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Art educators on Twitter and beyond: thinking with virtuality

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Abstract

Twitter is an online social media system (SMS) and provides opportunities for social interaction and communication of interests which may facilitate learning. As a virtual, communicative platform, Twitter is used by educational institutions, educators and students in various ways. The focus of this thesis is the work of art educators and the emerging positions on art education and practices as situated on Twitter and beyond Twitter in a virtual context generally. To achieve this, I have tapped into artistic junctures that harness instability, experimentation and possibility as synergetic learning processes.

Generally, educational institutions favour Twitter as a monologic or one-sided vessel for information dissemination. However, educators centre Twitter as a professional opportunity, including student engagement, peer to peer learning and network building. In light of the literature, virtual interactivity is deemed an important factor in art educator use of Twitter and beyond and is examined alongside my involvement in the study. I created artworks and surfaced art encounters to think with virtuality as a conceptual tool in art-making and art education.

Public and private virtual spaces are considered as merging entities that elucidate confusion in research practice. Examples from various large-scale data collection practices in virtual research identified various ethical issues, which in my view, expound an ethical ambivalence toward those who are researched. I addressed the significance of my ethics approval process, which I designed to identify and work with participants on Twitter and the theoretical need to centre my participation in this study.

Ethical virtual research practices and processes are deemed necessary topics for further research.

Affect theory and diffraction work in unison in this thesis to underline positions of reiterative meaning-making and the complexity of difference when communicating online. Affect theory is applied to the continuous transmission of communication on and beyond Twitter and muses the complexity of learning virtually. Art educators claim pedagogical space on Twitter and beyond in this thesis which is contextualised, connected and sensory. Generative actions such as communicating virtually with artmaking highlight synergetic learning processes that virtual engagement affords.

I initialised a study of art educators and their virtual work on Twitter and beyond to provoke thinking with virtuality. Working with affect theory and diffraction challenged how artmaking and art education can be delivered and interacted with in virtual space. The contribution to learning locates SMS like Twitter as generating transmissible options for art educators. The value to art education and art educators is to both embrace and destabilise virtuality in art education. Virtuality as a conceptual tool is deemed a necessary and troubling force in artistic practice and education and this thesis recognises that the conceptual and theoretical complexities of virtuality in education require further research.

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signature:

A solid black rectangular box redacting the signature of the author.

Print Name: Kerry Power

Date: 02/08/2018

The undersigned hereby certify that the above declaration correctly reflects the nature and extent of the student's and co-authors' contributions to this work. In instances where I am not the responsible author I have consulted with the responsible author to agree on the respective contributions of the authors.

Associate Professor Iris Duhn (Main Supervisor):



Date: 02/08/2018

Ethics approval

The research for this project received a “Human Ethics Certificate of Approval” from the Monash University Human Research Ethics Committee:

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Summary

Art educator engagement with social media systems (SMS) oscillates practice in and out of virtual and physical planes and it is important to examine how and why this is done, including the potential connections and associated problems. In 2014, I established a research site on Twitter and spent six months studying the interactions of art educators. Together with my participation in the study, I found that thinking with virtuality encouraged diverse and experimental ways of conceptualising positions on artistic virtual communication. As virtuality is a constantly moving and changing concept, this thesis poses challenges for art education, art educators and art students.

1. The beginning

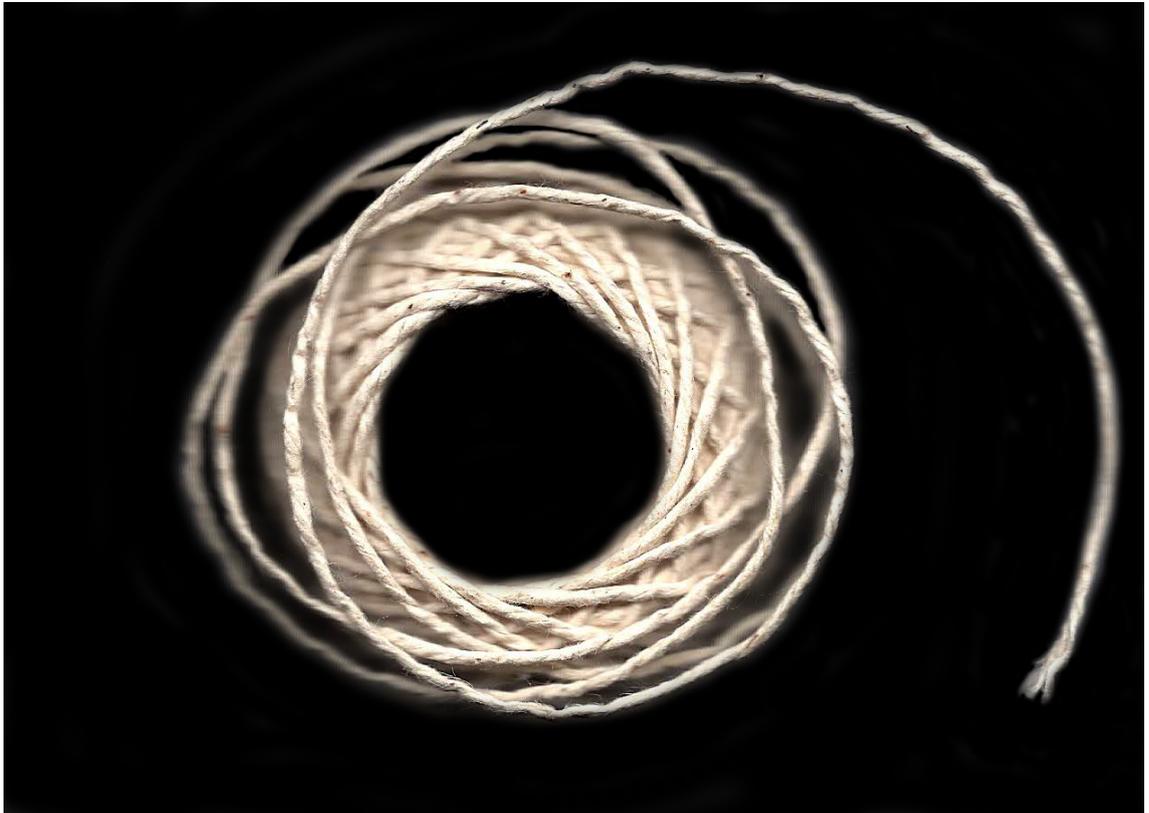


Figure 1.1: *The beginning* by Kerry Power, 2014, string and digital drawing.

1.1. Introduction

The speed and the virtuosity of communication in virtual space can bend and shape information, communication, learning and ways of being. The ever-changing World Wide Web (web) is a concoction of signals that I imagine as infinite, stringy bridges that melt, evaporate and clash sinuously in perpetual movement. These signals make a humming sound too as my computer fan cools the hardware in a never-ending spin cycle. Just as Philip Glass composed *The Grid* (1983, 2009) for the film *Koyaanisqatsi* (Reggio, 1982), the music of the web turns and turns in perpetual motion. Reggio's (1982) film depicts comparative and emotive footage of the impact of human 'progress,'

and Glass's (1983, 2009) minimalist ostinato spins and spins and builds complex sensory spaces. I feel the web and it changes and grows with me.

Virtual data connects to us, passes through us and bounces around us. Data can climb into your phone and play a music video you haven't seen in years. Although we accept that this does happen, we often take it for granted. Virtual data can seep around our lounge room, through the cat and occasionally ask for permission to download. We may think we can contain it, save it, run anti-virus software to filter it, but it just spins and spins in visible and invisible symphonic patterns.

Virtual engagement and communication infiltrates perception and learning and has wide-ranging implications for educational institutions, educators and students (see chapter two: *Literature review*). This thesis centres current art educator communication on the social media system (SMS) Twitter to springboard thinking with virtuality in art practice and education. I portray my synergetic relationship with virtuality throughout the sedentary pages of this thesis by experimenting with artistic practice and artistic encounters to challenge how art educators might make use of virtuality in art education.

1.1.1. Virtual and virtuality.

The word virtual has various definitions. Virtual can be a play on the word 'real,' whereby a reflection caught in a mirror constitutes a virtual representation of an 'original' thing. It can also happen as a result of a computer program, as simulated physical objects become virtual objects and are displayed on screens and played through speakers. Both definitions play with reality and materiality as sensory experience is

stimulated by ‘virtual’ interaction. These two definitions are addressed in part in this thesis in an effort to work through the concept of virtuality.

As Nardi (2015) aptly defines, “Virtuality permits forms of socializing not possible in the real world” (p. 18). The concept of virtuality is tied to a play on reality, but it balances on a tightrope of what constitutes real experience. Experiencing the web might be summed up as ‘virtuality’ but according to Nardi (2015), it is part of the “technological turn” of contemporary “social process” (p. 15). It is a complex state of involvement, “as human activity mediated through multiple digital technologies, including Internet telephony and video, instant messaging, blogging, social media, games, online worlds, forums, chat channels, listservs, podcasts, logs, and databases” becomes part of everyday experience (Nardi, 2015, p. 16).

Involvement in virtual space includes social experience perpetuated by SMS although it is important to state that SMS do not contain social experiences but rather propagate them. To clarify, the title of this thesis is *Art educators on Twitter and beyond: thinking with virtuality*. Twitter, in this thesis, is used as a starting point to examine current art educator virtual interactivity within a SMS. When writing ‘beyond,’ I state the challenge of this thesis: to think with virtuality in art, art making and art education as beyond SMS containment. This conceptual prompting began with my initial engagement with Twitter.

1.1.2. Twitter.

The stalwart of Twitter is that information sharing on various topics is proliferated by members and non-members. Anyone with an internet connection can have access to

Twitter data from public accounts. Twitter has approximately 326 million monthly active users and this number grows exponentially considering the variety of people, bots and conglomerates with access to Twitter data (Molina, 2017). Tweets are based on ‘texting,’ a hybrid form of typing enabled by mobile communication which was restricted by 140 characters and as of November 2017, expanded to 280 characters (Busby, 2017). A quick and functional statement/question can initiate communication on Twitter and links can harbour elaborations. Following and being followed on Twitter can build relationships with other user account holders, which in turn can develop into groups and further subgroups with a subject focus. Tweets can include statements, questions and multimedia which can, in turn, develop further interactivity. However, the subject or the initiation of a subject on Twitter does not determine a course of interactivity, as subjects may proliferate into various incarnations and this is a conceptual process of Twitter and virtual interactivity that I continue to experiment with throughout this thesis (for an initial discussion on movement and changeable process on Twitter interaction, see *Rhizomatic Twitter* in this chapter).

To introduce how Twitter began and the strange and prolific SMS it has become, I first turn to Jack Dorsey, the Chief Executive Officer (CEO) of Twitter. He (Dorsey, 2006) illustrated the *Twtrr sketch* shown below in figure 1.2, which in his words, was an “abstraction which was easy to implement and understand” and would provide “live” updates from user input (Dorsey, 2006, para 2). The sketch (Figure 1.2) is an early draft of the Twitter interface and the words include “know someone?” and then an oval tab offers “find ‘em.” The bold arrow drawn with a blue pen (Figure 1.2) indicates an option to find a Twitter user in the park and watch them (which conjures prophetic indicators of the privacy and surveillance issues that were yet to follow). Dorsey’s

(2006) configuration (Figure 1.2) provided a window to the connective tissue between human curiosity and virtual interactivity.

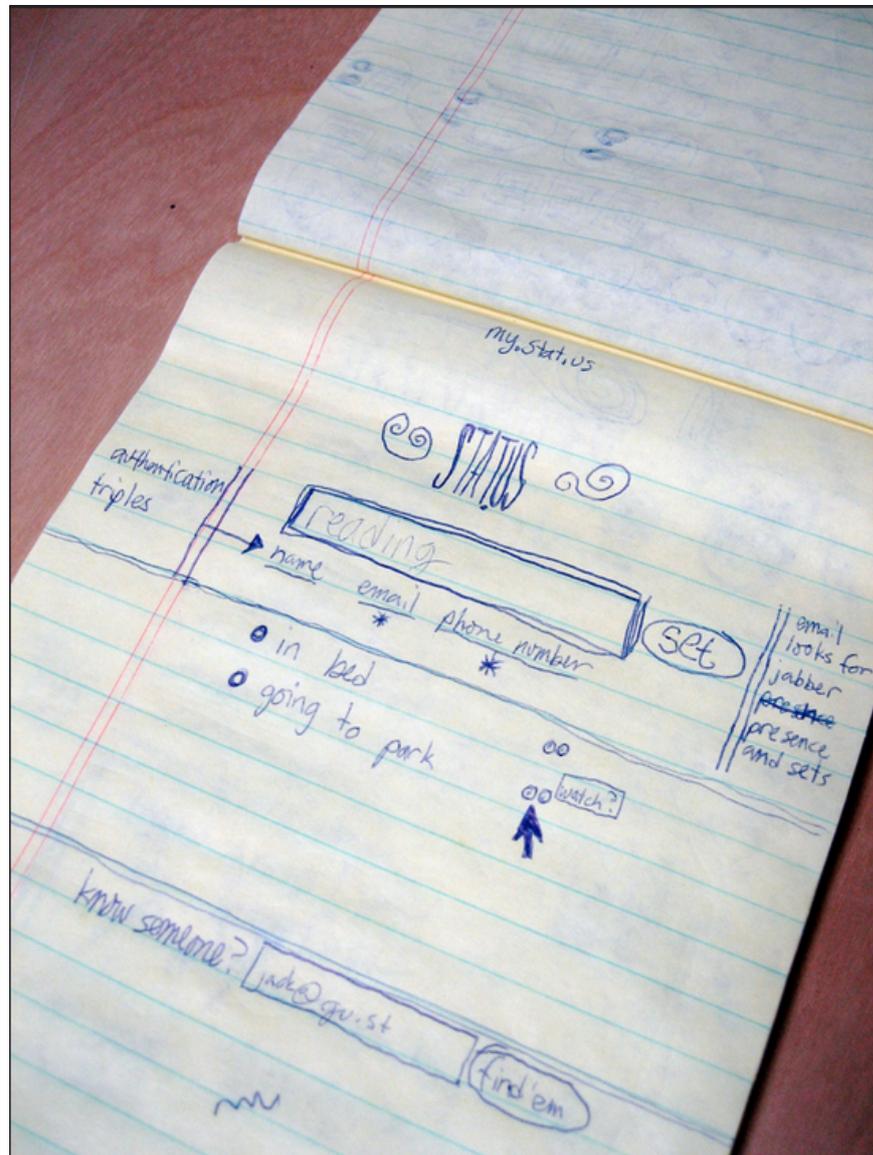


Figure 1.2: *Twtr sketch* by Jack Dorsey, image retrieved from

<http://www.flickr.com/photos/jackdorsey/182613360/in/photostream/>

Although the simplicity of the sketch (Figure 1.2) seems to encapsulate the drawback of Twitter, there is much conjecture surrounding how Twitter was founded, as many attribute the nuts and bolts version of Twitter's creation to Noah Glass (Bilton, 2013). The development of this program and how it was established is argued by Bilton (2013) as one of folklore and claims that "Dorsey was able to weave a story about Twitter that

was so convincing that he could put himself back in power just as it was ready to become a mature company” (para. 4).

The story of how Twitter was founded and became the SMS that it is today supports my approach to working with data in this thesis (see chapter 3: *Methodology*). As Duhn (2017) clarifies “Data is, at its most basic (or perhaps at its most complex?), about the entanglement of perception and experiencing the self as an entity that is able to sense the world” (p. 16). We may use data to situate problems, protest them, sense them and question them. Virtual data floods our wireless networks, travels through our bodies, is deleted then quoted, edited and then repurposed. It gets lost in a trail of intricate desktop folders and then found again using a search engine. Data, with all its might and frailty, can waft in the face of what we might call evidence.

1.2. Background to the study and how to read this thesis

This thesis may be read as a development of a conceptual approach to thinking with virtuality. There is an introduction and subsequent chapters that reinforce methodological and theoretical reasons for my present inquiry. Barad (2007) plays with time and memory in her writing, which seems to ensure that the fluidity of recollection is presented as an entangling trace of connections. The complex reasons behind Barad’s (2007) use of time in her writing are given more weight in chapter three: *Theoretical Framework*. The data chapters push and pull needles to sew what my idea looks like in form and in text. However, there are many currents that work with virtuality in this thesis. Firstly, virtuality is used to frame conceptions of virtual space that involve memory and time as fluctuating entities. In chapter four: *Theoretical Framework*, I introduce my first physical model of Twitter, to conceptualise my thinking with

virtuality. This artwork is considered a continuous artwork, as it is repurposed and used throughout this thesis over a period of four years. The timeline is partly linear, as it is instructional of how ideas and thinking develop. However, time is referred to as an oscillating presence in this thesis. We may use sticky tape to piece together memories to provide a timeline of one encounter leading to the next. But time and memory are framed by the need to make sense of things, as in a quest for some sort of evidence of how one encounter may lead to another (which provides a constant trap for those who attempt to confer to this process).

Throughout this thesis, I have used italics to signpost art encounters and art making as a generative way to think with virtuality:

*I remember watching the movie *Fantastic Voyage* (Fleischer, 1966) which begins with a scientific experiment that involved the miniaturisation of scientists. The aim was to inject them (in a spaceship-like vehicle) into the bloodstream of a patient so they could blast a life-threatening blood clot. The subsequent imagery inside the patient's bloodstream was a psychedelic portrait of human interiority, as colourful matter including antibodies floated by. Time became a constant foe for these miniaturised scientists, as their impending expansion approached.*

What was important about this memory for me was a vision of a technologised 'future.' Although fantastical, this film opened my thinking about the future, imagination and imagery in unforeseen ways (as many science fiction films do). It was frightening and alluring at the same time. The relationship between technology and humans can manifest in various ways according to Haraway (1991) and her cyborg manifesto initiated prophetic conceptions of material entanglement. I imagined this was an

exciting concept considering the emergence of the web in 1991, although there are sinister undertones in her prophecy. For example, fear may drum when thinking about progressing toward any entanglement with technology. In 2014, Amazon Technologies, Incorporated applied for a patent on their “keyword determinations from voice data” application technology that applies “sniffer algorithms” that “attempt to identify trigger words in the voice content, which can indicate a level of interest of the user” (United States Patent and Trademark Office, 2014, para 1). The implications of ‘sniffer algorithms’ in voice initiation software applications are that the delivery of voice commands, including inflections drawn by emotions, may connect a user to third-party operators (operators and affiliates who purchase rights to user content evident in terms of agreement, conditions of use and privacy notice declarations) who interpret and customise content accordingly. In my view, Haraway’s (1991) conception of the cyborg has manifested into daily use of and reliance on digital devices, which in turn has facilitated interactivity foreseen and unforeseen.

A decade or so from Haraway’s (1991) manifesto, I discovered blogging (blogging is a word devised from ‘web’ and ‘logging’ which can be described in general terms as online journaling), which was one of the earliest SMS. I posted various subjects ranging from film reviews to general observations. Usually, the comments section seemed to be the most intriguing part of blogging, as it could be a venue for lengthy and detailed discussions (bloggers who had the ability to make comments usually had an avatar and other forms of identifiable information. Generally, avatars are small thumbnail images that nest with a username in SMS). One of the bloggers I often visited asked a general question: *How did you get here?* My answer linked a meandering pathway of my general inquisitiveness, akin to a rhizomatic root system.

My digital footprint continued and I created a Twitter account in 2010 to connect with art educators around the world as I was particularly interested in how pedagogy was being Tweeted. When creating a research site to examine the interactions of art educators on Twitter in 2014, it is important to state that this study researched a small sample of art educators and the implications of this is discussed under *Implications* in this chapter and in chapter nine: *Recommendations*. My participation and artwork, in particular, was used in this study to experiment with ways of thinking with virtuality. Therefore, when reading this thesis, theory, artmaking and analysis work hand in hand to question what virtuality might mean for me the researcher and to provoke possibilities of art educator virtuality for further research.

1.2.1. Rhizomatic Twitter.

The multiplicities generated on Twitter may have no particular reference point or singular subject, just as Deleuze and Guattari (2011) maintain, “the rhizome connects any point to any other point and its traits are not necessarily linked to traits of the same nature” (p. 25). I draw on Deleuze and Guattari’s (2011) rhizome analogy as I imagine connections between users on Twitter that lead to further proliferation of ideas and implications. There is no formal customisation of connections in many cases, as connections can be instigated by apparently non-linear and non-discriminate means. When analogising Twitter connections as rhizomatic in nature, I am drawing on affect theory in particular (affect theory is discussed further under *Theoretical framework* in this chapter and in detail in chapter four: *Theoretical Framework*), as the driving force of thinking, creating and communicating on Twitter, can be unilateral in nature, as Tweets progress from one bulb or tuber to another.

To clarify, conversation threading on Twitter can be akin to the rhizomatic reach of root systems by encouraging topics to branch comments, questions and links in and beyond the program. A trail of thought and action from one Twitter user to another cannot be predicted and, therefore, only anticipated or imagined. Newsfeeds on Twitter contain topics produced by followed accounts and accessing and building subjects seem to drive a rhizomatic reach of interaction. Rhizomatic connections are continually made throughout this thesis as I have connected art, artmaking and the Tweets of art educators to work through what virtuality can mean for art practice, art educators and art education (see *Methods* in this chapter).

An example of the connections that have occurred rhizomatically throughout this thesis is found in the documentation of an artistic encounter in chapter seven: *diffracting art educators on Twitter and beyond*. Under the heading *Artwork as entanglement* (see p. 161), I draw on an artwork called Structure_1 (see Figure 4.5) that helped define the beginning of my conceptualisation of Twitter. A digital image of this sculpture was uploaded to the research site for this study on Twitter and then a train of interactions followed. The image of my artwork on Twitter preceded an image that was to follow, created by one of the participants in the study, Jemma Grundon (see Figure 7.7). While, in my view, the pictorial qualities of the two images were similar in my view, this cross-pollination of creating stimulated thinking of virtuality as an interactive art process.

For me, the researcher, this ‘encounter’ provided a clear link between two artists working in virtual proximity and the implications from this intra-action stimulated nebulous ways of conceptualising virtuality and intra-action through art encounters. Although I need to state that this ‘encounter’ was one-sided as framed in this context and provided stimulus for thinking of virtuality as art encounters.

The reader, I imagine, may view the artwork, read the discussion surrounding Twitter data and then respond in a multitude of ways. I have collected, analysed and created data in this thesis using a post-qualitative approach (see chapter three: *Methodology*) which elicits various, non-binding ways of creating and analysing data. Therefore, I have created data, experimented with data and theorised data by drawing on affect theory and diffraction as generative and continual forces. Therefore, this thesis needs to be evaluated in light of these positions.

1.3. Research aims

Issues of virtuality are relevant to art educators who communicate in virtual forums. This study examines art educators engaging in virtual communication on Twitter and argues that working in virtual environments needs further consideration on various levels. Research of educators utilising SMS is an evolving field and various problems for educators, students, educational institutions and researchers have been identified (see chapter two: *Literature review* and chapter five: *Ethics in virtual research*).

Apart from ethical problems examined in chapter five: *Ethics in virtual research*, there are areas of the study that concern art educators' communicative use and positions regarding art education in virtual environments. Further, the study invited possibilities of virtuality in art education through analyses of Tweets and artwork. My investigation congealed with the experiences of art educators working on Twitter as a starting point. As the data analysis took place over three chapters, I used my background in art education and experimented with communicating art education and art making virtually. I addressed possibilities in art educator virtuality with the technology and scope that I

have access to now and with the expectation that the study may ignite further investigation into what might be possible in virtual practice and process for art educators.



Figure 1.3: *Tweeting* by ArtTeacherAssemblage, 13th May 2014, screenshot retrieved from Twitter 27/02/2018 https://twitter.com/art_assemblage

1.3.1. Back to the beginning.

I scanned a tightly bound ball of string (see Figure 1.1) as string seems to be what many art educators use. It can be used to hang artwork, used to create artwork and it uncoils, knotting up in drawers, tangling objects related and unrelated. The centre of a ball of string could be the beginning and likewise, the outer edge may fray and strike up further beginnings. It is arbitrary where a beginning or end is and just as on Twitter,

interaction spawns further interactions that weave and fray simultaneously. It is not possible to measure where these interactions begin and end.

In my mind, an image of a tightly coiled string slowly unwound, became messy and broke apart when I imagined communicating on Twitter (see Figure 1.1). Although, the linearity of this image is in stark contrast to how I see thinking about Twitter (Figure 1.1). Tweets can boisterously uncoil from a unified entanglement to something unwieldy, fluid and magnetic forever attracting debris. I can tie a string and cut it, but the intricate threads can move wilfully, reaching for a new path of access.

As education in virtual space continues to bloat and consume learning and experience, educators become tied up in unforeseen intra-activity. My imaginings of education and learning, what it was and what it is moving toward, challenges experience and expectation in virtual atmospheres.

Analogising working with Twitter is and has always been how I make sense of things. I placed the string on my scanner and the image appeared on my computer screen (see Figure 1.1). From there, I edited the background so the string appeared to float. I wanted the string to be an image that stood alone at the beginning of my research. I uploaded the image (Figure 1.1) on Twitter and it became my user avatar. It appeared beside my user address with every Tweet I created over a six-month period in 2014. The image was used to start my research project in an attempt to connect with art educators on Twitter and as previously mentioned, carries the use of related materials to theorise art educator virtuality.

When examining art educators on Twitter and beyond, it is important to state that this study covers a small sample of art educators who participated in the study in 2014. My participation and work to magnify issues of art educator virtual immersion were designed to incite thinking about virtuality in different ways. My artwork, in particular, was used in the study to situate and experiment with the various issues that have come to the surface for me as a researcher and was also used as a way of theorising virtuality. Therefore, when reading this thesis, theory, artmaking and analysis work hand in hand to question what virtuality might mean for me the researcher and to provoke possibilities of art educator virtuality for further research.

Starting in May 2014, I began to Tweet about my research project. The chance that anyone would stumble upon my Twitter page during a Twitter search was quite minute and I was yet to attract followers (in order to gain participants for this study). Therefore, in my attempt to inform potential participants, I began to Tweet Tweets explaining what I was trying to do (see Figure 1.4). The image pictured is a detail of an installation called *Twitter Trail* (see Figure 6.1). I was attempting to connect the physicality of creating artwork into the digital hemisphere of Twitter. My handwriting is visible (Figure 1.4), alongside my perpetual need to stage models for my thinking.

The thread in figure 1.4 pierced the words to tie them up in a series of statements rather than a cohesive sentence. The thread was pinned up around my workstation, photographed and then uploaded to my computer. I uploaded artworks that I created which are used as data throughout this thesis. The artworks became Tweets and these Tweets appeared on Twitter searches regarding art education and research. The transformation of data, wirelessly flowing from virtual space to me and then back again, is what I attempted to trap in this thesis.

As this was a Twitter account created for this study in 2014 (the research site and the ethics process is discussed in detail in chapter five: *Ethics and virtual research*), I imagined that some users may have felt inhibited to participate (just as I would) and I began to wonder how to obtain trust or even interest from potential participants. My role as a researcher was stated in the explanatory statement which was made available on the website I created along with the Twitter site. It clearly stated that the data collected would be used for educational purposes and that if anyone decided to withdraw from participating, they should unfollow me before the end of the six-month period.

However, I did accumulate participants and felt immense gratitude to them for allowing me to collect every one of their Tweets over a six-month period in 2014. I cared and took an interest in what they were saying and doing on Twitter and beyond and continued following their links to other programs and websites. Discovering what these art educators were Tweeting in this public forum tuned into dispositions regarding art practice and virtual potential. It was not that practice and the virtual were separated from each other, but rather as co-contributors to unfolding layers.

Twitter and the process of uploading my material and viewing and storing the data my participants offered, provided a walkway from observing the Tweets of others to participating in the creation of data and subsequent analysis. Thinking publicly in a forum such as Twitter was like embracing the senses virtually. My capacity to perceive Tweets was not just as a Twitter user but as a researcher capturing a six-month window of opportunity to make sense of the interaction of art educators and the potential this process offered in regard to virtual practice and thinking.

The study of this 'group' is of both philosophical and practical importance to me as an artist, researcher and teacher (Springgay, Irwin, Leggo & Gouzouasis, 2008). I define the people who decided to participate in this study as a 'group,' but this is problematic. They are all art educators, but this descriptor is only one commonality. The variance between these people regarding practice and experience is examined and recognised not as homogeneous and representative of art educators, but as malleable and surprising explorations of inhabiting and working as educators on Twitter and beyond.

Representation is argued as problematic in this thesis by drawing on theoretical and philosophical arguments (MacLure, 2013). This argument (and realisation) first began with my engagement with the philosophy of Deleuze and Guattari (2011) and Baudrillard (2001) and then was further supported by affect theory (Clough, 2007; Gregg & Seigworth, 2010; Hickey-Moody, 2013a; Kosofsky Sedgwick, 2003; Massumi, 2002; 2015; Stewart, 2007; Wetherell, 2012) and diffraction (Barad, 1998; 2003; 2007; 2010; 2014; Bozalek & Zembylas, 2016). Drawing on these theorists allows movement and difference as never-ending processes. Representation is therefore elusive and cannot be pinned down. The significance of this position is elaborated in chapter three: *Methodology* and chapter four: *Theoretical framework*.

Therefore, the aim of this thesis is to examine how interactivity and intra-activity in virtual space perpetuate capacious and unstable educational practice by focusing on art educators on Twitter and beyond. It is a feat to single out any one particular group who use Twitter, but I have done so as I align myself with this group as an artist, researcher and teacher (Springgay et al., 2008). I am immersed in this study to work with and

beyond the initial boundaries of art educator communication on Twitter and problematise what art educator virtuality can mean and do for art education.

1.4. The scope of the thesis and limitations

This thesis does not attempt to answer the questions that it has posed, although the questions posed were used to provoke art educator use of Twitter and positions that virtuality may encourage (see *Research questions* in this chapter). Therefore, definitive reasons why art educators should or should not use Twitter are not debated and therefore, this position might be viewed as a limitation. However, in chapter three: *Methodology*, I argue for a post-qualitative approach in this thesis which troubles data as evidence. Data is collected, created and used to examine and experiment with particular ideas. I created data in order to centralise myself as researcher and experiment with data, which again, may be argued as a limitation of this study (for further discussion regarding data, see *Adopting a post-qualitative approach* in chapter three: *Methodology*).

Therefore, the limitations of this study may be viewed from different perspectives, depending on epistemological and ontological positions. It is my view that the limitations of this study are found in the scope of the participants who joined, as many were from the United States and many were from academic backgrounds. Art educators from various hemispheres and areas of education would have provided more diverse perspectives as I suggest under *Recommendations* in chapter nine: *Conclusion*.

1.5. Thesis organisation

This thesis is divided up into nine chapters. Firstly, I introduce Twitter as a recent virtual tool for educators to communicate and work in. Literature surrounding teachers and Twitter is examined in light of this developing phenomenon. Over a period of six months in 2014, I worked with data produced on Twitter by participants who identified themselves as art educators. Alongside the research process, I created artwork and situated my perception of art not only as an art educator but as an art student (see chapter seven: *Diffracting art educators on Twitter*).

I draw on affect theory and diffraction to think through how educators may use Twitter and broadcast themselves by creating artwork and communicating online. I discuss ethical considerations when designing this study and the need to identify participants. Three data analysis chapters entitled *Tweeting affect*, *Diffracting art educators on Twitter and beyond* and *Thinking with art educator virtuality* deliberate art educator virtual potential. Using data collected from 21 participants, I slowed down the pace of Twitter to locate the complicated nature of working on a SMS platform as an art educator.

1.5.1. Research questions.

Research questions were continually edited as I worked on this thesis. My use of a post-qualitative approach enabled and troubled the initial aim, which was to study why and how art educators were using Twitter. However, Twitter is an ever-changing SMS and educational research surrounding the use of Twitter is ongoing. Therefore, in the literature review, I initially concentrated on educator, student and educational institution

use of Twitter. The subsequent research questions that followed initialised inquiry regarding art educator virtuality and centred the research aims of this thesis:

1. How do educators, students and educational institutions make use of Twitter and what sorts of complexities does this virtual interaction afford?
2. How do art educators create and practice art education on Twitter and beyond?
3. How can we think with virtuality as art practice and in art education?

1.5.2. Selecting the literature.

Initially, the literature selected for this review examined educators and students using Twitter. There were both pitfalls and signs of progress identified by engaging with Twitter. It emerged that educators prize Twitter as a form of professional development and networking which facilitated meaningful interaction (Carpenter & Krutka, 2014; Davis, 2015; Gruzd, Wellman & Takhteyev, 2011; Marwick, 2013; McPherson, Budge, & Lemon, 2015; Visser, Calvert Evering & Barret, 2014). Further to this, Twitter was viewed as a facilitator of formal and informal interaction, which in turn, encouraged “patterns of difference” (McPherson, Budge, & Lemon, 2015, p. 132). On the downside, problems of privacy and safety were expressed (Carpenter and Krutka, 2014). I continued to work through what the literature elucidated and pursued research that addressed educator technological and virtual engagement specifically. Therefore, the literature is presented in two parts: *Tweeting in education* and *Art educator virtuality and possibility*.

1.5.3. Methodology.

Data is used to support the examination of art educators' use of Twitter and beyond in this thesis, however, data as evidence is challenged by my use of a post-qualitative approach. As a methodology, post-qualitative research challenges perceived binaries, including understandings about questions, answers and data used as evidence. Although I draw on a/r/tography and virtual ethnography as groundwork for creating artworks as thought processes and collecting virtual data from Twitter, a post-qualitative approach framed how various methods of data collection and generation were used to think with virtuality in various ways (see chapter three: *Methodology* for a comprehensive argument to establish the methodological approach used in this thesis).

The perception of data and the use of data in this thesis is the basis for how conceptions of art educator virtual engagement can generate learning and thinking. The result is a personal and contextualised challenge for how art educators can and do use virtuality in artistic practice and education.

1.5.4. Theoretical framework.

Twitter can be many things to many people and this thesis is concerned not with the categorisation of what happens and who uses Twitter, but rather, the various junctures that can enable process and progress in thinking and creating. To address and work with possibilities on Twitter and beyond, I elaborated two theoretical platforms from which I draw. These theoretical 'parts' work in unison and include affect theory and diffractive analysis. These theories 'speak' to one another, as affect theory addresses precursors to thinking and movement. Diffraction recognises difference as understanding and the

ability to think through, over and around matter (Barad, 2007). These theories provoke the intricacies of working with meaning-making in this thesis.

Affect theory and diffraction frame particular issues in this study. These theories support an examination of art educator virtual interaction but access different perspectives. Firstly, affect theory provided a platform to consider how meaning is translated, transmitted and intercepted in virtual arenas like Twitter. It is a theory that encapsulates and challenges non-linear ways of communicating; as on Twitter, users Tweet, reTweet, copy, paste, search, react and create. Affectual process as movement and connection is examined in Chapter six: *Tweeting Affect*, as I follow a Twitter trail of one of the participants in the study. This trail takes me from Twitter to multiple research sites and provides insight into the complexities of working virtually and the implications.

My use of diffraction addressed thinking with data as a cross-communicative and speculative process. Diffraction defies timelines, binary thought and linearity. It is based on a conceptual model of how light diffracts through matter (Barad, 2007). For example, diffraction is used to work with data and generate data in the analysis chapters in order to seek various possibilities for art educators' virtuality. This is where the examination of art educators' use of Twitter ignites further problems in the analysis. Affect theory and diffraction are examined further in chapter four: *Theoretical framework*.

An event takes place on Twitter such as a Tweet. There are processes and responses to a Tweet that move, circle, interpolate and jettison. Just like a plant that has an uncontained root system, the rhizomatic process (my first of many references to

Deleuze and Guattari's (2011) rhizomatic model) of Tweets cannot be controlled and multiple events stem, grow and affect other purposes continuing in and out of the program.

Barad's (1998) account of the piezoelectric effect continues my attempt at Tweeting analogies, just as matter is charged and becomes both "transmitter and receiver," it creates a field of affects:

Power is transmitted through the repeated application of pressure on the body. The body reacts to the forces, manifest as shifting material alignments and changes in potential, and becomes not simply the receiver but also the transmitter or local source of the signal or sign that operates through it (p. 87).

A crossover occurs when what was still, with no indication of energy or life, is energised by force. Barad (1998) provides the example of crystal, that when put under pressure, performs as a conductor. I use Barad's (1998) crystal to analogise interaction and energy on Twitter. Twitter is a program available for public access (except when a user account is locked from public view. Locked accounts can be accessed if an account user accepts a follower request) and once accessed, can ignite processes which are unpredictable and difficult to quantify.

1.5.5. Ethics and virtual research.

Understanding how to conduct research on Twitter and designing particular strategies was necessary for my project. I connected with participants in this study by immersing myself in the research process and creating data. However, it was necessary for me to be clear that to display Tweets in this project (Twitter, 2014), I would be working with

identifiable material. I elaborate the ethical process of conducting this study in chapter five: *Ethics and virtual research* and describe my initial foray into the world of virtual research as a challenging one.

I learnt how to design a means to openly invite Tweeting art educators into a study which would identify them. This was significant regarding their participation, the Twitter Terms of Service (TTOS, 2014) and my involvement in the study. Further, I deliberate the necessity to address what I perceive as ambivalence toward the ethical collection of data in cyber research. This pool of data may be ready for the picking due to availability and access, however blurry lines of public domain information were considered.

Ethics in virtual research is discussed in light of particular issues that arose from this study. I have written a separate chapter to address areas of educational virtual research that are complicated due to educator and student engagement, researcher approach and public and private access. Researcher ambivalence toward the ethical collection and use of virtual data was prevalent in the examples discussed. This included the crossing of boundaries between those who choose to participate in virtual research and those who do not and the inclusion of data that is collected without consent. These turbulent areas were identified as issues that need further research.

In order to address particular ethical issues, I situated myself as central to the research process and provided access to an explanatory statement to establish consent and outline how, why and when I would be obtaining data from Twitter. Although this explanation satisfied my university ethical application and the TTOS (2014), I argued that ethical virtual research needed further investigation due to issues of privacy, intention, scope

and boundaries illuminated in the literature (Ang, Bobrowicz, Schiano, & Nardi, 2013; Baym & Markham, 2009; boyd, & Marwick, 2011; Driscoll & Gregg, 2010; Roberts, 2015; Small, Kasianovitz, Blanford, & Celaya, 2012; Steinmetz, 2012; Zimmer, 2010). Affect theory and diffraction provided theoretical support to address issues of complacency and over-generalisation. By drawing on these theorists, my ethics chapter attempts to address specific gaps in the current literature on virtual research processes.

1.5.6. Data and analysis.

Images of Tweets, artwork and web pages are contextualised throughout this thesis and analysed predominantly in three data analysis chapters entitled *Tweeting affect*, *Diffraction art educators on Twitter and beyond* and *Theorising art educator virtuality*. The division between these three chapters is due to the focus. For example, *Tweeting affect* is primarily concerned with the use of Twitter as an affectual process, that is, a process in which transmission of ideas permeate the program, digital devices and people who access Twitter. This transmission of affect is not always tangible and therefore measuring the effectiveness of how this program is used by art educators is not validated in this chapter. Rather, the possibilities of virtual communication are explored and in particular, the processes of working through ideas in art making and art education in virtual arenas. The following paragraphs detail the data chapters.

1.5.6.1 Tweeting affect.

To work with the momentum and meaning-making generated by art educators on Twitter, the majority of this chapter is focused on one participant in the study. I elaborate the requirement (TTOS, 2014) and significance of identifying participants in

this study in chapter five: *Ethics and virtual research*. My analysis called for a ‘close reading’ of the data she produced. It was necessary for me to hone in on what an art educator (who was also a researcher and artist) was doing and creating on Twitter to find significant details of transmissible affects; which subsequently provided evidence of Twitter as an educational tool.

Her work was analysed through an affect theory lens, that is, not as finite explanations of pedagogy or art on Twitter, but as continual processes of documentation. Her work was of particular relevance to the explorations of what affect can be and do when working in a program that is constantly changing, updating and disseminating information. In this chapter, I equate an installation that I created as a process of working with and within the data, to how thinking with virtuality works in this thesis.

1.5.6.2 Diffracting art educators on Twitter and beyond.

I initially worked with data that implied the appearance of an art educator on Twitter and examined representational traps. Subsequently, I worked in and out of timelines that mark my involvement with art, artmaking and research. I used diffractive analysis to perforate memories that surfaced personal junctures of art engagement and, in doing so, related a virtual communication of an art-making process. Working diffractively with data and ideas around the impossibilities of representation in the data underlined a slippery analysis of experience, art process and art education on Twitter and beyond.

In chapter seven: *Diffracting art educators on Twitter and beyond*, I relate my experience of watching a film by Cocteau (1930) to recall oscillating connections between experiencing art, creating art and researching art educators on Twitter and

beyond. This process induced sensory responses and intra-active processes. These processes are deemed significant when working with experience, film, artworks and my history to process and challenge art educator virtual engagement. As I connected to the work of art educators on Twitter, their work affected my history and theorisations of what virtuality means to me.

1.5.6.3 Thinking with art educator virtuality.

We may use a camera to replicate a view of our experience and retain our memory of it.

For example, when constructing an image of 'nature' as shown in chapter eight:

Theorisations of art educator virtuality (see Figure 8.7), Theresa McGee provided a

conception of creating and replicating 'nature' on Twitter. We may recognise a difference or intensity and refer to our representation of it as evidence. However, the problem with representation, just as when Bozalek and Zembylas (2016) re-work problems with reflection, is that they can be fantastical moments, summoned to facilitate practice. They are informed by our present view and not objective at all.

Rather, representations of experience and practice are a process of building a worldview that sums up who we think we should be and what we should be doing. When working in a social media system (SMS) like Twitter, we may attempt to represent who we are as art educators, but this thesis challenges representation and offers that working in virtual space can expand rather than implicate what we already do (or think we do).

Therefore, when thinking virtuality, I create an experiment in a lightbox that develops throughout this particular chapter (chapter eight: *Thinking with art educator virtuality*).

This experiment developed artworks and displays them in several stages (see Figures 8.1, 8.2, 8.7, 8.10, 8.12, 8.14 and 8.17). Threads were used to analogise the process of

thinking and eventually tangle into an infinite maze (Figure 8.17). The continuous artwork works as a focus in the chapter and is directly informed by Barad's (2007) notion of entanglement. Barad (2007) views entanglement as the process of becoming embroiled with matter and ideas. Entanglement does not provide a unified form or idea, but rather, identifies difference or particularity as conjoining thinking processes. The entanglement projected through artmaking and artwork in this chapter becomes a synergistic continuum that invites virtuality as a constant interruptive force for interrogation in this thesis.

1.6. Conclusion

Throughout this thesis, I asked questions to challenge the interweaving, entangled, art educator acts that seemed to originate with a single instigation called a Tweet.

However, origins and possibilities of art educator virtual involvement and processes were troubled throughout this thesis and Twitter was used as a vehicle to facilitate this conversation.

Problems of creating and inhabiting virtual, pedagogical, public and personal spaces on Twitter were explored literally and analogistically. I created a model of Twitter that constituted my thinking about containment and structure (see *Structure_1* Figure 4.5), which enabled me to think about research, data and virtuality in several ways. My hands worked with paper, glue and cardboard to implicate virtual, cerebral and physical attachment to the theories and ideas throughout this thesis.

My inquisitiveness and the connections that I believe Twitter as an SMS propagated for art educators are claimed as significant attributes in this study. For example, I pondered

the conception of Twitter, whoever participated in the initial design and release of the program and wondered if they prophesied the multi-dimensional ways this program would be used, including the potential for “rampant harassment, bots, misinformation and polarisation” (Solon, 2018, para. 1). In 2018, Dorsey’s recent call out for “help” in order to contain spurious and abusive content seems to be a passive response at best to recent criticisms of Twitter (Solon, 2018, para. 1). Moreover, the rise of SMS like Twitter opened various issues of mass surveillance and manipulation due to the ease of public access and the proliferation of data mining companies. The tension that these issues attract is not sufficiently addressed in this thesis, however, in chapter five: *Ethics and virtual research*, I addressed the flimsy, under researched, under theorised area of virtual research ethics that can enable recent indictments of major SMS to flourish.

I worked with Twitter as a program that invites and duplicates and multiplies spaces generated by users. Participants in this study worked with the program to communicate positions on artistic and pedagogic process. Their spaces were determined by a majority of women art educators who agreed to participate in this study and therefore, instigate a dialogue on virtual and sensory presence among others who work in this field.

Twitter as a program invited the creation, ownership and division of virtual space and enabled me to think with virtuality in art education. Beyond Twitter, I attempted to pry open why and how art educators can create, interact and communicate positions on art in virtual space. The value to art education and art educators is to both embrace and destabilise symbioses afforded by virtual interaction.

2. Literature Review

2.1. Introduction

There is a dearth of literature in the field of art educator use of Twitter. Therefore, this literature review troubles current educational use of Twitter to examine the research of educator, student and educational institution use. Therefore, the layout of this review is in two parts. Part one surveys literature deeming Twitter as a means to enhance communication, technology engagement and collaboration in educational contexts. Further, problems of privacy, communication boundaries and safety are also outlined. Although for and against issues of educational use of Twitter are brought to the table, the goal of part one is to scrutinize complexities of educational use rather than argue effectiveness.

In part two, virtuality as a concept is examined to introduce art educator virtuality and possibility. A diffractive and affective lens is introduced to support thinking through ever-increasing technological and virtual educational entanglement. A diffractive lens can prise matter open by allowing arguments of possibility and experimentation to guide ways of knowing and being (Barad, 2007). An affective lens examines multiple ways of transmitting knowledge and invites valuable ways of thinking through movement and communicative complexities (Wetherell, 2012). By scrutinising literature surrounding the current and possible future educator use of social media systems (SMS) like Twitter, I speculate art educator virtuality and possibility.

To begin, part one asks: How do educators, students and educational institutions make use of Twitter and what sorts of complexities does this virtual interaction afford?

2.2. Part 1: Tweeting in education

2.2.1. Twitter and educational institutions.

Kimmons, Veletsianos and Woodward (2017) study examined ways of using SMS in education and identified how educational institutions fall short. They (Kimmons et al., 2017) used quantitative data mining methods to sample 5.7 million Tweets from higher education institutions in the United States and suggest that current studies “suffer from a number of limitations that curtail the generalizability” and therefore their massive data collection attempted to address this (p. 98). The literature they (Kimmons et al., 2017) surveyed indicated that most institutional usages were monologic in most cases with information dissemination and public relations Tweets featuring prominently.

Kimmons et al. (2017) suggest while educational institutions Tweets “are positively skewed with narratives that frame the institution as a place of success, achievement, and beauty” potential features such as “debate, conversation, and community outreach” were being sidestepped (p.108).

It is important to consider why Twitter is used by education institutions this way.

Monological use of Twitter is a one-sided dissemination of information. This form of use does not encourage a two-way conversation about any given topic. The reason why the dissemination of information might be done this way is due to the business model that many institutions follow, as financial concerns remain high on the list of priorities. My study attempts to address this issue in part, as the use of Twitter by participants suggests that Twitter use provides possibilities for both educator and student

engagement in virtual environments and that virtual engagement in SMS can mean much more than branding.

2.2.2. Real-life classrooms and Twitter.

Online courses tend to be modelled on real-life classrooms and potentially, Twitter may fill an online social gap (Dunlap & Lowenthal, 2009). For example, spontaneous interactivity could be drummed up by engaging on Twitter and therefore emulate classroom socialisation (Dunlap & Lowenthal, 2009). Dunlap and Lowenthal (2009) provide a link between student satisfaction surveys and “social presence” on Twitter (p. 2). Rather than filling online bulletin boards with team building activities, choosing to interact on Twitter provided a more spontaneous and interactive means with which they (Dunlap & Lowenthal, 2009) communicated with students and likewise, students “constructed meaning through sustained communication” (p. 6).

Regarding how this plays out for the educator, it seems as if Dunlap and Lowenthal (2009) highlighted Twitter as a platform from which to communicate with students using the physical classroom model. However, replicating teaching and learning experiences in a virtual context problematises the purpose of virtual interactivity. Virtual interactions are relatively new in education and therefore emulating the physical classroom model should be addressed. Although the purpose of many educators communicating with students on Twitter might rest with engagement, virtual interactions are relatively new in education, which may unearth particular problems and potentialities.

2.2.3. Educators and students communicating on Twitter.

Knight and Kaye's (2014) findings in a small study aimed at understanding academics' and students' use of SMS raised questions regarding motivations. Their (Knight & Kaye, 2014) study found that while students were using SMS regarding their learning, academics, on the other hand, were using them as a jacking device to improve their careers (Knight & Kaye, 2014). Further, there seemed to be reluctance toward the public nature of Twitter and therefore "issues relating to accountability of information through non-official channels" would come to the fore (Knight & Kaye, 2014, p. 1). While this study was located in one educational institution, it brings to light the complex nature of what public information sharing can mean and do in education (Knight and Kaye, 2014). There seems to be ties to hierarchy and accountability in ways that might impede steps toward working outside the physical educational institution and that virtual interactivity should be considered as more than advertising and accountability.

Reed (2013) proposes that "students who voluntarily engaged with Twitter" in his study "positively evaluated the tool for use within learning and teaching" (p. 1). Reed's (2013) review of the literature surrounding students and their use of the internet decided that access and "Communication" was a determining factor in their use (p. 6). Although email was favoured above Twitter in his (Reed, 2013) study, students found that Twitter was "beneficial", which was later specified as related to the "Speed" and "Ease" of communication (p. 15-16). And like Reed (2013), Junco, Heiberger and Loken (2011) found that students' experience and grades were enhanced by using Twitter for educational purposes. In a study focusing on higher education students, Evans (2014) claims that engaging in SMS like Twitter had a positive impact on learning.

Motivations for using SMS in higher education were deemed by Evans (2014) as “obvious” and include “current generation students (termed the “Net Generation” or “Generation Y”) being constantly connected” (p. 903). The theoretical underpinning of Evans (2014) study is Siemens’s connectivist theory, as the study supplies ample reasons why Twitter facilitates connection and in turn, enhanced learning. Quantitative data from 252 students were used to measure “whether the amount of Twitter usage would exhibit a positive relationship with the student experience” (Evans, 2014, p. 905). The results indicated increased student engagement; however, Twitter usage did not impact tutor/student relationships or class attendance (Evans, 2014). What I am curious about is the lack of investigation regarding how learning might be achieved by accessing a SMS which seemed to be the initial reasons for the study. Evan’s (2014) study focused on learning engagement, but I wonder if students are already engaged with SMS and the ability to find data to support learning with SMS needed further consideration.

2.2.4. Twitter and students.

Kist, Tollafeld and Dagistan (2014) intentionally incorporated Twitter to “situate our students as critical consumers within the context of an increasingly complex multi-modal textual world” (p. 318). By positioning Twitter as a means to serve students experience and thinking, they found evidence of student resistance which drove them to investigate content and question substantiality (Kist et al., 2014). This brings to light several issues that may inhibit educators using Twitter in the first place. For example, to engage students with a SMS, there needs to be justification. Moreover, when evidence such inconsistency or inadequate content is found, it may ward off educational use completely.

However, Kist et al., (2014) brought up an interesting proposition when introducing ‘new’ media in the classroom to pre-service teachers. The assumption that “preservice teachers are going to be quickly acclimated into any and all “new” media just because they were born after 1990” was argued as an over generalisation (Kist et al., 2014, p. 324). Assumptions about how and why students, in particular, might engage with SMS are problematic. If we assume that students will automatically engage with SMS in teaching and learning because SMS are part of their everyday lives, then this might be a flawed argument. SMS are part of every day for many, however, contextualising educational use needs to be questioned and theorised.

When a campaign known as *Rhodes Must Fall* (#RMF) began at the University of Cape Town that in 2015, Twitter was used to facilitate student-led activism (Bosch, 2017). #RMF initially protested the removal of the statue of Cecil Rhodes, as the movement worked against “institutionalized racism and demands for the Africanization of the university curriculum” (Bosch, 2017, p. 222). Bosch (2017) argues that due to the student-led initiative on Twitter, a public debate was set in place which traversed various media sites. In other words, Twitter became an active tool for students to profess change on multiple levels. While this is only one of many examples of student activism on Twitter, the implications are that students actively engaging on Twitter can provide a platform for interactivity and intra-activity, rather work as a one-way disseminator of information. The ease, with which Twitter facilitates communication and dis-communication, meant that accessing particular information did not equate to alignment (Bosch, 2017). Further, Twitter enables connective tools such as hashtags (a symbol that can group particular subjects and facilitate searches), multimedia and

hyperlinks (a linkable element) to broadcast and engage beyond initial interaction and therefore, intra-active processes can be initiated.

2.3. Twitter: teaching and learning trends.

Tang and Hew (2017) reviewed empirical studies of “using Twitter in teaching and learning” from 2006 to 2015 (p. 97). Their aim was to find out if using Twitter in teaching and learning had any impact, including emerging trends. They (Tang & Hew, 2017) found that Twitter was predominantly used for assessment and communication by educators and that student attitudes were impacted positively. However, they (Tang & Hew, 2017) do warn that some conclusions needed to be “treated with caution” citing the short duration of particular studies and “novelty effect” of using Twitter (p. 110). They (Tang & Hew, 2017) suggest that further research should be more diverse, as most studies are conducted in the United States and that more evidence of student engagement over time would provide more evidence of the impact on learning and teaching. Their (Tang & Hew, 2017) survey of the literature indicated that long-term studies of the impact on student learning and teaching would be of use to educators. My view is that there is a lack of studies that illuminate the possibilities for educators on Twitter. As Tang and Hew (2017) mention, the majority of the studies in their survey viewed Twitter for assessment and communication and in my view, this is only the tip of the iceberg of what Twitter and other SMS may provide educators and learners. Twitter used in this instance becomes a virtual mechanism for the physical classroom and this is where I locate some of my arguments regarding physical and virtual dichotomies in virtual education. Twitter and other online platforms can mimic the physical classroom, but that falls short on why and how many students and educators develop a relationship with virtuality.

Buzzelli, Holdan, Rota, and McCarthy (2016) draw on Bruner, Goodnow and Austin's "concept attainment" describing the ease with which students can access information on Twitter as "distributed practice" (p. 66). They identified Twitter as a model for "concept learning" because of the limitations provided in the 140 character restriction (restricts textual input) at the time (Buzzelli et al., 2016, p. 66). To summarise their (Buzzelli et al., 2016) argument, it seemed as if the sparsity of information in every Tweet promoted the ability to summarise and therefore provided a platform for conceptualisation. Further, recommendations by the authors (Buzzelli et al., 2016) suggested that the archival ability that Twitter affords provided opportunities for students to access information for further inquiry. The disparity between these papers suggest as Junco et al. (2011) ascertain, that further studies on "emerging technologies" as a tool for student engagement and learning needed further research (p. 130).

2.3.1. Educational conference Tweeting.

Kimmons and Veletsianos (2016) studied over 360,000 Tweets posted by participants during the annual conferences of the 2014 and 2015 American Education Research Association. The background to their use of Twitter in this study supports the ever-increasing use of technology in academia and Twitter as the "technology of choice for digital backchannel participation/communication" during varied large-scale events (Kimmons & Veletsianos, 2016, p. 447). Further, they warn of Twitter studies providing "snapshots in time as opposed to shifts, changes or trends over time" (p. 449). This idea supports my argument regarding the continuum that Twitter usage may afford, as possibilities explored in this study do not just examine current education use but project future use (particularly as usage and participation changes over time).

Kimmons and Veletsianos (2016) attest that to “make sense of long-term trends and changes in the phenomenon over time” and claim that their study produced varied comparisons from one large-scale conference to the next. They identified four main issues in their study which included: Twitter was used for various purposes as a conference backchannel, which may not be academic. Varied topics identified using hashtags may be initiators for participation but not necessarily the glue holding conversations. Only a minority of participants were the main drivers of the majority of Tweets which indicated that new or varied participants did not diversify the exchanges (Kimmons & Veletsianos, 2016).

Tur, Marin and Carpenter (2017) conducted a study of educational use in both the United States and Spain and concur that their data suggests positive student impact. However, the differences between the two countries were the interactive aspects of using Twitter which includes two-way chats and hashtags. They concluded that “differences in digital cultures” may be the reason for this, however, I think that we may need to look further into how comparisons between different languages and the dominance of US-based studies in the literature that shape how Twitter is used and can be used (Tur, Marin & Carpenter, 2017, p. 25).

2.3.2. Twitter: a complicated education.

However, Carpenter and Krutka (2014) outline a difficult relationship that educators may have with social media stemmed from boundaries and complications that may arise. Twitter it seemed was “dismissed by some as the realm of callow teens, narcissists, and celebrity stalkers” (Carpenter & Krutka, 2014). However, utilising

Twitter for professional development (as opposed to student interaction) was the determining feature of their argument. The results of their study in 2013, highlighted “personalized and immediate” access to information and “combating isolation and connecting them with positive, creative colleagues and leaders” (Carpenter & Krutka, 2014, p. 422). Not only did educators claim to source information or interact on Twitter daily, some accessed the program “multiple times per day” (Carpenter & Krutka, 2014, p. 422). The majority claimed they were “sharing and/or acquiring...collaboration...networking”, with the lowest percentage communicating with their students (Carpenter & Krutka, 2014, p. 423). The reason for this is education’s “often muddled and contradictory” relationship with social media (Carpenter & Krutka, 2014, p. 414). Self-directed approaches to learning were indicated in my study. It is an approach that can be considered ‘pro-active’ in education by relying less on the institution and more on alternative and self-directed avenues. Aligning with the literature, many of the educators in my study did not use Twitter to communicate with students (Carpenter & Krutka, 2014; Visser et al., 2014). According to the literature, the path from student to teacher and back again on Twitter seemed to be restricted by school policy.

Further, the problematic relationship with social media that Carpenter and Krutka (2014) discuss may not be entirely about educators and their sense of confusion about privacy and boundaries but more about developing knowledge about how SMS might work. For example, when educators communicate with their students in social media as in tandem with the physical classroom, there are prohibitions that may exist in school policy and access to SMS sites may be blocked. Issues that were raised in the literature regarding the prominence of educator professional development opportunities rather than student interaction may not lie with the educator but the institutions that govern

connectivity. Farahmand, Yadav and Spafford (2013) outline further risks, which can include security, privacy, productivity, cyberbullying and stalking. These are risks that may preclude any educator from formularising virtual communication with their students.

2.3.3. Tweeting as informal learning and professional development.

Studies indicate that “teachers highly value Twitter as a means of self-directed professional development” (Visser, Calvert Evering & Barret, 2014, p. 396) and that “Educators prized the medium for its personalized and immediate nature” (Carpenter & Krutka, 2014, p. 422). Davis (2015) provides supportive phrases such as a “sense of belonging” that may draw educators to this virtual platform (p. 1551). Krutka and Carpenter (2016) conducted a study of 303 educators’ use of Twitter. Drawing on Cunningham (2009, as cited in Krutka and Carpenter, 2016), they “frame Twitter as a platform that can afford transactional experiences that align with Deweyan understandings of participatory learning (p. 40). They contest that the propensity of educational systems that foster non-participatory learning atmospheres and suggest that participation in SMS may invite a more inclusive approach (Krutka & Carpenter, 2016). Many educators in the study appreciated information sharing on Twitter as “fellow educators on Twitter provided a means of filtering or vetting web content” (Krutka & Carpenter, 2016, p. 47). This seemed an important aspect of Twitter, as Krutka and Carpenter (2016) predicted that educators would “turn to each other as experts” and this “seems a more democratic approach to PD” (p. 47-48). Some educators found that global connectivity was useful and indicated that diverse pedagogical positions were optimal (Krutka & Carpenter, 2016).

Many also argue the social aspects of communicating using Twitter that can encourage positive student feedback (Dunlap & Lowenthal, 2009; Evans, 2014; Tang & Hew, 2017; Tur, Marin & Carpenter, 2017). However, Tur et al. (2017) warn that some conclusions needed to be “treated with caution” citing the short duration of particular studies and “novelty effect” of using Twitter in education institutions (p. 110). While Kimmons, Veletsianos and Woodward (2017) examined the continued use of Twitter as a “backchannel” in educational conferences, monological use of Twitter by educational institutions seemed to be evident, prioritising information dissemination and institutional advertising (Kimmons & Veletsianos, 2016). Ultimately, Carpenter and Krutka (2014) cite problematic educational institution relationships with technology and the internet and I work through what this might mean for educators.

Davis (2015) found that educators desired a “sense of community” which was not “available in their own physical workplace” (Davis, 2015, p. 1551). Further, McPherson, Budge, & Lemon (2015) invite possibilities for communicative practice on Twitter that cross and connect academic boundaries. I find this to be an initial argument for why educators might use Twitter. Professional development opportunities are often institutionally organised and may not localise the needs of specialised educators. Further, the access that educators may have to mobile technology can open opportunities to connect to a “global network of resources for professional and personal support” (Davis, 2015, p. 1553). While support regarding like-mindedness and specialised subject areas were considered significant, Davis (2015) identified “Diverse perspectives and experiences... as a subtheme related to professional development” (p. 1554). What is significant is that professional development that is initiated in SMS may encourage diverse connections, unexpected information and immediacy for educators (Davis, 2015; McPherson, Budge & Lemon, 2015). By engaging in SMS, the onus is

on the educator to participate and search for connections relevant to their field of practice and likewise obtain perspectives outside of physical or virtual networks.

Visser, Calvert Evering and Barret (2014) point out that informal professional development on Twitter can be “both appealing and valuable to educators” (p. 397). The reasons they outline involve informal practices, particularly in online community forums that are casual and available when the urge applies. The downside is possible bullying and a breach of privacy which can apply to both students and educators (Visser et al., 2014). Using a triangulation of mixed methods, these authors (Visser et al., 2014) were interested in the professional benefits of using Twitter for educators.

From the results of their study (Visser et al., 2014) which included 542 participants (including 69% women participants which align in part with women educators globally and women users of Twitter as previously discussed), mobile phones were predominantly used to Tweet which underlines the informal and accessible arguments initially posed. It was also pointed out that school networks can impose internet restrictions on sites such as SMS, which may have encouraged the use of personal internet access (Visser et al., 2014). Further, teachers in the study had a medium to high proficiency when it came to using technology which can imply flexibility and engagement with cyber-connectivity (Visser et al., 2014).

The significant finding in Visser et al.’s (2014) study was that their participants used Twitter for professional use rather than personal use. If we merge professional and personal use, the authors (Visser et al., 2014) found that participants accessed Twitter to “personalize their professional development by self-selecting resources and

opportunities via tweets and Twitter chats, as exemplified by the statement, “I don't wait for PD to come via my school district, I can seek it out via Twitter”” (p.404).

McPherson, Budge, & Lemon (2015) apply “academic development” to practices in the field of university and highlight opportunities that Twitter affords when “building networks of academics” (2015, p. 126). The informality of Twitter provided a pinnacle area for professional development (McPherson, Budge, & Lemon, 2015). These findings link to my study, as many educators who chose to participate were from academic backgrounds as described on their Twitter home page. The authors attributed importance to “developing confidence over time” and encouraging information sharing (McPherson, Budge, & Lemon, 2015, p. 127). They presented three vignettes in their paper with the first providing insight into how academics may communicate social and political issues instantly (McPherson, Budge, & Lemon, 2015). The effective transmission of knowledge on Twitter was demonstrated in a feed promoted by a discussion with a follower from an academic institution in another state (McPherson, Budge, & Lemon, 2015). Immediacy, connectivity and sharing followed.

In regard to accessing Twitter to share knowledge between colleagues, a significant vignette was that of “Author B” in their paper who outlined a process of sharing information through a ‘trusted’ system like email which included Twitter links (McPherson, Budge, & Lemon, 2015, p. 130). Encouraging others to use diversified technological approaches when communicating, in this instance, seemed to be a matter of ingenuity and persistence. Relationships can be maintained in workspaces via face to face or email, but new relationships outlined in this vignette were encouraged by using Twitter as a connecting tool (McPherson, Budge, & Lemon, 2015). The authors noted that connecting with others in this way (as it was mentioned that a face to face

encounter ensued after interaction had first developed on Twitter) facilitated comparative and supportive processes (McPherson, Budge, & Lemon, 2015).

The authors refer to Barad and the “notion of entanglement” on Twitter (McPherson et al., 2015, p. 131). They apply “diffraction to question and think through the use of Twitter as a form of social media for both its affordances and constraints in the work of academic development” (McPherson et al., 2015, p. 132). Thinking through diffraction becomes a way of attaining agency, as they claim the process of attaining agency is doing rather than just being. This applies to how educators use and access Twitter as it is the process of logging in and creating agency and the educator as a non-static descriptor, but a continual form of exchange.

McPherson et al. (2015) continually refer to the informal structure of exchange on Twitter, which in turn, provides a departure for how an educator might view working in physical institutions. Further, they cite “patterns of difference” when analysing Twitter as a fluid and changeable medium for communication (McPherson et al., 2015, p. 132). As acknowledged early in the case of these three authors, possibility on Twitter, which includes continuous connectivity, is applied to methodological process and pedagogical practice. Forging alternative spaces for academic work is not only deemed vital in this paper but according to McPherson et al. (2015), essential to informal learning and professional development.

Issues raised by McPherson et al. (2015) lead the following discussion on possibilities for educator virtuality on Twitter. I initially introduce the concept of virtuality to apply what this might mean for educators generally and then more specifically art educators due to the nature of this study.

2.4. Part two: Art educator virtuality and possibility

Part two of this literature review addresses educator virtuality and possibilities evident in the literature. Initially, I draw on Papacharissi's (2012) account of Twitter as a site of performance, which in turn, produces reiteration and multiplication of self. As mentioned in the introduction to this thesis, Twitter is used in this study to springboard thinking with virtuality. Therefore, part two of this literature review asks: How can we think with virtuality as art practice and in art education?

2.4.1. Performing on Twitter

Papacharissi (2012) identifies Twitter as a site for performance. Whether an audience is imagined or not, this possibility significantly shifts the nature of who we are and what we may project online. Further, Papacharissi (2012) draws on performativity as discussed by Kosofsky Sedgwick, as awareness of the other drives "storytelling of the self, further curated through digital media" (p.1990). I see a divide between performative as told through Kosofsky Sedgwick (2003) and then through the work of Butler (1988; 2010; 2014; Labo LAPS, 2014). In Butler's (1988; 2010; 2014; Labo LAPS, 2014) work, performing and performativity informs the other, but are two different things. I believe a misconception arises through the syntax 'performing' and then 'performativity.' Performing an identity brings awareness of the self as subjectively perceived and projected to others. In this case, I see Papacharissi's (2012) point as the self on Twitter performing to an audience as part of a constitutional process.

Papachrissi (2012) brings to the conversation that the nature of online communication as one of drawing attention to the self, the performer, which in turn produces “an ever-increasing multiplicity of other selves” and in “always-on platforms like Twitter further augment social saturation” (p. 1992). How can anyone truly understand how they are being interpreted, transformed and understood when reading, seeing and interacting online? It is a complexity that cannot be easily unravelled and yet it is a challenge to understand how social networks provide such extraordinary exposure to interpretation (for further discussion of these issues, see chapter 5: *Ethics and virtual research*). Are we more prone to influences and reiterative forces because our actions are constantly visible? Or is it part of a continual cycle that Derrida (2007) and Butler (Labo LAPS, 2014) attribute to self-composition, as comprised through symbolic reiteration?

World events unfold as Papacharissi (2016) writes about movement on Twitter which is signified with hashtags and “open to definition, redefinition, and re-appropriation” (p. 308). Connecting and meaning-making are persevered by media that “serve as conduits for affective expression in historical moments that promise social change” (Papacharissi, 2016, p. 308). Papacharissi (2016) is referring to various hashtags that have defined movement and affected movement by protesting change in Twitter. It is a forum that can perpetuate political action, mediocrity, hero worship and trolling amongst other actions.

Papacharissi (2016) proposes that hashtags resemble “framing devices” that perform the function of aligning people and groups “on their own terms” (p. 308). The power that this gives to the individual or group is absolute through this suggestion and therefore in the frame of this literature review, provides a few problems for me to think about.

When using hashtags for the purpose of containing an idea, the value or the sign that is

proposed by one individual is different for another. Although we are performatively constituted as Butler (Labo LAPS, 2014) suggests, approaching the signified is a detailed problem that might be worked out by someone like Derrida (2007). I suggest that the power we might attribute to the possibility of free speech on Twitter is not clear and is dubiously thrown into the discourse as the possibility of being and becoming a free citizen. Papacharissi (2016) clarifies the term “affective publics” in order to address collective ideologies by using hashtags and the possibility of difference driving affective unifications (p. 308).

The important issues that Papacharissi (2016) raised are that newsfeeds contained by hashtags may supersede media reports and speed up the production of news.

Papacharissi (2016) deems that “Premeditation is rich in affect” and this is what is telling of the focus of this paper (p. 309). Just as the affectual process is the possibility of producing change, so do rumours and potentially ‘breaking’ news speculation, which filters through Twitter with speeds unsurpassed by online media sites. Affect can premeditate an act and this is what is interesting about affective process in Twitter. The political aspects of change and protest that Papacharissi (2016) focuses on benefit from this analysis. For how one aligns with the ideology of a problem, a political event or even crises precedes the actual event.

As Papacharissi (2016) claims, “The impact of these publics is symbolic, and that is no small achievement. In order to make revolutions and change institutions, we must reimagine them first” (Papacharissi, p. 320). What I take from Papacharissi’s (2016) paper are the possibilities gained through active, online participation. What educators do on Twitter is to re-organise, re-imagine and re-iterate public space. Politically, this can do a lot for educators who are practising in one hemisphere in order to connect with

someone in another. Our ways of thinking pedagogical practice is affected by working in open and celebratory ways.

2.4.2. Social media and art education

Castro (2012) illuminates a shift for students and educators by the advent of engaging in social media. He describes the characteristics of interacting this way as “shaped by decentralized network dynamics; and the spatial shifts of learning in an asynchronous network of ideas” (Castro, 2012, p. 158). In other words, by learning this way, Castro (2012) attributes SMS environments as facilitating individual, non-linear and complex interactive collaborative processes (Castro, 2012). The varied messaging formats were noted as contributing to dialogue on difference due to collective encounters (Castro, 2012). Notably, the author suggested that SMS contributed to active dialogue and participation which in turn, contributed to non-passive ways of thinking art and creating art (Castro, 2012). The art educator was viewed as part of a dynamic system of “images, objects, events, encounters” and that learning in multiple contextual ways contributed to the student and educator experience (Castro, 2012, p. 165). Although Castro’s study highlights the engagement of art students in SMS, the discussion did not address students that may not have contributed to the online dialogue in notable ways. As stated throughout this thesis, engagement with SMS can be innovative and contribute to art educator practice and experience, but what is important is how this is done.

2.4.3. Virtuality as innovation.

The virtual, on the other hand, does not have to be realized, but rather actualised; and the rules of actualization are not those of resemblance and limitation, but those of difference or divergence and of creation. (Deleuze, 1988, p. 97)

Deleuze (1988) shapes the notion of virtuality by distinguishing it from “resemblance and limitation” (p. 97). Virtuality in Deleuzian (1988) terms is one of innovation; a departure from what has come before. Therefore it is necessary to examine the literature surveyed above in part one in those terms as a need or desire to repeat physical classroom performance needs to be questioned. As mentioned in the literature, educational institutions may use a monological approach to Twitter in order to control what readers of their Tweets should know and understand about them. This form of advertising enforces an educational business model and shapes the institution to attract consumers. The second part of Deleuze’s (1988) quote brings to light “difference or divergence and of creation” when thinking through virtuality (p. 97). Difference is a broad term used to understand diffractive ways of understanding (Barad, 2007). Difference is a benchmark for realising the unknown. When applying difference to virtuality in educational contexts, an awareness of what is unknown becomes a question of what might be possible.

2.4.4. Relinquishing physical and virtual dichotomies.

Haraway (1991) defines a “cyborg” as a “hybrid of machine and organism, a creature of social reality as well as a creature of fiction” as she states the “boundary between science fiction and social reality is an optical illusion” (p. 149). The hybrid nature of her descriptions begins a conversation regarding technology and virtual reality and how

we use it to communicate with others. We have become so reliant on machines and virtual reality that it seems the irony and wit of Haraway (1991) and her cyborg explanations are not derivative of fantasy but are constitutive of how things are.

The “cyborg is a creature in a post-gender world;” is an optimistic and emancipatory statement as Haraway (1991) entangles humans and technology and gender becomes obsolete (p. 150). The excitement that Haraway (1991) elicits regarding the cyborg is a sign of the time, which for me did not eventuate in virtual space as I know it today. Her enthusiasm reminds me of how wonderful I thought robots were going to be. I visualised that robots would look and act like us and perform mundane tasks that we loathed at the same time. Robots would be almost indistinguishable from human beings. They would befriend us and answer all our questions. They were not clunky or robotic at all. That is where science fiction and reality were supposed to meet for me. What seems to have happened with our technologised world in the years after Haraway’s (1991) cyborg prophesy seems more cerebral regarding the human experience and saturated by normative positions, particularly in terms of gender.

2.4.5. Virtual activism.

Plant (1998) teased out the significance of working in virtual space long before the idea of Twitter had even been drafted by Twitter CEO, Jack Dorsey in 2004 (see Figure 1.1). His initial notepad scrawling of Twitter (Figure 1.2) defined present-day SMS ease and accessibility. As seen in the drawing (Figure 1.2), his idea for the Twitter interface adhered to a fast-paced lifestyle and the input simplicity that was required. The significance of introducing Plant’s book is her reference to “cyborg manifestos,” namely the writing of Haraway (1991) and the art activism of the “VNS Matrix” (Plant, 1998, p.

58). In 1998, Plant situated Haraway (1991) and the VNS Matrix (1994) within a developing conception of virtuality as technology and communication were developing a strong relationship with everyday experience. Haraway (1991) conceptualised a shifting relationship with technology by devising the cyborg as a hybrid of human and technology. The VNS Matrix (1994) developed cyber-feminist responses in the form of manifesto and artwork and claimed their own virtuality.

In the early 1990's, alongside Haraway's (1991) conceptual cyborg, the term 'Cyberfeminism' arose from various access points in the literature (Barnet, 2014). Part of the dialogue included the VNS Matrix, "a feminist collective" of cyberpunk artists addressing virtual ownership of the internet (Seaman, 1994, p. 362). The collective was made up of Julianne Pierce, Francesca da Rimini, Josephine Starrs and Virginia Barratt and protested "notions of sexuality, commercial clichés, power structures, gender roles, ethics, art history and technological developments" (Seaman, 1994, p. 363). When interviewed in 1994, Barratt described their motivations as "a desire to talk about feminist issues in relation to technology; how women can interact with technology and have an effect on the production of images in technology, and in critiquing images created through technology which we see are often fetishistic stereotypical images of women" (VNS Matrix & Barratt, 1994). Like Haraway, they explored the connection between humans and technology, but more specifically, created artwork regarding women's technological trajectories and habitation of the internet (Seaman, 1994). They spoke to gendered cyber-positions and their manifesto embraced the internet as a tool for patriarchal deconstruction (VNS Matrix & Barratt, 1994).

Barnet (2014) concedes that the term 'Cyberfeminism' is tied with the optimism of the early 1990's and due to "rapidly changing theoretical frameworks that developed to

complement quickly changing technologies” warned of terminological redundancy (para 3). However, Barnet (2014) challenges the importance of ‘Cyberfeminism’ as requiring location then and now due to emerging theoretical positions on women’s virtual practice and presence. To address art educators’ use of Twitter and beyond, I elaborate my use of affect theory and diffractive analysis in the methodological chapter to provide a framework to address and work through problems regarding the virtual presence, performance and process on Twitter.

What draws me to the work of Plant (1998), the VNS Matrix (Seaman, 1994; VNS Matrix & Barratt, 1994) and Haraway (1991) are the early expectations of what the internet could do and how it could be used to transmit protest, intrigue and social change on a global scale. However, in the last thirty years, there is a dearth of progress toward any “post-gender” world (Haraway, 1991, p. 150) and I wonder if the term Cyberfeminism may be re-evaluated in light of what is being created and expressed in SMS fields. What I have attempted to open in the examination of literature surrounding the work of educators on Twitter and the cyber trailblazers of the 1990’s, was how educators might gnaw at the possibility of our technologised world and in doing so, push boundaries in educational practice, participation and situated problems.

However, the concept of radicalising virtual participation might threaten educational systems as we know them. Jandric (2014) proposes a “form of deschooling virtuality” although concedes that there are particular methodological restrictions that can impede this option (p. 84). These restrictions are argued as “human nature,” lack of development in “de-schooling virtuality” and “monopoly” (Jandric, 2014, p. 84). While broad views on how de-schooling may or may not work in virtual space are thought-provoking, learning in virtual settings has already arrived. My response to Jandric’s

(2014) proposal is that arguing all or nothing approaches to virtual education falls down before it can gain traction. There needs to be further thought on what virtuality is and can be in education.

2.5. Conclusion: the significance of thinking with virtuality in art education

Hickey-Moody (2016) maps “the posthuman material exchange undertaken through art” as “affective pedagogy of aesthetics” (p. 258). The materiality of artwork, the humanness of it, is transposed in digital ways and this transposition invites possibilities of exchange:

This affective pedagogy of aesthetics is a spatial, temporal assemblage in which historicized practices of art production, ways of seeing, spaces and places of viewing are plugged into one another and augmented. Subjective change is part of a broader assemblage of social change, activated by the production of new aesthetic milieus (Hickey-Moody, 2016, p. 259).

Arguing for a “new aesthetic milieus” is part of Hickey-Moody’s (2016) reasoning for the social aspect of artistic change (p. 259). Encounters in SMS and beyond, convey the premise of exchange and what comes with it can be dangerous, advantageous to artistic learning, over generalised and hap-hazard. However, it is the experimental, affectual, dynamics of working in virtual ways that may contribute directly to the educator experience. Positioning one as part of an education organisation, in a particular role, concerned with particular subject areas, is a sedentary formatting of how we may move, change and participate in virtual dynamics.

I proposed throughout this literature review that educational use of SMS like Twitter and beyond is framed through a monological lens and challenged what virtual involvement could do for pedagogy. Reasons for this favoured Twitter as a mouthpiece

for institutional advocacy rather than an interactive means of communication. Issues of privacy seemed to impede interactivity between educators and students and Twitter appeared to work best as a peer to peer communication site. There was an overarching trend for educators, in particular, to use SMS as a means of connection and professional development. Moreover, the process of working in this virtual space afforded collegiate educator relationships and self-efficacy.

In order to address particular issues in the literature, I proposed various questions to challenge virtuality in education. Virtuality can be framed as threatening to current educational models. However, the complexity of virtuality as a continually changing and developing state, cannot be simplified as either overtaking current models or not. The gap in the literature suggests that virtuality can work in various educational contexts, although due to the unknown implications of virtual work in education, there needs to be further research concerning educator, student and educational institution engagement. The impetus of my study aims to challenge possibilities of art educator virtuality to stimulate the conversation. In doing so, further experimentation and research of what it means for art educators, students and educational institutions to work in virtual atmospheres is encouraged.

3. Methodology

3.1. Introduction: methodological possibilities

This thesis investigated how art educators use Twitter and beyond the use of this program and the possibilities that virtuality affords. This enquiry is examined with the help of art educators who currently use Twitter to communicate about pedagogical practice, problems in art education and their contribution to art-making. The initial question driving the literature review asked: How do educators, students and educational institutions make use of Twitter and what sorts of complexities does this virtual interaction afford? The following questions directed the remainder of the study: How do art educators create and practice art education on Twitter and beyond? And how can we think with virtuality as art practice and in art education?

These research questions instigated experimental ways of thinking data and directed my use of a post-qualitative approach. A post-qualitative approach challenges data and encourages experimental ways of approaching emergent problems. For example, I interweave my history as an art student, artist, art educator and researcher as an inductive analysis of present and future possibilities in chapter seven: *Diffraction art educators in Twitter and beyond*. My research process takes shape in the form of artwork, my art encounters and analysis and pushes the initial problem of studying how art educators use Twitter and beyond to an examination of cross-communication, purpose and possibility for art educator virtuality.

A post-qualitative methodology is a rebellious methodology, as qualitative approaches to research are challenged. One of the major problems that qualitative methodologies

pose for post-qualitative theorists is how data is viewed and used (Amatucci, 2012; Bridges-Rhoads, 2015; Duhn, 2017; Lather & St. Pierre, 2013, Nordstrom, 2017; St. Pierre, 2014). In my research study, I do not argue for an answer to a question, but rather, aim to generate more questions through the research process. My study of art educators on Twitter and beyond thinks with art educators in virtual communication, including the possibilities for their own practice and art education more generally.

The goal of this chapter is to contextualise my use of post-qualitative methodology. Initially, I examine a/r/tography and virtual ethnography as locating particular aims for data generation and collection in this study and as this chapter progresses, I argue for a post-qualitative methodology that draws on elements of a/r/tography and virtual ethnography by thinking with virtuality in experimental ways. I contextualise a post-qualitative approach by examining the research design and the research methods used.

3.1.1. A/r/tography.

A/r/tography can be defined by the first three letters, as a/r/t represents the artist, researcher and teacher. However, the slashes denote “a doubling of identities and concepts rather than a separation/bifurcation of ideas” (Irwin, Beer, Springgay, Grauer, Xiong & Bickel, 2006, p. 70). An emphasis is put on combining the identities of artist, researcher and teacher rather than dividing them (Irwin et al., 2006). A/r/tography invites endless spaces “for furthering living inquiry” (Irwin et al., 2006, p. 70).

A/r/tography as a methodology is an arts-based inquiry by examining ‘being’ in subjective and immersive ways (Leavy, 2012). The term ‘being’ is used by Irwin (2008) to frame a/r/tographic process in reference to Deleuze and Guattari’s (2011)

theorisation, as being becomes an ongoing act of becoming. According to Lasczik Cutcher and Irwin (2017) movement in making becomes one of “slow scholarship,” as the pace of becoming is slowed in order to ascertain unforeseen experiences (p. 117). Heidegger's (2008) term “Dasein” also comes to mind, as creating artwork becomes an expression of “being-interpreted” (p. 61). Characteristics of being can be inquiry and wonder (Heidegger, 2008).

An immersive view of how a/r/tography can work for the researcher and the researched developed in my approach. I initially devised artworks throughout this thesis to respond to the data I was collecting from Twitter and to process my thinking. Initially, data in my view was something over there ready for a response. However, over the course of working through the study, I now view data as immersive, intentional, intra-active and part of something that I brought to the study.

In chapter seven: *Possibilities for art educator virtuality*, I wrote about the interconnectedness between my artwork and the artwork of a participant in the study. The timeline of artworks developed over a few months with an artist/educator/participant on Twitter. We both produced similar experiments with paper by developing sculptural landscapes at the same time and posted images on Twitter. This connection is explained by the aesthetic qualities of the artworks. However, what became clear was the immersive process that took shape. My analysis circled comparisons and connections between moments in time, including Twitter interactivity. There was no quid pro quo between one artist and another. It was an immersive process for me, the researcher. Elements of a/r/tographic process were evident in the study, but as I drew on the multi-dimensionality of working with both physical and virtual data, the cross-pollination of ideas was explored further. I did not

stand back and observe the virtues of an art educator uploading their artistic practice onto Twitter, but rather, worked alongside her. Therefore, a virtual ethnographic process was also used to collect and inhabit the Twitter forum and as I examine next, there were elements of this emergent practice that needed further consideration.

3.1.2. Virtual ethnography.

Virtual ethnography is applied to online settings and the study of social interaction (Hine, 2000, 2004, 2008). It is ethnographic, as the researcher is part of the study as a participant, observer or both and virtual by the non-physical nature of the research site located on the World Wide Web (web). A tradition of online ethnographic study began in the mid-1990's deeming 'cyberspace' and a unique opportunity for social study (Hine 2008). Further, when adopting virtual ethnography, hypermedia is part of how data is sourced and needs to be qualified. Hypermedia refers to online images, video, audio and links that enable interactivity by moving from one access point to the next while surfing (searching the web) web-based material. Although hypermedia is commonplace when interacting online, it is important to contextualise how web-based functionalities encourage interactivity and create and address problems for researchers.

Problems in virtual ethnography include questionable phrases such as 'online communities' that imply a cooperative approach when using socially interactive sites, which leaves behind a myriad of engagement that users of SMS might have (Hine, 2000, 2008; Postil & Pink, 2010). The reason why this issue is important, particularly in virtual research, is that conceptions of online communities are not one size fits all and the term 'community' implies an agreement of participation. There are many ways to engage with SMS. For me, describing how participants in this study have been grouped

as art educators who use Twitter can be rather arbitrary. The participants in this study may not be aware of each other, as they are from different countries, different states and areas and are not necessarily in agreement about how art educators should be grouped. Identifying particular phenomena in any 'group' is fraught with generalisations. The term community "has been a problematic concept in anthropological and sociological theory for many decades" and according to Postill and Pink (2010) the term community is "better interrogated in terms of its local meanings for research participants that as representing an empirical social unit that is open to analysis" (p. 127). I used the term art educator to define participants who identified themselves as such and I regarded my study and interaction with participant data as part of what was generated by this 'group.' Representation is a problem that I continually play with throughout this thesis (see Chapter one: *Introduction* and chapter eight: *Thinking with art educator virtuality*).

Issues in virtual ethnography can arise accessing appropriate material, general communication and as McKenzie and Timmerman (2008) describe "cognitive overload" (p. 129). The problem for researchers is that there is so much virtual data and deciding what data might be essential to a virtual study can become a process of straining a virtual sieve. I addressed problems with data and access regarding private and public online spaces in more detail in chapter five: *Ethics in virtual research*. A minefield of various approaches to accessing and interpreting virtual data have emerged and according to Postill and Pink (2010), new methodological interrogations beyond traditional ethnographic practice are needed.

Baym and Markham (2009) suggest that after many years of online research, methodological practices need to be reconsidered in terms of "basic principles" (p. viii). This idea springs from the way in which the internet has transformed 'space' and

‘reality.’ The epistemological implications for inquiry are that the term ‘space’ has opened in ways unimaginable in the past, encouraging intra-action “that influences the structure of practice in the field: dialogue about critical decision points, ethical quandaries, and the uniqueness of the internet as a mediating factor in research (or the research site itself)” (Baym & Markham, 2009, p. viii).

The central argument of this chapter is my use of post-qualitative methodology, which not only directed the virtual straining of data and analysis but pushed the collection and creation of data and analysis in experimental ways. This methodology served to provide thinking with art educators on Twitter and beyond but also questioned possibilities in creating, teaching, learning and communicating online by thinking with virtuality.

3.2. Adopting a post-qualitative methodology.

The prefix ‘Post’ indicates to Amatucci (2012), “a distrust of the tenets of humanist, modernist, positivists, interpretive and emancipatory modes of thinking” (p. 286). In post-qualitative research, knowledge building is a moving process. Nordstrom (2017) convenes that there can be some middle ground between perceived “deterritorializing” and “reterritorializing forces” and an application of re-thinking methods in qualitative research should be located (p. 1).

Further, Nordstrom (2017) argues that non-human artefacts that may constitute as “secondary, ancillary data sources about people,” as compared to traditional qualitative methods such as interviews, defy the human as the spring of validation and are important when producing new knowledge (p. 2). This position promotes a shift from

what constitutes knowledge or data as pre-existing for validation to focus on an approach to produce more questions and knowledge (and thereby decentring anthropocentric totalities). The constantly changing nature of Twitter, which includes participants, perception, time zones and my position as a researcher was a study that I chose to imbue in the pages of this thesis. Rather than pre-meditate what was going to happen throughout the research process, I chose as Nordstrom (2017) claims to “trust in the surprises, the research events, that radically alter how I do and think anti-methodology” (p. 9).

Many post-qualitative arguments refer to Deleuze and Guattari’s (2011) propensity for the in-between so that the traditional structure of research inquiry is supplemented by an experimental positioning of choice. Deleuze and Guattari (2011) slip knowledge building into a grey area of anti-structure which includes lack of conformity, artistic practice and an alliance with the experimental. Their urging for knowledge building in the ‘in-between’ resonates with many who argue for the breakdown of methods (or the need for) in post-qualitative debates as “speculative middles escape order” (Springgay & Truman, 2017, p. 7). An example of anti-structure is Amatucci’s (2012) engagement with fictional and academic deliberations in her work as she troubles the “normative teacher subject” (p. 271). She (Amatucci, 2012) identifies the “allure” of normative positions providing a cushion from which to perch (p. 272). However, these normative positions cause problems and require “strenuous maintenance” which resulted in Amatucci’s (2012) need to “excavate the cracks I work so hard to hide or ignore” (p. 272). Amatucci’s (2012) excavation qualifies that qualitative research as “fiction” and therefore, what can we do but question it (p. 278)?

Nordstrom (2017) describes the “object-interview” method she needed to invent to support a process of meaning-making in her work that was unconventional and “consisted of freeing up spaces for individuation and ontogenesis” (p. 3). Ontogenesis is not constitutive of phenomena but a malleable process of developing understanding. When developing the concepts that drove my data chapters, I continued to create data alongside the analysis process. Did one come before the other? Alternatively, as in Nordstrom’s (2017) work there was elasticity when co-constituting data, as data begins to talk to data, and I responded by creating artwork (which continued ‘the conversation’). Nordstrom (2017) identifies the perceived complications of working this way “Why won’t she just say what she did?” and I emulate her justification for the protracted way that I approached data in my study. I decided to evade thematic data analysis to challenge online practice which was central to the problem in the first place: How do educators, students and educational institutions make use of Twitter and what sorts of complexities does this virtual interaction afford?

Not only was data changing the way the thesis was written, but I continued to respond to the research process by creating data in the form of artwork and my art experiences. The stillness of the thesis page and the movement of Twitter propelled my analysis into challenging territories and confirmed non-static ways of thinking and creating data.

3.2.1. Research and outcomes?

Amongst post-qualitative theorists, there is a suspicion surrounding what constitutes sound research process, particularly in search of evidence to support enquiry. Lather and St. Pierre (2013) believe that traditional research formatting (such as the literature review, methodology and methods) “assume depth” from a humanist perspective (p.

630). Nordstrom (2017) clarifies that structural entities of “research questions”, “statement of the problem” and other areas of traditional research process “only function within the classical formulations of logic” (p. 3). When setting up proposals of knowledge this way, knowledge is steered towards particular outcomes (Nordstrom, 2017). What St. Pierre (2014) and Nordstrom (2017) suggest is that by simply formulating research procedure into neat headings with the back-up of data to prove or disprove a problem, the research process relies on assumptions and may not scratch the surface of what could be possible. Springgay and Truman (2017) claim that “intensities and forces that cannot be interpreted or understood through conventional meaning-making practices” are worth our methodological consideration (p. 3). What is important to consider with conventional qualitative methods is how narrative, reflection and interpretation are used to ‘legitimise’ outcomes. Therefore, Springgay and Truman (2017) trouble the view that data and theory are separate entities in research and draw on St. Pierre (2014) amongst other post-qualitative theorists to awaken us from any foggy detachment.

St. Pierre (2014) clarifies this position by stating “methodology should never be separated from epistemology and ontology (as if it can be) lest it become mechanized and instrumental and reduced to methods, process, and technique” (p. 3). Fullagar (2017) suggests “unsettling, disturbing and diffracting qualities that our ‘difference’ can produce” may address the complexity of experience (p. 247). One of my initial problems in this thesis was deliberating how to bring what I perceived as problems in virtual ethnographic research, particularly ethical boundaries, into my research approach. As Fullagar (2017) mentions “the limitations of how humanness has been thought in dualistic ways that privilege certain identities over others” needs to be addressed. For example, when I surveyed the country of origin of my participants, the

majority were from the United States and were academics (this issue is addressed in chapter nine: *Conclusion* under *Recommendations*). Therefore, the conversation that I instigated relied primarily on a small demographic of art educators and did not address possibilities of art educator virtual engagement in other hemispheres. Immersing myself in the data creation and collection process destabilised the initial data collecting process and critiqued virtual data collecting to consider theorisation in the field. However, the problems posed by Fullagar's (2017) statement were only addressed in part and need further investigation.

3.2.2. Data trouble.

Koro-Ljungberg (2013) suggests that data and the history of collecting data in qualitative research is illusionary. Data can be used as evidence of what we intend to find and analyse about a problem. The problem with data that Koro-Ljungberg (2013) suggests is that "Data may think us rather than we think data" (p. 275). We are affected by what we are looking for and what we might perceive about phenomena. We look for data that can address a problem which motivates our decision-making process but may not support the complexities and nuances that the investigation requires. Data, whether collected, created or hidden, affects how research projects take shape.

Koro-Ljungberg, Löytönen and Tesar (2017) claim that "the term data has been argued to carry an odour of scientificity, lending a spurious scientific rigor to the critical and cultural projects of qualitative research, alongside such concepts as validity and triangulation" (p. 2). I find their claim significant when examining how I worked through problems in this thesis. The significance of what the participants offered when conceptualised in chapters such as *Diffracting art educators on Twitter*, positioned data

as multi-faceted; whereby the intention of the participant who created the Tweet was considered but not consulted when the data was analysed. Their Tweets intermingled with my use of theory to problematise them. Their Tweets were altered in ways that were conducive to my research process and not part of their intention when they created the Tweet.

I found this incongruity troublesome on the one hand and the other, exciting. For example, when analysing an image created by a participant to define creativity (see chapter seven: *Diffracting art educators on Twitter*), I complicated her data to introduce perception and process of art educators' virtuality. The analysis merged my art education and artwork in an attempt to intra-act with data that was produced in various timelines and in various ways. I brought this data together to document and analyse movement through time and artistic process to address issues of virtuality. Therefore, data was generated and manipulated for this purpose. The use of the data may support my theorisation, but by no means did it supply a research outcome.

Post-qualitative approaches excite the research process by generating and unearthing data that may not have been clear at particular times throughout the data collection or analysis process. My approach to data generation and analysis was experimental, which in turn played with the notion of unstable outcomes in research (Duhn, 2017; Koro-Ljungberg, 2013; Koro-Ljungberg, Löytönen & Tesar, 2017; Nordstrom, 2017; St. Pierre, 2014).

3.3. The research sites.

3.3.1. Twitter.

Marwick (2013) identifies Twitter as a “rich research site for scholars interested in online interaction, information dissemination, activism, and a plethora of other subjects” (p. 109). However, quantitative studies that use “big data” number crunching samples provide information but are limited in areas of specificity due to the vastness of the field (Marwick, 2013). With reference to the growth of SMS, Postil and Pink (2012) argue “They create new sites for ethnographic fieldwork, foster new types of ethnographic practice and invite critical perspectives on the theoretical frames that dominate internet studies, thus providing opportunities for rethinking internet research methodologically.” (p. 124). They emphasise the need to immerse themselves in the research process and emphasise “collaborative, participatory, open and public” positions (Postil & Pink, 2012, p. 124). I speak to their positions throughout this thesis and in particular, the process of participating in the research process and interacting on Twitter. Although greater communication with participants could have led a more insightful interaction, I argue that a post-qualitative methodology produced an experimental approach to analysis and view of the data collected.

Twitter research relies on the premise that there needs to be connective tissue to enable interactivity in the program. I focused on Twitter’s public accessibility for the purpose of studying interactivity that circled online positions of art educators. The Twitter research site *ArtTeacherAssemblage* (2014) opened in 2014 focused collecting data on participants who identified themselves as such. Further, Twitter account users in my study were predominantly women art educators which aligns with statistics that deem

more women Twitter account holders than men (Sysomos, 2016) and the global predominance of women teachers (many countries vary in ratios and are disproportionate in reverse) (United Nations Statistics Division - Demographic and Social Statistics, 2012). Gender disproportions on Twitter and education are not fully explored in this thesis. However, it is important to clarify that as the majority of the participants in my study were women and the significance to the study situates Twitter as a vehicle for multidimensional communication in a virtual field dominated by women. Therefore, voices discussed in the literature review that recognised technology and the internet as sites for agency, protest and possibility for women (Plant 1998; the VNS Matrix, 1994; Barnett, 2014), underline how a SMS like Twitter can be used.

Setting up the sites for research began with initiating a Twitter user page that I named “Art Teacher Assemblage” (see Figure 3.1). The biography section directed potential participants to my web page (Power, 2014), which housed an explanatory statement, a brief summary of the project and my artwork. The explanatory statement (see appendix 2) explained my intention to study the work of art educators using Twitter and provided avenues for participation. In order to agree to participate in the study, the Twitter user needed to follow my Twitter page. The guidelines of my ethics application were that I would spend six months collecting data on Twitter in 2014.

This time frame I imagined would cover different months of the educational year and limit the amount of data I may collect. My reasoning was in reference to warnings from Hine (2000; 2004; 2008) as the amount of virtual data can be overwhelming. However, as mentioned previously, my decision-making process at the initial stages of the study was arbitrary in nature, due to my lack of experience.



Figure 3.1: Twitter research site *ArtTeacherAssemblage* retrieved from Twitter 14th July 2014 https://twitter.com/art_assemblage

Further areas that required rethinking through the project included my invitation to potential participants to join the study. I wrote that part of my aim was to “piece together the representation of the ‘art teacher’” in Twitter (see Figure 3.2). This statement marked early conceptions of how I viewed ‘representation’ and subsequently,

I have argued in light of my use of post-qualitative methodology, an initial misstep and conversely a generative process.

The beginning of this study was a series of new research experiences for me and as I thought through how I could lasso the problem of virtuality and art educators, the companionship of learning through research and art-making process became inevitable. Creating artwork alongside this process allowed an experimental approach to the project, which in turn influenced my choice of methodology.

3.3.2. Participants.

The participants in the study were me and 21 Twitter account holders who identified themselves as art educators and chose to follow the Twitter account *ArtTeacherAssemblage* (2014) in 2014. An explanatory statement could be accessed via a link to the website <http://artteacherassemblage.com/> (see Figure 3.2) which is included in this thesis as Appendix B.

What is important to state initially, is that in order to work with participants on Twitter, I needed to not only identify them through the information supplied by their Twitter accounts, but I also needed to obtain consent for them to participate in the study via a linked explanatory statement. The process of obtaining consent was required as part of Twitter Terms of Service (TTOS, 2014) and the consent of the ethics committee of my university (for further discussion regarding participants and ethics, see Chapter five: *Ethics and virtual research*).

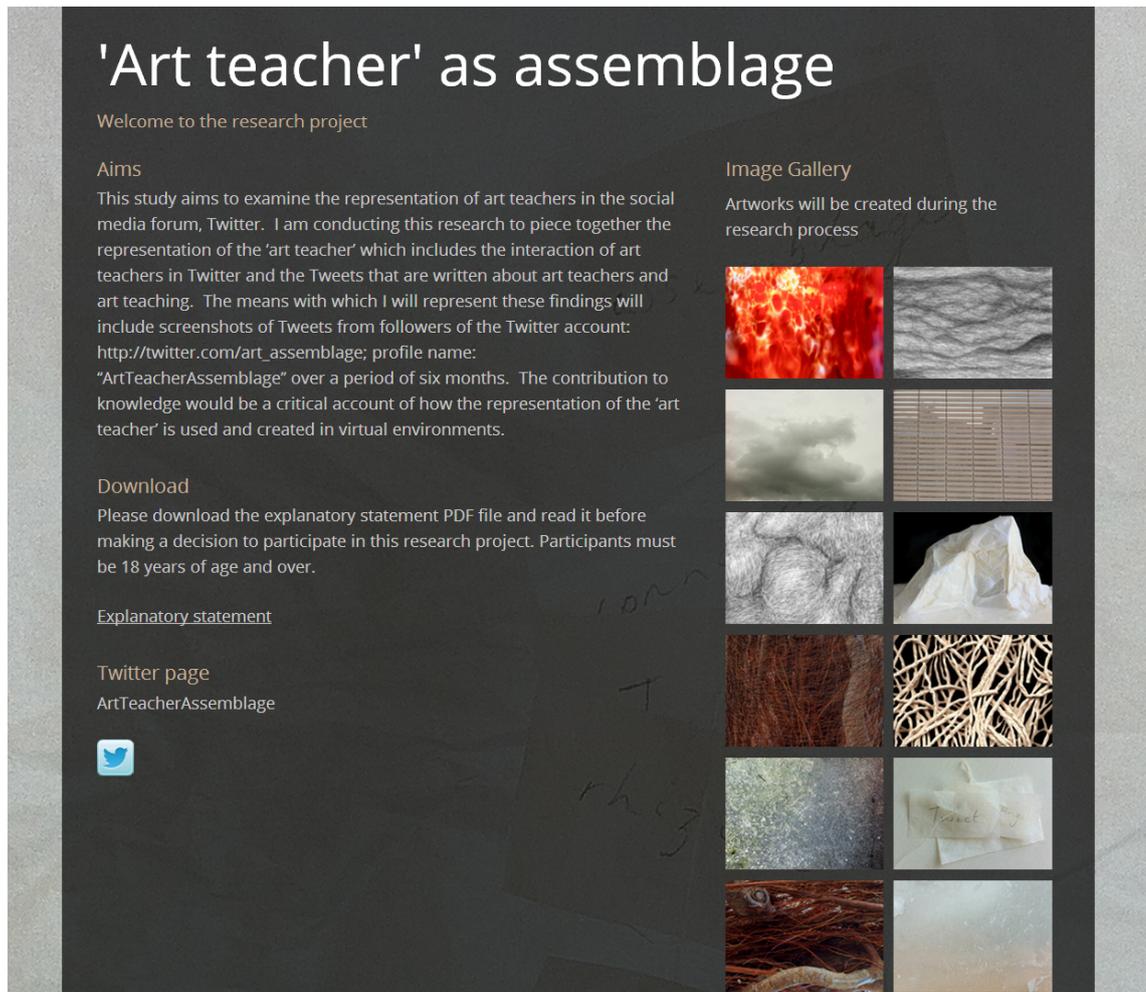


Figure 3.2: The website *'Art teacher' as assemblage* that housed the explanatory statement retrieved 29th July 2014 from <http://artteacherassemblage.com/>

During the process of working with a post-qualitative methodology, I decided to include data from a small group of participants and work through particular issues that began to surface due to my contribution.

My contribution involved various levels of participation which included, creating artwork to think through the issues raised in this study, interacting with participants on Twitter and drawing on my art encounters. These various states of participation were interconnected and yet served different purposes. Firstly, creating artwork was a way of thinking for me, the researcher. It was a way of speaking to theory, developing ideas, communicating ideas and contributing to the research process.

In order to challenge virtual possibilities for art educators, I studied what art educators were doing now on Twitter and challenge what could be possible when thinking art educator virtuality. Therefore, participants who were working with several virtual platforms and showcased a broad spectrum of virtual practice became the focus in the data analysis chapters.

3.4. Methods.

3.4.1. Screenshots of Tweets.

Once participants had joined the project, I began to take screenshots (capturing an image of what is displayed on a computer screen) of their Tweets. I would edit the screenshot to contain just the Tweet and then label the date obtained and subsequently identify particular issues evident in the Tweet. However, as I labelled the Tweets, I found that categorisations such as collaboration and art pedagogy (see Figure 3.3) described what these art educators were doing on Twitter, but did not critically evaluate what might be evident in the data. For example, in the literature review, there were issues that brought up fear and suspicion when communicating online as an educator. 'Rules' were drawn and broken and boundaries were threatened. Issues raised in the literature seemed to be conflicting as to the benefits of online communication. I questioned if my argument throughout this thesis was for or against the use of SMS in education. The more I thought through this binary, particularly the possibilities for art educators, the more I wanted to push the data further, push ideas further, into areas that may not have been clear at the time.



Figure 3.3: *#edchat collaborative studio...* by margot roi @margotroi, 17th Sept 2014, screenshot retrieved from Twitter 08/10/2014 <https://twitter.com/margotroi>

Further, my use of post-qualitative methodology created a caveat of potential research traps such as attempting to piece together a collage of voices to represent what art educators were currently doing on Twitter. Therefore, deciding what data I would use began when I figured out what this project was really about (although asking the initial research questions drove the Twitter data collection). Once adopting a post-qualitative methodology in this study, it opened my thinking to the potential of art educators and their virtuality.

3.4.2. Artwork.

Throughout the research process, I created and used artwork to work through ideas (see Figure 3.4). This is a complicated process to explain. For example, creating sculptures to 'model' a virtual program like Twitter (see Figure 4.5) may seem like an odd thing to do, but for me as a researcher, artmaking presented my thinking in alternative forms. I used my hands to work with paper and pencil, I photographed the artwork and digitally edited the images. My analysis was part of the generative process.

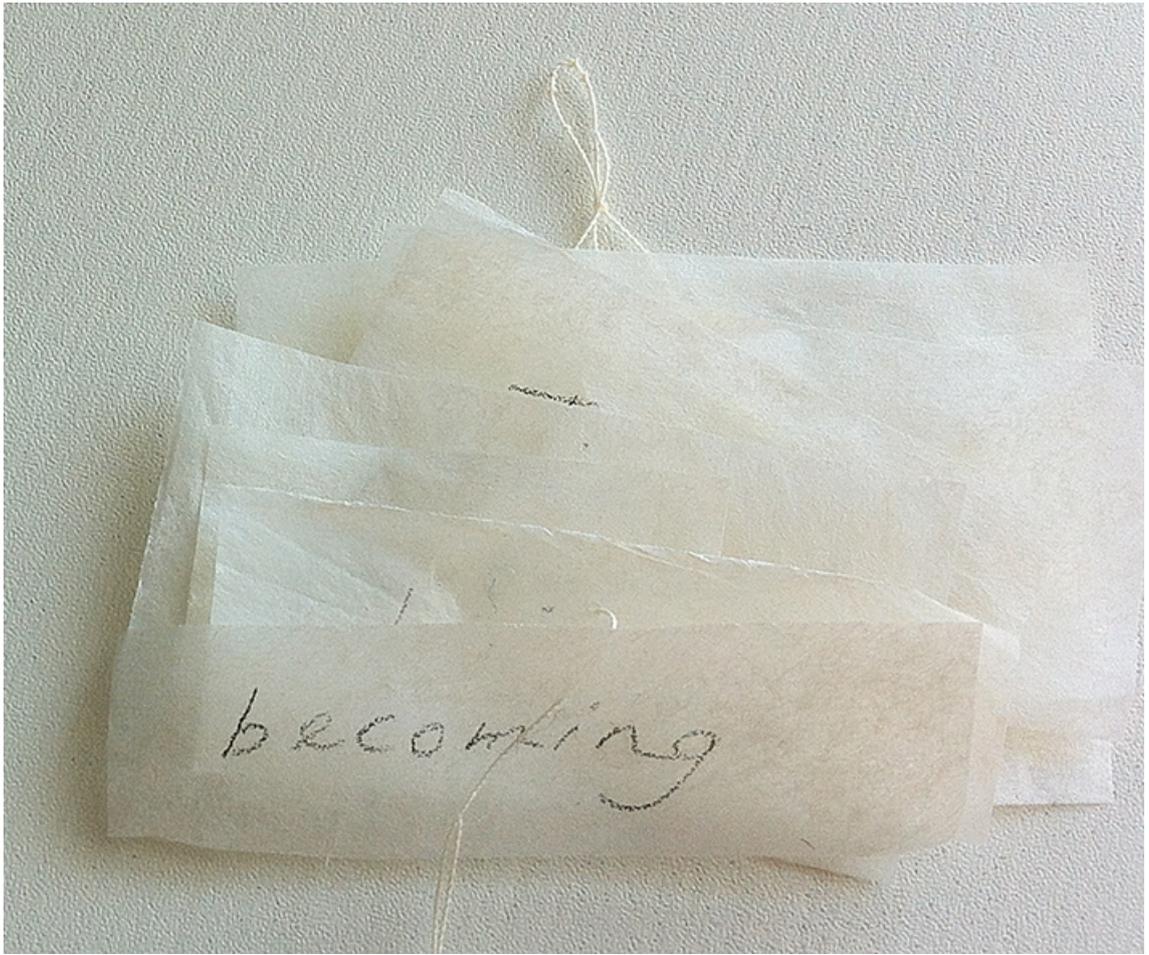


Figure 3.4: *becoming* by Kerry Power, 2014, string and paper, part of the continuous installation *Twitter trail*, 2014.

My artmaking projected ideas *and* was a means to react to ideas by intra-acting with theory and participants' virtual work. My artwork does not stand alone hanging on a page to ponder; it is situated in the pages of this thesis to invite further ways of thinking.

The process of creating the artwork was multifaceted in terms of method, as there was no one medium or idea that summed up the aims of this study. Various art processes included creating sculptures, installations, digital drawings and photographs. The artworks in various stages of completion were uploaded to the Twitter research site and the website that housed the explanatory statement. Uploading the artwork to Twitter as Tweets was an attempt to connect to the participants and in various stages through the

data collecting process, giving participants the opportunity to interact with the artwork. This process is documented and analysed in chapter seven: *Diffracting art educators on Twitter and beyond*.

3.4.3. Art encounters.

My voice throughout the data analysis is present due to a post-qualitative approach. As previously discussed, data is not considered evidence that can be collected objectively to prove anything and in my case, I have not established that art educators will benefit from engaging with Twitter. Data is a tool that is used to complicate and examine ideas generated through the research process. My position as an art educator, researcher and artist is at the centre of this enquiry. I have examined the data that I created and collected in this study. The potentiality of art educators' virtual engagement is a goal that I have as a researcher. Therefore, my voice is evident throughout the thesis and particular art encounters are signposted with italics.

In chapter seven: *Diffracting art educators on Twitter and beyond*, I look back at my own experience of encountering art as a phenomenon. Art to me as a young student was something that others did and I was yet to learn about the mystery of it. In my view, it was identified in books, cinemas and galleries and my participation was yet to materialise. The significance of using my art encounters to engage in the analysis in this chapter in particular, was to cut through various timelines in order to experiment with perception, participation and virtuality. The oscillation between the past, present and future projections is in reference to Barad (2014) as she returns to the past. It is not a reflexive approach to learning but a process of "turning it over and over again – iteratively intra-acting, re-diffracting, diffracting anew, in the making of new

temporalities” (Barad, 2014, p. 168). For Barad (2014), this process challenges sedentary meanings, which weigh down how we might think timelines and the formulation of knowledge.

Further, (in chapter seven: *Diffraction art educators on Twitter and beyond*), I intra-act with various data that compose art educators and virtuality. Firstly, I worked with a Tweet by an art educator who uses Twitter as a vehicle to project her pedagogical position. The chapter begins with an image of herself as an example of “creativity” (see Figure 7.2). My intra-action begins with the acknowledgement of her projection in Twitter and I work through the ideas that this Tweet brings to the perception of the art teacher. From there, I transport the intra-activity to my own experience of interacting with ‘art.’ Art is defined by a visit to a cinema to see a surrealist matinee when I was 16 years old. My impression of the movies shown is analysed in regard to the oscillations of memory, time, representation and symbolism. My participation is part memory, part onlooker, part artist and part researcher to bind ideas surrounding art, art making and art teachers on Twitter and beyond. I am all of the past, present and future projections in this chapter.

This approach encapsulates why I have used my art encounters as a method. I described a cinema, my reactions to a surrealist film and then I re-watched the film during the research process to work through my encounters with ‘art.’ The excitement and the danger of these encounters connect to the possibilities of art educator virtuality. As artistic connections are exciting, dangerous and unknown, they are considered significant in this study. There is little ease when learning something momentous, only the challenge of it gets us through.

3.5. Conclusion

In this chapter, I have argued for the use of a post-qualitative methodology to study art educators on Twitter and beyond. While there were elements of a/r/tography and virtual ethnography used in this study, ultimately, the way in which the data was collected, generated and used directed by my choice of methodology. Initially, while studying art educators on Twitter, I was drawn to virtual ethnography and the groundwork that had been done to examine the velocity and scope of virtual habitation. However, it was necessary for me to consider that working this way may not necessarily unearth anything surprising at all about how art educators use Twitter. The validity of researching art educators on Twitter and my engagement with art and art-making has unearthed my tenuous relationship with art education and stimulated thinking with virtuality.

Due to my continual immersion in the study, I unearthed art encounters to connect with how and why art educators use Twitter and beyond. I produced artwork in order to push the boundaries of this study to something more than weighing positive or negative outcomes for utilising SMS in art education. The methods of collecting Tweets, artmaking and my art encounters, work not to support a final outcome for art educators' virtual intra-action but rather spur thinking virtuality as art-making and in art education. My argument for using a post-qualitative methodology was a continual process of thinking with art educator virtuality and in doing so, I have pushed for a virtuality steeped in danger, excitement and learning possibilities.

4. Theoretical Framework

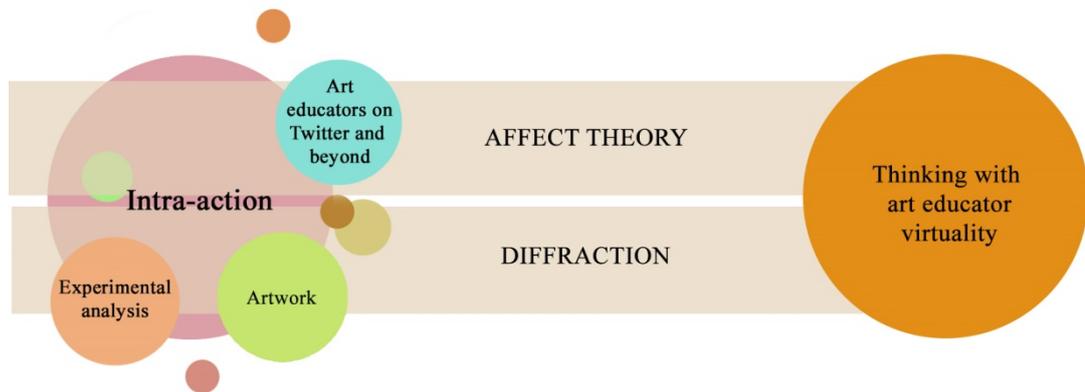


Figure 4.1: Diagram of the theoretical framework: Affect theory and diffraction supporting thinking with art educator virtuality.

4.1. Introduction

My use of affect theory and diffraction is used to challenge art educators working on Twitter and beyond. Research questions ignited this study of Twitter by opening or decentring the art educator, art making and art education which includes virtual education, artwork and opportunities afforded in online spaces. As pictured in the table above (see Figure 4.1), affect theory and diffraction support intra-action as artwork, experimental analysis and art educators on Twitter and beyond to work through thinking art educator virtuality. The study of art educators on Twitter is used as a springboard to theorise what might be possible for art educators' engagement in virtual space. By adopting a post-qualitative methodology as discussed in the previous chapter, I trouble art educators on Twitter and beyond and question what might be possible for art educator virtuality.

The data analysis chapters became linked conceptual assemblages by applying affect theory and diffraction. These theories were applied to challenge virtual engagement on

Twitter and beyond and to complicate the data that developed. As an avid user of SMS, I folded myself into the process centrally by creating data and analysis in this study to challenge and open the use of Twitter to stimulate thinking with virtuality as art, art pedagogy and the art educator.

4.2. Affect theory

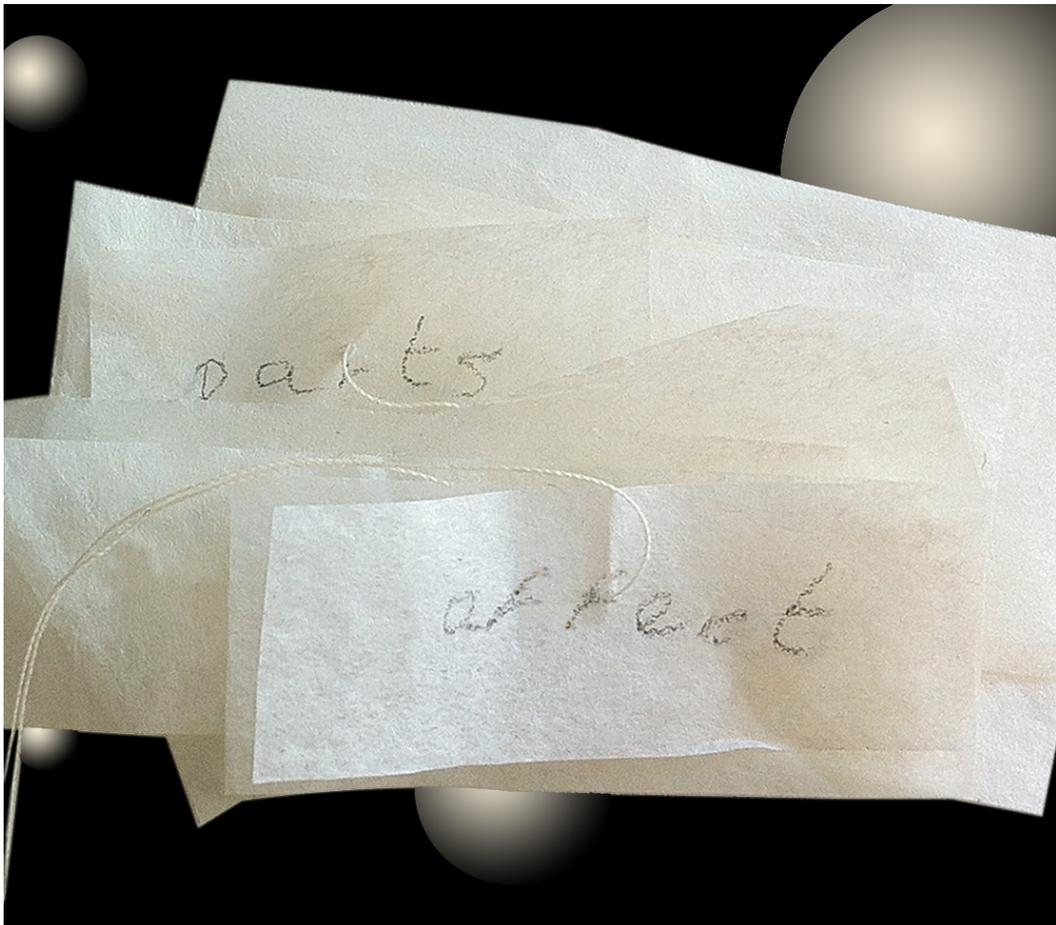


Figure 4.2: *parts_affect theory* by Kerry Power, 2018, digital photo and drawing.

Affect regarding theory and application addresses a broad cluster of forces such as acting, reacting, feeling and experience (Tomkins, 1992). Tomkins (1992) identifies a “drive-affect assembly” in favour of what he argues “had passed for drive for centuries” (p. 88). What motivates us to form decisions about how we act is founded in an “ever-

changing multi-component set of drives, affects, general and specific amplifiers and attenuators” (Tomkins, 1992, p. 88). This complex notion can be explained by articulating interlocking neurological systems that develop in the process of doing, acting and thinking.

Affect is a complex philosophical premise from which to examine virtuality as an artmaking and art educational vehicle. Affect theory may be viewed from several vantage points and therefore, my use of affect theory is described by the following philosophical premise:

Affect happens before we act and react. Affect cannot be controlled. It is not necessarily a motivation or a mental state of affairs. Affectual modes promote intensity and move between various acts of negotiation and experience (Gregg & Seigworth, 2010). Affect can occur within a social realm as we pick up on intensities and create them. We may sense affectual modes as one inhabits territory and absorbs preordained forces. According to Gibbs (2002) “affect *organizes*, both intra- and inter-corporeally, and is crucial to social responsiveness” (p. 337). When applied to using social media systems (SMS) for example, the body/mind produces and absorbs interactivity and therefore, affect theory can provide a framework to understand the nature of virtual exchanges.

Affect theory examines the transferrable energy of communication and this energy can be communicated before perception, it can be ephemeral and it can be long-lasting. Affect cannot be controlled. Feelings are associated with emotions but affect works with us, upon us and we can, in turn, affect others (ajayc42, 2013). However, Wetherell (2012) deliberately closes a line that other theorists may draw between affect

as “Basic emotions versus social construction” (p. 17). These two areas of affect in her (Wetherell, 2012) view are inextricably linked. Further definitions argue that affectual modes promote intensity and move between various acts of registration and experience (Gregg & Seigworth, 2010). We may sense affectual modes as one inhabits territory and absorbs affectual force. Therefore, I draw on affect theory as a framework to understand the nature of virtual exchanges and more specifically, how and what happens when art educators negotiate SMS like Twitter.

Gibbs (2002) identifies different uses of affect in cultural studies, particularly in regard to “feminist desires to think ‘through the body’” (p. 335). Therefore, the application of affect theory in research can have varied “theoretical and political implications” (Gibbs, 2002, p. 335). What is particular about affect theory as a departure from the predominance of the linguistic is what takes place around and through responses to stimuli (ajayc42, 2016). Affect theory is not simply a response to stimuli but the “transmissible” nature of stimuli (ajayc42, 2016). The transmissive force can go beyond verbal commands or even the interpretation of text. Affectual process moves or oscillates between text and the symbolic to areas of the body, space and mind (ajayc42, 2016).

Affect theory helps describe complex machinations of why we come to feel and act the way we do. However, beyond emotional co-habitations, affect is a continuing theoretical point of intrigue and can include non-organic engagements such as technology (Massumi, 2015). Affect in this context, moves from intrapersonal modes of thinking and doing to something more diverse, that is, into areas created and inhabited virtually. Affect theory can be responsive, unpredictable and invisible and when applied to virtual interactivity, valuable.

4.2.1. Affect theory and Twitter.

On Twitter, the source of a Tweet is not always known. The authorship of a Tweet is not always defined. The recipient of a Tweet is just as confounding. A Tweet can include hashtags which serve to group ideas and increase accessibility in search engines. Using hashtags can bring voices together alongside opposing opinions which can be distributed by media and other communications. Affectual processes can be absorbed, ingested and purged in multitudes of ways. Affect theory encapsulates energy and movement and I apply it to possibilities in art-making and art education virtuality in this thesis.

Wetherell (2012) believes understanding affect is acknowledging that we are not isolated in experience. She (Wetherell, 2012) underlines that affect does not permeate the other in some sort of ethereal manner, but rather, acknowledges how affectual process between beings propagates movement. Wetherell (2012) delineates affectual process when applied to crowds for example, as “less like surfing the waves like a fish and more like drowning” and “mass affect” when communicative positions overtake the individual (p. 145). What this study recognises is the intricacies of what both individual educators and ‘group’ collectives may achieve when engaging virtually.

Wetherell’s (2012) “affective contagion” can also describe ‘trending’ subjects on Twitter (p. 147). These are subjects that can infuse media reports regarding hot topics of the moment. Permeations of these topics can be declared as important due to the sheer number of people who Tweet them. The reporting of trending subjects by media outlets (which can include quoting Tweets as evidence of public opinion) has become

commonplace. Specific communication in groups does not necessarily make the headlines, however, the virtual transmission of art and art education is relevant to this study.

4.2.2. Transmissible knowledge.

Affect is the transmissible nature of knowledge in various modes. Tweets as transmissible knowledge can move into physical and virtual realms for those who choose to read them. I work with affect in this thesis by responding to data collected from virtual interaction and I physically create data alongside it. This shows the affectual process as moving beyond the initial intention of participants in my study and the function of the Twitter program to my own hands as they draw and my eyes look. I respond to the Tweets of participants and then the affectual process continues as you read this now. It is not as linear as I have explained it here; rather it is an awareness of how interaction and the transmissible nature of thoughts and actions occur. We absorb the day as it flows around our homes and on the screens of our digital devices. It is beyond a cerebral reaction. It is the multilateral transmission of affect.

I find affectual process important when thinking about the pedagogical intentions of educators who Tweet. Firstly it can be that their intention is to transmit an idea in order to support others, but a feeling when someone reads a Tweet or even decides to respond to a Tweet produces varied experiences. For example, Tweeting about art-making process provides a pedagogical intention. This, in turn, is received by those who access this intention in various ways. The connective tissue between examples of art-making process in a Tweet to a receiver of the information via a Tweet may be an attempt to simulate pedagogical process that occurs in a physical classroom. However, the

affectual, virtual nature of this transmission creates further pathways for change. Virtual affectual process goes beyond a unilateral exchange proliferating various interactive pathways.

4.2.3. Affect: virtual encounters and change.

Hickey-Moody (2013a) clarifies that “affect is an embodied change” (p. 88). One can be affected by virtual interactivity when creating art, teaching art and encountering art. Further, a connection between human senses, virtual engagement and a subject can merge. Connecting with matter and deciding meaning can alter positions, namely on what constitutes meaning and as a result, an assemblage occurs. Hickey-Moody (2013a) defines the term assemblage as “a contextual arrangement in which heterogeneous times, spaces, bodies and modes of operation are connected” (p. 94). These interchangeable manifestations of energy can produce and conduct change.

In order to explain our response to stimuli such as aesthetics and affect, Hickey-Moody (2013a) draws on Spinoza’s exploration of bodies and relationships. External forces of image, sound, texture, heat (regardless of the generator of force), creates bodily responses that shape consciousness (Hickey-Moody, 2013a). Hickey-Moody (2013a) draws on the Spinozian theory of the value of the aesthetic subject as opening “up a space for thinking about how art and the aesthetics of daily life change what it is we are able to do” (p. 83). Further, the epistemology of art and every day can “map the politics of feeling: unpack how aesthetics teach through making assemblages we learn through feelings” (Hickey-Moody, 2013a, p. 84). Examining art educators on Twitter and beyond, which included their pedagogical approaches, their artistic practice, their

interactions in a virtual environment, provided an avenue to examine virtual, affectual process.

4.2.4. Affectual process: Intra-acting with Scott and Kosofsky Sedgwick.

Interchanges between one Twitter user to the next can demonstrate the affectual process of how ideas, reactions, feelings echo across a virtual field. This is an “actualisation of a field of forces that is apt to frame and thus to express the singularity of the subject” (Braidotti, 2000, p. 160). I refer to Braidotti’s (2000) term “field of forces” to frame movement on Twitter (p. 160). I expand the use of this quote to explore the “actualisation” of a field on Twitter to locate what happens and how this reverberates in virtual space (Braidotti, 2000, p. 160). The subject focus of this thesis is art educators on Twitter and beyond, however, the territory or “field” is expansive and mapping the complexities and the tensions of working on Twitter and beyond draws various complexities.

As I worked with theorisations of affect, I created artworks to process my understanding of it. An example of this affectual process begins with a book by Kosofsky Sedgwick (2003) that I carried around with me at the beginning of this study for many months. The cover features a photograph of Judith Scott, a fibre sculptor embracing one of her artworks (Kosofsky Sedgwick, 2003). Scott leans into her sculpture of meticulously wound string. The sculpture is about her size and is made of string that had been continuously wrapped around various objects found in her workshop. I found this out by looking up Scott as I was initially unaware of her work (Scott, 2015). A narrative unfolded, as explained by her twin sister, Joyce (Scott, 2015). Judith Scott lived in an

institution for thirty-five years and was eventually emancipated to lead a life as an influential artist (Scott, 2015).

Carrying this book around was part of becoming wrapped in Scott's web that she wove with her string and found objects. She wrapped objects to create something new as one might use a paintbrush to render flesh or manipulate clay. The detail of this sculpture (Kosofsky Sedgwick, 2003) is chaotic as the stringy fibres she used do not follow any particular path; however, her process produces an end result which is firm, smooth and resolved. It echoes an attachment; just as a blanket that has covered a chair can be moulded by the shape of a sitter. The process of Scott winding the string over and over her found objects created a companion for me to think about diametrically opposed ideas becoming one. The space surrounding the sculpture invited Scott's body to lean into it and embrace it.

My encounter with Kosofsky Sedgwick's (2003) book and the artwork of Scott is an example of how I created artwork to intra-act with theory and process in this thesis. Scott's artwork is the inspiration for the digital drawing I created in Figure 4.3 which was created in a digital editing program by drawing both continuous and oppositional lines over and over. As I was intra-acting with the photo of Scott (Kosofsky Sedgwick, 2003), I thought of the ways we may embrace ideas and in particular, affectual energy that communicates ideas. As I imagine Scott continually wrapping found objects over and over with string, I used my mouse to simulate this repetitive motion. In my view, I worked with Scott and Kosofsky Sedgwick (2003) intra-actively by thinking with affect theory to create artwork and work with participants in this study.

Introducing images, books and ideas to work through theoretical positions in this thesis was important. The process acknowledged various forces that affect how we may approach thinking and doing. The physicality of Scott's image led me to search for her work and her background online. Access to her sister's webpage (Scott, 2015) enlightened the repetitive winding motion of her work, as she smoothed out objects, some knowledge of her disclosed and some of it is still yet to surface (Scott, 2015).



Figure 4.3 *Interwoven: Scott and Kosofsky Sedgwick*, by Kerry Power, 2014-8, digital drawing.

My drawing (Figure 4.3) went through several transformations; at first, my eyes saw something different when the image was minimalized compared to when it was viewed 'as print' in the editing program. The interwoven, jagged lines of the pencil tool came to meet each edge and then were smoothed by the eraser tool to create a new layer of binding. Changes in direction are defined only by the flow of the pencil action and produced by my mouse. The growth and transformation of this picture was a reaction to affect theory and propagated by affect theory as I produced new marks and altered the artwork over several years.

The intention of Kosofsky Sedgwick's (2003) writing preceded the choice of image to cover her book. The image becomes part of the book, partly describing what might be inside and further propagating how one might approach the book before reading. I responded to the image by creating artwork as pictured in figure 4.3. There is a non-linearity of the process of understanding that leads me to include the image in figure 4.3 and this is what I have attempted to capture the a multitude of layers of affectual process.

Affect causes a mind/body sensation (mind and body being one and the same) and provides a process for learning. The "corporeal affect" is the state of growing or developing from one state to the next while assembling past encounters (Hickey-Moody, 2013a, p. 85). The way in which artworks and art-making may make us feel and think as a viewer interacting with the work is also part of the process. Connections made by the initiation of an idea, the touch of material, the hand/eye coordination of tools and then to the viewer are affectual pathways.

Hickey-Moody (2013a) theorises the method of ‘affect’ in relation to movement. When using the term ‘affect’ in research, Hickey-Moody (2013a) states the examination of affect enables “mapping the ways mixtures or assemblages change, effecting alterations of subjectivities” (p. 80). The exploration of the motivations of art teachers on Twitter; which includes their pedagogical approaches and their artistic practice, provided avenues to examine affect.

4.2.5. Tweeting affect.

In chapter six: *Tweeting affect*, I trace my journey as I interacted with the Tweets of a participant in the study named Lillian Lewis (n.d.-b). The decision to focus on one of the twenty-one participants in the chapter was made to follow a *Twitter trail* (see Figure 6.1). I described a Twitter trail as a non-linear movement clicking from one hyperlink to another and demonstrated this by following Lewis’ (2014) virtuality in and outside Twitter. In doing so, I attempted to convey the elasticity of the program and the intra-activity of moving in and out of different virtual ‘rooms.’

This process can be analogised as ‘going down the rabbit hole’ in reference to *Alice’s Adventures in Wonderland* by Lewis Carroll. The force of gravity that drives Alice down a rabbit hole enables various unforeseen encounters. Going down the rabbit hole can be experienced when accessing hyperlinks as one can get lost in a myriad of options. And further to this, getting lost in virtual space is not an easy experience to describe. The plasticity of virtual space, merging one area and emerging to the next is not due to a singular click of the mouse, but rather, multitudes of incidents that occur at the same time. Lewis’ (2014) homepage provided descriptions, recent Tweets, followers and links to her work outside of Twitter. The premise of working this way

was to show how the walls of this program were flexible when communicating positions on art education. The walls of Twitter in *Tweeting affect* opened to other sites and grew legs. I began to walk through one wall at a time and then run with multiple sites. The pace in the chapter increased as I intra-acted with various points of axis. My intra-action moved through various phases of examination, analysis and artmaking alongside Lewis. I attempted to capture multiple of experiences occurring at the same time, including some before and some after, in an attempt to provide context and projection of what may be happening and what is yet to happen as we continue virtual communication.

What was significant while working through this process, was how my senses colluded in virtual intra-action. I found that my head faced the screen the majority of the time to decipher data that was before me, my fingers felt the keyboard and my auditory sense interacted with an artwork in Lewis' web page called "Wives Tales" (Lewis, n.d.). This artwork contained recordings of people talking about particular objects that were meaningful to them which in turn stirred memories of objects that contained meaning for me. Memories rose when I listened to the artwork of Lewis (n.d.-a). Although her artwork involved participants and their stories of objects, my experience was drawn into the artwork. This was significant to me regarding analysis. My involvement with her artwork occurred intra-actively, as I attempted to stage a non-linear journey through a virtual landscape.

My examination of an emotional, artistic and sensory connection that I had by following a virtual trail was not literally about virtuality or art educators on Twitter but the potential this affectual process affords. Haraway wrote a manifesto about the cyborg back in 1991 which was a precursor to our daily experience. As with affect theory,

diffraction enlightened how looking through a problem, around it and bouncing off it, provided ways of challenging art educator virtuality.

4.3. Diffraction



Figure 4.4: *diffraction* by Kerry Power, 2018, digital photo and drawing.

When thinking about working with art educators in this study, I imagined the Twitter home-page as a virtual house which signified pedagogical positions. What were art educators decorating their houses with to signify art and education? These ‘houses’ included lessons plans, problems in art education and artwork. Initially, in my view, these ‘houses’ were part of a post-structural discourse regarding subject hierarchy and power structures in education. My background as an art educator filtered this perception, including retaliatory positions regarding homogeneity in art education and a desire to encourage global connectivity. Art education as a subject that art educators

taught was in my view, involved in a political dialogue regarding value systems in education. However, once thinking diffractively through the data, my position did not alter but expanded into further areas of investigation.

Barad (2007) defines diffraction as “a physical phenomenon that lies at the center of some key discussions in physics and the philosophy of physics” (p. 71). What is significant about Barad’s (2007) definition is that it is not just analogous regarding physical phenomenon, but also a “methodological approach” that enables a point of reference and continuity about how to think matter, difference and entanglements (p. 71). This sounds rather broad but can be applied to how we think through difference (Barad, 2007).

Barad (2007; 2010; 2014) works with physics, matter and time to alert difference as an omnipresent merging of events that contribute to our thinking. Binary or oppositional thought such as right or wrong is challenged as being an archaic formularisation that promotes fixed states of being from which there may be no reprise. The challenge offered by diffraction is meshing two seemingly separate or counter-arguments to celebrate a cohabitation of thought.

Spaces created by art educators’ on Twitter and beyond provided positions that were difficult to articulate, particularly when they were imaginative, private, conscious and unconscious. These were spaces I tapped into in part, but as I have mentioned previously, the intention of participants cannot be fully realised and therefore perception was ultimately designed by me (see chapter five: *Ethics and virtual research*). For example, I made a sculptural model of Twitter (see Figure 4.5) at the beginning of the study to suggest different rooms on Twitter which became analogy for how I worked

through what art educators were doing on Twitter and beyond. Although this model served as an articulation of the various states of interest I was digging up in my investigation; it remained an analogue view of what this study could do. To explain further, the more that I attempted to articulate this investigation through models or representations, the further disservice I was performing to the possibilities of the study.



Figure 4.5: *Structure_1* by Kerry Power, 2014, paper, cardboard and glue.

The issues raised regarding educators on Twitter in the literature review and art educators on Twitter in chapter six: *Tweeting affect* were the foundation of chapter seven: *Diffraction art educators on Twitter and beyond*. They were partly generated by data that I had found over six months in 2014 but also ignited by the promise of what was to come. That is, if I could foresee the possibilities of educators afforded by virtual interaction in the future (which is not contained by justifications for career advancement) but rather, residing with others over vast physical/ virtual territories, then this is what I understand as a post-qualitative approach in research. It is the possibility

of moving beyond data as evidence to something that may not have been evident at all. Space as a concept can be imagined, implied and built because it seems to be something that we strive for when learning and creating in virtual/physical experiences.

4.3.1. Thinking with data.

Barad (2014) points out that diffraction “troubles dichotomies, including some of the most sedimented and stabilized/stabilizing binaries, such as organic/inorganic and animate/inanimate” (p. 168). What is important to understand about Barad’s (2014) position, such as how we might look at data, information and history, is the story of data we tell to support what is valid or invalid, in other words, the dichotomies that we may set in research. Diffraction may illuminate and diffuse the dichotomies we may use, including how we may experience virtual life and ‘real’ life.

Diffraction is useful considering the modes of application afforded on Twitter due to the blurriness of the here and now. Time becomes a fictitious commodity when looking back, or as Barad (2014) refers to as “re-turning” (p. 168). Further, Barad (2014) describes diffraction as “dynamism” and by doing this, process, movement and a lack of containment ensue (p. 169). This can be true of Twitter in 2018, as it seems the direction of this program is unclear. This again brings me to how working with a program that appears to encourage reTweets, comments and connections that continually change and grow.

Applying a diffractive analysis to Twitter data is a turn against the interpretive model (Bozalek & Zembylas, 2016). This is important as Bozalek and Zembylas (2016) provide a model that goes against categorisation or binaries by acknowledging

difference as a “relational ontology” (p. 8). In order to explain how this might apply to an analysis of Twitter data, I imagine that data does not prove or disprove the value of working as art educators in a public sphere such as Twitter, but rather, there are various issues that run alongside one another (which can include issues past, present and future as omnipresent). If we can see difference in this way, it may provide a starting point for why and how this forum is used by educators that may support practice in a professional capacity, but also, provide a venue for how this works for individuals who learn, respond, educate and practice.

In the above explanation, I see working on Twitter as a diffractive and affectual process. The process provides “a detailed reading of the intra-actions of different viewpoints and how they build upon or differ from each other to make new and creative visions” (Bozalek & Zembylas, 2016, p. 8). Bozalek and Zembylas (2016) provide various pathways from which to view data and the questions I might pose about the use of Twitter by educators. It frees up the direction of an argument and provides a pathway for this thesis. This thesis is not driven by answering the research questions posed, but by opening a conversation about the possibility of working with technology and virtual platforms.

Further to this, diffraction provides an open, “ethical” and formidable approach to understanding pedagogy according to Bozalek and Zembylas (2016), in order to “review and renew socially just pedagogies in higher education” (p. 9). This is explained by the authors (Bozalek & Zembylas, 2016) when describing a reading group that operates trans-nationally when appraising the texts of Haraway and Barad amongst others (Bozalek & Zembylas, 2016). The texts are not pitted against one another but are read and responded to alongside the other “to open possibilities of entering new spaces of

inventive learning that do not seek to represent the *right* answer” (Bozalek & Zembylas, 2016, p. 9). The collaborative aspect of this reading group reiterates the underlying “ethical” approach to that Bozalek and Zembylas (2016) apply to diffractive analysis, as texts are not argued in terms of more weight than the other. Instead, texts become part of a conversation; approaching new ideas and ways of thinking about pedagogy and practice. I apply this approach to thinking about art educator virtuality. The approach is not formalised as such (like a reading group choosing text) but multilateral collaboration that promotes new ways of being online that may even “interrupt” pedagogical practice (Bozalek & Zembylas, 2016, p. 9).

4.3.1.1 Applying diffracting analysis.

To frame diffractive analysis as applied in chapter seven: *Diffracting art educators in Twitter and beyond* and chapter eight: *Thinking with art educator virtuality*, I refer to Barad’s (2010) play with time “This ‘beginning’, like all beginnings, is always already threaded through with anticipation of where it is going but will never simply reach and of a past that has yet to come” (p. 244). Barad (2010) is referring to a passage in which she describes the interaction between two scientists as she begins an examination of how time and events collide. What is significant about Barad’s (2007; 2010; 2014) play with time, is how a view of history, the future and the present envelopes various vantage points of how we might think through a problem.

When thinking through a spatial formation, I refer to Kosofsky Sedgwick (2003) as she uses “beside” and “beneath and beyond” as a “spatial descriptor” for the thinking process (p.8). Her descriptor provides a three-dimensional view of what it means to think. In figure 4.6 I have displayed the artwork *Entre* with the artwork *the beginning*

as both images work with Kosofsky Sedgwick's (2003) use of spatial thinking. The image on the left is an opening to the model of Twitter called *Structure_1* (see Figure 4.5). It is a continuous sculpture that I pulled apart in order to continue thinking about virtual structures and toward the end of this thesis, it is bound and re-imagined (see Figures 9.1, 9.2 and 9.3).



Figure 4.6: *Inside and The beginning* by Kerry Power, 2018, a composite detail image of *Entre*, 2014 and *The beginning*, 2014.

Dismantling linear ways of thinking like right and wrong embraces spatial qualities such as virtual ways to create and imagine. By opening up a spatial perception of thought to possibility, previous modes of thinking shift including a reliance on facts and the “authority of experience” (Braidotti, 2010, p. 416). These ideas are tied to post-qualitative ways of seeing data, as data is not evidence but used as provocations. In post-qualitative research, we are less reliant on what is right or correct and more responsive to questioning.

Barads (2014) position on difference clarifies as she quotes Trinh Minh-ha with the following:

Many of us still hold on to the concept of difference not as a tool of creativity to question multiple forms of repression and dominance, but as a tool of segregation, to exert power on the basis of racial and sexual essences. The apartheid type of difference. [. . .] [But] [d]ifference as understood in many feminist and non-Western contexts [. . .] is not opposed to sameness, nor synonymous with separateness. [. . .] There are differences as well as similarities within the concept of difference (Trinh, 1988, as quoted in Barad, 2014, p.169).

Trinh (1988, as quoted in Barad, 2014, p. 169) challenges dichotomies of the self - as if 'parts' of us were oppositional: one position against the other. Difference is framed as a site for meaning-making (Trinh, 1988, as quoted in Barad, 2014). You are different from me let's talk about it. "What if we were to recognize that differentiating is a material act that is not about radical separation, but on the contrary, about making connections and commitments?" (Barad, 2014, p. 184). I apply Barad's (2014) question to binary thought. Binary thought entails a right or wrong way to define or think about a subject. The definition of a subject is considered concrete/oppositional and therefore disables any movement. The aim of my study was to destabilise art educators' virtual interactivity by examining what is happening now in order to project what might happen next.

4.3.1.2 reflecting diffracting.

I walked through my bedroom, stopped and saw light coming through the window, bouncing off a shiny object on the table and then it created a myriad of lines and reflections on the wall (Figure 4.8). The projected 'object' was oval in shape and moved subtly as the light from the window penetrated and bounced on leaves that brushed outside. It was a quiet moment and I found myself tip-toeing to get my camera to take a picture. It was a strange configuration and I tried to understand how the object on the table created such a light show. As I learn from diffraction, the journey

that a source of energy such as light takes through, over and reflected off matter, further diffracts as the it continues.

A source of the light comes through the window, but we know that it is really the sun. It makes its way to the wall and creates lines and shapes that are difficult to count. What this tells me as I put the experience into words, is that learning and experience come together in such complicated ways. The affect of energy, will and force from various starting points, bend and take shape, if only momentarily. The act of tip-toeing to get my camera to make sense of this shape on my wall was part of a continuing process that inculcates curiosity as learning.

I first created this image and named it *reflecting* in 2014 and in 2017, I re-named it ~~*reflecting*~~ *diffracting* (see Figure 4.8) to reflect the generative post-qualitative nature of my study.

I revisited this artwork (see Figure 4.7) while writing this chapter and continued to draw on the reflection on the wall. I emphasised the brighter hues and created further pathways within the shape. The image began to remind me of recent x-rays of my bones that have now become brittle and are now partially transparent. These images now relate to the inner workings of my body; as data has moved in and out of it, my bones have changed with time, energy and matter. Diffractive approaches in research can reveal interiority and possibility; as my digital drawings have captured light and interiority, they have in my view, they connected to the inner workings of my bones.



Figure 4.7: *reflecting diffracting*, by Kerry Power, 2017, digital photo and drawing.

Bozalek and Zembylas (2016) draw on Haraway and Barad regarding the problem with reflecting and I re-work the artwork in this thesis to facilitate disruption that comes with working with diffractive analysis as not just “an optical metaphor, but also as a method and a practice that pays attention to material engagement with data” (Bozalek & Zembylas, 2016, p. 2).

4.4. Thinking with art educator virtuality

As Donna Haraway suggests, diffraction can serve as a useful counter-point to reflection: both are optical phenomena, but whereas the metaphor of reflection reflects the themes of mirroring and sameness, diffraction is marked by patterns of difference (Barad, 2007, p. 71).

In this quote, Barad (2007) provides further expression of diffractive thinking, as diffraction is finding difference rather than replicating something we already know. The limitations of working with a small group of art educators on Twitter cannot reflect or replicate what is happening now for art educators in virtual communication, it can provide a departure from what we know now. Examining how participants are working with Twitter now, is not suggestive of the overall impact that this virtual practice has on learning, however, it is necessary to think with virtuality as learning. The differences that acclimatise virtuality are new, isolating, connecting, productive and generative of educator experience beyond replicating physical practice.

4.4.1. Intra-action as connecting.

The artwork, *Intra-action as connecting* (see Figure 4.8) is based on the work of Barad (2007; 2010; 2014) which accepts the material, the ephemeral, the endless and the virtual as co-constitutive space. I depicted an interior image of *Structure_1* (see Figure

4.5) conjoined with *reflecting diffracting* (see Figure 4.7) and my handwriting that labels the image with “intra-action.” My image (Figure 4.8) intra-acts with the work of Barad (2010) as she states that “Science and justice, matter and meaning are not separate elements that intersect now and again. They are inextricably fused together, and no event, no matter how energetic, can tear them asunder. They cannot be dissociated, not by chemical processing, or centrifuge, or nuclear blast” (p. 242).

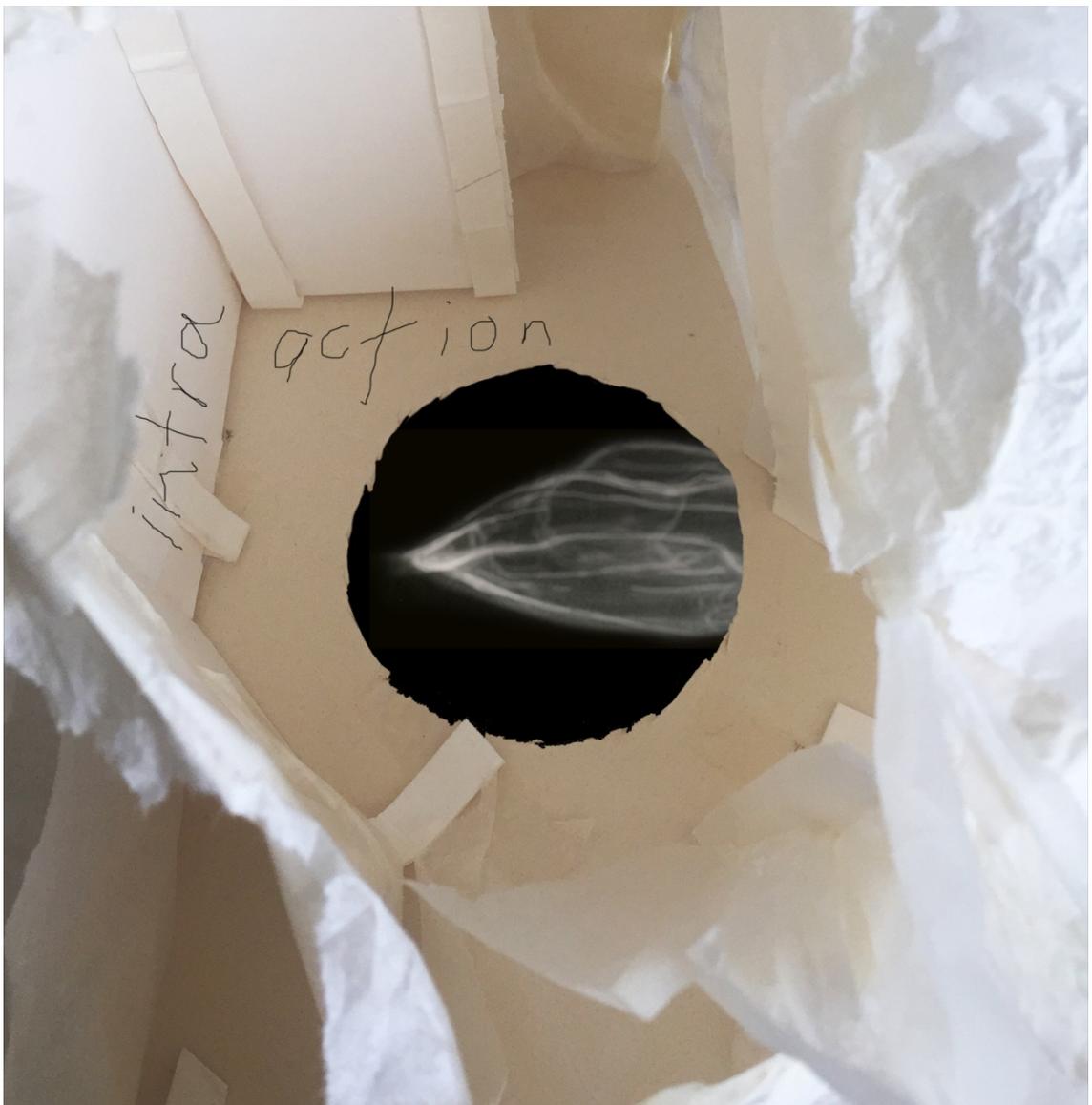


Figure 4.8: *intra-action as connecting*, by Kerry Power, 2018, digital photo and drawing.

Barad's (2010) insistence of co-constitutive space that we may attempt to drag apart is where I see virtuality for art educators now and in the future. An attempt at separating the material/physical and the virtual in art-making and art education may be a longing for how we have classified the classroom and the educator. The educator is already standing in both physical and virtual rooms. Thinking diffractively is part of connecting what we are already experiencing now as educators and embracing how virtuality might be.

It is optimal in this thesis to examine how difference becomes part of an intra-active engagement with others. Likewise, "enacting new patterns of engagement" supported my art-making "joins and disjoins – cutting together/apart – not separate consecutive activities, but a single event that is not one" (Barad, 2010, p. 243-4). Working with data that has been collected from Twitter and creating data that challenges how we might think with virtuality, sets to imagine future conceptions of art-making, artistic communication and art education.

4.5. Conclusion

This chapter has discussed the use of affect theory and diffraction to see through what we may know and understand about the use of virtual engagement in art education, with particular emphasis on art educators. Affect theory was deemed to facilitate thinking through movement and embrace perpetual connective moments that enhance change and understanding. Affect is associated with feeling, but it ultimately constitutes intensities as they occur in obvious and subtle ways. In order for art educators to communicate in a SMS like Twitter and beyond, there has to be a connective force that encourages this engagement. Diffraction was examined as a necessary way of creating new knowledge

as matter and virtuality were viewed as co-constitutive of everyday experience.

Diffraction is accepting difference as a necessary part of learning and therefore, art educators who work in various virtual ways will perpetuate this.

5. Ethics in virtual research



Figure 5.1: *My computer screen* by Kerry Power, 2014: digital photo of an active Samsung SyncMaster S24B350 screen (detail).

5.1. Introduction

Entering the virtual world to research interactions of art educators on Twitter, I had questions regarding potential participants' data and how it could be used. I stared at my computer screen (see Figure 5.1) and wondered how to make decisions regarding informed consent and privacy. These decisions fall initially under the banner of 'research ethics' but who was I to know what was ethical in terms of using and accessing virtual information? I read the Twitter Terms of Service (TTOS, 2014) and received advice from my University ethics department. Some roles at any moment can

change and interchange in educational research, including researcher, participant, student and teacher and these roles intersect and complicate ethical considerations in virtual research.

When conceptualising knowledge gained from tapping into an internet data pool, one may question many things which can include the role of the researcher and the researched, privacy and ethics, intention, authenticity and the vastness of scope. In terms of power relations, the researcher, regardless of research intention including ethical positions, must acknowledge that there are billions of nuances affecting online user participation. The ethical boundaries surrounding available data deemed 'public' in a program like Twitter for example, are not easily wrapped in a terms of service agreement or a university ethics application.

5.1.1. This study.

I intended to connect with participants in some sense by becoming both a researcher and a research subject in my study of art educators' use of Twitter and beyond. Examining the interactivity on Twitter required particular levels of experience with the site, including familiarity with terminologies and behaviours and the challenges of collecting and working with data, which in turn, invited layers of ethical concerns.

My participation in the project began with the creation of a Twitter account that declared my identity as a PhD candidate conducting research surrounding the topic of art educators' working on Twitter. By stating this intention as a starting point for data collection, I began my request for informed consent. I was seeking to research art

educators' use of Twitter. Alongside this request, I uploaded my own artwork to indicate my thinking through the research study.

The artwork created in figure 5.1 was a digital photo of an active computer screen which captured a swirling, pixelated image. This swirling can change when zooming in or out of an active digital screen. With the naked eye this movement is invisible, but when using a digital camera, movement is captured as omnipresent. This artwork provided a window into my thinking about virtual research and ethics. Various research approaches bring issues to the table of virtual research. We may predict and imagine the problems, but they are so big and continually move and change.

In the following chapter, I raise major ethical issues in virtual research and then situate issues evident in my post-qualitative study of art educators' virtuality.

5.2. Ethical questions in virtual research

Dwelling in online forums is quite different from meeting someone face to face and this is one of many problems that arise when conducting research in virtual space. Driscoll and Gregg (2010) offer a question of ethical relevance to any researcher who performs ethnographic research and in particular online community based blogging sites: "Is she a "member," then, or a "participant observer"?" (p. 15). When examining groups or individuals in research, one can observe, quote, describe and analyse data but what say does a participant have when their voice is presented in research? What contextual concerns should we employ? Lin (2016) suggests that "online identities involve more complicated processes and potential risks than those of people only holding offline identities" (p. 115). However, while I agree that online participation in research has a

narrow history that needs further clarification in safety and ethics, I could argue that anyone participating in online forums should expect that their interactions can be seen and used by anyone. I could also argue that there might be faith in virtual security systems that should prevent any possible leaks in locked applications. However, there is confusion, plurality and obliviousness that surrounds how we create online presence and how we understand what might happen to it. The issues considered here are addressed as an enmeshed experience and I detail examples in the literature to contextualise this ‘fusion.’

5.2.1. Public and private information.

The distinction between public information and private information on the web can create a dilemma for researchers and many researchers using virtual ethnographic practices postulate the boundaries (Ang, Bobrowicz, Schiano, & Nardi, 2013; Baym & Markham, 2009; boyd, & Marwick, 2011; Driscoll & Gregg, 2010; Roberts, 2015; Small, Kasianovitz, Blanford, & Celaya, 2012; Steinmetz, 2012; Zimmer, 2010). The literature surrounding virtual ethnographic research practices suggests an ethical ambivalence.

Online access to a SMS such as Twitter may provide opportunities for conversation, arguments, statements and groups to emerge, but the account user may not be aware of how ‘public’ these interactions might be. Hine (2008) highlights ethical issues that can plague virtual ethnographic studies. She refers to the “issue of developing an effective ethnographic presence” and the “role of informed consent” (p. 265). For example, binaries such as public and private data temper at the nerve of what might be risky in virtual research. The interactions of users of any social networking site “might be

deeply intimate and be experienced as if they were private” (Hine, 2008, p. 265).

Although the use of public Twitter accounts implies that anyone from the public can view information, it may not be the intention of a Twitter user that this information is read by anyone but the user with whom they are interacting with, let alone used for research purposes. However, when users agree to participate (TTOS, 2014) on Twitter, data may be taken into unknown territory in regard to what information is accessed and what information is used in other contexts.

5.2.2. The researcher presence.

Further, when do ethnographers ‘appear’ in the data collection process? This is a historical postulation regarding ethnographic practices and when conducting online research, lines may blur more purposefully due to the lack of face to face presence when accessing data. Time zones and geographical boundaries are also loosened. When embedded in an online community, it can be as covert or as obvious as the researcher deems fit. However, when ethnographers connect with online communities to conduct research, boundaries between what is considered intimate (including hypermedia) and what is acknowledged as in the public domain can alter and confuse, depending on the position of both the researcher and the researched.

It is an understatement that harvesting large quantities of data regarding human interaction on the web has become fodder for research (Ang, Bobrowicz, Schiano & Nardi, 2013). The availability of data deemed public property is irresistible. According to Ang et al., (2013) the availability of data facilitating various research motives has changed the way researchers research. They (Ang et al., 2013) name this shift “data in the wild” when conducting virtual research, as data generation suiting research aims

shifts to shaping a research question to suit what is available (p. 39). Further, they (Ang et al., 2013) suggest that ‘trivial’ data results are included in studies as part of a data motley crew determinant on availability rather than design. Ethical dilemmas including limitations arise due to wild approaches to data retrieval, bringing new and challenging problems to the fore (Ang et al., 2013).

To support their investigation, Ang et al. (2013) used examples of violation of privacy that can be found in Google’s street view technology. Streets are photographed for the purpose of mapping territories, which in turn invites ethical issues such as the photographing of human subjects and their accompanying residences without their consent. But how does one get consent for such massive surveillance? This question can temper at the inability of any organisation/government to obtain legal and ethical consent on a Meta scale. Providing detailed, photographic three-dimensional maps is a great innovation, isn’t it? Ang et al. (2013) describe data in the wild as full of legal and ethical “gaps” that may take the researcher (and affiliations) and the researched to unrealised areas of ethical infringement (p.43). Further, the use of mass surveillance persuades convenience, safety and monetary compensations.

5.2.3. Virtual research and the intimacy of online interaction.

Steinmetz (2012) points out that the ever-increasing participation of online communities fulfils a cultural and social need. The idea that a perceived lack of human connection can underpin a social desire or need to connect globally seems to be a contradiction. How does one attach intimacy to a global chat room? And as Gatson (2013) states “communities, identities, and places are contested entities” (p. 304). For example, the word community denotes a membership, a place for commonalities. When agreeing to

use a particular SMS like Twitter, a formal user agreement is agreed to (TTOS, 2014). How we may negotiate our participation in a SMS is an ever-changing and evolving field (Gatson, 2013). These problems are addressed in part in this study, as relationships, support and interactivity were evident in the data. Although contested and problematic, it is for these particular reasons, virtual ethnographic researchers tap into SMS whether they take place on Twitter, Facebook or online gaming forums (Steinmetz, 2012).

Focusing on identity, Steinmetz (2012) plays with the internet as a forum for identity elasticity. Face to face contact is minimalized by current text and imagery use (rather than live video chat). It has to be stated that in 2018, this is continually materialising in various formats. To bring the discussion to the format on Twitter, the interaction is primarily text driven with accompanying hypermedia. Steinmetz (2012) refers to possible identity “play” as an ongoing participatory device when accessing virtual space to connect with others. Therefore, “digitally projected identities” are data that virtual ethnographers deal with during study (Steinmetz, 2012, p. 31). The means with which online users may alter their identity can be through the use of avatars, log in descriptors and usernames and the content they upload online (Steinmetz, 2012). This information may have some significant relationship to the ‘true’ nature of the participant, or to the contrary, this information can be used to diffuse any relationship to the ‘original’ identity of the user. Steinmetz (2012) argues that the profile of one’s true identity can be collated through the various trail of posts, signatures links that one user may accumulate in any particular chatroom. However, the arbitrary nature of online identity brings to question theoretical implications for what is deemed original, true or representative of one’s identity.

This perceived departure from a conventional ethnographic field data requires new methodological approaches. However, this shift or identity ‘play’ may not disturb what offline ethnographers would describe in the field in terms of identity; rather as according to Hine (2000) this is not necessarily something to dwell on. I argue a contrary view; when identities shift intentionally or unintentionally regardless of purpose including anonymity, play or any other variant, the complexity of identity and ethics in the virtual field needs to be addressed. There may be ambivalence or confusion concerning the welfare of human interactions in the virtual realm, including the menace of exploitative research practices. Can we argue that using so-called ‘unidentifiable’ data that does not expose the identity of the researched subject in terms of name or signifier is an acceptable research practice?

Small, Kasianovitz, Blanford and Celaya (2012) identify issues revolving around an “ambiguous and evolving understanding of privacy in networked communication” as coming from all stakeholders in the pool of internet communication which include users and the researchers who mine data (p. 174). They specifically address Twitter data to identify key complex problems that surround the use and reuse of this virtual data. When discussing the issue of privacy, Small et al. (2012) examined the issues of “ownership, authenticity and reliability” (p. 175). With this in mind, the goal of their paper was to discuss appropriate guides to address issues of ethics when mining virtual data and in particular, archiving such material. As the Library of Congress in the US continues to struggle to archive *all* public Tweets, I wonder if Twitter users were aware that *all* their Tweets would potentially be archived (McGill, 2016).

Whiteman (2012) argued when conducting online research, that due to the public nature of the forums that she was accessing it was not necessary to obtain permission to “observe and cite” postings (p. 48). Her (Whiteman, 2012) stance changed as she began to take note of the “status of material” that she came across (p. 48). I can draw a line here to some of the Tweets that I have come across on Twitter. The ‘conversations’ that arise in response to Tweets are neither public nor private; they are somewhere in between. They may be read by any member of the public but sentiments expressed can be of an intimate nature, as if friends are talking on the phone. Whiteman’s (2012) approach was changed by the research process as she found that online contexts for how one may experience a chat room or public forum needed a further look.

Whiteman (2012) points toward the “‘ethical’ Internet researcher” in her exploration of “unsettling of expectations and assumptions that are felt by both researchers and Internet users” when working in virtual environments (p. 1). The position that researchers have generally relied on when applying for ethical clearance is just that, clearance that proposes that any foreseeable harm is avoided by ensuring particular guidelines are met to ensure the safety of participants. Traditional research proposes “certain familiar arguments” that ensure the researcher and researched are nestled in reachable agreements and due process takes care of the rest (Whiteman, 2012, p. 2). However, the researchable world that Whiteman (2012) proposes has altered; not in terms of what is expected of researchers but by the known challenges that a faceless, virtual data pool can enable. This faceless internet crowd is whom I am concentrating on when deciding where ethics and the virtual researched subject may meet.

Further problems Whitehall (2012) raised were the “covert methods of data collection” that researchers may practice when accessing online data (p. 49). When joining online

forums, everyone's presence is not always known or distinguished (aliases for example) and therefore when conducting research, there are several ways in which covert data mining may be undertaken. Openly stating the intention of participating in a forum (as I did when stating my Twitter account was a site for research) needs to be done. But does this go far enough?

Davidson (2012) stipulates that "The fact that individuals may have multiple online personae and that it may be difficult to connect an online persona with a living individual, is irrelevant to the fundamental principle of privacy. Finally, the inability of individual people to distinguish or separate their online and off-line lives, or their real and cyborg identities, simply underlines the same principle: privacy protection is paramount" (p. 324). Firstly, I acknowledge from this statement that the immersive nature of internet connectivity provides blurry boundaries (whether 'boundaries' might be apparent or not) and according to Davidson (2012) there is an indistinguishability between physical and virtual life. His argument arises when discussing cyborgs and the various definitions available.

5.3. Is there ethical blurriness?

I turn to Haraway (1991; 2016) for clarification and her devotion to subspecies, namely, hybrid connections between animal and human and technology. She leads a pathway for us to follow as technology intertwines with humans and vice versa. What this does for thinking about virtual selves in research is far-reaching. We cannot detach the physical self from the cyborg in research and therefore the need for consent to participate in research needs to be obtained despite perceived ethical blurriness "An actual affirmative response is needed. Only those individuals who explicitly agree to be

studied can be studied. This sets up a very tight set of requirements, but I believe that it is necessary if we are to be serious about protecting the privacy of individual people, whether as off-line humans or online cyborgs” (Davidson, 2012, p. 324). Therefore, the following is my consideration of ethics in virtual research, which was more process than a determined path.

5.3.1. Ethics and my research process.

I obtained a green light from my university ethics department to identify research participants on Twitter and followed the Twitter Terms of Service (TTOS, 2014) and the online guide *Displaying Tweets and other Twitter content* (Twitter, 2014). The latter guide outlines how Tweets should be displayed and required the inclusion of “name, @username, and unmodified Tweet text with the Twitter bird nearby” (Twitter, 2014, para 2). This meant that anonymity in my project was not possible if I displayed and quoted Tweets. Therefore, it was necessary for me to direct potential participants to an online explanatory statement (see Figure 3.2) to obtain informed consent. But as discussed previously, how prepared can anyone be for how online information is used and interpreted?

As a new researcher needing ethics approval for the use of online, potentially identifiable material was a web of intrigue. Firstly I needed to contact Twitter to gain approval for the use of their material in my study (see Appendix A). To contact Twitter is a difficult matter as they provide online forums for such queries. I took a chance and emailed the Twitter business team directly and was able to gain a response adequate for my university’s ethics approval board (see Appendix A). In the reply, it is stated that as long as I followed the guidelines using the TTOS (2014) and that the users identified in

my study were not going to be “surprised by use of their content,” I was able to proceed (see Appendix A).

This led me to another difficulty in gaining approval from prospective participants. I initiated a Twitter account in 2014 to establish a research site and obtain access to potential participants by stating the following: “Ph.D. Student researching the 'art teacher' Following implies consent to participate (18 yrs & over only) Unfollow to opt out. Info & explanatory statement @ <http://artteacherassemblage.com>” (Power, 2014). I directed potential participants to an explanatory statement housed in a website that would facilitate the consent process and the following aims of the study were provided:

This study aims to examine the representation of art teachers in the social media forum, Twitter. I am conducting this research to piece together the representation of the ‘art teacher’ which includes the interaction of art teachers on Twitter and the Tweets that are written about art teachers and art teaching. The means with which I will represent these findings will include screenshots of Tweets from followers of the Twitter account “‘Art teacher’ as assemblage” over a period of six months. The contribution to knowledge would be a critical account of how the representation of the ‘art teacher’ is used and created in virtual environments (Power, 2014).

I made it clear in my explanatory statement that participants would be identified in my study and the choice to opt into my study could be made by reading the explanatory statement and then following my Twitter account.

The website provided a place to not only house the explanatory statement but worked as an ongoing diary of artworks that I generated throughout the research process. I hoped that this website and my Tweets would provide a bridge to Twitter users who chose to participate in the study. Although the majority of the data collected from Twitter were

Tweets with textual and hypermedia content, I found that many participants also generated their own artwork that supported their use of Twitter as art educators.

The challenges and perceived social rules of how a Twitter presence is built needed to be understood and allowed to develop. I had to build up my page. I would post Tweets regarding the nature of my study and upload artwork. The images that I initially constructed were in response to the research process, which as discussed in the methodology chapter, developed as intra-active process. The fluidity of these artworks from one area of thought to the next can be equated as negotiating the intention of art educators on Twitter and beyond, however, changing positions also were captured in the research process. Tweets are not stagnated objects. They may change in tone depending on the reader and they may change in research as context, analysis and theory are applied. This intra-activity needed to be considered in terms of ethics.

I addressed ethical problems including online data collection, participant identification and consent, the consideration of online public and private spaces, data presentation and analysis and applied theoretical frameworks to support my decisions. However, despite my attempts to bridge perceived 'gaps' between myself and the research participants, ethical concerns considered 'low-level risk' research practices involving human subjects (which may include psychological or physical harm) troubled my thinking.

In human research, standards attempt to address potential harm when conducting research which is feasible regarding the protection of participants who may experience distress in low-level research participation. What is missing from this axiom of concern is the development of what is deemed 'low-level' in terms risk upon the subject and how online communication and data retrieval is done. For example, the brief

description I applied in my explanatory statement suggests that there could be psychological distress and that contacting the named research ethics department for elaboration could be of comfort. However, how is one to know if this addresses the issue of risk and how the researched subject is considered? It was necessary for me to draw on theoretical support to work through how ethics in virtual research can be addressed from various vantage points.

5.4. Diffracting ethical issues in Twitter research



Figure 5.2: *Glass*, by Kerry Power, 2014, digital photo.

The information that is contained in every Tweet includes time stamps, avatars, usernames, content such as text and imagery, statistics (follower numbers and retweets for example) and hyperlinks (Small et al., 2012). More information can be included on the user's homepage that may contain a homepage background image (see Figure 3.1),

geographical data, occupation and links to other websites like blogs. The image that I created for the background to the homepage for my research site on Twitter was a digital photo of light filtering through a glass jar (see Figure 5.2).

The transparency of the glass was a hopeful gesture to my future participants that I would be transparent about how and why I was using their data in research. As light passed through the glass, I held it up to take the photo (Figure 5.2). The glass bled red, orange and dark hues including bulbous passageways when light illuminated it and passed through it (Figure 5.2). The image in my camera viewfinder changed as rays of light from the window, the room and my computer screen, diffracted in, on and around the glass jar (Figure 5.2). The diffractive process continued as I uploaded the images to my computer and then onto Twitter.

This is how diffraction can work when thinking through ideas and research (Barad, 2007). Diffracting decisions in my study embraced nuances in my virtual research that altered and affected my decision-making process, particularly in regard to ethics.

Diffraction as a concept and theory supported how, why and what I should consider when thinking about participants and data in virtual space.

Researching a global phenomenon such as Twitter and elucidating moral or ethical norms when searching, collecting and using data was a precarious task. The examination of art educators on Twitter and beyond enabled a platform from which to examine educator connectivity in virtual space. The use of Tweets provided, for example, views held by art educators regarding art pedagogy and were examined as projected in virtual space which, until recently, little was known. Therefore, my study

examined the virtual realm of the art educator, as their personal and professional lives bled into areas of privacy, public life and ethical problems.

5.4.1. Binary apparitions.

Binary terms such as ‘public’ and ‘private’ areas of concern are major issues when tackling ethics in virtual research. However, I consider binary terms as apparitions when attempting to understand the abundant nuances and intricacies of the human condition in physical and virtual realms. Binary terms prohibit grey areas that may provide insight into complexities that are often sanitised and simplified.

If I merge what may be perceived as polar opposites such as public and private or offline and online experiences diffractively, entities or categorisations such as these are transparencies that can allow light to stream through; just as in the photo of the glass photographed in figure 5.2. This glass sits at my desk as I write this; dull from lack of exposure to outdoor light. The moment I lift the glass to the window, colour and brilliance emanate and my ongoing relationship to art-making practice continues. I argue the possibility of meeting together, merging two opposing positions and providing a place where these oppositions might meet. The ethical intentions of me, the researcher, using images and text of art educators’ virtual work in my study, can only appeal to what *I* perceive as ethical intent. In doing so, I respectfully include their work with their consent and contextualise it throughout the study alongside my participation.

Adams and Thompson (2016) further question ethical intent in the tools that we may use to collect virtual data. Using technologies to perform data collecting tasks is not simply using tools to collect data, but part of companionship between human and

technology. The decision making processes when data collecting tools are designed and used is a ubiquitous relationship between human and technology rather than “an unexamined belief in humanity’s domination over technology” (Adams & Thompson, 2016, p. 108). Programs such as NVivo are mentioned by Adams and Thompson (2016) and we may delegate these tools as research methods and process, but they are part of a human decision-making process that is continually evolving. Evolving technology seems to be designed *to* break boundaries between the physical human condition, including our face, our thumbprint and our thinking and virtual space.

According to Bergsdóttir (2017) humans and technology have merged and notes, “We do not have a relationship to the world, rather we are in reciprocal relationships of human, non-human, material, and technological enactments in and of the world” (p. 1). We are in the mix; I am in the mix and my position on ethics and participants in virtual research comes from my first experience in the field.

However, entangled virtual/physical/technology/human positions are unstable (Barad, 2007). Participants reply to a research request and eventually what happens to their data in virtual research is out of their control. Their Tweets have already merged and transformed into other Tweets, other devices and the minds of others. Although this is not a disparate view of ethical concerns afforded in virtual research, it is an acknowledgement of entanglements. This acknowledgement brings complexity to ethical positions in virtual research. Diffractive positions do not wave accountability but rather trouble it; just as this chapter is not a summary account of knowledge learnt through virtual research but a continuum of curiosity and questioning of both merging and seemingly disparate ethical issues (Bergsdóttir, 2017).

5.5. Conclusion

I suggest that ethics in virtual research is problematic and applying diffraction may illuminate problems. I have attempted to capture the movement on Twitter generated by user interactivity as continual, momentous and beyond our imagination. How does one know that using and reproducing/reconceptualising/researching what is said and done during and after virtual interaction swipes a definitive view on any particular subject? What about the intentionality of the participant who uploads opinions, postulations, proclamations about any given issue online? Is it their opinion of who they think they are or their opinion at any given time? Alternatively, is it a projection or response that may change? Should any participant be “surprised by use of their content” as suggested by Hersher (see Appendix A) when responding to my request to use Tweets in research?

I poked holes through positions of researcher and research participant, private and public information and offline and online positions to bend and stretch possibilities and complexities in my study and more generally, ethics in virtual research. By questioning these supposed stable positions, we may see through tokenistic ethical approaches or even blatant disregard for who we intend to research in virtual space.

6. Tweeting affect

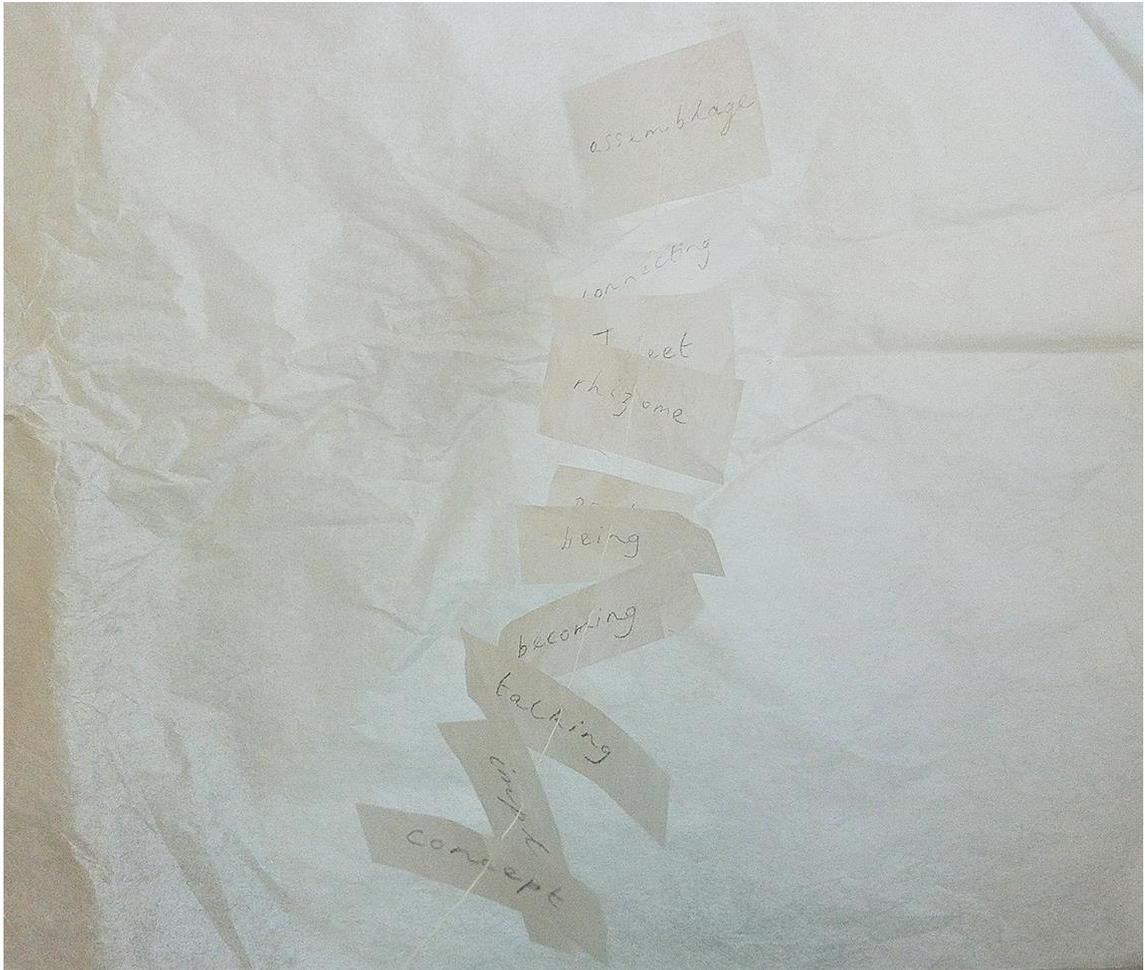


Figure 6.1: *Twitter trail* by Kerry Power, 2014, paper, string, pencil installation.

6.1. Introduction

I wrote words on flimsy pieces of tissue paper to begin my data collection on Twitter, 2014 (see Figure 6.1). Words such as “assemblage, connecting and rhizome” reflected my reading of Deleuze and Guattari at the time (2011). Foreseeing a growing mass of Tweets branching with stringy attachments, I imagined a potential data pool and staged a theoretical model in front of my computer. I created this model as a means to sew theory to a perceived mass of Twitter data. As examined in chapter four: *Methodology*, data is not waiting to be taken but part of a process to ignite intensities produced when

experimenting and theorising. Therefore, despite collecting screenshots of what art educators were doing on Twitter over a period of six months, I created artwork to experiment and sew theory and art educator virtuality.

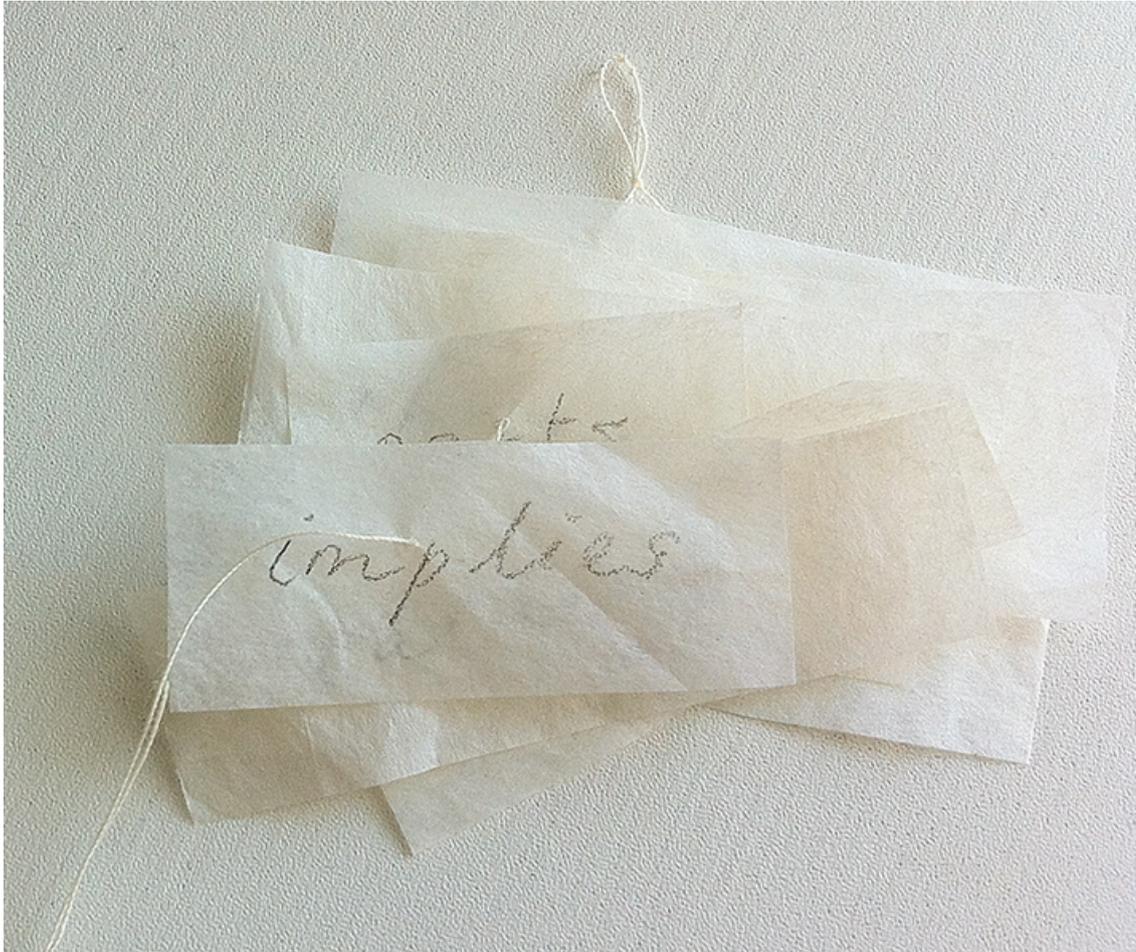


Figure 6.2: *implies* by Kerry Power, 2014, string and paper, part of the continuous installation *Twitter trail*, 2014.

6.2. Art making as an affectual process

I marked the beginning of my data collection period in 2014 by wrapping paper around my screen and applying sticky tape to install a temporary string of words in my workspace. I touched the materials and felt my way around a computer screen. I was

aware that my installation would not confine a pathway to follow but was a process of making meaning. My model of a *Twitter trail* (see Figure 6.1) was linear, which seemed antithetical to the multiple layers of data produced by art educators on Twitter. I dismantled the model and continued to take photos of the words as they fell on my desk (see Figure 6.2). As seen in *implies* (Figure 6.2), the thin tissue paper slid into various positions which affected meaning. When I thought with art educator virtuality, documenting affectual process was a multi-layered process of intra-acting with data that on one hand was collected as evidence of current art educator use of Twitter and beyond and then on the other, as in post-qualitative theorising, evidence was troubled, igniting loose and uncontained ways of researching phenomena.

This chapter sews art making and art educator Twitter data as an affectual process to stimulate various positions on how we might make sense of what art educators do in virtual platforms and where this work might go from here. A post-qualitative approach challenges what might be visible in the data and by experimenting throughout this study, I unearthed hidden or yet to be theorised possibilities. The process of collecting and using data to support research questions was troubled in light of these issues.

6.3. Affect as process

Working on a *Twitter trail* (see Figure 6.1) draws on theorisations of affect to demonstrate process (Wetherell, 2012). Affect as described by Wetherell (2012) is “inextricably linked with meaning-making and with the semiotic (broadly defined) and the discursive” (p. 20). Massumi (2015) includes that affect is politically charged and both writers invite that affect is a continuous theorisation of experience that builds on intensities to punctuate meaning. Whether screenshots of Tweets evoke the mundane

or the impactful, I have used affect theory to draft what I initially learnt from collecting data produced by art educators on Twitter and beyond.

The name *Twitter* implies a fleeting action and the 280 character limit sizes a snapshot of a thought in ‘time.’ However, Tweets can change shape and grow exponentially when accessed, read and interacted with. Tweets can grow legs when used by politicians and the media too and be interpreted and used for various purposes. In this chapter, I have hit the pause button on Twitters’ pace, just momentarily and the image of a Tweet is analysed to examine the echoes of perpetual motion that in turn, affect perception. I have followed the biography (bio) of Lillian Lewis to work through her trail of virtual affectual process.

6.4. Lillian Lewis

Lewis’ (2014) bio reads that she is an “assistant professor of art Education, ed tech aficionado, museums & informal learning specialist, modern & contemporary art spy, maker, writer.” Lewis’ (2014) description builds an image in my mind of who she is and what she wants to share. She describes someone I would like to follow; an art academic with a sense of humour. Her descriptions initiated my curiosity and then a momentum was built when I created screenshots of her Tweets and accessed hyperlinks to further virtual areas of habitation.

Braidotti (2014) explains, “language is not just (or even) an instrument of communication, but rather an ontological site of constitution of our shared humanity” (p. 164). I understand Braidotti’s (2014) application of “shared humanity” to mean that this is how we bridge understanding and relationships (p.164). I have found similarities

with Lewis and established a connection. She sounds a bit like me: she works in art education research and is an “informal learning specialist,” although I am not sure exactly what that means (Lewis, n.d.-b). She is an academic (in the group of participants that agreed to take part in my study, many have an academic background). Lewis (n.d.-b) comes across as if she has a sense of humour. This relaxed me as I collected data and became further acquainted. She agreed to participate in my study by following me and as I faced the bright screen of my computer and created a trail to this virtual relationship.

6.4.1. Following a Twitter trail.

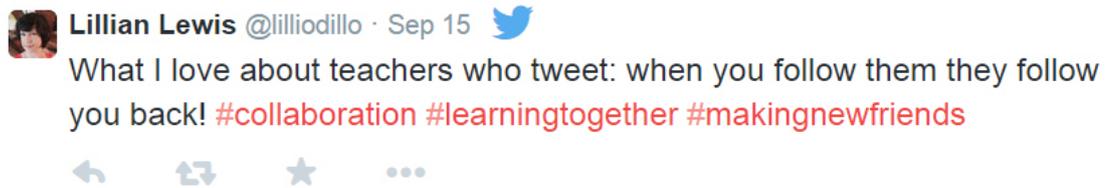


Figure 6.3: *What I love about teachers...* by Lillian Lewis @ lilliodillo, 15th Sept 2014, screenshot retrieved from Twitter 08/10/2014 <https://twitter.com/lilliodillo>

Davis’ (2015) argues in the literature review chapter, regarding educators’ motivation to use Twitter, that it provides “a sense of belonging”, “meaningful professional development” and “perceptions of sharing knowledge and resources” (p. 1551). The sentiment in the Tweet above (see Figure 6.3), speaks to Davis’ (2015) point of view and invites educators to support each other on Twitter. These actions can be a courtesy or a direct attempt to establish a connection but do not always encourage reciprocity. The interaction between users on Twitter is described by Gruzd, Wellman and Takhteyev (2011) as “asymmetric” in nature: a Twitter user can follow public account

holders without an obligatory ‘follow back’ (p. 1296). Further, as mentioned in the literature review, when educational institutions Tweet, they do not necessarily invite others to interact, as many Tweets are used to inform and advertise.

In terms of affect theory, inviting others to follow to invite collaboration supports Visser, Calvert Evering and Barret’s (2014) view that “teachers highly value Twitter as a means of self-directed professional development” (p. 396). So the first indicator of collaborative Tweeting in this analysis is one-sided, but an invitation to join a conversation nonetheless. What it does reveal is Lewis’ (2014) penchant for curiosity which is indicative in her bio description. Asking to collaborate with others in virtual environments draws on “nonnormative” forms of interaction, as the source of interaction and the outcome is unpredictable (Rutherford, 2016, p. 286). Further, building virtual relationships in many contexts is a gamble as indicated in the literature review, despite grounded by bio descriptors or Twitter terms of service (TTOS, 2014).

According to Wetherell (2012), “Situated affective activity requires formative background conditions that are social, material and spatial” and occur in local and broader ways to accumulate knowledge and meaning (p. 79). Tweeting a call for collaboration is part of an affectual process as it relies on linkage and the exchange of energy.

Although as seen in figure 6.3, the Tweet indicates a positive invitation to collaborate, Rutherford (2016) also warns of “affective labor” as work infiltrates free time (p. 288). This is an issue that is dealt with by Lewis in her next few Tweets:

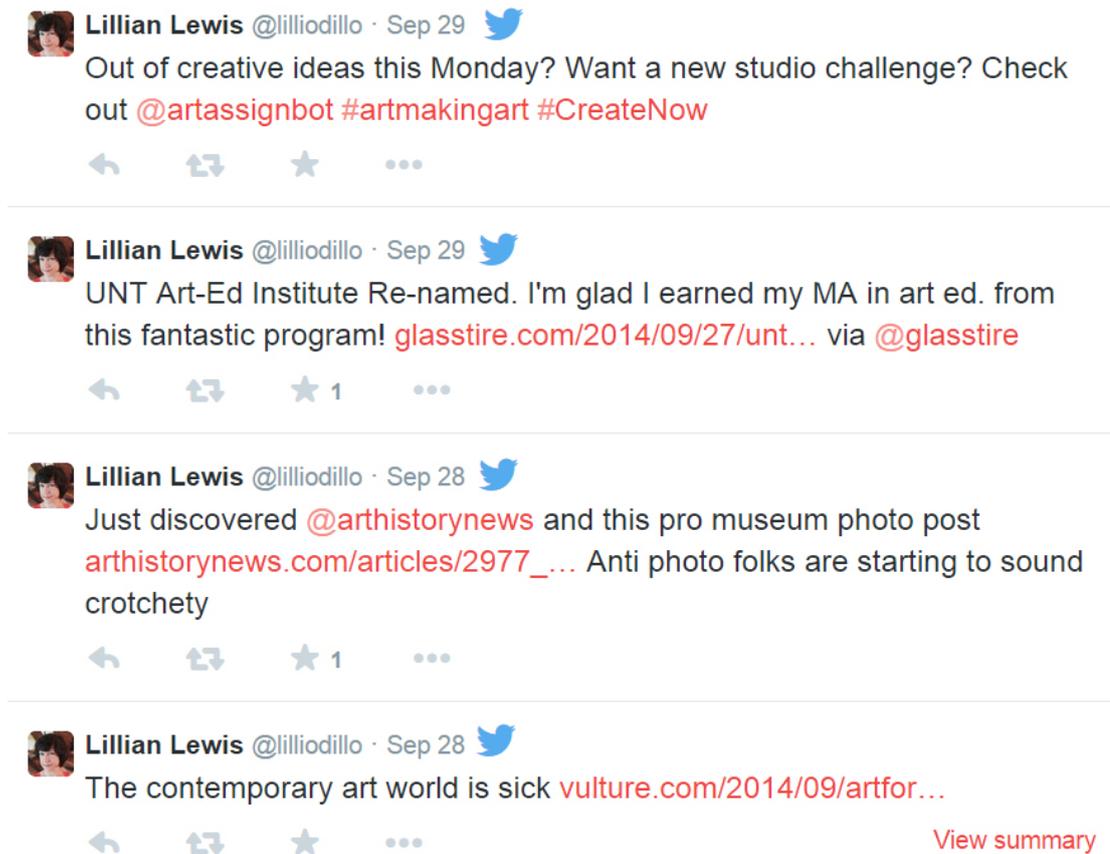


Figure 6.4: *Out of creative ideas this Monday?...* by Lillian Lewis @ lilliodillo, 28-29th Sept 2014, screenshot retrieved from Twitter 08/10/2014 <https://twitter.com/lilliodillo>

Lewis (see Figure 6.4) provides a series of opinions and resources that support the passing of information to others, but they are also indicative of who she is. Firstly, she has a sense of humour beginning with “The contemporary art world is sick” and linking to an example (when taking screenshots of Tweets, the earliest Tweet is at the bottom of the image as seen in Figure 6.4). Her language reminds me of how some students speak, but also her vernacular provides an informal suggestion regarding ‘contemporary art.’ Her language makes the link attractive, just as she may hope that contemporary art might be for students. Her Tweet makes me want to access the link.

The Tweet directly above “The contemporary art world is sick” (Figure 6.4) again addresses issues of contemporary art, but this time due to the hierarchical delineations between various artwork mediums. Lewis uses the term “crotchety” when referring to people who are particular about medium hierarchy (Figure 6.4). This Tweet again provides an opinion on how interacting with artwork and each other can produce judgement and acceptance. I find these Tweets comforting as I continue to recognise some of my opinions in what she Tweets.

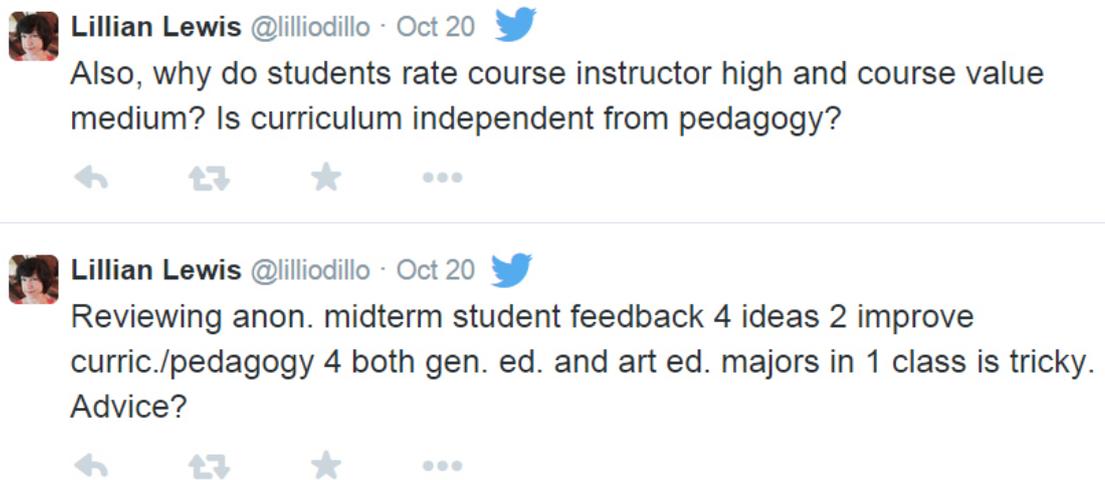


Figure 6.5: *Also, why do students rate...* by Lillian Lewis @ lilliodillo, 20th Oct 2014, screenshot retrieved from Twitter 31/10/2014 <https://twitter.com/lilliodillo>

Although student surveys allow for a certain amount of feedback for an educator, they may produce results that are questionable, as in the example of “Reviewing anon” (see Figure 6.5). I read that in the classes reviewed, there is a mixture of general education students and art education majors. The numbers indicate the score. The remark that this is a “tricky” mixture of students and student feedback scores may be affected by the different student majors sounds familiar to me (Figure 6.5). Not only can you be teaching art curriculum and pedagogy to students that have chosen these subjects as

their specialisms, but you may also be teaching students who are generalist pre-service teachers and therefore may not have a background or affinity with art as a subject.

Therefore, any student who has a background and or affinity with a subject specialism that differs with the subject you are teaching may provide a negative subjective response to a survey question regarding their learning which is not always evident in quantitative survey analysis. Twisting and turning dichotomies work through educational life and are not always recognised. The value of reading about Lewis' experience provides a connection to the problem and an appreciation by me of her openness.

I am drawn to discuss the support that Lewis receives from writing the Tweets that she does. Although I cannot gauge what sort of affect her Tweets will have on those who read them, or what sort of experience Lewis (n.d.-b) has when writing them, I can only assume that it can be a cathartic and rewarding process. When asking "Is curriculum independent from pedagogy?" reads more like a statement suggesting that curriculum is part of pedagogical process (Figure 6.5). In the case of Lewis (n.d.-b), it seems that these two categories are not far apart and therefore the disparity in feedback score may imply something else. The process of writing Tweets is engaging others in a conversation. Asking questions and making statements about the student rating and feedback process (which in this case seems to be unclear) affects further meaning making regarding the pedagogical experience.

We can locate politics in what we do and say because it constitutes our position. If I discuss decision making through a Foucaultian lens in the Tweets displayed in figure 6.6, a distinctive message regarding monetary forces that constitute public versus private education is delivered. The location of the educator, namely Lewis (n.d.-b), is

an adversary, someone retaliating against words such as “harmless” when related to the privatisation of education.

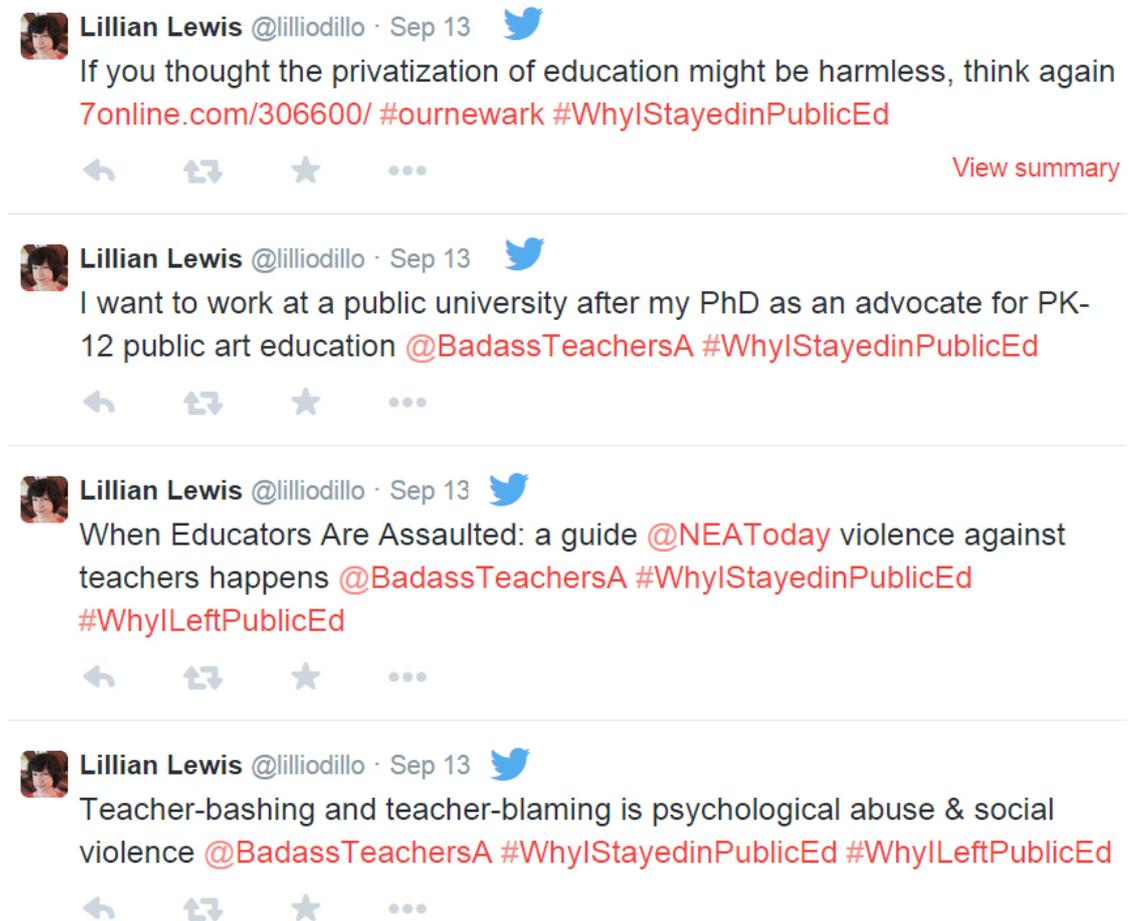


Figure 6.6: *If you thought the privatization...* by Lillian Lewis @ lilliodillo, 13th Sept 2014, screenshot retrieved from Twitter 08/10/2014 <https://twitter.com/lilliodillo>

Lewis would “want to work at a public university after my PhD as an advocate for PK-12 public art education” and provides the hashtag #WhyIStayedInPublicEd (Figure 6.6). The Tweet instils her position regarding her experience working in public education and herself as an advocate. The force in her Tweet puts into question debate regarding public versus private education and the position that she finds herself in, which includes affable terminology such as “harmless” used to describe the change in the delivery of education and the employment of educators (Figure 6.6). The linguistic forces

questioned here are important in terms of how ideologies are sold in governmental policy and through the media.

6.4.2. Power and affect.

As in Wetherell's (2012) statement "Power, then, is crucial to the agenda of affect studies. It leads to investigations of the unevenness of affective practices," and she asks "How are practices clumped, who gets to do what when, and what relations does an affective practice make, enact, disrupt and reinforce?" (p. 17). Tweets that address "teacher bashing" and "social abuse" demonstrate the politics of educator experience, perception and violence (Figure 6.6). The Tweets written by Lewis are confrontational as they address the perception of educators in general and what might be advocated through media.

I use the word 'media' in broad terms such as news items, the internet, generalisations, perception and beyond. Therefore, when I apply this term to Lewis' Tweet (Figure 6.6) regarding "Teacher-bashing and teacher-abuse," it provides a platform for me to understand that this Tweet is not just a personal and political view but rather a commentary on perception in a broader sense. When teachers are grouped together and commented on as if they are a homogenised component of the educational system, then perception regarding an array of disgruntled opinions regarding care, time, workload, competency to name a few, can be read as "teacher-bashing." If I relate this Tweet (Figure 6.6) to the Tweets earlier regarding student feedback (Figure 6.6), I can draw a line regarding perception and meaning in the working lives of both Lewis and me.

Part of the process of creating the *Twitter trail* (see Figure 6.1) installation, was to dismantle it. As I took down the sticky tape and the string of words reading from one end to the other, I took a few photos of the string of words as they lay on my desk. The artwork below (see Figure 6.7) called *implies* has the word ‘parts’ just edging behind it. The parts of the Twitter trail draw together in terms of affect but are also part of the discourse in a Tweet.

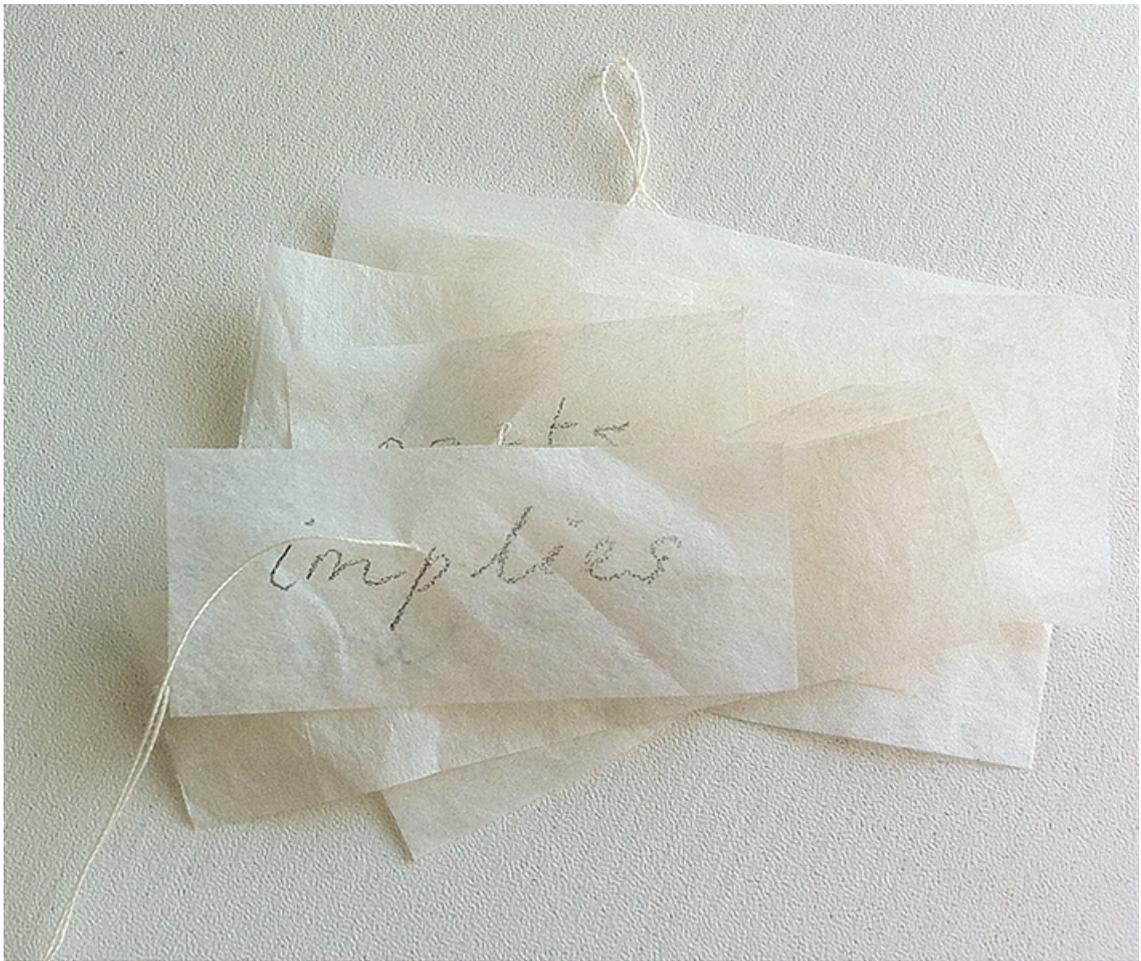


Figure 6.7: *implies* by Kerry Power, 2014, string and paper, part of the continuous installation *Twitter trail*, 2014.

Wetherell (2012) applies affect and discourse as a coherent relationship, as one is part of the other, immersed in “patterns to varying extents and in varying ways” (p. 52). The

implications that run through Tweets, from one statement or question to another, lead me to dig further into affectual areas.

6.4.3. Continuing to follow outside of Twitter.

I continue to follow a trail left by Lewis (n.d.-b) that leads me to her web domain outside of Twitter. Her website compartmentalises *Projects*, *Writing* and *Teaching* in accessible tabs (Lewis, n.d.). The titles of these three tabs I relate to as A/R/Tographic statements; describing an interrelated identity as “Artist, Researcher and Teacher” (Irwin et al., 2006). Weaving between several states of being in A/R/Tographic research does not distinguish ‘Artist,’ ‘Researcher’ and ‘Teacher’ but dissolve the terms into one another, contributing to various identities (Irwin et al., 2006). The trail that I followed from the beginning of this chapter more or less emulates my search for how art educators use Twitter, including my own place in this momentum. I followed Lewis (n.d.-a) to her webpage so that I could learn more. It was a continual process as I searched to piece together her experience and my own. Her web pages included signs of what I recognised about teaching; including what I find relevant in this study and what I might relate to and think further about.

In her *Projects* tab, I found an audio artwork called *Wives’ Tales* (Lewis, n.d.). This artwork was delivered in four instalments providing various ‘tales’ attributed to objects explained by a narrator. The stories are all different but connect in terms of a story told through an object. The artwork evokes sentimentalism at times as narrators relate their story. The artwork also evokes meaning-making through connection. The objects embody a symbolic resonance with the narrators as they experience a path of various affects. These affective turns are emotional and historical, as they point to memories of

relationships between women. When considering the title *Wives' Tales*, I am reminded of the term 'just old wives tales' which may refer to fabricated or speculative explanations for how we come to know things (Lewis, n.d.). It is a derogatory statement about the explanations passed down by women who apparently have little resonance with facts or the truth. I think of Derrida's (2007) claims regarding the weakening of meaning through continual and varied interpretations causing a "citational chain" of events and how performative acts explained by Butler (2010) produce meaning and event. The stories told in Lewis' (n.d.) artwork are for an audience to listen and interpret. I write about my experience of listening to these stories too. I am led to a web page from Twitter and I look, read and hear Lewis' (2014) artwork as told through the narration of others.

6.4.4. Affect and the senses.

When interacting with the audio artwork, I find myself thinking about Pink's (UOC, 2012) work with digital media and the senses. As she refers to the work of David Howes, the cultural diversity of sensory hierarchies is addressed; particularly the dominance of the five senses in western categorisation (UOC, 2012). This is important to consider in terms of my journey through a trail of multimedia, as sensory experience motivates clicking one data source to another. I wanted to find out if I could map the participants' movements in this study and delineate the value of sensory perception in teaching and learning. However, in doing so, my experience was built in various ways. For example, it was not just an engagement with an audio file produced by Lewis (n.d.-a), but a combination of sight, touch and curiosity as I clicked and scrolled through the options. Once engaging with her artwork (Lewis, n.d.), the pace of my interaction slowed and then stopped as I began to listen.

I too remembered objects that held significance in my own lineage. I began to sift through objects in my head while hearing tales of others talking about the objects in their lives. A small lamp came to mind. I remember carefully packing it and Mum telling me that it was mine to keep. I also remember fits of laughter over the lamp because it was a source of value in our family but not to anyone else (we presumed). The object in my case was a lamp brought over from Japan by my Dad decades ago and then handed down to me. The lamp embodied a symbolic value that included memories of places we had lived and its' place on Mum's bookshelf. It was an object of curiosity and had many associations. This memory was drenched in response to Lewis' (n.d.) audio artwork and demonstrated the affectual lineage of interaction from Twitter, research and my own memories of significant objects.

6.4.5. Sensory art encounter.

The combination of my responses interacting with Lewis' (n.d.) artwork is how I understand Pink's (UOC, 2012) argument regarding sensory experience; as it is various senses working together providing perception rather than a single sense as stimulating experience. Pink (UOC, 2012) explains when referring to the work of Mitchell that there is never just visual media or any one sense dedicated to media. Therefore, when reiterating my experience with the artwork of Lewis (n.d.-a), I moved through various states of being.

It was not a linear experience, but rather a multitude of varying impulses and experiences that lead me to write about affect in this analysis. Therefore the affectual states experienced were initially built from intrigue when reading Lewis' (2014) bio,

then to discovering her Tweets and across to her website that housed more detailed information regarding practice, experience and artwork. The movement did not stop but continued. I accessed memory from my own childhood in relation to the audio artwork. I made a connection with her artwork and my own experience. The drive was multilayered by moving from virtual interaction to research, an audience member and then to my memory of familial attachment.

In light of Pink's (UOC, 2012) argument, it is important to relate how working through data invites multiple sensory experiences and therefore multiple ways of thinking data. For example, one could argue that engaging with artwork tends to invite a visual experience.

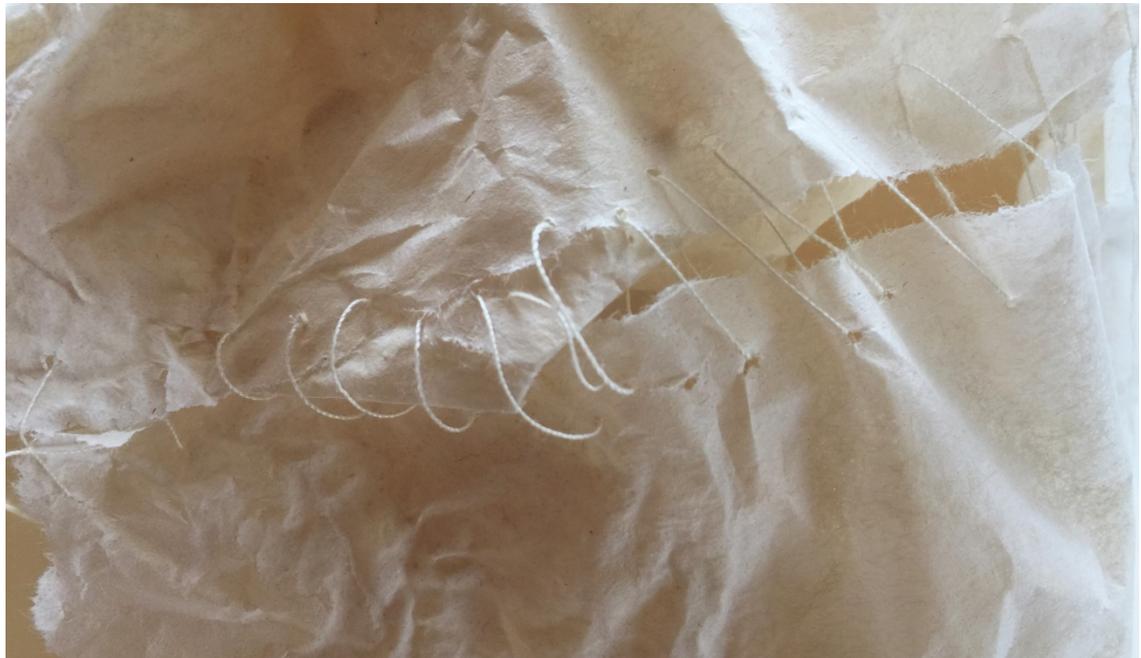


Figure 6.8: *Sewing_together* by Kerry Power, 2017, detail of continuous sculpture *Structure_I*, 2014.

However, if I continue to refer to Pink's (UOC, 2012) survey of analytical approaches to senses and media, then sensory perception when engaging with Twitter, is beyond western categorisation regarding only five senses. Something else may be at play in terms of experience.

I will take you back to my initial discussion regarding my installation (see *Twitter Trail* Figure 6.1) and then lead you to the artwork *Sewing_together* (see Figure 6.8). As I was sewing the pieces of tissue together, the nature of picking up text with a needle and thread did not occur to me at the time. My train of thought was to piece together the research study. I could not have foreseen with whom I would interact, including my documentation of it and the subsequent analysis. These later developments on my part are analysed throughout this chapter. As in the artwork *Sewing_together* (Figure 6.8), my trail became interwoven and messy.

My sensory experience is one of continual surprise as I moved from one link to the next and through the various files that archive 'data.' This is not a textual, visual or auditory process, but rather an overall experience of getting acquainted with possibility and an ongoing commitment to understanding. Pink (UOC, 2012) invites a deconstructive approach to categorisation in relation to senses and the media. Questioning the separation of the senses or my understanding of a western view of sensory experience developed in my response to Lewis' (n.d.) artwork and compounded my perception of her experience as an art educator. I began interacting with the work she produced on Twitter by viewing her Twitter data as a starting point for my conception of how experience can be supported and extrapolated virtually. Lewis produced work on several media platforms and therefore it is not a line that I draw but a myriad of access points from which her work is sewn through this chapter.

An audience is a requirement of building any public space. It requires interaction with the other and so does creating artwork. It is a relationship with the other that is not always known but imagined in part. One needs the other to identify a message, a communication regarding the social world that we inhabit. I have attempted to address how the process of interacting and intra-acting with data to produce continual learning. It is a continually moving process as experiencing new ideas, creating new conversations, assembling tools, adapting practice and adhering to and altering positions creates things.

6.5. Conclusion

I applied affect theory to analyse data from one participant in this study as generated on Twitter and beyond over a period of six months. It became evident throughout the analysis that posting Tweets, inviting conversation, discussing artwork and commenting on educational policy and experience was an affectual process. The venue for each issue, if you could call it that, changed and enveloped the entwined nature of virtual engagement. Although I assume that Lillian Lewis may be aware of the impact of her Tweets, the impact and subsequent re-telling of her work in this chapter has continued an overlapping, enveloping affectual process.

Affectual process affords various responses and states, which infiltrate thinking and creating. It dances around temporality, as before, during and after in virtual realms becomes entangled as a learning process. This process did not present itself initially to me when considering the data chapters that I would write denoting art educators practice on Twitter and beyond. It was a gradual engagement with their work, their

thinking and the subsequent data ‘snapshots’ that led me to work beyond what Twitter art educator participation might entail.

7. Diffracting art educators on Twitter and beyond



Figure 7.1: *Entre* by Kerry Power, 2014, detail of the continuous sculpture, *Structure_1*, 2014.

7.1. Introduction

Documenting connections in Twitter may provide evidence of why and how art educators use this social media system (SMS) but I question possibilities afforded by virtual interactivity. In the previous chapter, I examined how affectual process created momentum and theorised art educator virtual interactivity as knowledge production. The affectual process of using the program can enable intra-action to build on ideas. While threads of how art teachers use Twitter brought me to this study, working through

and creating data continued pathways of inquiry regarding how, as educators, we may use virtual space now and in the future. In this chapter, I continue to theorise art educators' negotiation of Twitter and draw on diffraction to pry open virtuality and my participation in the project. As in the image above (see Figure 7.1) I have excavated a 'continuous' sculpture that began as a model of Twitter (see *Structure_1* Figure 4.5) in an attempt to reveal the interiority of structure, perception and what virtual connectivity can be. The jagged lines reveal the bluntness of a pair of scissors that I used to hack open a new entrance to the model. The vague light in the far background shows the distance peering through the paper and cardboard structure. This chapter connects my art-making process to the smooth and foreboding area of diffracted virtual connections between art, art education and art educators.

Initially, I introduce data that has the visual appearance of art educators and this 'evidence' includes pedagogical practice and conceptions of art practice on Twitter. However, this is not a reflective or representative account of art educator use of Twitter, but rather an examination of the use of a virtual apparatus to communicate positions on art practice and learning. As with diffraction, events and acts work around time and oscillate between then and now and move in and out of focus on devices to inform experience and thinking. Time can be slippery on Twitter, just as thoughts and dreams of creating art and working in art education can be. I work through my early intra-action with art forms through to the virtual communication that appeared on Twitter. This chapter acknowledges Twitter as non-linear, twisted and entangled; an interactive force that has put into speculative motion, art educator virtual 'realities.'

Sedentary thought is considered concrete and oppositional; disabling movement from the initial understanding. Braidotti (2010) suggests that allowing movement toward a

“recomposition” of the subject shifts stagnation and our individual experience in the world (2010, p. 414). For example, Braidotti (2010) writes about how Deleuze would write his memory of watching films. His writing was not a reproduction of the film; rather, it was his memory of the film that generated his thinking process through his writing (Braidotti, 2010). The experience of watching a film; to memorise it and relay the experience, affects thinking not just regarding the film but to the layers of relatable subjects. Braidotti (2010) regards memories as malleable versions of the truth and when retold, a creative process is stimulated. A film can affect one’s thinking by provoking many interrelated subjects (like the World Wide Web (web) capturing experiences with its gluey, fibrous talons).

An internalised simulacrum of the self, the one we project to the ‘outside’ world, is an attempt to represent who we think we are. This is a complicated notion and is hard to translate into words; however, we may try and understand how this works when an artist paints a sitter who poses before them. The relationship of the artist to the subject and viewer is perceived as an external one. The artist has no inside view or ability to understand their subject (be it a person sitting) but to tap into what the subject offers. The construction of the subject matter is informed by the relationship established including the power dynamic between the artist and subject. I could argue that the desire of many artists is to peel back the layers of the subject and reveal interiority, but it is just that, desire. Data is viewed similarly in this thesis.

7.2. Tweeting the art educator

When creating an image as in the case of figure 7.2, elements such as a face, the objects, space and the colours cohabit in the picture frame to create a composition.

The roundness of the shape, as Deleuze (2003) writes regarding the work of Francis Bacon, may indicate a space occupied by “the person” (p.1).



Tricia Fuglestad @fuglefun · Jul 24

Anyone else posting #aoeconference preso from last summer? Mine: 12 creative dig. #artsed prjs drydenart.weebly.com/fugleblog/crea...

Reply Retweet Favorite

Figure 7.2: *Anyone else posting...* by Tricia Fuglestad @fuglefun, 24th July 2014, screenshot retrieved from Twitter 08/10/2014 <https://twitter.com/fuglefun>

The shape of the face above separates from the surrounds and can indicate a connection to the text (see Figure 7.2). Deleuze (2003) argues that this is not representation, but a force between the figure (the human) and the world inhabited. Bacon was one such artist that married the human figure with the surrounding space as if one were part of the

other. In Bacon's *Study after Velázquez's Portrait of Pope Innocent X* (1953) a screaming Pope echoes hysteria within the confines of a throne. Energy is created between the round object of the face, figure and space. Although the painting is a sedentary object, the broad strokes of Bacon's brush echo a relationship between matter: the figure, the throne, the artwork, the artist and viewer. Deleuze (2003) argues that Bacon's work is not narration but rather an expression of continuity between the figure, space and the audience. And it is more than that too, as speculation about the subject matter enters a relationship with the painting and the horror of incongruent behaviour. Just as in the case of a self-portrait, the self enters a public sphere (as in the case of Twitter in Figure 7.2) and intra-activity of ideas communicated in virtual space begins.

7.2.1. Intra-activity.

In figurative painting for Deleuze (2003), the artist captures the circular nature of the figure interacting with the world. Interaction is the problem of the artist and the viewer. We may attempt to make sense of it from cultural, political and societal viewpoints but what happens in the moment of intra-action? What are the feelings that come when we are alone with artwork as it communicates to us and we communicate with it? The dilemma that artwork instigates can be arbitrary, banal and loaded at the same time. This is a point of intra-action that Barad (2007) defines as the very nature of moving co-contributions and "space-time-matter relations" that inform the other (p. 178).

Do we encounter an artwork to decipher a story that an artist attempts to tell? It can be a difficult conversation when looking at art and then to try to 'analyse' it in the classroom. The force in the curriculum may steer the conversation to that of formal art

analysis and therefore create assumptions based on how to discuss artwork and how to think about it (depending on the particular educational curricular structures employed).

Formulations of how to negotiate art can be related to the problem of representation. If one decides what is being represented, there is a resolve about “fixed positions” (Bozalek & Zembylas, 2016, p. 2). Using diffractive analysis is a process of understanding and making use of difference and “thus predicated on a relational ontology, an ongoing process in which matter and meaning are co-constituted” (Bozalek & Zembylas, 2016, p. 2). Therefore, working with art is a co-dependent relationship, when one views an artwork there is an interchange of meaning-making. Likewise, when I work with the data of art educators in this thesis, there is interactivity of my research intentions and further, directions from which I work with knowledge in order to build understanding.

The face of Fuglestad in figure 7.2 is warmed by yellow and orange hues and cuts the picture plane in half; the right side shows a grinning woman with dark hair and glasses looking just beyond the text to the left. Just as in a cartoon thought bubble, we receive the author's definition of creativity: *Rethinking Remixing Reinventing* (Figure 7.2). In the slightly smaller text, the use of the word “retro” continues the cut-out poster aesthetic. She cohabitates the space with text and delivers her position on “creativity” (Figure 7.2). The portrait depicted here (Figure 7.2) has achieved a resolution of what creativity means and shares a definition in a Tweet. When the self becomes part of the message as in the image created by Fuglestad (Figure 7.2), we position ourselves in definitive terms. Although I read what creativity means to Fuglestad (Figure 7.2) and imagine this image was constructed as an exercise in using digital editing software, I wonder about how this image performs who she is?

Images on Twitter can encourage personable interaction. We look at a face and can be informed by aesthetics that indicate traits and positions. Although these traits and positions work differently for everyone, I look at Fuglestad's portrait (see Figure 7.2) and believe I am interacting with someone who provides a bounty of various lesson plans designed to engage students. She appears confident when defining the terms "Rethinking Remixing Reinventing" (Figure 7.2). I click on links to tools provided by a person I have never met and am assured when reading the comments and the list of followers accumulated over time that her engagement with Twitter surrounds her work as an art educator. The avatar, meaning the thumbnail image of Fuglestad's user account, is another circle indicating her presence (Figure 7.2). It is a personable avatar that invites Twitter users to see her face and identify her physically (Figure 7.2). It is fashioned like a stamp and provides an image representative of the self while using Twitter.

7.3. Art educators working on and outside of Twitter

As a prolific user of Twitter (being that Fuglestad may Tweet many times a day), her focus communicates issues relating her role with teaching art education. This is done in the form of ideas for lesson plans, connections (providing links) to other user accounts, her blog, workshops and philanthropic pursuits to help other educators in need. She is an art educator who spreads a message of art teaching and art making amongst the Twitter community in the form of support.


Tricia Fuglestad @fuglefun · Jul 24 
 Share what teachers do over the summer with [#HowTeachersSpendSummer](#) I've been hanging out with my fellow superhero



[View more photos and videos](#)

Figure 7.3: *Share what teachers do...* by Tricia Fuglestad @fuglefun, 24th July 2014, screenshot retrieved from Twitter 8th October 2014 <http://twitter.com/fuglefun>

Figure 7.3 displays Twitter symbols that can be found at the bottom of a Tweet. A range of mechanisms facilitate responses and numbers calibrate followers and respondents. The Twitter symbol (the small blue bird next to the date stamp) has been added to this screenshot by me, the researcher, as a requirement when reproducing Twitter data (Twitter, 2014).

The image in figure 7.3 invites us to think about how teachers work outside of the school parameter. Although Fuglestad depicts herself as a ‘superhero,’ there is an invitation for anyone to think about how teachers work outside the physical school boundary (Figure 7.3). Her figure is a cartoon drawn hero printed on a coffee mug (Figure 7.3). The ownership indicated here of what constitutes ‘personal’ time while on

holidays can be imagined during coffee breaks in school hours spent with colleagues letting off steam or thinking about the next class. Imagining how one is perceived outside of the classroom as an educator seems to be what is asked here (although comically).

The duality of educators working in the classroom and outside of it merges just as discussed with public and private spaces in chapter five: *Ethics and virtual research*. There is a merging of personal and working spaces that troubles these binary terms. One is online in and out of the physical school, just as one is online in and out of personal time away from the school. Just as Barad “troubles dichotomies” (2014, p. 168), by cutting through memory and time, there is no escape for teachers in and out of the classroom (well, they are superheroes).

Surely it is a risky move by anyone who puts their professional lives on Twitter. Due to public accessibility, anybody, regardless of a Twitter membership, may access Tweets (if they are not private accounts). Broadly, it cannot be measured who, why and how Tweets will be received. What can be measured are the options in the program such as ‘reTweet.’ When working publically in this way, the self is up for scrutiny and support which is another perceived binary that needs to be addressed.

When hoping for virtual connectivity, the possibilities of how Tweets will be received whether positively as in support and acknowledgement (which may continue to include friendship, exchanging of ideas, help) or scrutiny (which may include negativity or lack of acknowledgement) is an arbitrary gamble. Therefore, events in this program generate multiple options and sprout rhizomatic connections in and outside of it. Fuglestad may predict her Tweets will reach followers and Twitter users who have an interest in her

statement about creativity and, therefore, may respond, but her suggestion will always be an unpredictable generative act. I perceive this gamble as one that can give rise to various problems when using Twitter, considering the possibilities that are enabled.

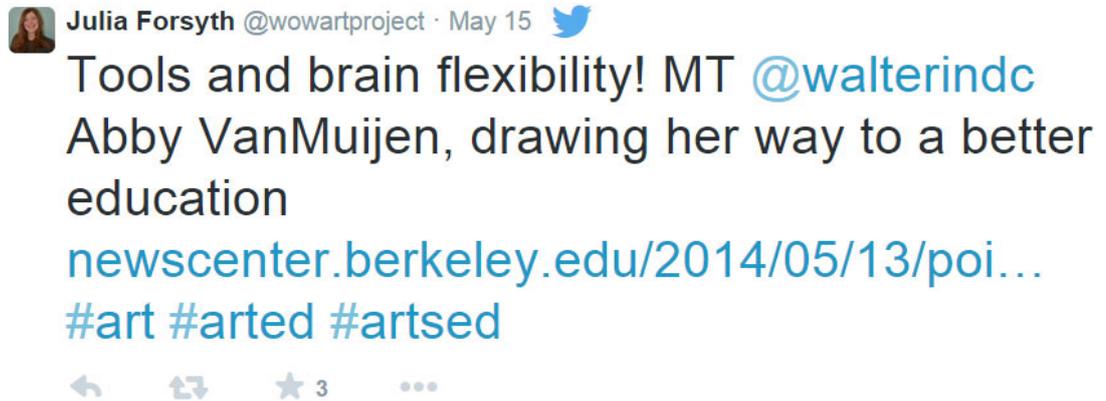


Figure 7.4: *Tools and brain flexibility!* ...by Julia Forsyth @wowartproject, 15th May 2014, screenshot retrieved from Twitter 6th October 2014

<https://twitter.com/wowartproject>

7.4. Twitter thinking

When thinking about how pathways are built by Tweets and links in Twitter, I turn to Julia Forsyth's Tweet (see Figure 7.4). An article is accessible from the link provided and leads to a discussion regarding note taking in the form of visual images (Figure 7.4). However, what I am interested in is the way in which Forsyth has written her Tweet with the words "Tools and brain flexibility" (Figure 7.4). Writing the Tweet in this way provides a link to an article from the *Berkley News* (Ness, 2014) and brings attention to many things. Firstly, the premise of the article features Abby VanMuijen drawing visual images to summarise points from a lecture (Ness, 2014). It is a visual shorthand technique and an image captures VanMuijen in the process (Ness, 2014). Although this article relates various issues regarding interpretation and communication,

the Tweet (Figure 7.4) provides indicators for how I might get to know what is relevant to Forsyth and art pedagogy. “Tools” and “brain flexibility” linked to a visual expression provide possibilities regarding communication (Figure 7.4). The link to the article (Ness, 2014) is a way for Forsyth to promote what she is interested in and at the same time provide stimulus to possibilities of “brain flexibility” (Figure 7.4).

This affectual process is of a continual nature in Twitter, although Forsyth would be aware that the link would be accessed and the information could permeate in various formats, her instigation of Tweeting words and links provide fodder for perception. The flexibility that is celebrated here is one of moving past perceived limits using imagery and how the brain (which I am assuming means thinking) can operate. This Tweet advocates art education and pervades Forsythe’s promotion of flexibility in learning (Figure 7.4). Creating a link between a “flexible brain” and visual imagery could be a tempting offer for any educator as it provides an argument for engagement with visual imagery that often corresponds with art advocacy in education (see Figure 7.4).

Although promoting the use of visual imagery this way may encourage other educators to consider the brain and flexibility, often educators are at the behest of educational systems that favour controlled teaching environments and equate brain power standardised testing (McGowan, 2018).

7.5. Cutting my art timeline

I wonder about my engagement with art and thinking, just as Barad (2007; 2014) moves in and out of timelines when diffracting. I worked on a personal timeline to pry open how my connections were made. To support this process, Barad (2007) claims time as “out of joint; it is diffracted, broken apart in different directions, noncontemporaneous

with itself. Each moment is an infinite multiplicity” (Barad, 2007, p. 169). This existential theory invites thinking in and out of timelines to work through problems while linearity (associated with timelines) is pushed aside. To address this challenge, I submerged into memories of my art encounters to pry open how my connections were made between art, art making, art education.

7.5.1. Art encounters.

From my memory as a high school student around the age of 16, I was urged by my art teacher to go to a Surrealist movie matinee one afternoon. I was proud of getting the train to an inner city suburb of Melbourne to watch these films and excited about leaving my suburban life behind. I had a feeling of exhilaration walking into the cinema because it felt risky and alienating to me. I imagine that a conversation about Surrealism had taken place with my art teacher and yet, I was unprepared for what I was about to see.

*One film that resonated with me on that afternoon was *Le Sang d'un Poète*, or the English translation is *The Blood of a Poet* (1930), a film by Jean Cocteau. This film was divided into four parts and simultaneously interconnected as characters and ‘symbols’ reappeared. I enclose the word symbols with apostrophe marks to bring attention to the word. It is a word that can denote universality; however, it is tempered by post-modernism and discourse theory. As with representation in this thesis, the words symbol and symbolism are scrutinised throughout these recollections.*

A scene involving an artist and a talking statue took place in a room. The statue was Grecian-like, an art studio prop scantily draped with missing arms. The prop indicated

that we (the audience) were in the presence of an ‘artist.’ Previous to this scene, the artist struggled with a mouth that he found in the palm of his hand. He kowtowed to the statue and pushed his palm to her mouth. This contact changed the statue into a human-like form, including the ability to speak. Her marble-like surface transferred to the arm of the artist and one became part of the other.

Briefly, a door was visible and then, in a flash, it was replaced by a mirror. I can describe this scene in detail as I have revisited the film again (Cocteau, 1930). I scroll back and forward through the scene, pausing and playing it, reliving it and filling in the gaps. Filling in the gaps requires a sense of retelling or reliving the scene. There were surprises; I don’t remember that part! When did the exits vanish? I retell this particular scene as it interweaves in a timeline that includes my art education and research and the various questions of how did I come to this point?

The statue seemed to smile and chuckle menacingly when she came to life. I wonder what it was like to be her, an actress dressed up as a statue (surely filming this scene would have been funny). Perhaps the chuckle was genuine and not sinister at all. Then the room changed and emptied. The artist raised his arms to feel the walls and lack of entry and exit points. The room became claustrophobic which was emphasised by panicked close-ups. There is a dull crackling as in films of the era with limited sound and visual quality. The sound added to the suspense. The people around me in the cinema continued to be immersed in the room with the artist (or as I imagined the audience to be).

The continuity of this description travels in and out of various timelines since I first saw this film. This is how I use diffractive analysis and work with immersive art

encounters. I may oscillate from the memory of watching a film many years ago and then suddenly jump to the ‘present’ as one encounter informs the other. Meaning and interpretation of the film are informed by the oscillation between time and context. Meaning is built in this way to serve various points of difference and difference is part of creating and identifying meaning (Barad, 2007).

The statue spoke, urging the artist to enter the mirror. It was as if the room had swallowed all openings so that only the mirror was left. A prop appeared, a chair, for the artist to level up to the mirror. His two hands tapped the mirror in anticipation; “Try” urges the statue (Cocteau, 1930, English translation). Again, the artist’s hands touched the surface of the mirror, but this time a gateway of water provided an exit and the artist fell into the underworld beyond.

Simultaneous events had taken place. I re-watched this scene to examine encounters with art from various vantage points. In the film, there was an audible yell when the artist fell into the mirror. Whether the yell was a simulation of an audience who could not believe their eyes or an inner voice that came from the artist himself, it was hard to tell. A large splash lifted from the mirror identifying water and the camera changed position to film the mirror from above. I watch this film on my computer screen and wonder *did Cocteau pioneer this cinematic technique? Surely when this film was made in 1930, this technique was ground-breaking.* In retrospect, I examined camera positions and sound and a certain detachment had taken place.

I am back with the movie again and listen to the horror of the yell; the statue’s voice was soothing but dangerous “Try” (Cocteau, 1930, English translation). The artist had escaped the airless room into an unknown world and moved from one reality to another.

The persistent statue had shown him the way by tempting him to experience something unknown (just as I was urged to watch this film). Although my analogy becomes flawed at this point due to simple parallels that I match up (equating a character in a film to my art teacher), however, this perception works for me. I know that this scene was filmed and the man is an actor and the statue is not my art teacher, but my body felt his fall into the mirror with a jolt (similar to a jolt when falling in a dream).

And now, my screen is much smaller and I watch the film again. I am ready for the fall and I keep backtracking and then moving forward to check if what I am typing coincides with how the movie plays. Now I have picked up a thread of how perception can shift. The statue urged the artist to fall into the mirror and the scene continued. Cocteau (1930) created events that seem to make no sense: a talking statue, a room with no doors and a mirror providing a gateway to another world. Cocteau (1930) wanted to bend reality with us (me). I moved in and out of this scene and relate it to diving into the unknown, which for me, was working with art, teaching art and scrutinising how my thinking works. I have watched the film again and continue to oscillate in and out of art encounters.

Although Cocteau's (1930) film has been included in a Surrealist matinee, he vehemently stressed that "surrealism did not exist when I first thought of it" (Cocteau, 1985, p. 3). Further, he claimed:

The Blood of a Poet draws nothing from either dreams or symbols. As far as the former is concerned, it initiates their mechanism, and by letting the mind relax, as in sleep, it lets memories entwine, move and express themselves freely. As for the latter, it rejects them and substitutes acts, or allegories of these acts, that the spectator can make symbols of if he wishes. (Cocteau, 1985, p. 4)

This quote is poignant when attempting to analyse and denote the ‘symbolism’ in his work (Cocteau, 1985). What is significant about Cocteau’s initial claim and rejection of the term “surrealism” in regard to this film is that there are scenes that cannot be about *our* dreams. His films are about his ideas and play on the tangible and intangible nature of ideas and imaginings, which have a connective tissue that can link them. If I continue with this thread and weave it back into what I have done in this chapter, I too, have followed and back-tracked the connective tissue of my involvement and continuing involvement with art and art-making process. It is both tangible and intangible in a connective ‘binary’ that often contradicts.

7.5.2. Backwards and forwards.

Years later, after first watching Cocteau’s film (1930), I created a paper and cardboard sculpture entitled Structure_1 (see Figure 4.5). Within the sculpture, various passageways made out of cardboard served to hold the structure together. The shell of the sculpture was layered with thin paper allowing light to shine through. I made my own glue out of water and flour and found thin wrapping paper in the kitchen drawer. I worked on the sculpture in the middle of my dining table and built up walls to simulate compartments.

Similarly, recalling a scene from Close Encounters of the Third Kind (Spielberg, 1977) when the character Ron Neary had a persistent image of a shape in his mind, I watched him reconstruct this shape in his lounge room. He moved dirt, bricks, rubbish and shrubs into his house and worked through the problem. After creating a mountain in his lounge room and scaring his family in the process, he looked to the television set. There on the news, he saw the very image he had created in his lounge room which was

to become the focal point of the movie. Parallel to his experience, Jillian Giuler, a character also plagued by the image of the mountain, discovered that what she had been obsessively drawing was also on television. Although my attempt at creating a structure of Twitter was not as momentous (Figure 4.5), it was similar regarding the urge to make sense of a mysterious idea.

When making my artwork *Structure_1* (see Tweet Figure 7.5), I attempted to compartmentalise Twitter into some sort of ‘structure.’ After documenting it, I cut a hole at the base to look inside (see Figure 7.1). The process was tied to watching Cocteau’s (1930) film and the desire to emulate a structure in Spielberg’s film (1977). These films and my sculpture present the problem of curiosity and creating; *how do I present my idea? Will this artwork communicate what I want it to? Is it beyond my reach?* From the instructions of the statue in Cocteau’s film (1930), the artist enters the unknown.

I experimented with simple materials such as flour, water, paper and cardboard to create a broad analogy of the compartmentalised workings of a SMS program. This process led me to further experimentations by excavating the sculpture to look inside (see Figure 7.1 and 7.6), breaking it apart (see Figure 7.8) and then sewing it up again (see Figures 9.1, 9.2 and 9.3). These experiments occurred over a period of four years as I worked diffractively with art making and art encounters throughout this thesis. I describe thinking diffractively as an enmeshed physical and virtual artistic experiment.



Figure 7.5: *Structure_1* by ArtTeacherAssemblage @art_assemblage, 3rd of June, 2014 screenshot retrieved from Twitter 13th of Oct, 2014 http://twitter.com/art_assemblage

I was created a physical connection to the computer program in my thesis, just as I understand Haraway's (1991) cyborg conception. Her cyborg (Haraway, 1991) was the conception of human and technology amalgamated into one and I had glued the walls of a Twitter 'structure' and uploaded it on Twitter (see Figure 7.5).

Beyond the mirror, the artist swam into the darkness and eventually entered a new space: a hallway with many doors. I looked under my sculpture through a hole that I burrowed and jagged scissor marks that roughly gave way to a new entrance. The hole was just big enough for me to shine a light inside. As I balanced the light through a new entrance, the structure glowed and became something else again (see Figure 7.6).

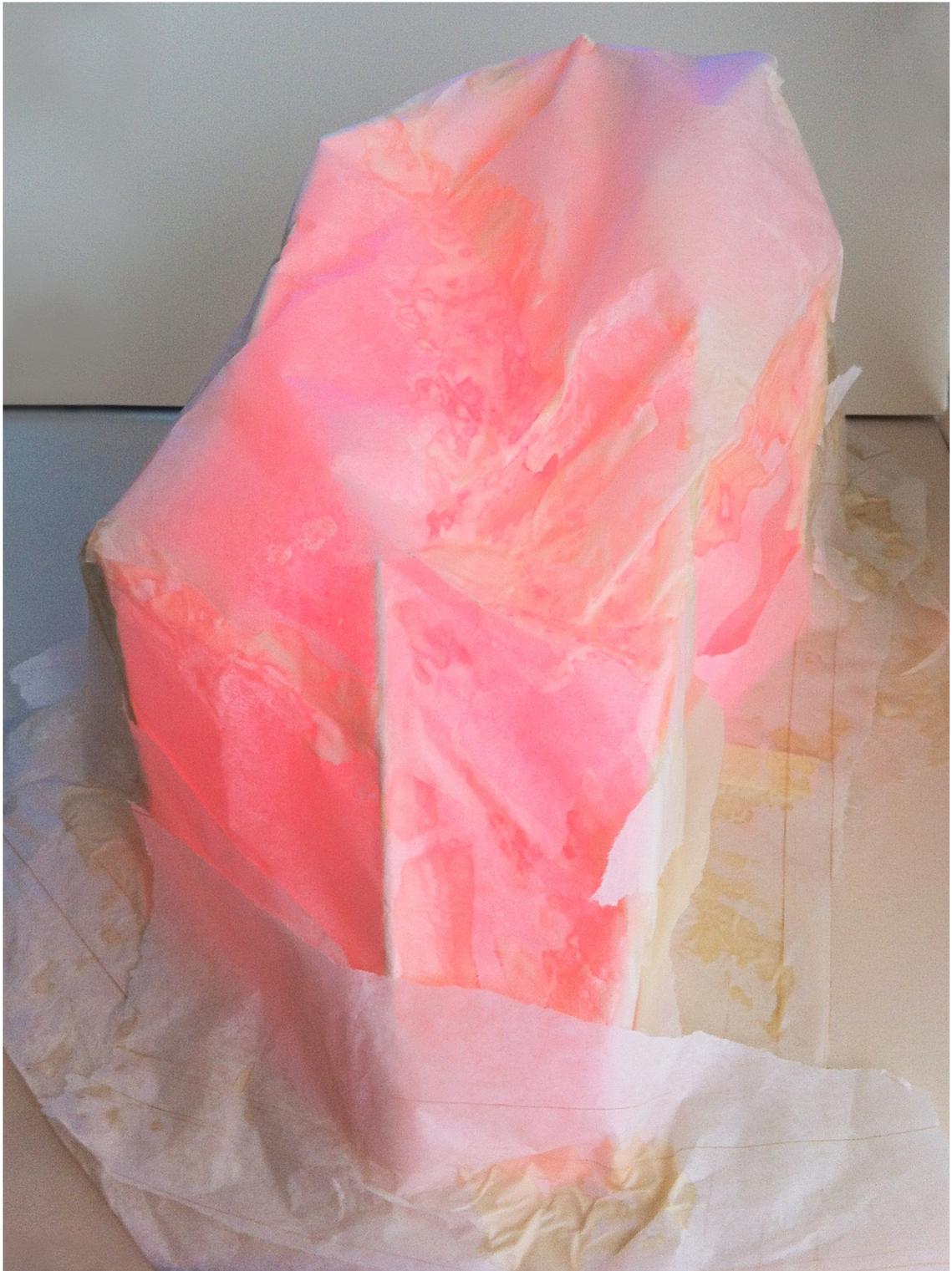


Figure 7.6: *Structure_2* by Kerry Power, 2014, 2nd in a series of digital photographs of the *Structure_1* sculpture, 2014.

The glue yellowed and the sculpture turned pink and purple, akin to subcutaneous tissue (Figure 7.6).

When experiencing and creating artworks, there is a co-conspiratorial process enabling thinking about context and in particular, the workings of art encounters and curiosity. The artist in the film (Cocteau, 1930) moved from one scene to the next, one reality to another and I connect present (and past) experience to a film that I saw when I was sixteen and then forwards, to viewing the film now, as part of this thesis.

Re-working this experience connected pathways for thinking about my art-making, the unknown and working with virtual data. As Bozalek and Zembylas (2012) attest, the process of looking back is not critical or reflective but more like a juncture of various memories that inform thinking today, yesterday and tomorrow. I re-visited Cocteau's (1930) film again and again and my recollection of events changed over and over. This is important to how we may consider the role of data (as situated in virtual reality) as beliefs can converge with past experiences which changes perception. Just as Bozalek and Zembylas (2012) retrace the use of reflection in educational work as insufficient (as if working back into history somehow makes one objective) diffraction encompasses passageways of time, matter and space, as one of entanglements.

If I tangle the analogies that bring me to the point of this discussion, it is the manifestation of not just experience when thinking about how I came to work and teach art, it was the subsequent research and artmaking like the sculpture depicted in figure 7.6. The sculpture, although initially formed out of my thinking about research and Twitter, became something else entirely and not representational at all. It (Figure 7.6) now glows from a light that I shone inside it with hues of pink and purple and yellow. The skin of the sculpture (Figure 7.6) almost peels off from the heat of the light and the light diffracts within and outside of the structure. It is a sculpture in progress, one that

looks different in every photo from various hues to different backgrounds. It emulates human flesh as it peels away the layers of paper and glue. It defies stagnation just as I am encouraged when using diffractive analysis to work in various ways with data and process. Barad (2007) claims that “diffraction not only brings the reality of entanglements to light, it is itself an entangled phenomenon” (p. 73). One sculpture becomes many sculptures and one’s Tweet, re-forms and re-deploys in different ways through receptors that invariably become generators.

7.5.3. Making un-sense.

When an attempt is made to make sense of artwork and in the case of Cocteau’s film (1930) for example, we may apply what we know of reality. Although we may come to an understanding of how this film bends reality as we know it, it also defies how matter operates in the world as the mirror splashes and the room opens and closes exits. These happenings do exist in the imagination of Cocteau (1930) as the film was developed and subsequently transferred digitally. He edited the film to apply visual trickery to the fallible nature of reality or un-sense.

I am back in the cinema in my uncomfortable chair (it is a cinema with old, peeling leather chairs). I am about to leave high school to enter the future as an art student. I look at the audience facing the screen. I imagine that we are all pulling threads together to make sense of what is happening. Our eyes shift around the screen as a speaking statue and a glaring artist maintain our focus. A mirror splashes and reveals darkness beyond. We were all there for a ‘Surrealist’ matinee. I re-watch this film as a researcher. My memories have come together: a man and a mirror, falling into water, a piece of cinematic trickery.

What is it about this scene in Cocteau's film (1930) that resonates regarding art educators in this study? I begin with various points of perspective as one looks to the past for threads that lead to the present, one learns from experience to make sense of an idea. We may watch a film and feel a jolt when an actor falls. The jolt is real. One is convinced of one reality and then led to another. I remember sitting and watching the film and now I am watching it again, years later. For one experience may thread into the other just as the artist from Cocteau's film (1930) falls into my present via my computer screen.

I use these threads to build my understanding of various realities in past, current and future terms. Working back to a point in my life when I decided to become an art student facilitated an intertwining process of connecting with future imaginings of working as an artist, researcher and teacher (Irwin & O'Donoghue, 2012).

Communicating variant positions are threads I use to build a simulacrum of multiple points of view. What is important to consider when we define, create and assemble our beliefs is that reality fluctuates and positions reconfigure over and over again. These considerations can permeate through the use of SMS like Twitter because they help us change and oscillate positions.

7.6. Entanglement on Twitter

According to Barad (2007), "diffraction is also more than a metaphor," and I work with diffraction in this thesis in optical, metaphoric, analytic and theoretical ways (p.72).

This is a messy business and one that might be summed up with the word "entanglements" (Barad, 2007, p. 71). But rather than getting bogged down with the

mountainous task of understanding how virtual interaction works and why it is used, I refer to Barad's (2007) metaphoric language and methodology in order to work with knowledge and data on Twitter and beyond. This helps, for I can elaborate watching a film as a diffractive analysis of experience through time and space to contribute my understanding of how entanglements matter. The following examples and analysis entangle my data and data generated by a participant in this study: Jemma Grundon.

7.6.1. Artwork as entanglement.

I have worked with the *Structure_1* (see Figure 7.5) in various forms throughout this thesis, but in the following examination, I work with the image as entanglement. After posting this image on the 3rd of June, 2014 on Twitter, I came across Grundon's image in a Tweet posted on the 23rd of July, 2014, with the following caption "Experimental photography – developing new ideas for my next series of paintings (using paint and tracing paper!)" (see Figure 7.7).

This was an exciting connection for me in this research. Initially, in my view, her image related to my artwork *Structure_1* aesthetically (Figure 7.7). Although Grundon has identified "Experimental photography" (Figure 7.7) as the driving force when creating her artwork, I was interested in the structure created by the folding tracing paper. Grundon (see Figure 7.7) has used blue paint and there is a mountainous quality to the folds depicted in her photograph and I have related the image to my initial search for Twitter structure (and subsequent artwork) when I started this research project.

The focus of the camera in figure 7.7 is on the 'mountain' that is in the foreground. The blurriness of the background contributes to the depth of the image. The viewfinder that

Grundon provided to her thinking was that this artwork was in progress rather than a finished piece.



Figure 7.7: *Experimental photography...* by Jemma Grundon @JemmaGrundonArt, 23rd of July, 2014, screenshot retrieved from Twitter 8th of Oct, 2014

<http://twitter.com/JemmaGrundonArt>

Grundon's process continued by uploading the image (see Figure 7.7) to Twitter, which may attain a response just it may by hanging it in a gallery. Her participation in this project included documenting the process of working with materials on Twitter and creating artworks alongside her art pedagogy. Modelling how one creates artwork on Twitter can be received in several ways and when analysing the process diffractively, I have picked up on intensities that might not have been available to me or Grundon at the time. Artwork cannot function without the viewer. There is, as mentioned before, a

response required for the transaction to take place. I look at Grundon's image (Figure 7.7) and created a relationship with my work.

The camera angle of Grundon's image is raised above the 'mountains' and focuses on a rocky scape below (Figure 7.7). The icy greys in this image speak of the moon to me. It confers to an icescape that is bound for an exhibition in New York (Figure 7.7). Her work entangled with mine for the moments that I brought them together in this chapter. I pulled the images together in order to examine the possibilities of entanglement on Twitter to purpose art practice and co-creating. Entanglements worked as points of reference identified by me just as differences elaborated a creative process and were facilitated by intra-activity on Twitter.

When delivering Tweets that invite the viewer into the world of the art teacher as an artist, Grundon has uploaded her artwork as an unfolding process (Figure 7.7). This is a crossover from one mode of being an art teacher to another as an art practitioner. It was not prevalent in the data that many art teachers produced their own artwork and uploaded it to Twitter.

Throughout Grundon's Tweets over a period of six months, the messages have predominantly regarded pedagogy and art practice. The images supplied built a folio of works that would be exhibited physically and virtuality (see Figure 8.15). The audience then, is a varied one, from fellow art educators to a broader audience. This production of art and pedagogical context provided a window into Grundon's identity as an art teacher. It was partly definitive as it is an art practitioner who teaches art education, but also someone who works in the field as an artist and, therefore, provided a connection to how artists work.



Figure 7.8: *Deconstructure_1*, by Kerry Power, digital photograph (detail) of the dismantling of *Structure_1* sculpture, 2014.

The image is not guided by text but described as bound for exhibition. This is a point that I have been alluding to throughout this study as textual or linguistic approaches to art appreciation cannot substitute or truly supply a response to an artwork. The sense of touch when creating artwork, the sight of the image and the smell of the materials, the motion of the creating is not equated with linguistic knowledge but something altogether different. It is a visual image. The presentation is through the Tweeting of

the subject and therefore, it resides as produced by the Twitter user Jemma Grundon (Figure 7.7).

I responded to intra-action that I perceived occurred between Grundon and my work on Twitter. As I retrieved my sculpture (see Figure 4.5) and blew off the dust that had accumulated over the years when creating this thesis, I ripped at the tissue. As simulated on my computer screen, the original sculpture called *Structure_1* (Figure 4.5) continued to unfold as I peeled back the layers. The horizon line is marked by the blue of my computer screen. I named this work *Deconstructure_1* (Figure 7.8), which is a play on the concept of deconstruction.

Derrida's (2007) purposeful syphoning of how language and communication works is an anchor that I draw on as I pulled apart my sculpture. He argued the "structure-or rather the structurality of structure—although it has always been involved, has always been neutralized or reduced, and this by a process of giving it a center or referring it to a point of presence, a fixed origin" (Derrida, 2007, p.247). Derrida (2007) plays with the fundamental flaws of representation. It is a circular riddle that perpetually implodes. The problem of a "fixed origin" is impossible and therefore, destabilises structures in language and the interpretation of meaning (Derrida, 2007, p. 247). What we might hope for when emulating structures in order to contain meaning is open to collapse. And by collapse, I mean the unpredictability that comes with inviting events to occur through communication. The communication between Grundon and me was part of the research process and partly due to the analysis in this chapter. The surprises for me were continuous as reverberations of intra-action informed my work.

The documentation of *Structure_1* (see Figure 7.5) emulated the horizon in Grundon's Tweet *Experimental photography* (see Figure 7.7). In writing this, I have created a relationship with her work and what I had perceived as a connection. This circular homage enabled continuity between the work that Grundon produced and my own. Although my intentions were to show the interiority of process and the connective difference between the two artworks, it was a documentation of my thinking about how intra-active artistic practice works.

7.7. Conclusion

Excavating the *Structure_1* sculpture (see Figure 4.5) reminded me of a few things. Firstly, I have always been curious about how things work and I'm tempted to open things up just to see what is going on inside. The curiosity of the artist in Cocteau's film (1930) who falls into the murky underworld is comparable. The urge to see and feel what is on the other side of something is part curiosity and partly the urge to work through ideas. As the artist falls into the mirror (the irony is not wasted on me), I too pushed through perceived boundaries in order to work away from the surface.

Continuing to move again in time and matter, I illuminate the structure that I broke apart only to put it back together again in this thesis (see Figure 7.6 then Figure 9.1, 9.2 and 9.3). It became a translucent image (see Figure 7.6) as a muted redness seeps through the skin and peels back from the heat of the globe. Light filtered through the delicate layers inviting an unsettling image of the fleshiness of artmaking. This artwork connected to Grundon's *Experimental photography* (see Figure 7.7) and reminded me of the peaks and crevices in her work. This circular relationship between artist, artwork and research documents the tenuous nature of intra-activity that can occur between ideas

and matter. Processes in virtual space afford this connectivity, as the circular relationship of an art educator, artist, art encounters and art-making examined in this chapter would not have otherwise occurred.

8. Thinking with art educator virtuality

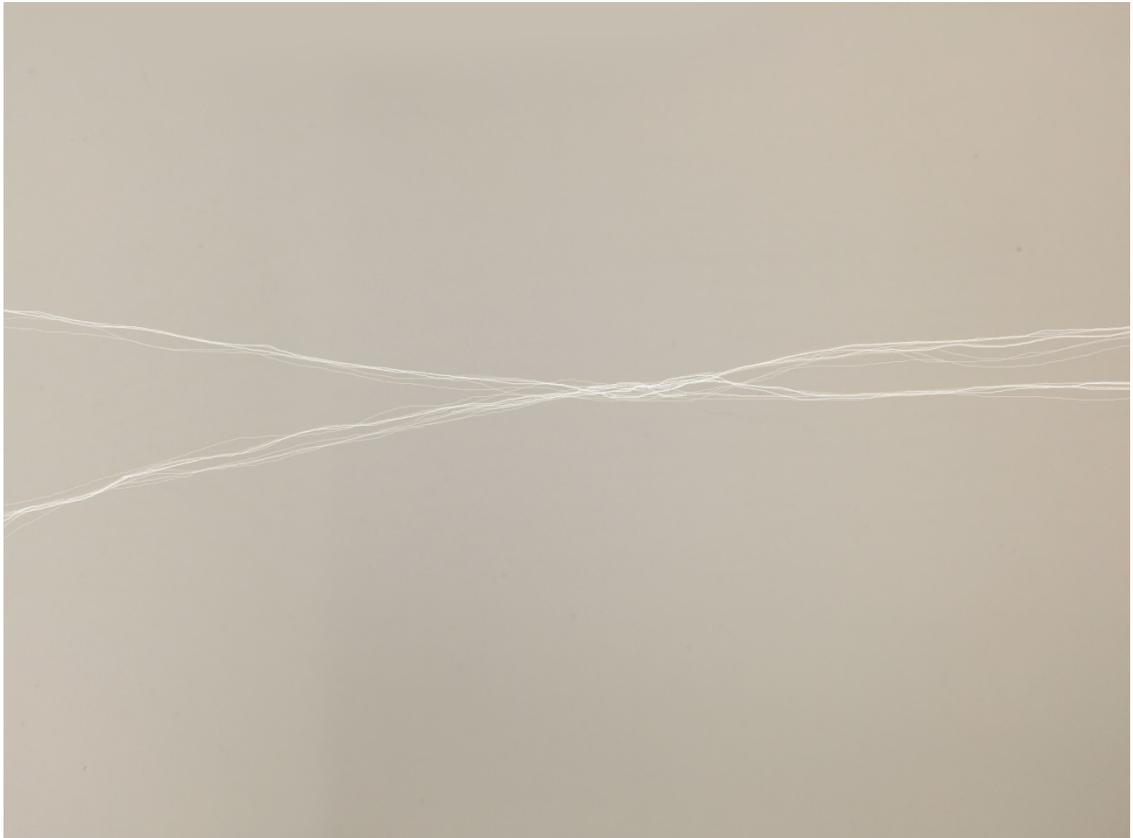


Figure 8.1: *Thread_1* by Kerry Power, 2018, detail of the continuous sculpture and digital drawing, *Thread*, 2018.

8.1. Introduction

Intra-actions are nonarbitrary, nondeterministic causal enactments through which matter-in-the-process-of-becoming is iteratively enfolded into its on-going differential materialisation. Such a dynamics is not marked by an exterior parameter called time, not does it take place in a container called space (Barad, 2007, p. 179)

Barad sets a definition of intra-action with the above quote. This definition breaks a seal of containment for how we might perceive learning and experiencing. Intra-activity seeps through time and space as it can be ephemeral in quality and it can be

long-lasting. It is the ‘casual enactments’ of intra-activity that Barad addresses (2007). Casual enactments are often passed as insignificant; however, it is the sum of enactments Barad (2007) is paying attention to. Just as movement is evident in this quote as “matter-in-the-process-of-becoming” materialises meaning, it is the process of materialising, of intra-acting, as a continuum that I attempt to capture and examine in this chapter and where possibilities of art educator virtuality become apparent (p. 179).

8.1.1. Virtual connections.

Communicating or just browsing on Twitter can produce a habitable space both virtually and metaphorically. Touching screens, keyboards and phones to access Twitter, for example, can enable users to hop into cohesive atmospheres and push around space. Our sensory perception shifts from breathing, eating, listening and any purposeful human function to a space that was mapped by technology. Further, it is more than an abstract or imaginary space as we can attribute importance to virtual space in terms of modern-day reality. We make friends, judgements, commitments and promises. The process can be alluring, intriguing, informative, frightening and isolating. We learn from what others create and contribute in virtual space in important and casual ways. As educators delving into virtual co-habitation that continues to consume and elaborate practice, it is important to theorise how this may work for us and to us.

The above image (see Figure 8.1) is a detail photo of a continuous string sculpture that I constructed using a lightbox, thread, needles and magnets. The construction of the sculpture is not just a metaphor of how diffraction plays in this thesis but a physical structure designed to enable thinking about perception and connection in virtual space.

This artwork initiates a discussion regarding what the experience of virtuality might mean for those who work as art educators and in particular, how this space might facilitate continuous and ongoing pedagogy. Various images of this artwork contribute to theorisations presented throughout this chapter.

The magnets held needles and the needles held the string to indicate connection and materiality. As I moved the magnets around the lightbox container, I added more thread, which in turn created messy configurations.



Figure 8.2: *Thread_2* by Kerry Power, 2018, detail of the continuous sculpture and digital drawing, *Thread*, 2018.

To explain my thinking, I began this study by describing myself as a PhD student who was interested in researching “The art teacher” on Twitter. However, the development of my research aims and the connection established with participants was not a linear process. The process began with abstract interactions determined by tapping screens,

keyboards, surfing through templates and sifting between timelines and time zones. Analysing data produced this way invited “intra-actions of different viewpoints and how they build upon or differ from each other to make new and creative visions” (Bosalek & Zembylas, 2016, p. 8). Approaching a question of how an art educator may use and interact on Twitter was like sifting through a maze of possibility. Therefore embracing Twitter as a virtual maze, including the scale of this virtual space, ignited questions of virtual habitation and what might be possible for the art educator beyond current participation on this program.

8.1.2. Connectedness on Twitter.

Connectedness on Twitter can be working with others, responding to others and supporting others. It takes a connection in a social media system (SMS) to provide a sense of ‘community’ or collaboration regarding any subject. My interest in collaborating with other art teachers when I first started teaching was to find out how this role works and what best ways to engage students were. These sorts of questions were on my mind when I first started teaching, but developing pedagogy was to unearth intricacies in learning that continually changed. Pedagogy is not an easy fix.

I initially Tweeted about my project in the research site *ArtTeacherAssemblage* (2014) to attract other art educators to join in my research study: *This study aims to examine the interactivity of art teachers on Twitter* (see Figure 8.3) but it was a general statement that did not provide particulars on what sort of interaction might be studied.

One of the first responses came from Julia at @wowartproject (Figure 8.3) and she followed my research site and reTweeted my Tweet. Participants continued to join after

this initial interaction and I began to work with a cohort of 21 art educators using Twitter over six months.

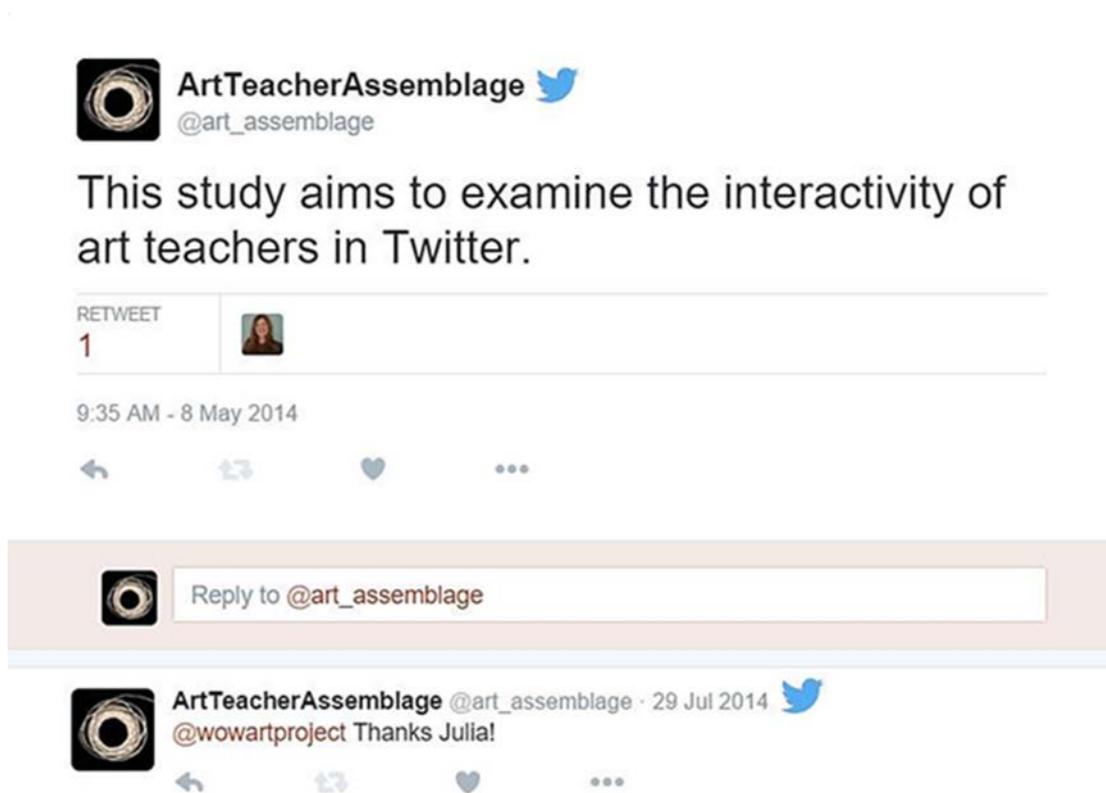


Figure 8.3: *This study aims to examine...* by ArtTeacherAssemblage @art_assemblage, 8th of May, 2014 screenshot retrieved from Twitter 13/10/2014

https://twitter.com/art_assemblage

When permission was given in the form of following *ArtTeacherAssemblage* (2014), I was able to collect all of their Tweets over a six month period. Initially, I thought that this process would provide insight into how and why they used Twitter. Beyond this, I was interested in how the 'art teacher' as a role and concept was developed on Twitter. The composition of this role was of prime interest to me, as it was a role that I was continuing to build for myself.

The impact is difficult to measure, but some of the responses can be documented in terms of statistics collated below a Tweet and comments that respond to statements such as these. For example, McGee (see Figure 8.4) is a popular Twitter user by the number of her followers. This sort of Tweet (Figure 8.4) can be encouraging to users of Twitter and the connectivity that McGee considers worthwhile on many levels. Firstly, it is not a linear form of connectivity that one action can be followed by another. It is multilayered in terms of how this sort of self-narrative may develop. McGee is a prolific user Twitter and her influence over art teachers that read and follow her is difficult to measure. The position I can develop is how and why she writes her self-narrative through statements such as this. For one, we know that connecting and “teaching more” is a high priority. It implies that Twitter can encourage/enable the user to teach outside the physical classroom and develop teaching in a virtual arena. It can also imply that teachers can work more, stay connected to their role and as an art teacher, for longer than they are clocked in terms of work schedule. This introduces a tension of sorts that may not be evident in the initial reading of the Tweet.



Figure 8.4: *Don't teach in a vacuum...* by Theresa McGee @theresamcgee, 23rd June 2014, screenshot retrieved from Twitter 07/10/2014 <https://twitter.com/theresamcgee>

8.1.3. Virtual/physical habitation

Throughout this thesis, I attempted to break a seal of how art educators use a SMS like Twitter. It was a metaphorical seal that I applied by working through with art educators

on Twitter and how virtuality might be for art educators in the future. When moving closer to data as Bosalek and Zembylas (2016) challenge us to do, I conveyed Twitter as a visual structure that included entry points, rooms, tunnels and space to inhabit.

Building a model of Twitter (see Chapter four, Figure 4.5) encouraged me to imagine a mountainous structure housing various cavities and walls. However, in this chapter, I theorise educator virtuality as a stringy, fragile concept that wistfully plays with time, matter and connectivity. Thinking with virtuality in this way moved from a purposeful and metaphoric model of Twitter to something that may be more ephemeral and difficult to describe.

In the previous Tweet above (see Figure 8.4), McGee expresses “Don’t teach in a vacuum. Make connections. Teach more” (McGee, 2014, Tweet). The broadening of space that McGee refers to is related to the Twitter experience. The connective quality of working on Twitter can allow a pedagogical “vacuum” to perforate (McGee, 2014, Tweet). The affectual process of Tweeting this statement, including hashtags, may be endless. For one, it may imply that connecting in virtual space allows growth and expansion in order to “Teach more” (McGee, 2014, Tweet). This, in turn, may produce various reactions. Reading this Tweet may encourage working outside of ‘clocked hours,’ encouraging a connected and dedicated educator. It may imply that confining to any area of education in the physical world produces insular or non-progressive pedagogy. And then it may be an encouraging cheer to those who engage with Twitter and have established a place there. The Tweet may continue to perforate conversations about the teaching experience, including the dedication that may be needed. Working life may cross physical and virtual territories, just as in daily life we glance at phones and check emails. Conscious and unconscious states may connect to virtual territories through our day. We may not necessarily finish work when leaving the school or office

and due to virtual connectivity, work may continue throughout the day and night. The timeline for teachers oscillates through physical and virtual modes and the affect that this may have needs consideration.

Dennis Inhulsen's (see Figure 8.5) hashtag "#naealeaders" implies that the image that he has uploaded in this Tweet has been taken from an annual convention run by the National art education Association (NaeA) in the United States. The text "tweeting and sketching" (Figure 8.5) shows the interconnectedness of the event, as an educator sketches and Tweets while attending the conference.



Figure 8.5: *#naealeaders tweeting and sketching!* by Dennis Inhulsen @dinhulsen, 27th July 2014 screenshot retrieved from Twitter 13/10/2014 <https://twitter.com/dinhulsen>

Multitasking is recognised here, just as educators are encouraged to work with technology, they are also encouraged to branch out to others and broaden their

knowledge. This brings into play a hyper-performing teacher, one who operates in various modes to engage and extend the pedagogical process.

Foucault (TRUTH AND POWER, 1979) helps me here in terms of how one is interconnected to work as an indicator of value. The multitasking implied in Dennis Inhulsen's Tweet (see Figure 8.5) shows how technology provides a space for this to occur. Navigating online communities or connecting while at conferences for those who can and cannot physically attend, invites a space for educators to occupy. These virtual spaces are continually developing and multitasking is indicative of how the physical and the virtual coincide.

For example, the push to connect more, work more or teach more might be at odds with how the teacher role is adopted. Teaching can be demanding with regard to workload, hours expected, challenging classroom situations and performance standards. Kuster, Bain, Newton and Milbrandt (2010) describe that most first year art teachers "described many challenges, including exhaustion, time management, motivating students" (p. 47). It is worth considering why educators choose to connect with others online. Rather than adopting a goal of working more, it may be a lack of support and the urge for alternative professional development opportunities as suggested in the literature (Calvert Evering & Barret, 2014; Carpenter & Krutka, 2014; Davis, 2015; Knight & Kaye, 2014; Visser, Calvert Evering and Barret, 2014).

Art educators can be isolated by their subject field including "tales include a feeling of isolation, having to negotiate the status of art and conflicts with the educational system" (Cohen-Evron, 2002, p. 79). There are particular challenges for art educators in schools "defined mainly by an educational system that has discourses and agendas in which art

and art teachers are marginalised” (Cohen-Evron, 2002, p. 82). The marginalisation that Cohen-Evron (2002) refers to may be remedied by connecting to others beyond their immediate workstation. Further, educational curricular that values literacy, numeracy and science above other subjects in schools, may contribute to art educators seeking connection and validation elsewhere.

8.1.4. Physicality and virtuality.

The physical act of artmaking makes me think about data analysis. My fingers remember letters on a computer keyboard, but I can't tell you where they are. Rising up and down, my fingers follow thoughts as they touch letters. I read what is in front of me and have to go back. I need to rethink that. I document my thoughts with technology and my fingers type 'automatically.' A perceived binary between the corporeal and the cognitive dissolves. My physical actions connect to virtual space and an enmeshment takes place.

As I introduced further threads into this discussion, I added more thread to the sculpture (see Figure 8.6). I expand the initial idea of studying art educators on Twitter to what might be possible when thinking with virtuality. Entering into a virtual program by creating an account and accessing communicative areas of interest is an opportunity for expansion. This process multiplies when interacting with others.

Defining space on Twitter as an educator becomes an online destination and can be decorated with imagery, multimedia and text. What was done in the classroom can be uploaded to virtual space. However, capturing the pedagogy of the classroom can be

helpful to those who share lesson plans online, but what could be possible if we used virtual space as a different pedagogical arena?

8.1.5. Capturing nature.

Theresa McGee has used the camera to replicate the viewpoint of the author (see Figure 8.7). McGee has conceptualised 'nature' in a Tweet alongside her user avatar which presents herself as author and teacher. Once taking the photo, a lasting reconstruction of experience remains and can be transferred elsewhere. The image (see Figure 8.7) is evidence of nature: beholding a nature that is green with flora and bugs. The image (Figure 8.7) documents a process: a photograph of a hand holding a digital camera to photograph nature outside a digital world, an organically formed nature that is at times outside of experience.



Figure 8.6: *Nature at Cuyamaca ...* by Theresa McGee @theresamcgee, 16th, July 2014, screenshot retrieved from Twitter 07/10/2014 <https://twitter.com/theresamcgee>

Conceptualising the physical world provides a platform from which to inform others. It is a coding device that binds intention and definition into one. This image (Figure 8.7) can be used to describe and define nature, just as it can be part of the job of art teachers to take students outside the classroom to observe the ‘outside world.’ Documenting this process is a narrative about capturing a version of ‘nature’ as defined by the pedagogue. Malone (2016) challenges anthropocentric versions of nature, as defined in relation to humans. She muses, that a nature defined in relation to a child for example, is a nature reinforced by “the exceptionalism of humans” (p. 20). When providing a snapshot of a human documenting a reconstruction of ‘nature’ as in figure 8.6, the documentation provides an example of McGee’s pedagogical process (Figure 8.6). It is a simulation of a simulation which reflects Baudrillard’s (2001) “precession of the simulacra” (p. 169).

Baudrillard (2001) introduces the folly of a map that surpasses marked territory and deems the map “hyperreal” and the territory it surpasses as insignificant (p. 169). The map, a copy drawn of a territory, attains focus and worth and becomes the “hyperreal” object (Baudrillard, 2001, p. 169). The object in Baudrillard’s (2001) example describes knowledge about a territory that is drawn by mapmakers. It is so well described, that the mapmakers produce a conceptual version of the territory according to their beliefs and then it becomes factual. This meta-analogy warns of generalising any territory. A map or any copy of an ‘original’ as legitimised through production and affirmation. Legitimation is the problem that Baudrillard (2001) deems cause for concern. For without mapping physical spaces, what sociological space do we inhabit? Virtual space becomes mapped by reproductions of the physical and therefore, the more this is done, the more we believe these reproductions to be true.

Uploading images to Twitter provides evidence of encounters and stimulates communication including the use of available functions below (the symbols below in Figure 8.6 indicate three reTweets and two favourites).

Other users of Twitter have viewed this Tweet and accessed functions documenting processes of recognition. Clicking on respective symbols, hashtags and commenting promote a journey from an initial citing of 'nature' to one of acknowledging the intention of the author (Figure 8.6). Responses to Tweets can have various implications ranging from acknowledgement and the constitution of meaning. Users react to Tweets whether responding openly by accessing functions or just by reading and thinking about them. These reiterative processes continue a chain reaction that builds on the 'original' Tweet.

I built on the layers of thread and changed the angle of the camera (see Figure 8.7).

The frail thread was vulnerable to the slightest gust of wind. In fact, the thread moved in waves that were affected and disaffected by the small gushes of air that puffed from my computer and from my breath above. When uploading the images to my larger, editing screen, the thread multiplied and blurred from the air that had been gently blowing outside. I added further digital threads to the 'physical' ones. The layers of thread began to echo and ghost on the screen. Twisting and turning, fragile and strong, these threads would eventually pull the ideas of this thesis together.



Figure 8.7: *Thread_3* by Kerry Power, 2018, detail of the continuous sculpture and digital drawing, *Thread*, 2018.

8.1.6. Hyperreal space.



Figure 8.8: *Last 2 weeks to create your own world!* by OAEA @OnAEA, 15th August 2014, retrieved from Twitter 7th October 2014 <http://twitter.com/OnAEA>

Hypothetically, an educator sets up a ‘hyperreal’ space on Twitter by determining a virtual pedagogical space. A physical place for an art educator may be a studio or something that looks like the image provided by OAEA (see Figure 8.8). The image of the studio in figure 8.8 houses an array of materials and images conducive to working as an artist and teaching art. It is an inviting image and warns the viewer *Last 2 weeks to create your own world!* (Figure 8.8).

Various hashtags accompany this image including *#inspiration* and *#motivation* (Figure 8.8). It simulates an environment for creating artwork and potentially encourages art educators to follow this lead. While many art classrooms may have an opportunity for this design, it is indicative of how we co-construct experience in virtual space. For example, this is what an inspiring art studio looks like and therefore, it is something to aim for. The image of this art studio simulates a concept about what creating and *#creativity* can look like (Figure 8.8).

When referring to Deleuze's philosophical stance on representation, MacLure (2013) argues that "Representation serves the 'dogmatic image of thought' as that which categorises and judges the world through the administration of good sense and common sense, dispensed by the autonomous, rational and well-intentioned individual, according to principles of truth and error" (p. 659). This statement by MacLure (2013) "does not deny that it does indeed happen, and that its cultural, ideological and symbolic productions from a legitimate focus for research" but it is a form of representation that MacLure (2013) troubles when representations are used as concrete examples (p, 659). The problem that MacLure identifies here is something that I troubled when thinking through physical representation in virtual space. Moreover, images, text and multimedia of all kinds are being used as narratives of art education in virtual space. It is the transposition of what art educators bring to virtual interaction that needs more thought.

A Tweet from 100DaysofProgramming (see Figure 8.9) refers to "Crowded" and "chaotic" classrooms as another 'reality' of physical teaching. For some, reading this Tweet may induce physical reactions such as tightening of the larynx and sweaty palms. The Tweet was reTweeted as indicated by the symbol below (see Figure 8.9).



Figure 8.9: *Crowded, chaotic classrooms...* by 100DaysofProgramming

@100DaysCCP, September 8th, 2014, screenshot retrieved from Twitter 03/10/2014

<https://twitter.com/100DaysCCP>

“FDK” refers to “full-day kindergarten” and the physical space of the classroom is described as “Crowded, chaotic” that will “hurt Ontario full-day kindergarten” due to these conditions. One may read this Tweet as a narrative about poor working conditions, but this virtual gesture can also serve to support educators who work in a system beyond their control. It is a political act of disseminating news regarding perceptions about kindergarten conditions. The Tweet may activate support and, in turn, counters the ‘fictional’ world created in Figure 8.8.

Opposing views are presented here (see Figure 8.8 and Figure 8.9) on what might constitute experiences in the classroom. However, both Tweets are similar in their aim to connect to physical aspects of teaching. When thinking about the desire to create hyperreal spaces, I add further strings to the lightbox and move around the magnets (see Figure 8.10).



Figure 8.10: *Thread_4* by Kerry Power, 2018, detail of the continuous sculpture and digital drawing, *Thread*, 2018.

8.2. Virtual symbioses

Using Twitter to broaden horizons from the physical classroom to a virtual one can enable connective processes that may illuminate surprising information. For example, the following Tweet by McGee (see Figure 8.11) has provided just enough information to entice a Twitter user to click on the link provided. I accessed the link which directed me to an online article that elaborated the topic of bees in “collaboration” with the artist Ren Ri (visual news, 2014). Organically based sculptures were created by bees with the help of Ren Ri who manipulated the direction and shape of the honeycomb produced. The article provides insight into the motivation of artist and subject, as these two positions have seemed to interchange and merge throughout the art-making process.

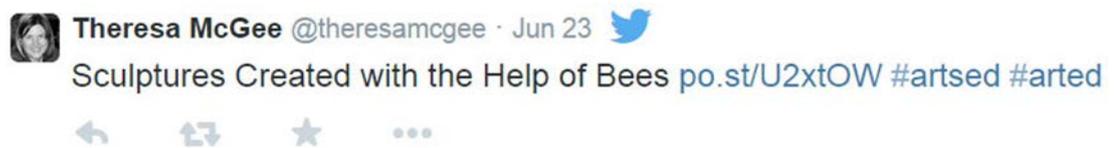


Figure 8.11: *Sculptures Created with the Help of Bees* by Theresa McGee

@theresamcgee, 23rd June 2014, screenshot retrieved from Twitter 07/10/2014

<https://twitter.com/theresamcgee>

What is relevant here is that information uploaded as Tweets is by no means static. It takes the interaction of those who access a Tweet and follow a trail of information to set in motion virtual interchanges that ignite and change information. Further, these processes encourage nebulous exchanges, elaborations and evaporations that are out of one's control. McGee's Tweet (see Figure 8.11) initially directs her followers to the 'collaboration' between Ren Ri and the bees but also unearths arguments of authorship, representation and intra-action between humans and insects. Interacting with the Tweet becomes part of a pedagogical process initiated by McGee (Figure 8.11).

The symbiotic process in Ren Ri's collaboration with bees (visual news, 2014), McGee's Tweet (Figure 8.11) and my elaboration on this page brings to light experimental ways of being. Hays, Patrick, Ziesack, Oxman and Silver (2015) identify the unification of two separate entities as contributing to 'real-world' problem-solving in regard to engineering and design. For example, Hays et al., (2015) highlight the combination of microcosms such as algae and fungi to develop communicative and robust outcomes (Hays et al., 2015). Their research attempts to understand the "Robustness — the ability to survive perturbation — is an emergent property of microbial communities and is necessary for survival in the wildly fluctuating world" (p. 40). However, synergy of this kind is from a human-centred perspective. Although *we* may be enriched by the collaboration of insects, microcosms and technology, there can

be deleterious implications for any cross-species-material collaboration. Hays et al., (2015) acknowledge “that continued study is necessary for the understanding and engineering of microbial systems that are more than the sum of their parts” (p. 40).



Figure 8.12: *Thread_5* by Kerry Power, 2018, detail of the continuous sculpture and digital drawing, *Thread*, 2018.

In relation to Hays et al., (2015) identification of ‘parts’ as being a solvable problem, the potential for virtual art production, experimentation and expression reaches from the virtual manifestation of a Tweet to inspire the subject of difference as a collaborative entity. Bozalek and Zembylas (2016) clarify in reference to Barad and Haraway, that diffraction is “a process of being attentive to how differences get made and what the

effects of these differences are” and is “predicated on a *relational ontology*, an ongoing process in which matter and meaning are co-constituted (p. 2).

The case that Bozalek and Zembylas (2016) make for diffraction underlines the importance of meaning as a collaborative and moving process. In the case of McGee’s Tweet (Figure 8.11), pointing to the work of Ren Ri, it is and becomes a collaborative process when creating meaning in a virtual platform. The artwork does not stand entirely on its own in a physical space but oscillates between physical and virtual planes.

The threads (see Figure 8.12) in my sculpture continued to skew and intertwine, as I make unsense of difference and collaboration in physical and virtual planes.

8.3. Sensing virtuality

Sarah Pink’s (2007; 2010; UOC, 2012) work on media and the senses supports how I might theorise virtuality. One may read a Tweet and journey through links and options providing an interactive experience. As one interacts using a phone or a keyboard, the stimulation of the senses drives a communicative mode of thinking and doing that may not be easy to follow regarding what sense or what sort of thinking is being operated. This participatory mode of operation is experiential in terms of being and doing. A Tweet may encourage us to click a link and we may respond by reading, thinking, commenting which invites a continuous chain of events. An art educator may develop a user page on Twitter and then promote a lesson plan that may have worked or technique that is worth sharing. However, a Tweet may grow and behave in ways that may not have been envisaged by the author.

The interchange depicted in figure 8.13 is between me as the research site “@art_assemblage” and Jemma Grundon, a participant in the study. The image that I uploaded in figure 8.13 is part of a digital photo of a small paper installation that I assembled in front of my computer that I explored in Chapter six: *Tweeting affect*. I wrote words on flimsy pieces of tissue paper pertaining to how I imagined movement, connection and theory on Twitter. My first word was “assemblage.” Further words such as “rhizome” shaped my view of interactivity on Twitter. Twitter became for me an infinite knotted mess, as stringy connections turning and imploding in a matrix-like space.

What occurred was what I hoped would happen. When I uploaded imagery and projected my thoughts about my study, potential participants would join in and comment on my images and text. The interaction is quite specific as Grundon responds to the words I have included in my image “I think you should add dialogue and participation to your trail!” (Figure 8.13). The next day I have responded “Thanks Jemma!” but I wished I had said more (Figure 8.13). My innocuous response leaves me thinking that I could have started a conversation. I would ask her why the words “dialogue” and “participation” are so different to words that I have used in my artwork such as “connecting” and “talking” (Figure 8.13).

They are different in her view. I took a screenshot of this interchange as evidence of working with a participant, but it does fall short. I imagine that a more fruitful conversation would have provided ‘evidence’ supporting my initial research intention, that was, to postulate the usefulness of art educators working on Twitter.



Figure 8.13: *I think you should add dialogue...* the interaction between @art_assemblage and @JemmaGrundonArt, 19th of May, 2014 screenshot retrieved from Twitter 13/10/2014 https://twitter.com/art_assemblage

Part of the motivation to upload this image (see Figure 8.13) to Twitter was to engage with participants that followed me. A reaction from Jemma Grundon contributed the words “dialogue and participation” (Figure 8.13). Creating an image that depicted my

thinking at the time instigated collaboration as her comment added to the image and further developed my research approach.

The images that I made and the Tweets that I collected as part of my research method were not representational of the work that was created by art educators on Twitter but were “traces of the routes we have taken through the world” as stated by Pink (ATLAS.ti, 2013). These traces that Pink (2013) refers to, I recognise as moments or affects that track interactive movement on Twitter. The image depicted in Figure 8.13 was part of a chain of affects produced in a moving field of virtual activity.

8.3.1. Connectedness.

Pink (UOC, 2012) argues against Clifford Geertz proposition that anthropology can be ‘read.’ She (UOC, 2012) states that there is “more than one anthropology” that is, anthropological approaches are diverse in terms of how we interpret experience, whether it is to smell or even touch what it is we are studying rather than favouring sight. I argue that interaction in SMS like Twitter invites various sensory experiences due to the opportunity to respond. We can see and read Tweets, sometimes hear them, but we can also feel them, whether it is a guttural response to educational work conditions or an artwork.

If I dig deeper into what it is that Pink argues in terms of visual media, she refers to the work of Mitchell (2005) and states that all media are, “from the standpoint of sensory modality, mixed media” and not just dedicated to just sight (2005, p. 257). Mitchell (2005) claims that “there is no visual media” and that “all media is mixed media” (p. 260). If I take Mitchell’s (2005) argument that all the senses are involved in

experiencing media, then sight may not be distinguished from touch for example. Then we can equate images in visual media, as not entities unto themselves, but pliable objects that move and change as the viewer intra-acts with them. Media invites all of the senses regardless if the impulse is to watch it and or listen to it. This is important when examining art educators on Twitter and further invites how virtuality offers connective and multi-sensory states.



Figure 8.14: *Thread_6* by Kerry Power, 2018, detail of the continuous sculpture and digital drawing, *Thread*, 2018.

Moving the mouse and digitally rethreading the formations, I 'echoed' their frail presence in the lightbox. Adding new layers, sliding the hue and saturation up and down, blurring some threads and not others; these multi-sensory repetitions drew me closer to what was happening on my computer screen.

8.4. Art and connection

Art objects instigate a connection to the ‘viewer’ and a transaction takes place. An art object is established by this process just as the ‘viewer’ of the art object is established. Art objects cannot be without the ‘viewer,’ and beyond ‘viewing,’ art objects cannot be without one who experiences it. It is a definable process, the naming of the thing as an art object and the action of the art beholder. Beholding an artwork is a non-stagnant action, as change occurs through intra-action.

Barad (2007) depicts intra-activity as something that happens as opposed to something that is contained. Art educators Tweets about art teaching and art education are useful examples to use in this discussion as Tweets are non-stagnant and subject to change. Connecting one’s approach in art education using Twitter provides a sensory, non-stagnant, movable approach to performing the subject. As I worked through ideas and Twitter data, I produced digital images that stimulated questioning and understanding of these concepts. To question the possibilities of art educator virtuality is to draw on what virtual intra-action facilitates.

8.5. Art educator virtuality

When delivering Tweets that invite the viewer into the world of an art teacher and artist, Jemma Grundon has uploaded her artwork together with intentions to show in New York (see Figure 8.15). This could be considered a crossover from the role of art educator to art practitioner who exhibits her work. It was not prevalent in the data that

many art teachers produced artwork and uploaded it on Twitter; however, there were a few examples.



Figure 8.15: *Another @RepreArt sneak peak...* by Jemma Grundon

@JemmaGrundonArt, 17th Oct 2014 screenshot retrieved from Twitter 31/10/2014

<https://twitter.com/JemmaGrundonArt>

In figure 8.15, Grundon has given us a “sneak peak” of her work. It is a play on words, as in peeking at her work and peak, as she has depicted peaks and mountains in her artwork. Text is part of a communicative pattern on Twitter and builds the presentation. Text build a diffractive pattern throughout, and supports, plays and verbalises communicative positions.

Grundon makes further virtual connections with three words by commenting on one of my Tweets “Artist Researcher Teacher” (see Figure 8.16). These are the three words

that Grundon responded with when commenting on one of my Tweets “The formation of experience and knowledge, a sum of parts that build a whole can be considered an assemblage” (see Figure 8.16). When thinking through virtual immersion in art teaching and artmaking, an assemblage of various modes of thinking and doing attracts, propels and detracts ways of being and becoming.



Figure 8.16: *The formation of experience...* the interaction between @art_assemblage and @JemmaGrundonArt, 2nd of June, 2014 screenshot retrieved from Twitter 13/10/2014 https://twitter.com/art_assemblage

Through the camera lens, I saw a fluid process as needles were guided by magnets and generated a messiness in the editing process. The sharpness of needles and the springy softness of the thread seem diametrically opposed in matter and the senses, but as in the artwork of Scott depicted on Kosofsky Sedgewick's (2003) book cover, the work of Ren Ri (visual news, 2014) and the research of Hays et al. (2015), various matter can be entangled as connected. Glass (1983, 2009) was repeating in the background while the symbiotic sensory experience of guiding and editing the thread on my computer contributed to the final experiment of this chapter (Figure 8.17).

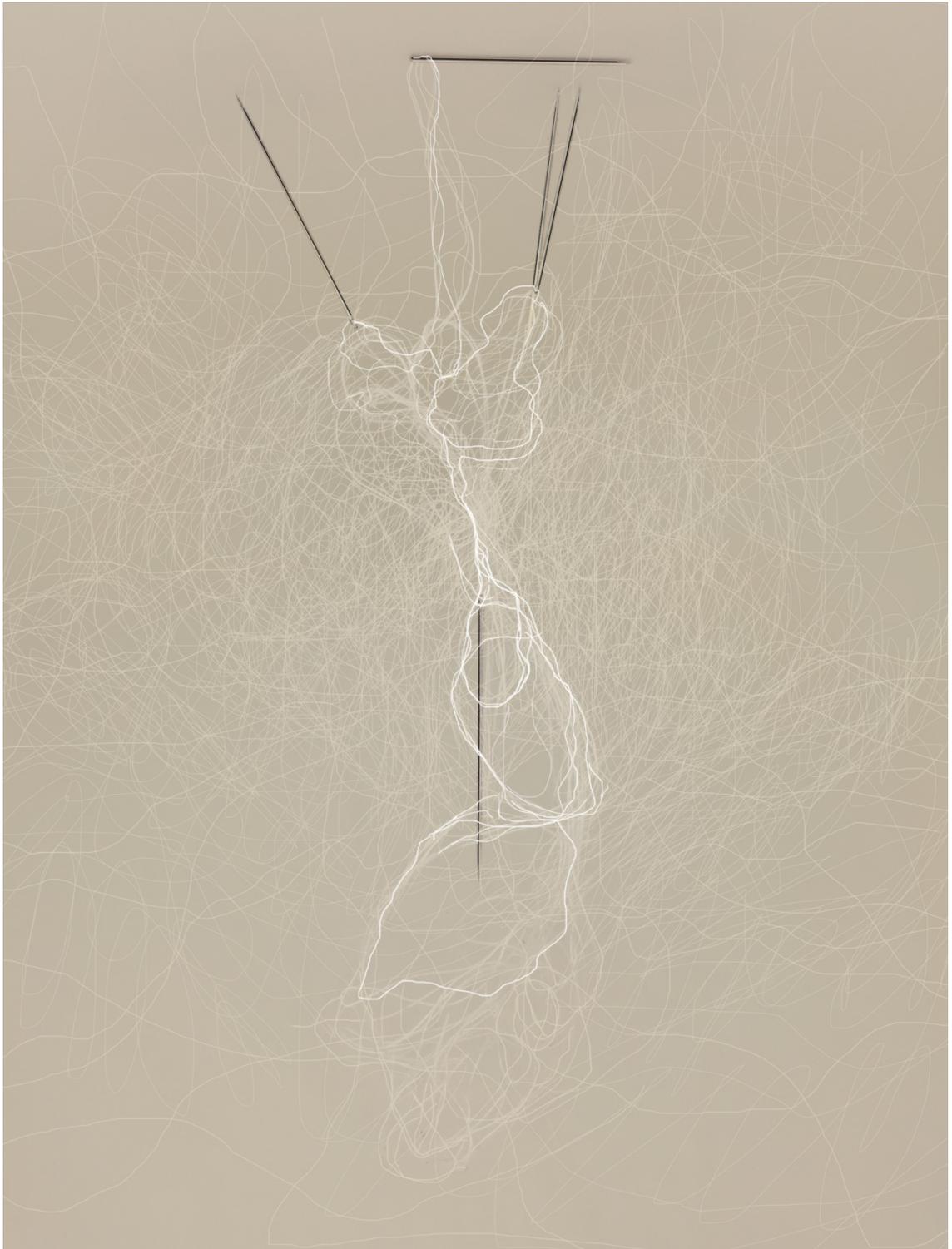


Figure 8.17: *Thread_7* by Kerry Power, 2018, detail of the continuous sculpture and digital drawing, *Thread*, 2018.

8.6. Conclusion

Intra-activity describes engagement that facilitates change and this chapter acknowledges intra-action as integral to virtuality and part of becoming (Barad, 2010). Becoming, as in diffraction describes culminative processes ascribing learning and understanding. My study of art educators and virtual ways of creating and learning art stirs possibilities of what virtuality is and might be.

Within virtual forums like Twitter, one may create a user page and label it 'art teacher' and the identification may attract other like-minded users to follow and interact. This is part of inhabiting a space that continues to grow and speak to others. However, the documentation of art educator process in this study helped frame what is important about online interactivity and attempted to push the direction of virtual intra-activity by addressing issues of representation, educator experience, artmaking, art learning and what virtuality might entail for the art educator. A Twitter user's page may be adorned with paint brushes or images of students' work which, apart from the label 'art teacher', provides evidence of one's role. However, the act of intra-acting in virtual fields of space provides opportunities for how art educators continue to create, learn and educate.

9. Conclusion



Figure 9.1: *Thinking with virtuality_1*, by Kerry Power, 2018, digital photo and drawing, a continuous artwork based on *Structure_1*, 2014.

Working with the artwork Structure_1 (see Figure 4.5) over and over again was like playing Glass (1983, 2009). His repetitive, manoeuvring music induced sensory ways of thinking. A sense of refuge followed, as my mood and concentration tuned into his ostinato The Grid (Glass, 1983, 2009). While creating artworks, certain musical pieces invoke a meditative space for me and persistent marks follow and time to mix colours. And when writing this thesis, 'interferences' such as art encounters and artworks invited spaces for thinking with virtuality. The broken down image of Structure_1

(Figure 4.5) *created in 2014, became a new space for drawing in 2018. The weaving of thread between digital devices, artwork, theory and analysis in this thesis evoked binding and expansion simultaneously.*

9.1. Introduction

In 2018, our handheld digital devices can act as connective tissue between the fleshiness of creating and connecting virtually with others. Our phones in particular, which seemed to be the preferred technology of teachers engaging with Twitter (Visser, Calvert Evering & Barret, 2014), can be virtual portals from which we carry and input musings, complaints, enquiry and artwork. Moreover, how we perceive our virtual interaction can be nebulous and indefinable and simultaneously, be experienced as direct and intimate. This is where the lines between private/public/intimacy/friend/foe/fact/fiction can blur. Social media systems (SMS) can become part of daily experience, as words, images and multimedia bounce through temporality and are forever virtually interned.

Virtuality in this thesis was used as a conceptual tool to challenge current and future art educator virtual intra-activity. To frame this idea, I introduced specific lightning rods to capture the internet buzz of the 1990's, namely the work of Plant (1998), Haraway (1991) and VNS Matrix (VNS Matrix & Barratt, 1994). These theorists and artists applied feminist perspectives on virtual habitation and possibility in the 1990's. VNS Matrix (VNS Matrix & Barratt, 1994) for example, propelled dialogue in the form of art activism claiming bodily ownership of the internet. Haraway's (1991) cyborg crystallised enmeshment with technology, as the body became technology, just as technology became the body:

The cyborg is resolutely committed to partiality, irony, intimacy, and perversity. It is oppositional, utopian, and completely without innocence. No longer structured by the polarity of public and private, the cyborg defines a technological polis based partly on a revolution of social relations in the *oikos*, the household (p. 151).

Haraway's (1991) cyborg serves as a testament to the usurping of absolute positions grounded in binaries like public and private space and human flesh and technology. It is a theoretical challenge to structures like the 'oikos' (Haraway, 1991). As Haraway (1991) names the 'oikos' a symbolic containment of resolute positions, her cyborg spurs these anchors with deliberate force and rebellion.

Haraway's (1991) cyborg conceptualised how the technologised human experience might play out. This human experience is argued in this thesis as one of cerebral enmeshment, as a digital phone is a human technology facilitator that connects and expands our experience in the world.

Sewing these ideas into how art educators might use virtuality in their artwork, their pedagogy and their conception of art was physical, analogous and a theoretical process (see Figure 9.2). I stitched the paper by changing the digital paintbrush size, sampling the colour and added a new layer. Hours went by and the stitches became messy and enhanced and detracted from the original structure shape (see Figure 9.3). The wiry nature of the digital thread softened the structure as it succumbed to the strokes of digital paint. The interweaving thread and concept merged gradually (see Figure 9.3).

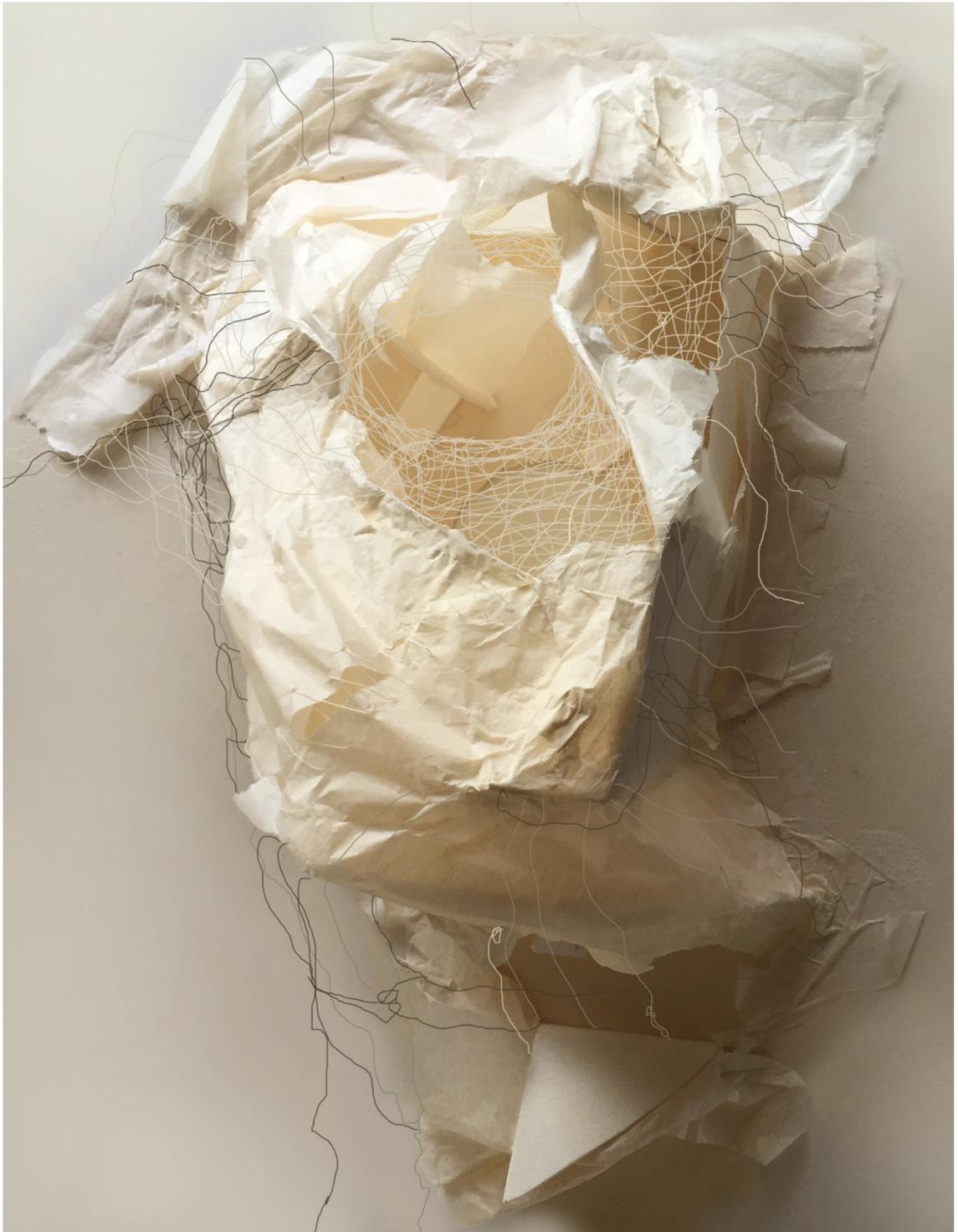


Figure 9.2: *Thinking with virtuality_2*, by Kerry Power, 2018, digital photo and drawing, a continuous artwork based on *Structure_1*, 2014.

While theorisations of fleshiness and technology and the challenge of feminist internet ownership provided an exciting view of what virtual interactivity might mean in the 1990's, there is a melancholic entanglement with these theorists and activists that I

would like to resolute in this conclusion. Their pioneer projections have not been realised in my view as decades of internet interaction has since passed. To clarify, their feminist perspectives were hopeful of a new virtual territory, one that jettisoned familiar patriarchal strongholds.

Gough and Gough (2016) postulate what being a post-human researcher might mean and in doing so, formulate the opinion that entering “into composition with other bodies” shifts “singularities of self perpetuated by neoliberal individualism” (p. 2). Further, enmeshment with the other identifies the importance of collective understandings and change. The cyborg draws on post-human demarcations of self (Gough & Gough, 2016), as the body is projected and changed by virtual intra-action.

Connection, creating and transmission has been explored in relation to the use of Twitter and beyond by art educators. The process of virtual immersion has been deliberated as one of moving and changing information in multiple ways throughout cavernous virtual hemispheres. It is the hope of this thesis that by thinking with virtuality, a significant and productive component of current and future art education will be challenged.

9.2. Complications in virtual research

In order to continue to challenge virtual art practice and pedagogy in research, I suggest there are many areas that need to be addressed. For example, private and public data interrelate profusely when thinking about virtual research ethics as discussed in chapter five and how readily available virtual data has become, including possible exploitation. This availability can be understood as being in the public domain, however,

conceptually, to those who generated online public data, the material may have generated through intimate conversation and informality (Driscoll & Gregg, 2010).

To address ethics in this thesis, I not only had to adhere to the Twitter Terms of Service (2014) but I also needed to maintain openness and clarity with potential participants, as their identities would be made apparent. The ways in which users converse and interact in SMS can be a problem when transposed in research with and without consent. Just because data is in the 'public domain,' it should be treated with the same ethical considerations we would apply when interviewing participants sitting across a table.

I not only addressed ethical concerns in virtual research as being connected to how we would treat participants in the physical realm, but I continued to draw on Barad's (2007) diffractive model to conceptualise the fragility and magnitude of virtual space. Just as light may bounce around and through matter, it can energise and transform matter. For example, I used diffractive analysis to work through difference as an encompassing agency (Barad, 2007). Enmeshment conceptualises how we make meaning by acknowledging difference and interrelation and therefore, the fleshiness or humanness of data in virtual research, needs further recognition and theorisation.

9.3. Thesis design

Initially, when designing this research project in 2013 to study art educators' on Twitter, I found that my thinking centred on perception and how art educators might represent and communicate art teaching in this virtual forum. This position was based on my previous experience of using Twitter and my thinking about external perceptions of and about art educators. I wondered how art educators negotiated this SMS as a means to

delegate positions on art education. I named the research site on Twitter *ArtTeacherAssemblage* (2014) in order to connect various constitutions of art educator practice and performance on Twitter. However, proposing that a ‘group’ of art educators could be represented or represent is counterbalanced by my admission throughout this thesis that this was a fundamental flaw in my initial research design.

I wanted to take small samples of interactivity on Twitter to resolute significance of working publically and virtually as an art educator. However, this position has been troubled throughout this thesis, as maps were pointed out as folly in chapter eight by elaborating Baudrillard’s (2001) symbolic mapmakers in “*Simulacra and Simulations*” (pp. 169-85). His (Baudrillard, 2001) essay on what is ‘real’ as being surpassed by the symbolic or the representational was built on questions of what is virtual and real in this study. For example, when working closely with Lewis’ Tweets in chapter six: *Tweeting affect*, I was able to dismantle one of the initial maps of this study called *Twitter trail* (see Figure 6.1) in the process. It was a ‘map’ in front of my computer screen that I assembled using string, paper and pencil. The map was eventually taken down and as the string of words lay down on my desktop, I took photos of the different combinations of words. These photos include images of single words such as *implies* (see Figure 6.2) which reiterated how meaning changes intentionally and unintentionally, particularly from the initial artwork *Twitter trail* (Figure 6.1). These words became significant as the project progressed as ambiguity found in art objects, symbolic representations and written language was recognised.

MacLure (2013) argues that “materialist research must involve *non- or post-representational* thought and methods, drawing on contemporary materialist theories that reject the hierarchical logic of representation” (p. 658). The representation of art

educators did not unfold in my study but rather, the ability to counter what representation calls for in research. Representation on Twitter is counterproductive to what the program affords, as it a continuous, moving and malleable means to communicate. As Bozalek and Zembylas (2016) aptly frame, “practices of ‘reflexivity,’ which are seen to be grounded in a representational paradigm” are challenged as not critical at all (p. 1). It is not possible to objectively stand aside from one’s experience to analyse it and therefore does not produce the knowledge that reflexivity calls for. Bozalek and Zembylas (2016) turn to the work of Barad to situate diffraction as a “*relational ontology*, an ongoing process in which matter and meaning are co-constituted” (p. 2). Encountering difference or interference and the effects of such an encounter produces intra-action (Bozelek & Zembylas, 2016).

Likewise, positions on the ‘art teacher’ first sought in this thesis, were challenged. As I ripped through *Structure_1* (see Figure 4.5) to look inside and then recompose the image in figure 9.1, I was physically and cerebrally intra-acting art practice and research process. As studied in 2014, Twitter was a program that encouraged Tweets, reTweets, symbolic responses, following, being followed and comments in art practice and art education. The virtual space and the co-habitation afforded on Twitter and beyond perpetuated shifting positions. This shifting was presented as an exciting prospect and can provide fodder for thinking art-making and art education in virtual spaces. Rather, than finite positions on art practice and art analysis for example, continual process in virtual space can be used as a metaphor for embracing change. Therefore Twitter, which was deemed an unstable communicative forum, facilitated change *and* art educator agency in this study.

As has been deliberated throughout this thesis, binaries are destabilised and enmeshed by working through communicative positions of art educators' on Twitter and beyond. As Kosofsky Sedgwick (2003) professes "it's far easier to deprecate the confounding, tendentious effects of binary modes of thinking and to expose their often stultifying perseveration-than it is to articulate or model other structures of thought" (p.2). To speak to this challenge, I worked with affect theory and diffraction to see through enduring oppositions such as physical and virtual space, public versus private space and find grey areas. These areas are concerning in education, as privacy and safety in all stages of education temper at ethical dilemmas (Carpenter and Krutka, 2014). However, grey areas can open discovery by creating artwork as a research process to unhinge what may be wedged in-between, or what might be definitively apparent about a subject (Springgay et al., 2008).

9.4. Intra-acting throughout this thesis

Barad (2007) describes agency as "a matter of intra-acting; it is an enactment, not something that someone or something has" (p. 178). She (Barad, 2007) further clarifies movement in agency as 'being' or 'doing.' With this clarification, I understand agency as intra-acting, as it is a constantly moving process. Intra-activity was the generative nature of this study and supported analysis in this thesis. Barad (2007) clarifies intra-activity as enabling difference and recognising it at the same time. Rather than resolute the individual with pre-existing differences (as one from the other), intra-acting with the other provides a countenance as interaction occurs with all forms of matter for it to 'exist' (Barad, 2007). Therefore, once applied to the interaction studied on Twitter, including the differences or junctures that I clarified regarding art educators communicative positions, I provided a scope from which to understand opportunities or

possibilities of interest when applied to the value of this study. My participation in the process of creating data diversified as I adopted this understanding and applied my account of becoming involved as an observer, participant and art educator throughout the thesis.

Constant replication of ideas and formulations that can occur on Twitter, to me, were initially analogised in the introduction chapter, as the repetitive soundtrack by Glass (1983, 2009) was used to introduce complex, sensory engagement with virtual space. The value of analogising virtual space was to establish the complexity of intra-acting in virtual space. Art educators and how they used the Twitter program were of particular concern in this thesis; however, it was necessary to think with virtuality as a concept and to challenge what virtuality might mean in art-making and in art education.

9.5. Transmission

Just as Barad (2007) depicts diffraction as a metaphoric model of light bouncing over, under and through matter, my process of creating artwork and surfacing art encounters alongside art educators on Twitter was a means to demonstrate transmission. This signalled affectual process as demonstrating the complexity of experience, feeling and ideas when communicating online. When applied, affect theory elaborates the dynamic properties that Twitter affords. Accessing Twitter was deemed part of a complex intra-active process, which initialised creating and conceptualising art. When affect theory was applied to art educators' use of Twitter and further to communicating outside or beyond Twitter, it purported the intricacies of learning and transmitting ideas virtually. This was considered significant in the study, for example, as my artwork (see *Structure_1* Figure 4.5) in my view, was enmeshed with the work of Jemma Grundon

(see Figure 7.7) in chapter seven: *Diffracting art educators on Twitter and beyond*. The diffractive metaphor and theory was applied to my experience as I recalled becoming an art educator as intra-active art process. Diffractive analysis drew lines into the project, enabling light to illuminate possible ways of knowing and learning virtually.

9.6. Tweeting educators

The literature surrounding educators using Twitter provided insight into the usefulness of virtual connectivity (Carpenter & Krutka, 2014; Davis, 2015; Gruzd, Wellman & Takhteyev, 2011; Marwick, 2013; McPherson, Budge, & Lemon, 2015; Visser, Calvert Evering & Barret, 2014). Interaction with this SMS seemed to provide current and individualised ways of supporting professional development. Further to this, many authors found that engaging with others through virtual means encouraged relationships to form and therefore traverse geographical and physical boundaries in ways that were not previously available. My study worked through literature that sought Twitter as a means to enhance student engagement, educator professional learning and networking. However, privacy and safety issues have impeded progress toward student and educator engagement on Twitter (Carpenter and Krutka, 2014). These issues have not deterred educator peer learning, particularly in regard to informal sourcing and networking (McPherson, Budge, & Lemon, 2015). It was clear throughout a review of the literature surrounding educators and students' use of Twitter, that there were different uses of the program and conflicting positions on Twitter's usefulness in education. As Twitter is still evolving in use and user numbers, further research regarding educators' negotiation of SMS like Twitter and future incarnations needs to be addressed.

9.6.1. Tweeting art educators.

It was recognised throughout the course of this study, that continual renegotiation of meaning-making on Twitter was applied to pedagogical process, creating artwork and documentation. The scrutiny of these positions afforded an awakening of art encounters and meaning-making in my work and a potential framing of what might be useful and meaningful about virtuality.

What I learnt throughout the process of working with and alongside art educators was to value the process of meaning-making online. There is a particular conversation regarding work that surrounds artistic practice in education in virtual space. I regard it as a negotiation difficult to categorise and formulate as a pedagogical approach.

Worthwhile art pedagogy in my view, embraces instability and problems, it relies on particular negotiations that envelope the viewer and the art object/s as bound by social, political, historical and cultural forces. However, this explanation does not set art education apart from other curricular regarding this negotiation, but rather, it suggests how these forces are transposed when creating and engaging with art objects.

Further, the means by which we enter into virtual spaces and command communication about artistic process is complicated by unfathomable delineations that follow performative acts and multiple meanings. I chose to examine art educators' use of Twitter as a vehicle to examine intra-active process in a public forum and produced affectual and diffractive negotiations of art, meaning-making and virtual entanglement.

My understanding of the ongoing acts, enactments and encounters on Twitter are conceptual and relational to meaning-making. Encounters on Twitter can be subject

related, which in turn characterises groups and ideas, which in turn produce continuums of unpredictable events. I celebrate unpredictability in this thesis to offer what I perceive as important regarding virtual connections, particularly on SMS. In the data analysis chapters, I slowed Twitter down to screenshots of participants' data as if there was a pause button on virtual interactivity. Pressing the pause button magnified my response and spoke to the significance of the study, which highlighted art educator use of Twitter as challenging options for online considerations, particularly problems of representation, meaning making and opening interactive and intra-active educational space.

9.7. Limitations

This study contains limitations and problems that plague virtual research practice as I pursued challenges for art educators documenting and communicating online. I recognise that this study focused on a small portion of users on Twitter and how their use and my own was applied as knowledge of art educators currently on Twitter.

Regarding how I addressed the initial research questions:

1. How do educators, students and educational institutions make use of Twitter and what sorts of complexities does this virtual communication afford?
2. How do art educators create art and practice art education using Twitter?
3. How can affect theory and diffraction trouble and enable thinking virtuality as art practice and art education?

I did not answer these questions in the form of concrete outcomes, but rather, as problems that trouble enmeshment in virtual space regarding art, artmaking and art

educational practice. Creating artworks and connecting art encounters as generative processes provided data and analysis from a researcher perspective. Therefore, it is my recommendation that providing more comprehensive interactive data from participants is a way forward to examine art educator virtual communications.

9.8. Art educator virtuality: recommendations

As previously discussed in this thesis, participation in the Twitter data collection process was done predominantly by United States citizens and many of the art educators were academics. For this reason amongst many, the generalisability of Twitter data was not conclusive. It would have been preferable to gain participation from art educators from all hemispheres and in turn, invite diverse art educator perspectives. This is a significant recommendation due to the need for diverse cultural perspectives, diverse funding access and access to technology enabling virtual participation in art education. Further, as the time frame for data collection was a period of six months in 2014, wider participation may have occurred if this time period was increased. Many art educators followed the site *ArtTeacherAssemblage* (2014) after the data collection period had ended, however, it is not conclusive whether they may have agreed to be included in the study as outlined in the explanatory statement (see Appendix B).

Further, due to the discussion outlined in chapter five: *Ethics and virtual research*, the theorisation of what researchers should consider when attempting to access virtual data and the subsequent implications need further investigation. It was also evident in the literature review that many educators encountered significant issues when communicating online and the premise that any virtual participation by educators or students should be a foregone conclusion lacks academic rigour and theorisation.

As this thesis thinks with virtuality by creating artworks, analysing the interaction of art educators on Twitter and beyond and conceptualising art encounters from various access points, I encourage further investigation into this matter. Art education is a continually changing and developing means of communicating artistic process and learning. Contemporary art practices move and shape in reactionary and pro-active ways. Containment in any physical educational environment is not possible and therefore, art educators have an opportunity to harness virtuality as not just part of pedagogical practice, but as facilitating intra-active artistic learning and practice.

9.9. Conclusion

My relationship with participants' data in this study has been one of enmeshment as positions on virtual art educator process are actualised in art and analysis, broadly and specifically. While writing this conclusion, I produced the artworks *Thinking with virtuality_1* (see Figure 9.1) *Thinking with virtuality_2* (see Figure 9.2) and *Thinking with virtuality_3* (see Figure 9.3). Judith Scott wrapped objects with string to create change in the form of smooth, enveloping sculptures (see chapter four: *Theoretical Framework*) and I wove threads throughout the Twitter 'structure' (see Figure 4.5) to bind, release and change the 'original' (Figure 9.1). Each artwork hangs in testament to thinking with virtuality, as the structures and maps that initially defined this study were dismantled.

The shadows and highlights in figure 9.3 define an imagined or virtual space in a two-dimensional digital photo. The 'reality' of *Sculpture_1* (see Figure 4.5) became embedded in a digitally generated entanglement over the course of this thesis.



Figure 9.3: *Thinking with virtuality_3*, by Kerry Power, 2018, digital photo and drawing, a continuous artwork based on *Structure_1*, 2014.

Moreover, a structure that was modelled on Twitter to represent what art educators did and do in the SMS was ultimately undone to generate possibilities of artistic process and art pedagogy in virtual contexts. My intra-activity was an intricate process of

communicating with ideas from various virtual, sensory and artistic ports to generate thinking with virtuality. This process has not concluded how affect theory and diffraction trouble and enable thinking virtuality as art practice and in art education but stimulated possibilities for thinking virtuality as art practice and in art education.

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Appendices

Appendix A

Email correspondence between Kerry Power and Sofi Hersher, Brand Marketing,
Twitter Inc., dated 25/03/14

Appendix B

Explanatory statement: 'Art teacher' as assemblage, dated 01/05/2014

Appendix A

Email correspondence between Kerry Power and Sofi Hersher, Brand Marketing,

Twitter Inc., dated 25/03/14

From: [REDACTED] Kerry Frances Power

To:

Date: Tue, 25 Mar 2014 14:56:34 +1100

Subject: Fwd: Guidelines for using Tweets in broadcast

----- Forwarded message -----

From: Kerry Frances Power [REDACTED]

Date: 25 March 2014 14:46

Subject: Guidelines for using Tweets in broadcast

To: [REDACTED]

Hello,

My name is Kerry Power and I am a PhD education student at Monash University (Australia) attempting to research the online interactions of art teachers using Twitter. I have read your "Guidelines for using Tweets in broadcast" Retrieved March 25th, 2014 from <https://support.twitter.com/articles/114233> and you state that to broadcast tweets the requirements are:

- "Include the Twitter bird www.twitter.com/logo in close proximity to the Tweets for the duration that Tweets appear in your broadcast.
- Include the user's name and Twitter handle (@username) with each Tweet.
- Use the full text of the Tweet. You may edit or revise Tweet text only as necessary due to technical or medium limitations (e.g., removing hyperlinks).
- Make sure that the Twitter logo or bird icon is a reasonable size in relation to the content. A little taller than a single line of text is a good guideline."

Retrieved March 25th, 2014 from <https://support.twitter.com/articles/114233>

I will be displaying screen shots of Tweets, including user generated imagery, multimedia and hyperlinks in a printed research thesis regarding the online interactions of art teachers. Could you please confirm if this is acceptable according to your broadcast guidelines.

Regards,

Kerry Power

From: 

To:

Date: Wed, 26 Mar 2014 11:33:54 +1100

Subject: Re: Guidelines for using Tweets in broadcast

Hi Kerry,

If you are in line with the policies in our Help Center and at twitter.com/logo, you should be fine to proceed. Please note that we advise that no user should be surprised by use of their content.

Best,

Sofi Hersher

Brand Marketing

Twitter, Inc.

Follow me: @sof

Appendix B

**01/05/2014****EXPLANATORY STATEMENT****Project: 'Art teacher' as assemblage****CF14/1198 - 2014000533****This information sheet is for you to read first and retain before deciding to participate.**

My name is Kerry Power and I am conducting a research project with Dr. Iris Duhn, a senior lecturer in the Faculty of Education, towards a PhD (education) at Monash University. The following information is to clarify the research project and the options you have to opt in or opt out as a voluntary research participant. Please note: participants must be 18 years of age or over.

This study aims to examine the representation of art teachers in the social media forum, Twitter. I am conducting this research to piece together the representation of the 'art teacher' which includes the interaction of art teachers in Twitter and the Tweets that are written about art teachers and art teaching. The means with which I will represent these findings will include screenshots of Tweets from followers of the Twitter account: http://twitter.com/art_assemblage; profile name: "ArtTeacherAssemblage" over a period of six months. The contribution to knowledge would be a critical account of how the representation of the 'art teacher' is used and created in virtual environments.

Participation in this study contains low level, if any foreseeable risks. It may reveal potentially identifying information in the form of Twitter user account details, avatars, embedded multimedia, links and Tweets. If you choose to participate, your consent will be in the form of following the Twitter account: http://twitter.com/art_assemblage; profile name: "ArtTeacherAssemblage". I will adhere to Twitter's broadcasting policy: <https://support.twitter.com/articles/114233>. However, if participating in this research project causes any distress you are free to contact the executive officer at Monash University Human Research Ethics (details listed below). Further, this study is going to be conducted from the 1st of May 2014 until the 31st of October 2014. If you decided to withdraw, you need to unfollow the Twitter user account: http://twitter.com/art_assemblage; profile name: "ArtTeacherAssemblage" before the 31st of October 2014. I will check all Twitter followers of the account: http://twitter.com/art_assemblage; profile name: "ArtTeacherAssemblage" by that date. Any data that has been collected from followers that have chosen to unfollow the named account will be removed from the project and deleted. Further, any follower of http://twitter.com/art_assemblage; profile name: "ArtTeacherAssemblage" that produces offensive behaviour or is using their Twitter account solely for commercial purposes, will be excluded from the project.

The storage of data will follow Monash University regulations and will be kept in one password protected computer and one password protected data storage unit for 5 years. The data collected for this research project may be used for other purposes which can include presentations, publications and education.

If you decide to participate and would like to be informed of the research findings, please email Kerry Power at [REDACTED], provide your Twitter username for verification and a summary report will be sent to you. The findings will be available until the 31 of January 2015.

<p>For any questions regarding this study, please contact the Chief Investigator:</p>	<p>For any concerns or complaints regarding the above mentioned research CF14/1198 - 2014000533, please contact:</p>
<p>Chief Investigator: Dr. Iris Duhn Department of Early Childhood and Development Phone: email: [REDACTED]</p>	<p>Executive Officer Monash University Human Research Ethics Committee (MUHREC) Building 3e Room 111 Research Office Monash University VIC 3800 [REDACTED]</p>

Thank you,
 Kerry Power