ‘visible’ as an actor. I hope that by harnessing this idea of the ‘glitch’ as a sense of fallibility and indeterminacy in the computer system I can imbue the devices with anthropomorphic qualities which point towards some kind of agency.

vii. Developing my final outcome

At this point in my practice I am interested in developing the interactions between the machines themselves. And exploring how these interactions could communicate their agency over the production of virtual representation.

I decided that the best way to move forward and discover the potential of turning the camera on the screen was to surround myself with my medium and hire as many screens and cameras as possible. I assembled several TVs, laptops, smartphones, I-pads, projectors and webcams in a space and began to test different arrangements. I used several laptops in a hub arrangement from which I could connect them to TVs or projectors. I used the smartphones and I-pads as mobile cameras for ease of repositioning and for recording the outcomes. I found that by placing a camera at close proximity to a screen the feedback effects would increase. I linked all the devices together in a video call and found that with more 'users' (devices) on the call there was more likelihood of generating feedback and a varying array of effects. The devices began to construct their own images as they attempted to transcode their own screens. In this way I felt that they were attempting to re-display – transcode – themselves. This revealed some of what occurs in the process of transcoding: that is, translating one form of information to another. If the translations were complete and sincere then surely the image on the screen would not change. Yet it did change, a lot. Which indicates that the processes in action when constructing an image from code are not well equipped to produce a factual representation of appearance. This seemed to present some evidence of the insincerity of virtual images.

In this testing phase I observed that the haphazard arrangement of devices – their various wires and physical appendages – were a literal representation of the connections between them. Much like Addie Wagenknecht's physical manifestations of data networks, this assemblage of techno-objects could enable an audience to conceptualise the subject in a way which they could not when examining it in its intangible form. By displaying the devices in this way I could approximate my goal of situating my subject matter in the objects themselves. Thus having both the physical and virtual (image) in play.

My next step was to make a formal arrangement of these objects in an exhibition setting. For my first exhibition practice I arranged three laptops in a circle facing towards each other. Three projectors were connected to these laptops (**fig.2**) and their displays were projected against one long wall in the space, overlapping so that there was no white space in between and the entire wall was covered. I decided not to use smartphones in this setup in order to test how the arrangement could function without them and how the work would be read without their presence. The three laptops were connected in a video call. Each laptop had a webcam placed directly in front of the screen so that only the screen would be visible in the projection. The wires of these webcams crossed over in the center of the circle created by the laptops. The power cables for the laptops and projectors were arranged in snaking forms across the floor. This was an attempt to make the connections visible and part of the subtext in the work. I intended that the cables – in this arrangement – would convey some anthropomorphic quality in the devices. As if they're physical connections and dependencies could be an indication of their needs for sustenance. The circular arrangement of the laptops and crisscrossing wires between them were intend to constitute a kind of gathering, as if they were at a

meeting conversing with each other. The purposeful positioning of the setup was intended to construct an image of agency and independence. As if they were a collection of artificial intelligences acting in and for themselves. In this way I hoped to draw attention to the objects themselves as the subjects of the work.

Following on from this practice exhibition I rearranged the install to address some issues which had arisen. I placed the circular arrangement of laptops in the center of the room as the focal point and increased the screen brightness to maximum, creating a glowing circle of light. The laptop screens also display the same imagery which is being projected. This means the projections are merely an external 'projection' of the interactions between the laptops within the circle. I arranged the projectors around the outside of the laptop configuration and pointed them at separate walls. This arrangement created a more immersive space and meant that there were no dark corner or obvious 'viewing area' in which an audience could gather. I also re-introduced two smartphones as a way of addressing the need for more 'users' in the group video-call. This meant that the feedback-loops and effects could function at their full capacity. I floor mounted the smartphones to record the projections. My arrangement of cords and wires followed the same organic patterns, but in this case I utilised them as a means of cordoning off space and directing traffic in front of the projections and the laptop circle.

This rearrangement of the install was very effective. The space functioned much better, in that it focused attention on the laptop circle and directed movement around it and through the paths of the projections. The effects produced were more varied and energetic than ever, organic patterns began to appear and warm glowing shapes of various colours were displayed. This imagery seemed to express an externalisation of the internal space in the machines themselves, like thoughts or dreams. The sound was also very active, and able to feed off itself, though still very reactive to sounds made in the space (footsteps etc). The placement of microphones (those on the two smartphones) at a distance to the laptop circle seemed to aid these sound effects, allowing the sound more points of contact and encouraging the system to switch video feeds more readily.

The work was very immersive and quite beautiful. Being in the space felt intimate, as if one was invited into the private dreams and internal spaces of the objects (**fig.3**). Yet the imagery and sound was so alien that the sense of otherness was very much present. This installation seemed to quite appropriately fulfil my idea of finding a space beneath "virtual space" somewhere which was situated in both physical and virtual but due to its unfamiliarity, felt like neither. Both the objects and the images were privileged and their connections and systems of interaction and production were evident. Observing the arrangement within the circle clearly showed that the computers were looking at each other via the webcams and that the interactions and communications between them were producing the audio-visual effects which fill the room. There is a feeling – as the viewer – that one is separate from this interaction. We are not being mediated, the communication occurring has nothing to do with us, we are on the outside of this virtual interaction, on the outside of the 'virtual space'.

There is one primary aspect which includes the audience in the performance of the work. That is, the facility for interaction with the microphones on the devices. When there is a large group in the space this becomes very evident. Voices and footsteps are delayed, echoed and abstracted by the machines. Because the imagery is generated by the sound and vice versa, the images are also

effected by the presence of people in the space. The video feeds switch more rapidly and the patterns, colours and effects are more likely to change. When the interference peaks – in a kind of overload – the screens begin to flash and a high pitched whine is emitted. In this way the work can still be seen as very interactive, though not in any controllable way. The audience does not control the interaction, they are subjected to it. It seems that the devices are also somewhat unwilling participants in the interaction, preferring to ‘converse’ among themselves without human ‘interference’ to overload them. This is an interesting dynamic. One that serves the purpose of creating a rupture between human and machine, a dissonance which can perhaps facilitate discussion on our separations.

In order to think about how and if this element of interactivity is beneficial – and ascertain what can come of its absence – I produced another work which could be less interactive. This work would attempt to further exclude the audience from the computers virtual interactions. I replaced the projectors with four TV screens and emphasized the form of the laptop circle by placing them radially around it, facing inwards. There were four laptops and four TVs creating two concentric circles of screens looking in on each other. The laptops were linked in the usual manor, with webcams positioned in front of each and their wires crossing in the center. I decided to emphasize this center as a kind of connectivity hub by directing all the power cords to the center and running them up to the ceiling. This drew attention to the center of the circle and somewhat approximated an image of gathering around the fire – the primeval hub of social interaction, safety and sustenance. Yet this anthropomorphic image was counteracted by the cinematic image of the powerful interconnected network of devices drawing their power from a singular source and combining their intelligence in a hive-mind (**fig.4**). This installation certainly emphasized the notion of agency in the machine, artificial intelligence and the separations and differences in human/machine modes of being.

I controlled the sound in this installation by turning down all the volumes so that the devices could hear themselves but little else. Voices could still be picked up by the microphones, but only if someone stood very close to the circle and spoke loudly (i.e not typical behavior in an exhibition setting of this kind). The devices still produced their own sound – which emitted from the television sets. The range of audio/visual effects were somewhat diminished by the proximity of the devices – and their microphones – to each other. The sound and images created were more consistent and constant and more likely to get ‘stuck’ on a reoccurring feedback loop. The screens would mostly display the same video feed in unison or generate the same image on all feeds. The most common result was a mostly flat colour – either red or purple – which would pulsate in unison on all the screens as if they were breathing or simulating a kind of heart beat. The sound was more changeable but mostly consisted of a kind of undulating ringing like an echoed dial up tone. The overall effect of the installation was quite compelling in terms of generating an image of the machines as having agency, life/being, and a consciousness separate to that of humanity. As I expected, this Idea of separation was emphasized and embodied by this installation.

I must consider the question of what constitutes too much distance from the subject matter. For it is not my wish to infer that the virtual is not made by us, it is my intention to talk about that which we have constructed and its potential to alienate us from our reality. I obfuscate the technology as a means of drawing attention to its materiality and substance and its ability to alienate. This idea of separateness overrides considerations of the very human powers at play in the construction and control of ‘virtual space’.

At this point in the timeline leading up to my graduate show, I have not decided which of these two differing iterations to hone and present. I will continue to test both – and variations in between – to allow the final work to be “indeterministically determined” (Paik 1993) by process. Art cannot be controlled it can only be guided.

viii. Graduate Show Exhibition

“Re-mediated Virtual no.4”

AUT, AD17, St.Paul St Gallery 2

November 2017.

My final outcome for the graduate show at AUT expanded on my earlier experimentations: A grouping of laptops (connected in a video call), projections from these laptops covering the walls of the space, accompanied by the facility for audience interactivity via smartphone cameras placed throughout the room, recording sound and video to input into the video call. The devices were connected with an abundance of tangled exposed wiring, making plain the physical interconnectivity between the objects. I was offered the St.Paul St (No. 2) gallery (roughly 6mx12m with high ceilings) to present my graduate exhibition. This relatively large space provided the opportunity to maximise the effect of my projections and create an immersive experience. Four laptops were grouped in a video call near to the left wall (**fig.5**) with five projectors connected to this grouping (**fig.6**) which covered three walls of the space with the various video feeds outputted from the laptops and their ‘Google Hangouts’ group video call. These projections took many shapes, colors and levels of distortion (**fig.7**) dependent on how the laptops were interacting with each other and with the participants moving through the space. Smartphones (connected to the video call) were placed at varying locations throughout the installation to test how the movement sensitive video feeds could provide opportunities for unintended interaction with the work as people entered the space to view the installation. The sound generated by the laptops in response to each other and to the introduced sounds in the space (voice, footsteps etc) varied from basic echoing to high and low pitch distortion, whining and pinging. The sound generated a sense of the distortion and feedback between the devices and the distortion and abstraction of human

generated voice and movement in interaction with the devices. The work was open to the public for 5 days, running from 9am to 4pm. During this time the work produced a multitude of audio/visual effects and loops: Some participants enjoyed responsive interactions with the installation, recognizing themselves in the projections and 'playing' with the responses (many colourful repeated images of bodies and shadows in the projections which participants could move and activate) ; other participants experienced only the cacophony of blaring distorted sound and flashing colours (unable to have influence over the intense feedback between the devices) ; and some participants would be met with a completely unresponsive display. Silent with muted white or beige projections on the wall. Unable to be reactivated without a loud shout, clap, or stomp. Over all, the installation was successful in that it functioned as intended, generating a wide variety of effects and responses and providing a space to perform, observe and contemplate the dynamics of our relationship with digital communication technologies.

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Appendix

i. List of Figures

Fig.1



Fig.2

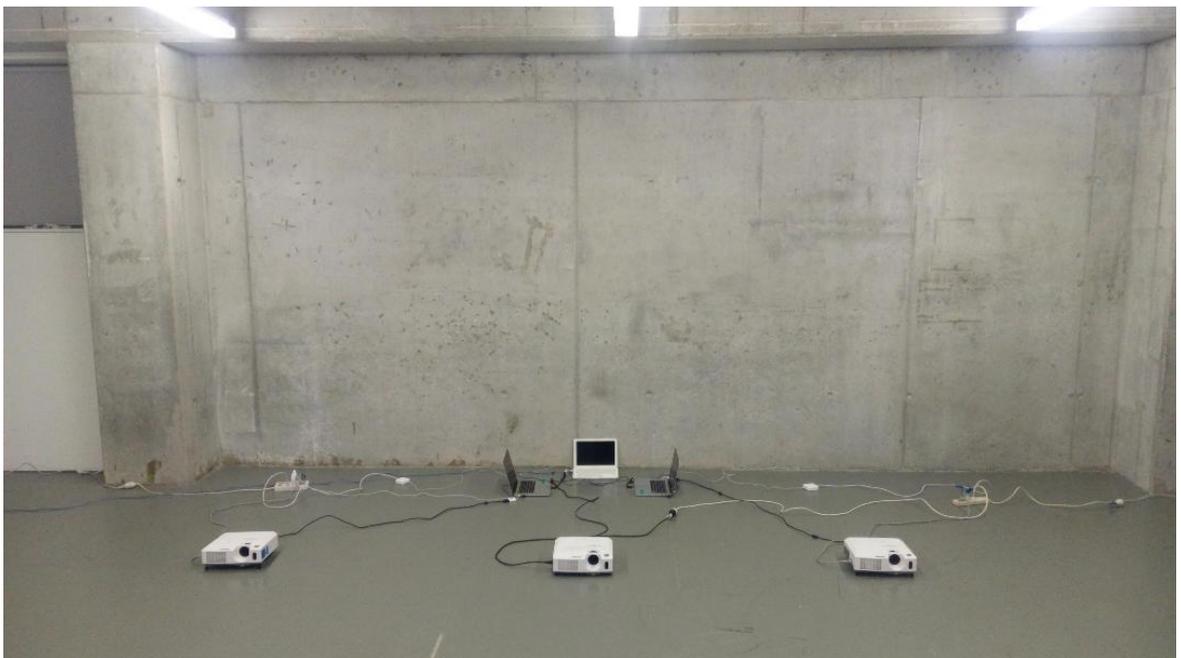


Fig.3

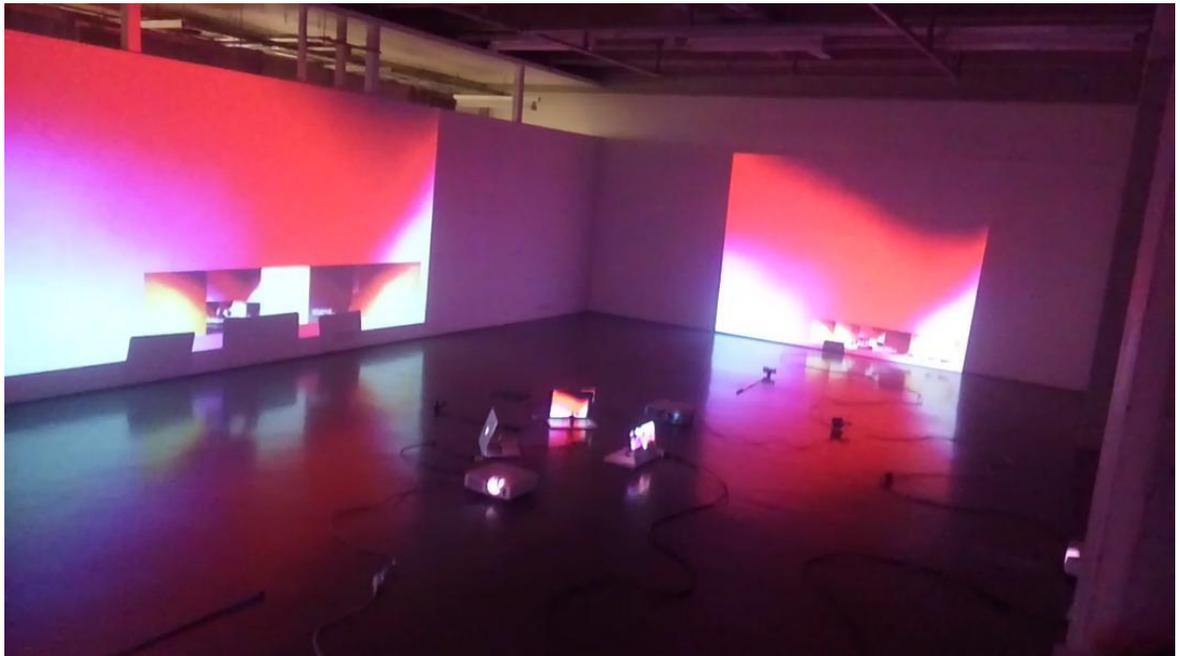


Fig.4



Fig.5

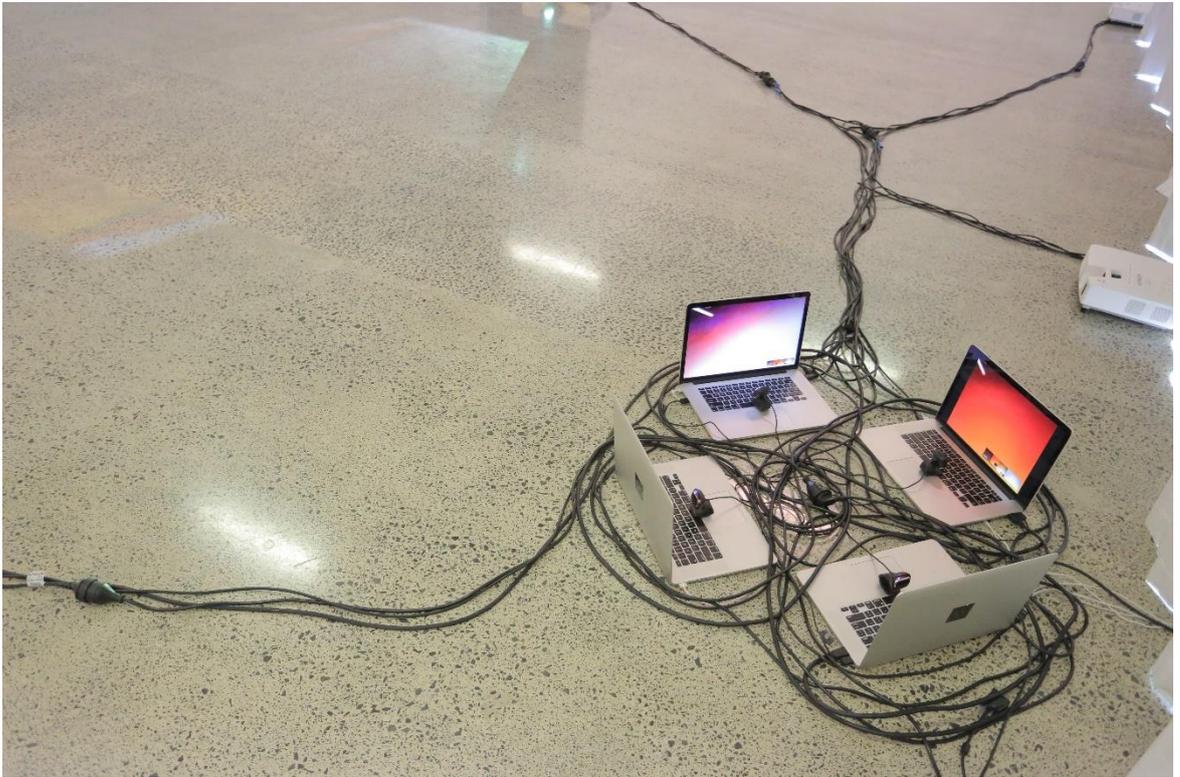


Fig.6



Fig.7

