

Deleuze and Big Data:

**How Facebook's Use of Big Data Analytics Shifts Legal
Personhood, Privacy and Commercial Expression**

By

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Abstract

This thesis explores the application of Deleuze to the use of big data analytics by Facebook to conceptualize the fusion between the physical and digital world. The fusion of technology and everyday life revolves around a debate between technological determinism and instrumentalism. This thesis begins by examining the operation of Facebook as a web 2.0 service and applies a Deleuzian discourse to explore Facebook as an assemblage of control. This assemblage is framed as a soft form of technological determinism in the control of a mass aggregated population of profiles. Facebook's profiles are representative of Deleuze's dividual, a replicated image of the self held in data. The combination of the use of data based surveillance and the data feedback loop in retrieving, analyzing and manipulating these profiles leads to a series of legal challenges. This thesis seeks to provide a framework for understanding these challenges in law.

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Table of Contents

Abstract	i
Acknowledgements	ii
Table of Contents	iii
Introduction	1
Instrumental Theory versus Technological Determinism	2
Surveillance in the 21 st Century	5
Signposting the Narrative	9
Chapter 1: Introducing Facebook’s Big Data Paradigm	14
What is Facebook?	14
Data as Flows of Technological Determinism	16
Facebook’s use of Data	20
Data Based Surveillance within Facebook	22
Exploring Dataveillance with Foucault	24
Chapter 2: A Deleuzian Approach	31
Introducing Deleuze	31
Starting with Jurisprudence	32
Assemblages and the Process of <i>Becoming</i>	33
Desiring Machines? The Facebook Assemblage	37
Societies of Control	39
The Facebook Assemblage of Control	46
In Search of a New Model of Surveillance	48
The Legal Problems	52
Outlining and Validating the Approach	55
Chapter 3: Dividual, Legal or Non-Legal Person	57
Framing the Dividual	57
The Concept of Legal Person	60
A New Concept: The <i>Contextual</i> Person	69
Summarizing the Crises of Legal Personhood	74

Chapter 4: Decentralizing Privacy	77
The Collapse of Enclosures	77
Unpacking Privacy	80
A New Privacy Framework	82
Conceptualizing the Need for Privacy	87
Privacy in the 21 st Century	91
Chapter 5: Commercial Expression and the Rational Actor	93
Modulation's Focus	93
The Dividual and Affect	96
Validating the Power of Priming	105
The Crisis of Economic Choice in Control	109
Conclusion	113
Data is Changing the Game	113
<i>Becoming Data?</i>	116
Final Thoughts	120
Bibliography	122

Introduction

Technological innovation has always been a fascination for me in analyzing where we have come from and where we are going as a global society. Technological innovations have also brought with them a diverse range of emotions. I find technological innovations to be exciting as they grant creators the ability to push the boundaries of technology and unimaginable creativity. This is closely associated with a feeling of happiness, to own and operate these new technologies as they provide us with new experiences. Like others I feel a need to be eager, as corporations tease their latest innovations and creations. With these positive emotions have also come negative emotions that introduce the need for critical thought regarding the implications of new technologies. I have been fearful about the possible implications of technological advancement and the capacity for insecurity about how safe these new technologies are. As every year passes there is a sense of hopelessness at the sheer scale and grandeur of new technologies emerging at such unprecedented rates.

In 2012, the average cell phone had more computing power than the Apollo 11 spacecraft that would put humans on the moon in 1969 (Gibbs, 2012). Imagine where technological innovation will lead us in 43 years? Within the past few decades we have experienced the rise of the computer, the television from black and white to ultra high definition, the portable cassette player to the fully digital portable media device and the arcade machine to the dedicated home game console. The environment of technological innovation has evolved to new heights where modern day innovators would appear as magicians of creativity to past generations.

This rapid growth in technology has led to a simultaneous development in the sociology of technology. In the past decade we have seen a rise in the creation of web 2.0 content. These

are web services, applications or sites that present user generated content instead of content created by the owner. One of the most popular and widely used web 2.0 services is Facebook, created in 2004 by Mark Zuckerberg while he was studying computer science at Harvard University (Facebook, 2015a). Facebook is a new social environment for interaction being held in a digital and virtual world outside of the natural physical world. This new technological ecology has created a new online environment whereby users can interact with each other in a virtual community.

Instrumental Theory versus Technological Determinism

Nigel Thrift (2005) explores the shift in the spatial background of being as transitioning into a more complex and multi-layered intelligence through an attenuation of the natural and technological world. Thrift advocates that the biological and the technical are interlocked in a way that is biologically determined (467-8). Due to the recent rise in technological innovation, Thrift notes that the tools (things that are used by the human) are beginning to separate themselves from the domain of the human to become independent. It is within the distributed networks that these modern tools are gaining greater capacity to influence bodies in their coming and going (468). As technologies increase in complexity, Thrift sees this as technology taking on more adaptive features to communicate and interact leading to new knowledge that is migrating into software that informs new environments. These new environments are converging with the bare natural world to inform a new reality of an informed materiality whereby the conscious life of the human spatiality is subjected not only by the physical environment, but also by the array of biodigital politics (469-472). As a result, life becomes the fusion of the

biological, technological and cultural, creating situations where the playing out of events may be predetermined by technologies (472-3).

Thrift introduces a new spatial dimension of the affect that technology has in fusing together with the physical world. As humans, we tend to perceive and assume our existence is perceived of in one world. We fail to realize the realm of different worlds of other animals and technologies, all of which are occupying the same space as Thrift is attempting to show us. The purpose of this thesis is to explore and provide a theoretical contribution to the fusion of modern technology in search of a framework whereby we can understand the crises law will face in the spatial fusion of modern technology and the physical world.

It is important to position Thrift's approach in relation to the theories on instrumentalism and determinism. Technological determinism argues that technology itself is an autonomous power that influences and changes humans or societal values outside of human control (Ess 2002, 231). Technological instrumentalism takes the opposite stance in arguing that technology is absent of value and therefore neutral in morality thus making it incapable of influencing the ethical or cultural values of societies (McLuhan, 1965). Thrift is largely ascribing to the notion of technological soft determinism. Soft determinism is an approach marked by arguing that technological development is engrained in the socio-political-economic sphere with the capacity to influence actions and relationships, but simultaneously accepts that even though past technologies shape the present, individuals still can exert control over them (Cockfield 2010, 6). While Cockfield addresses concern for accepting the notion of determinism, big data and its technological influence in analytics is early in its existence. At this point we are not fully aware of the implications and functions of this technology to reject determinism.

The introduction of web 2.0 services like Facebook in creating a new environment that is founded on an interaction between people and technology in a communal sense inherently brings with it a debate regarding determinism and instrumentalism. Thrift's work in accepting that humans influence technology and technology influences humans opens the door to seeing new interactions occurring at both levels and this occurrence is not random. Thrift (2005, 474) recognizes his influences in his conclusion by referencing Deleuze as a key inspiration. The creation of web 2.0 services like Facebook can be understood as an assemblage, a Deleuzian concept that understands the coming together of elements to form a heterogeneous whole (Macgregor Wise 2011,91) in this case the Facebook environment. Assemblages are not pre-determined or based on pre-conceived strata and neither are they random but they lay a claim to a territory (like Facebook) to which there is a contingency to these elements. Similar to Thrift's soft determinism, new territories and spaces understood through Deleuze provide an analysis to the coming together of structural space and the interactions in-between technology and bodies.

The choice to focus on Facebook as a case study to examine the legal issues involved in the usage of big data in web 2.0 services was made for the following reasons. Facebook's user generated content is unlike other web 2.0 services in that it is geared at the accurate representation of the person. Other services like YouTube or Twitter reward users for creativity in gaining reputation vis-à-vis subscribers or followers which leads to the representation of the person being biased in favour of this reputation. Facebook seeks an accurate representation of the person through the input of identifiers (names, employment, friends etc.) and encourages the sharing of these identifiers between users. This accuracy in terms of representation allows for the creation of a digital profile that more aptly represents the person than other web 2.0 services and therefore surpasses a threshold in the ability to control. That threshold being the quality and

accuracy of the data that is being extracted from the body. Facebook further amplifies the legal issues this thesis investigates because of their usage of the data they retrieve. Facebook treats data as a commodity that can be sold and used to influence the commercial expression of private corporations. Additionally, Facebook is deeply rooted in connecting as many other web 2.0 services and by designing applications for a wide breadth of devices, all of which are seeking to invade the remaining private spheres of contemporary society. Through this examination of Facebook, this thesis can help to explore issues in other web 2.0 services and other institutions seeking to use big data analytics.

Surveillance in the 21st Century

George Orwell wrote in *Nineteen Eighty Four* (2008) “if you want to keep a secret, you must also hide it from yourself. You must know all the while that it is there, but until it is needed you must never let it emerge into your consciousness in any shape that could be given a name (283).” Orwell’s work is nearly synonymous with negative emotions toward technological innovations stemming from fear and insecurity. While that fear and insecurity may be the result of venturing into new technological environments of the unknown, it may also be representative of the fear of our current information society. This Orwellian quote represents a deep fundamental problem with the operation of today’s information society. Orwell’s quote implies that in order to maintain control over something that is private such as a secret it must remain hidden. Even from yourself in so far as that you can never become aware of its existence to the point it (being the secret) can be named which is to suggest that it can become something that is quantifiable or qualifiable. But, why should one be afraid or insecure of our own thoughts, which in today’s society we readily share on web 2.0 services. The answer is simple but as will be

shown throughout this thesis that answer represents a cog of an overwhelming control scheme, that is data.

The ability to transform the physical world into data that could be stored in a digital format represents the technological converging with everyday life. One of the fundamental elements of our information society is the capacity to record and hold information in data to be analyzed and utilized. In recent years we have now uncovered a new superior capacity to analyze and utilize what is known as big data. Big data is data that is high in volume, high in in velocity and high in variety (Kitchin 2014). Orwell's depiction reveals that there is a tension between avoiding the "Big Brother" that is attempting to analyze and record you, which in today's society is represented by your digital data and large corporations. In order to ground this issue, this thesis seeks to focus upon Facebook as a corporation which relies on user data to survive. By transforming the physical world into digital format, Facebook created a new environment with new knowledge of analyzable data that was based on the everyday lives of people. The physical world is represented by the pure physical existence of that which is perceived and exists in the tangible world that surrounds bodies. It is separate from the intangible world of the digital format that is comprised of binary 1's and 0's which are absent of a physical presence. The Facebook service encourages users to share elements of their lives through pictures, videos, posts and sharing of information. The synergy of the physical and technological world become converged into an intertwined world whereby Facebook interacts with the natural person in the physical and the natural person interacts with Facebook in the digital world. Events can simultaneously exist within the planes of existence of both worlds as they have become one unique and fluid environment. For example, you could be attending your favourite artist's concert, taking pictures on your mobile device and uploading them to Facebook at the same time. Your existence is

recorded digitally and lived naturally in this same instance! By separating the physical and digital world does not mean that they exist in parallel to each other. Rather this separation is being conducted so that they can be treated as heuristic tools for comparison and examination throughout this thesis. In the conclusion, I will re-address the existence between the physical and the digital world.

As the playing out of these different planes of existence interact with each other, your personal data is aggregated into a digital profile. Haggerty and Ericson (2000) use the term data doubles and Ertzscheid (2009) uses the concept of digital identity to describe the existence of a digital version of the self. This digital self is generally accepted to be the aggregated form of data that has been extracted from your interactions in both the lived and digital world and is held solely in a data format (Haggerty and Ericson 2000). The digital self is part of a larger systemic database of many profiles that are analyzed, tested and are always growing in capacity. This digital self will act as a tool between the lived self and another entity whether corporate or government, allowing for a communicative relationship between the two through this digital profile. As Thrift (2005) explains, the power of technology to become independent and adaptive leads to this informed materiality. Our material existence is simultaneously being informed by another world and this thesis seeks to explore that influence through the convergence of Facebook and everyday life. This is done through a process known as dataveillance in which the controlling entity, the one whom possess digital information regarding a person, can use the knowledge gained from that information to influence the lived self (Clarke 1988). Facebook actively engages in this process to not only sell your data but to empower advertisers to sell to you or influence you to buy their products and services (Stone 2010).

To analyze the crisis law might face in the fusion between Facebook's usage of big data

through datavelliance in everyday life through the creation of a new territory, I chose to focus on Deleuze. This decision was made because of Deleuze's work on the notion of societies of control as it moves beyond the mere physical existence of the metaphysical by understanding that our existence may take on different forms. Datavelliance as a form of surveillance maps well onto Foucault's leading theories on the disciplinary society and the panopticon. However, Foucault's model of the disciplinary society sees disciplinary power and normalization as silent on the issue of digital doubles. Foucault saw the creation of territories as rigid and not as fluid contingencies and this contention leads to an issue in the synthesis of technology and bodies within the operation of merging the physical and the digital. This underpins the notion of an informed materiality of existence, what exists in the physical must simultaneously exist in the virtual. Theoretically, rigid enclosures are not suitable to analyze the fluid dynamic of interaction occurring between these two intertwined planes of existence. Although Foucault's contributions are nonetheless helpful in guiding the research.

To solve this dilemma, the work of Gilles Deleuze is an essential solution to understanding the operation of big data surveillance between Facebook and its users. One of Deleuze's later works, "Postscript on the Societies of Control" (1992) helps to explain how the fluidity of the modern world and the advent of technology has pushed us beyond the disciplinary society of Foucault. Deleuze introduces us to understanding the transition of existence for people is to be known as "dividuals". The dividual concept as will be shown helps to inform the operation of datavelliance. Furthermore, by relying on Deleuze's conception of the societies of control replacing the disciplinary society, helps frame in the convergence of Facebook and everyday life. Through Deleuze's larger theoretical contributions and his use of creative concepts

allows for a new perspective to analyze and conceptualize how the introduction of control societies through the fusion of technology and the natural world can create new legal crises.

The problems in law this paper seeks to address are the result of a common issue. That issue being the reliance on the use of universal principles that attempt to consistently argue that any case in law to become a legal issue, needs to conform to the conditions of the law. However, Deleuze's conception of a fluid existence within the societies of control renders a reliance on the universal to become an overly narrow approach that restricts the creativity of law in understanding multi-dimensional issues. For instance, expanding our understanding of our existence as being both a digital and physical creation. This thesis favours fluidity in interpreting law and the case because it reverses the constraints placed upon law as a rigid enclosure of universals to allow for creativity in the interpretation of legal problems. To summarize the purpose of this thesis is to provide a legal framework for analyzing and beginning to conceptualize the potential crises law will face as the societies of control begin to enter into our world through a case study of Facebook.

Signposting the Narrative

In chapter one, I introduce Facebook as a web 2.0 service and begin to frame their usage of big data. The debate on technological determinism and technological instrumentalism is applied to data so that we can begin to understand the information that is informing the knowledge pyramid of today. This chapter will explore the purpose of big data analytics and seek to apply Foucault's model of panopticism, disciplinary society and confession to aid in explaining the relationship between Facebook and their users. This is achieved through the introduction of Esposti's (2014) approach to understanding data based surveillance occurring in a

feedback loop that continually cycles in a constant growth in the ability to analyze more data.

This comparison to Foucault's model of normalizing behaviour and disciplinary society leads to a revelation that power within the big data analytics is centralized in the algorithm. As the algorithm is a technological advancement it begins to shift the determinism/instrumentalism divide.

In chapter two, I explore Deleuze's theories and concepts by focusing on his approach to jurisprudence. Deleuze does not stratify or hierarchize his concepts and leaves them very open to interpretation and creativity, even shuffling around their uses in relation to the text. This leads to an introduction of Deleuzian thought that while not apparent, follows a historical perspective starting with his earlier work for the most part. The reason for this is that it best compliments Deleuze's creativity in his concepts as they grew in their introduction and relation to older and previously discussed concepts. This chapter seeks to set forth a framework from which we can begin to think like Deleuzians by framing Deleuze within law and society. This chapter will rely on Deleuze and his work on the societies of control to explore a new method of understanding surveillance through the dividual. After establishing the operation of big data based surveillance within the societies of control, the crises in law will be introduced that are specific to the assemblage of the Facebook territory. These crises in law being issues of legal personhood relating to Deleuze's conception of the dividual and the dividual as an assemblage of the body. Further to this discussion, the issue of how big data has surpassed a threshold and the rhizomatic growth of new technologies seek to invade the private sphere shift the legal right to privacy into crisis. The final legal issue exposed through Deleuze is the problem of commercial expression acting as a form of control through modulation based on the power of modulation to cut into the flows of desire that are comprised of data.

Chapter three focuses on Deleuze's concept of the dividual, which is specific to the societies of control and is represented by the Facebook digital profile. The implications of the dividual draws in a unique crisis in law as to our understanding of the legal person as it relates to data based surveillance and the digital profile. With the introduction of big data, the capacity to hold increasingly aggregated profiles has become prevalent and surpassed a threshold whereby digital profiles are more than just simply data. This brings into question whether we can consider data to be property or as an extension of the legal person or as a separate legal person and how this relationship affects Facebook's use of data. In conducting this analysis, I review the previous approaches to defining legal personhood and draw upon a new frame of understanding legal personhood based on the creative differences found within the societies of control as encapsulated within the Facebook case study. This is done through a focus of four predominate approaches to legal personhood: legalism, rationalism, religionist and naturalism. I then attempt to apply a new notion of personhood to better understand the dividual by focusing on the contextual elements that dictate the new physical/digital world.

Chapter four explores the role of privacy as it relates to the operation of big data based surveillance within the societies of control. A fundamental problem is that privacy since its early conception has been enclosed within a specific and fairly rigid definition. As Deleuze's theories and the properties of big data reveal to us, society is transitioning to a more fluid network of desires that requires we attempt to re-approach privacy by focusing on leading privacy theories. By understanding that Deleuze sees control societies as operating through modulation which is premised on the requirement that information exist so that the dividual can be acted upon, leads to a debate as to privacy acting as resistance to modulation. The effectiveness of privacy as resistance to modulation is drawn into crises on two bases. The first is the inability of law to

understand privacy as being fluid. The second is that privacy as a singular approach to resisting modulation is outmatched by the sheer scale of big data based trackers and analytics that it is seemingly impossible to manage as a lone actor. Through a major focus on the use of Solove's work that attempts to decentralized privacy away from a universal rule into a fluid taxonomy aids in complimenting the Deleuzian analysis.

In the final substantive chapter, I explore the controversial role modulation plays in encouraging commercial expression to control the economic interest of the body. This chapter relies on an examination of Deleuze's use of modulation within the societies of control. By exploring modulation, this chapter seeks to explain how modulation operates within the specific assemblage of Facebook. As modulation within Facebook is largely focused on the capacity to advertise to its users, I survey studies that have evaluated the effectiveness of Facebook advertising. This in turn leads to implications regarding the ability to exploit Deleuze's dividual in favour of corporate control over a bodies economic interests. This chapter heavily relies on introducing affective theory to explain the operation of the Facebook assemblage. In doing so, I largely pull from Brian Massumi's work on affective theory and its implications upon the dividual and by extension the real person. This conversation re-engages the discussion on technological determinism and instrumentalism. The power to modulate through technology in the creation of a pre-determined and primed environment is largely reflective of a deterministic influence in the convergance between the physical and the digital. Through Massumi's notion of priming, this thesis contends that the power of commercial expression has surpassed a new threshold that now strongly influences the economic interests of the body. This new form of commercial expression surpasses the previous legal presumption of the protection of corporate expression in Canada. This discussion on commercial expression brings forth the crises that

rational economic choice is being replaced by determined economic choice. This results from the inability to protect the individual from being sold as property and as an element of the body contained in data. The need to focus on commercial expression is because it encapsulates the function of modulation and control within the Facebook assemblage. The implications in this chapter aid to show how modulation operates through a notion of consumerism on a larger scale at the expense of the individual.

Chapter 1: Introducing Facebook's Big Data Paradigm

What is Facebook?

Facebook was created in 2004 by Mark Zuckerberg and co-founders Dustin Moskovitz, Chris Hughes and Eduardo Saverin at Harvard University (Facebook 2015a). Originally known as “the Facebook,” Facebook began as a closed registration system requiring that only individuals from universities could join and slowly turned into an open registration system by September 26, 2006 to allow anyone to join Facebook (Facebook 2015a). There are two components to the Facebook service that are offered to its registered users. The first is the ability to create a digital profile of yourself to share with as many other Facebook users as you want. This profile can be filled with; photos and videos, biological, geographical, employment and educational history, likes and dislikes, links to other sites and user generated posts. The second component is the ability to connect with other registered users with whom you can share any information contained internally to Facebook through the chat widget or posting on either profile or from sharing outside sources. This is reflected in Facebook's mission statement where they seek to “give people the power to share and make the world more open and connected” (Facebook 2015a).

Facebook is therefore understood as a web 2.0 service. Tim O'Reilly in his “What is Web 2.0” (2005) drew forth a new plan for internet architecture which popularizes the theoretical potential of a new frontier in the online experience known as web 2.0. O'Reilly (2005) believes that web 2.0 does not have a rigid enclosure rather it is representative of a “gravitational core” whereby each website is to move beyond the mere presentation of a pre-packaged website into a user generated service in which users become the co-developers of the content. Components of

web 2.0 believe it is essential to move beyond the single device which was understood at the time to be the computer, but today is represented by the smartphone and tablet. The goal of web 2.0 is harnessing the power of collective intelligence which is closely associated with the principle of web 2.0 as reliant on participation of the user. O'Reilly (2005) believed that collective intelligence could be the result of increased user participation through repetition and variation that could be mediated through a focus on making web 2.0 sites operate in cooperation with each other. Essentially, the concept is to create websites that connect to each other and provide a means of communications between these websites thereby breaking down the barriers of the once single-serve website. This is what O'Reilly (2005) called the long tail of web 2.0 which focused on the leveraging of data from the entire web because of web 2.0's open and fluid architecture.

Facebook is a web 2.0 service because it ascribes to all these components and is therefore one of the best representations of a pure web 2.0 service. The ability to create a digital profile and communicate with others through sharing information that can be packaged to other users represents the co-development of the corporate unit of Facebook and the user. Facebook provides a service, specifically to facilitate communication and connection between people and does so across multiple devices whether it be the computer, the tablet or the smartphone. Lastly, Facebook is harnessing the power of collective intelligence in using data retrieved from every action of every user to then reach out to the entire internet of companies to use that data for capital growth. The power of this collective intelligence is based on the requirement of data and user participation and as such I will begin to explore the role of data as it relates to Facebook.

Data as Flows of Technological Determinism

In Kitchin's (2014, 1) *The Data Revolution* he introduces data as being the building blocks of information and knowledge. Kitchin (2014, 9) explains that data is the base of the knowledge pyramid, where each layer is separated by a process of distillation in which organizational meaning and value provide new truths. Therefore, it is through the pulling together of data into databases that add or create a logical system of sense. Kitchin (2014, 21) also notes that databases are not simply organized out of convenience, instead they are complex sociotechnical systems that are designed within a larger landscape of the production of knowledge, governance and capital. Data comes from the Latin word *dare* meaning to give, however, Kitchin (2014, 2) notes that data instead tends to be extracted through a process of retrieval. Rosenberg (2013, 18) separates data from other scientific forms of knowledge production by suggesting that data is rhetorical unlike facts which are ontological and evidence which is epistemological because a fact that is proved to be false is no longer a fact, but false data is still data. Rosenberg further states that data is inherently neutral, as it comes before argument or interpretation. This is why it forms the basis of Kitchin's knowledge pyramid. By organizing the data into a dataset, it allows for the synthesis of data into information. That information is in effect a summation of the argument applied to the data, rendering a specific result. The same process applies from information to knowledge as we transcend the pyramid.

What these databases resemble is a coming together of data, to form a dataset that seeks a specific sociotechnical purpose, which for Facebook is to know more about people by collecting data on them. In terms of Facebook, their data is stored in databases located in many parts of the United States as well as in Sweden all of which connect to form a large database network (Facebook 2015a). Within this data ecosystem the flows of data occur instantaneously amongst

an array of machines from point to point within the multiple data centers of Facebook thereby removing structural limits from machine to machine to open up variety, velocity and volume.

While data can be understood on its own, it is the concept of big data in its occurrence and continued occurrence that makes a focus on Facebook unique. In returning to Kitchin (2014, 68), he defines big data as data that is high in volume, velocity and variety. Magoulas and Lorica (2009, 2) see big data as the point at which the size and performance requirements for managing data become significant factors in implementing data management and analytics. Therefore, big data represents a *shift* in data whereby it crosses the threshold from isolated data either being held in multiple unconnected sources or small amounts into the high volume, variety and velocity of big data as defined by Kitchin. It is through the increase in intensity of the data by flowing faster, amongst multiple sources at the same time and in larger quantities that define the advent of big data. In conceptualizing the increased flows in the creation of big data requires an investigation into the shifting increase of volume, variety and velocity.

The question of the source of this growth in data re-invites the discussion of technological determinism and technological instrumentalism. Gordon Moore, cofounder of Intel Corporation, is accredited with the formulation of Moore's Law¹ that states, "the number of transistors incorporated in a chip will approximately double every 24 months" (Intel, 2015). Ceruzzi (2005, 590) notes that while race, gender and class may affect consumer decisions, transistor density and memory continue growing. For Ceruzzi (590-3), individuals tend to focus their attention on the product within society without considering the evolution of Moore's Law within these products. For example, there is strong evidence to support the existence of addiction

¹ Moore's Law is the result of a statement that Gordon Moore made in "Cramming More Components onto Integrated Circuits" (1965) where he predicted that the number of components on an integrated circuit would double annually. In Ceruzzi (2005) he affirms that Moore's prediction has remained true and has occurred in shorter 8 month intervals than 12 month intervals (585).

resulting from playing video games which has led to negative consequences such as: over-revealing private information (Sanders et al 2010), withdrawal from the physical world, and even death (Oqvist 2009, 107). While people tend to blame the games for creating the social phenomenon of gaming addiction, however, as Ceruzzi argues this is irrelevant because the machine that runs the game and the one that will run it tomorrow, will still be more powerful and advanced.

In this tension of debate between the roles and functioning of society and technology, I have presented the approach to this debate in the form of soft-determinism as relied on by Thrift. However, the question in relation to Facebook that needs to be answered is what is the *essence* of the technology? How do we ontologically define and conceptualize the technology of Facebook? These questions are in line with Heidegger's (1977) work in "The Question Concerning Technology." In his work Heidegger (1977, 4) states, "everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it." Modern technology for Heidegger (1977, 15-23) reveals itself as "driving on the maximum yield at the minimum expense" and it is through this exact science that modern technology is understood as enframing. Through this understanding, Heidegger (1977, 17-23) argues that modern technology reveals itself by framing society as a standing-reserve which is to suggest that everything in nature (human or resource) is to standby and await its calculated use in the creation of desired products. For Heidegger (1977) the only way to get at the true essence of technology is to allow the world to reveal itself like the artist reveals the world, for man needs to find a way to escape the enframing of modern technology.

When we consider the debate of technological instrumentalism and determinism in relation to Heidegger, the essence of technology for Facebook is revealed as a dualism. Facebook

is a web 2.0 service and while we frame this technology as web 2.0 there are two deeper essences to this technology. The first is that Facebook is a tool of bringing together bodies in the digital world to engage with each other as a new source of social capital in the digital. As user's engage with the technology of Facebook they shape it and shift it through posting and sharing to create a digital environment. In this essence we understand Facebook as being a technology that is instrumental because it is society that shapes the technology to become a digital space of interaction. Yet there is a duality to this existence in that Facebook as a modern technology is seeking to extract from its resources in the form of digital profiles, the maximum profit through the sale of the data that is mined. Facebook attempts to enframe its users in a space that is pre-conditioned in the form of priming, an issue dealt with in chapter 5. Facebook's ontological essence is therefore in itself suffering from its own tension of existence as it is both an instrumental means to an end technology in communication as it is the creation of a standing-reserve of digital profiles. By relying on Thrift (2005) and Cockfield's (2010) soft determinism approach, I attempt to explore this dualism in the ontological being of Facebook as an artist seeking to reveal the truths of both instrumental and deterministic views.

Big data's existence results from the capacity of technology to create the conditions for the three elements of high volume, variety and velocity. Zikopoulos' (2013) *Harness the Power of Big Data: the IBM Big Data Platform* displays the technological determinism of big data by referencing that in 2010 the world surpassed 1 zettabyte (ZB: One Trillion gigabytes) of global data. However, in 2011 there was an estimated 1.8 ZB of global data indicating an 80% rise (Zikopolus 2013, 9). Zikopoulos (2013, 9) projects on the low end that by 2019-2020 the world will contain around 35 ZB of data or in physical terms four trillion 8GB iPods worth of data. The irony of writing this thesis today in 2015-2016 is that Microsoft Word 2016 does not event

recognize zettabyte as a valid English word, however, it is likely that it will become a recognized word in the English dictionary in the next version. In terms of variety, Zikopoulos (2013, 9) points toward TerraEchos, a system that is capable of monitoring live events through a process of identification that separates the variety of big data instantaneously. Velocity is no different, in 1997 data transfer speeds on the internet had a top speed of 56 kilobits per second (Chandrasekaran, 1997) meanwhile 18 years later Google is introducing its Fiber network capable of 1000 megabytes per second (Google 2015) which is just over 18,000 times faster. Moore's Law continues to act upon the growth of volume, velocity and variety in big data. Therefore, big data continues to be intrinsically technologically determinative as its existence is reliant on the capacity for technology to create the conditions for its existence and as will be shown in the analytical component of big data, is largely controlled by big data algorithms.

Facebook's Use of Data

The application of Moore's law to data creation would accept that there is a degree of technological determinism as every interval of time we are witnessing a large increase in data retrieval and production. In order to understand Facebook's use of big data I will break down the operations that outline its implementation. Facebook (2015a) advocates its mission statement is "to give people the power to share and make the world more open and connected". Facebook allows people to create a digital profile of themselves and use that profile to connect with other profiles that are representative avatars of other people. This is what makes Facebook unique because unlike other web 2.0 services like Twitter, Vine and Instagram, Facebook is all about reflecting a profile of the real person on all fronts of communications; photo, video and text sharing along with personal information. Facebook's data policy is very vague as they collect

information about the content provided by the user including messages and communications with others (Facebook 2015b). Facebook also collects information on the devices used to connect to the service including the location to where the connection to the service was made. Essentially any data generated by the user in Facebook is collected in forming a digital profile so it can be analyzed and controlled.

This information that is retrieved becomes subjected to being shared across a vast network of Facebook companies (Facebook 2015c). Two of the Facebook group of companies, Atlas Solutions and LiveRail are advertisement firms that have engineered the advertising process of “people based marketing” (Atlas Solutions 2015) and “people-based targeting” (LiveRail 2015), which are both methods of connecting companies with Facebook’s anonymized data of its users. The data that is collected by Facebook from the social interactions and representations of people within the network is converted into anonymized data (Facebook 2015b). The concept of anonymized data is when the digital profile becomes represented by a code, a literal number sequence, not a name to remove the person from the profile. That anonymized data can also be decoded by others who wish to use that data to exert control and power through that data on a personal level. This is because anonymized data may be intended to be private through the removal of key identifiers such as names and addresses, however, methods exist to de-anonymized the data and rebuild the information (Prateek and Kuo 2011, 4).

Facebook users are both consumers and producers of data, known as “prosumers” (Lilley, Grodzinsky, Gumbus 2012). Users of Facebook accept that they are paying for the service through the presentation of advertisements (Wigan and Clarke 2013, 49). Users inherently accept that they are providing data in exchange for the service to which they are provided as a consumer. The interaction between the control entity of Facebook and the user through which

data is retrieved is unilateral as Facebook retrieves and collects all the data. The same is true in the formation of metadata, the user gives and is retrieved from, meanwhile Facebook provides nothing in return but access to the system of control. Metadata is understood as data about data (Kitchin 2014, 8). Metadata helps to sort data and explains the data as a whole. Metadata would be the data that defines the limits of your digital profile held in data. This does reveal a trending theme through this thesis that the territoriality of Facebook is a constantly morphing entity, through a communicative standard with the digital profile acting as your data double and Facebook as the digital environment. Its history and datasets are always shifting in each and every interaction, thereby transforming it into a potentially limitless world.

Data-Based Surveillance Within Facebook

Recall that Kitchin (2014, 2) notes that data is not that which is given, it is that which is taken in a method of retrieval. The most common method of retrieving information from a subject is through observation or more formally surveillance. The use of data based surveillance, the same method being employed by Facebook, was originally termed by Clarke (1988, 498-512) as dataveillance. Dataveillance is defined as the “systemic use of personal data systems” to conduct personal surveillance being “the surveillance of an identified person.” The concept of the identified person includes the anonymized and coded digital profile within the virtual network of Facebook as the digital profile is an avatar of the body. Since Clarke introduced the term dataveillance in 1988 researchers have applied the concept to areas ranging from the War on Terror to intellectual freedom (Amoore and De Goede, 2005; Orito 2011).

Esposti (2014) combines big data analytics and dataveillance to explain the use of big data analytics by corporations. Esposti (2014, 211) frames big data based on dataveillance as

comprising four steps: recorded observation, identification and tracking, analytical intervention and behavioural manipulation. Esposti argues that each step is complimentary to the next, informing it and building upon it so that it forms a feedback loop whereby each full cycle of the four steps repeats itself with more information. Therefore, what occurs is the creation of a digital self, a data based version of your interactions, your choices, and informing a constant digital version of the self. The creation of this digital self is always increasing in intensity as data is increasingly being collected representing variety and volume. Simultaneously it expands across networks with each cycle as new connections are created thereby reflecting the principle of variety. As fresh data adds to the data flow, the intensity of the digital profile continues to grow as it connects to previously held data along with the dataveillance regime that continuously attempts to track and record the digital self. In essence, the totality of the dataset in Facebook is expanding outward as more data feedback loops are occurring, but is simultaneously expanding inward as user's provide and input more content to the service.

The four steps of big data-based dataveillance become evermore important in their application if we are to understand their ability to grow in intensity. Recorded observation is the process of paying close attention through any technological sensor or observer toward someone to retrieve information (Esposti 2014, 211). The two-part process of identification and tracking is defined as identification being the recognition or connection of the information to a person's identity and tracking refers to the maintenance of the tracer once a person has been identified (Esposti 2014, 211). These first two steps are the retrieval process of extracting data and organizing the data into data systems. Analytical intervention describes the process of applying analytics to the data (Esposti 2014, 211). Effectively, this represents the step involved in order to progress upwards within the knowledge pyramid. The stratified data becomes information, which

becomes knowledge that can be used to inform future decisions. Lyon (2014) echoes this view and notes that big data based surveillance tilts the focus of surveillance from drawing on the past to predicting the future. Lyon (2014) also notes that the system becomes automated, in that it is the data that determines where the analytical process will continue. The final and most controversial step of big data based surveillance is behaviour manipulation in the ability of the observer to influence or change the behaviour of the observed (Esposti 2014, 212). This step can be understood in terms of discipline representing the operation of behaviour manipulation. Therefore, I turn to Foucault's panoptic model and the disciplinary society to frame the operation of data based surveillance to Facebook.

Exploring Datavelliance with Foucault

Panoptic surveillance of the Foucauldian model in disciplinary societies can help ground the operation of Facebook's datavelliance in retrieving and analyzing data. Foucault (1994, 44) believed that knowledge and power were intertwined occurring through a process of examination that tested knowledge. Knowledge was held within disciplines (medicine, economics, etc.) and operated its disciplinary power through a process of examination and was followed by normalization (Foucault, 1995). The disciplinary society is maintained by checks and balances of Foucault's hierarchical observation, panopticism (Foucault 1995, 170-71). Foucault's panopticism is modeled after Jeremy Bentham's Panopticon. The Panopticon was a circular jail design with a central observer tower where a supervisor can constantly surveil any of the prisoners (Foucault 1995, 200). While the prisoners are not always being watched, the presence of the potential gaze embodies disciplinary power as it is ever present (Foucault, 1995, 200). The gaze is seen as a self-regulating force that encouraged habituation to the norms to avoid conflict

should the observer be surveilling. Foucault (1995, 207) notes that within panoptic surveillance that disciplinary power was applied internally to the person where the person was seen as an object of information not an object of observation. Foucault's panoptic model carries with it a set of assumptions. Surveillance operates through discipline, surveillance occurs in a top-down hierarchy, surveillance must always be capable of being present, and surveillance is an internalizing force. Additionally, disciplinary power operated at the individual level focusing on the body first.

In understanding a Foucauldian approach to the dataveillance regime of big data analytics, I will begin with a focus on recorded observation, the first step. Within Foucault's model, there is a central observer whom observes from a centralized vantage point. A common example of the closed circuit television camera represents the ability to be subjected to the gaze. Today they are utilized in schools to mitigate and manage risks (Hope 2009), in subdivisions to provide citizens a comfort and deterrence from the "other" who is deemed criminal (Zurawski 2007) and nightlife districts to deter anti-social behaviour (van Liempt & van Aalst 2012). All of these examples use the power of the gaze to lead to a manipulated behaviour.

Each of these examples, however, treat the body only within specified and very rigid spaces. Once the body leaves this rigid space they are no longer observed. Within the Facebook service, Facebook can track the body through each and every movement by geotagging devices and recording the interaction of the user within the service. Panoptic surveillance focuses upon each individual location as a separate function of observation and power whether within the school, the subdivision or the nightlife district. On the other hand, Foucault's work on confession in *The History of Sexuality Volume 1: An Introduction* (1978) shifts the conversation from the role of the supervisor acting upon the body to internalize a normative belief to confession

whereby the body projects itself outward. Prior to engaging with the concept of confession it is important to first reflect that Foucault (2000, 342) saw power through the governance of people as requiring that people are first free to act. It is within the ability to act freely that confession becomes an important element of the dynamics between the body and Facebook. Foucault (1978, 61) relies on the Christian penance in comparison to the present day, to explore how confession is representative of a subject in this case the body, revealing the truth to another partner who is an authority. In confession the authority reviews the confession so it can be analyzed in terms of judgement and guidance (Foucault 1978, 61-62). In essence, the free body through confession reveals the truth to the authority and the confession as the statement of the subject can be analyzed for the purpose of governance, relying on Foucault's (1991) notion of governmentality. The reasoning for the need to confess results from the need to be free. The obligation for the body to confess is the function of freedom, because as Foucault (1978, 60) argues "power reduces one to silence." The body in relation to Facebook is exercising its freedom through the technology that is Facebook so that it can reveal its truths. However, Facebook as the authority records this observance so that it can be acted upon and that the body can be governed within the first step of dataveillance.

Foucault's panoptic model and its focus on rigid spaces of observation leads to a gap in the observation of the spaces that exist outside the central observer. The issue of identification and tracking thereby presents a challenge to applying panoptic surveillance. The reason Facebook is always able to track you when you enter its service is because of digital tracers. A digital tracer involves a source such a cookie, a file that logs your online history (Reigeluth 2014) and an objective (Laflaquiere 2009), within Facebook which would be to continually add data to your digital self. Merzeau (2009a, 2009b) indicates that there is little disagreement about

whether people can leave their digital traces behind. Identification is achieved by the code in the password, however, tracking is maintained by the source of the tracer each being a tool to maintain the open fluidity of the web 2.0. However, Foucault recognizes the function of normalization which acts in conjunction with panopticism at the level of population (Foucault 1995, 192, 205). Normalization within the disciplinary society functions to create a standardized population across the disciplines through its reliance on the norm (Foucault 1995, 184). For Foucault (1995, 184) normalization created a “homogenous social body” of docile bodies whereby it was possible to compare individuals within the population to expose the gaps of non-compliance and group bodies together. Normalization acted following disciplinary action as it was through the recordings of the disciplines and the documentary technique of the case which characterized the specific body thereby subjecting that body to the normalized standard (Foucault 1995, 189-194). Similar to how the digital tracer tracks the body from site to site, the operation of normalization helps to connect different institutions. Therefore, it is possible to understand the digital trace as a normalization instrument, it allows Facebook to individuate and compare profiles within the larger population of users.

Both recorded observation and identification/tracking work to retrieve and organize data on the digital self. Within big data based surveillance, it is the analytical intervention stage that creates metadata which is then used to pre-emptively control and subject the online experience. Within the disciplinary or panoptic model, this is understood as the examination (Foucault 1995). The examination is a test to see if the actions of the individual observed by a central authority of the discipline are sufficiently successful to meet the normalization standard. Esposti (2014, 215) notes that the key to unlocking big data lies within the analytics. Analytics is inherently problematic because, as Lyon (2014, 6) notes in commenting on big data based surveillance,

relying on algorithms to inform the analytics of big data automates the process and removes discretion. Lyon (2014, 7) writes on algorithms that they “grip us even as they follow us, producing ever more information.” Algorithms themselves are also a code but they are something more within big data based surveillance. The algorithm becomes the central authority of the Facebook big data paradigm. The algorithm creates information from the data it has retrieved and uses that data to produce a response. Foucault (1995, 224) discusses the way the disciplines crossed the technological threshold through an increase in the production of knowledge which lead to an increase in power through a circular process. Within the disciplinary society, it was at the physical level through disciplinary power in the form of panoptic surveillance that directed attention to the individual. That knowledge would inform new information that could then be compared to the statistical nature of a population for comparison, only to return upon the body in an application of normalization.

The digital profile is subjected to the technological deterministic flow of data within the large database. This does not refer to the absolute control over the body, nor does it imply that the body can no longer shift the territoriality of Facebook. It would lead to a logical endpoint in the existence of web 2.0 services if I suggested that digital profiles are fully determinative because the user generated content element that defines them would cease to exist. This issue becomes a central focus of chapter five.

Behavioural manipulation is the last step of big data based dataveillance of which the panoptic model and disciplinary power are silent in explaining this interaction. Within panopticism, the wronged behaviour is corrected post-action through a process of normalization whereby training is applied to correct behaviour. Within the Facebook service, big data analytics are being employed to conduct or influence behaviour pre-action. This is replicated in Bauman &

Lyon (2013), who note that in today's surveillance regimes the primary function is social sorting. Social sorting being the formation of categories created through the retrieval of information from people to direct the behaviour that is applied to them (Adey 2004). Social sorting organizes the body based on conditions that are outside its control and may already have been known or determined. Facebook operates to encourage the manipulation before the behavior occurs. The leading function is through advertising whereby Facebook subtly presents the company that has targeted the subject and continues to incite a purchase later on (Stone, 2010). This is in opposition to disciplinary power, which seeks to respond to the action after it has occurred.

This discussion of shifting disciplinary surveillance through dataveillance leads to a need to find a new system of surveillance within big data web 2.0 services because of a series of gaps. The first gap is between the user and the body. Within the disciplinary society and panoptic surveillance, the digital profile and the body are treated as different entities. The digital profile is a source of information it informs the knowledge that can be used to normalize or control the population. The body on the other side is the physical presence of the operation of disciplinary society being applied. In contemporary society with the usage of the Facebook service, however, it is observable that the digital profile and the body are merging together through the fusion of technology and everyday life as discussed previously with Thrift (2005). The second gap is that normalization and disciplinary power which are corrective actions occur post-action which is in contrast to the algorithm which acts pre-action in big data regimes. In filling in these gaps I turn to the work of Deleuze to compliment the work done by Foucault in grounding the operation of big data usage by Facebook. The reasons for a strong focus on Deleuze begins with his acknowledgement of Foucault in his work on control societies. Furthermore, Deleuzian concepts fill in the gaps of the contemporary big data regime that Foucault's disciplinary theory was silent

on. Deleuze's work is essential in this analysis because his work on the metaphysical breaks down the barriers between the physical and the virtual to inform a new understanding. In the following chapter, I will use Deleuze to bring forth a new method of thinking about law, society and big data usage through Facebook.

Chapter 2: A Deleuzian Approach

Introducing Deleuze

The purpose of this chapter is to frame an understanding of the key concepts of Deleuze's work as they apply to my focus on the Facebook service. The following concepts discussed in this chapter are going to be the tools that inform the legal analysis. Specifically, these concepts will open the discussion regarding the crises law faces in the Facebook service. Deleuze frames the world within his metaphysical approach to understand life and the foundations of social existence as fluid. In approaching Deleuze, it is important to set aside pre-conceived beliefs regarding the social foundation of our existence. In the frame that I will use Deleuze, I will focus on his work as being fluid and deconstructive of stratifications. In doing so, I will not simply accept concepts, especially those that are "organic" in the sense that are restricted by their pre-conceived structures. Deleuze's societies of control as a concept will largely underpin the main arguments of this thesis as it brings an element of fluidity in the construction of existence and as such rigid structures become incompatible for analysis.

This chapter will begin with a look at the small discussion that Deleuze made in reference to law and jurisprudence. As this is a legal studies thesis, it feels appropriate to begin here. Deleuze's notion of jurisprudence centralizes singularities as the aim and focus therefore it is discussed following jurisprudence. The next section will look at assemblages in depth and its connection to the process of *becoming*. The shifting and expanding of assemblages is represented through a process of *becoming*. Deleuze's concept of *becoming* is a strong tool to analyze law as it allows us to pull apart legal concepts and analyze them in terms of a Deleuzian approach. In further developing the concept of assemblage I will focus on the use of Deleuze's work on

desiring machines that is closely associated with assemblage and desire. Law can be understood as a desiring-machine and so can the Facebook assemblage. Desiring machines as a tool of analysis focuses on the functions of assemblages and aids in explaining how different assemblages are connected and operate. In the final section of this paper, a significant amount of attention is paid to discussing Deleuze's society of control. Deleuze's approach to technology is underpinned in his work on the societies of control which will reveal how he approaches technological determinism and instrumentalism and similarly how I will adopt that relationship for this thesis.

Starting with Jurisprudence

In beginning to frame Deleuze's concepts in relation to the focus on big data and law requires we start from a central point from which we can draw the connections outward and inward. In *Negotiations* Deleuze (1995, 156) states that "jurisprudence is the philosophy of law, and deals with singularities, it advances by working out from singularities." Therefore, if we are to ground ourselves to a central point in understanding Deleuze's approach to law, we must begin with the singularity and how it relates to a larger Deleuzian approach.

A singularity can be framed as a point of transition, a transition from one thing to the next within a single moment, whereby the past and the future become connected through the transition. For example, boiling/freezing point of water, a splitting point between chaos and order or a mutation in biology (Shaviro 2002, 13). A singularity can also be an event, even one that is repeated. Every singularity is connected to another, as found in a lesson taught by a professor where as even if the lesson is repeated and retaught year after year, each lesson builds upon the past lessons which also informs the lessons to come (Williams 2011, 81). Bodies are also defined

by singularities, for humans are themselves a formation of intensive singularities but it must be noted that singularities are pre-individual as they inform the person² (Bains 2002, 105).

Singularities in law are events that transition and inform law, that question and reshape law from what it is and what it will be. Deleuze's use of the term jurisprudence is essential for its formation as jurisprudence comes from the Latin words "jus" meaning law or right and "prudentia" meaning knowledge or wisdom. Therefore, our philosophy of law is based on our knowledge of the meaning of our legal system, the common law system. The core of our common law system is in constant transition as each event (singularity) reapplies the law and the decisions that are formed are based on past practice but also will inform future decisions. Within this ever expanding collapse and creation of territorialisation's is the assemblage and the process of *becoming*.

Assemblages and the Process of *Becoming*

Assemblages as a territory according to Deleuze refers not to the physical sense of space but rather cuts through time and space as a territory of words, meanings and intangible signifiers (Macgregor Wise 2011, 94). People enter into and exit out of assemblages as they are always in a process of territorializing and de-territorializing, being made and unmade (Macgregor Wise 2011, 92). Assemblages are more than just a formation or coming together, they are also qualifying, informing and encourage specific intensities and actions (Macgregor Wise 2011, 98). The assemblage to which I focus upon is the Facebook environment in which technological innovation and bodies become intertwined. As these bodies enter the assemblage, the intensities

² In the third chapter I will return to this discussion of the person as conceptualized in law. There is a difference between the body and the person. The person is the culmination of singularities, potentials and desires that flow through the body to become understood as a person.

or potentials that are informing their actions are both a process of their being within the assemblage and the assemblage acting upon them. Deleuze understood this interaction as a process of *becoming*.

The process of entering into assemblages for Deleuze was known as the process of “*becoming*” (Macgregor Wise 2011, 94). *Becoming* is not about origins or ends it is about lines and intensities that are rhizomatic, extending outward in different directions (Sotirin 2011, 118-19). Before exploring the rhizomatic, *becoming’s* are “the pure movement evident in changes *between* particular events” (Stagoll 2005, 21). *Becoming’s* are therefore the process of moving into, out of and between singularities and assemblages. Within the Facebook environment we can understand this at a micro level of moving between Facebook groups or as the shift within the Facebook assemblage as it changes every time you log in due to new friends and content.

Deleuze uses the term rhizomatic to refer to the rhizome, an underground root system where different roots break off and move in separate directions. This is similar to the way a body may move between different assemblages or events in a process of multiple different *becoming’s*. Assemblages are always being created and destroyed along the rhizomatic lines whereby any point along the line is known as a singularity and each singularity connects to another and infinitely connects to the next. Following Deleuze’s conception of desiring production (discussed later), assemblages seek to be connected and informed by an abstract machine, however, the body still enters the assemblage at a local level (Macgregor Wise 2011, 100). The abstract machine becomes the generalized operation of collective flows upon which we find assemblages. For example, in the Supreme Court of Canada’s case of *R v Lavelle* [1990] 1 SCR 852, the Supreme Court ruled that expert evidence of battered wife syndrome could assist in the finding of self-defence where a battered wife kills her abuser. At the time of this case, the

law on self-defence never stated anything in relation to battered wife syndrome or abuse and was specific to an incident of assault (*Criminal Code*, RSC 1985, c C-46, s 34). In the *Lavelle* case, Ms. Lavelle would have entered into an assemblage when the events that caused the legal case to exist occurred. At that moment, she felt and experienced a set of emotions with intensity, her sense of being and existence altered, her perception of her batterer shifting from significant other to potential killer. This moment was not entirely created in her, rather it was informed by an abstract machine for example; society and women's movements that came together to form the preconditions of the events that she would soon enter.

Deleuze and Felix Guattari (1987, 8, 242) demonstrate that there exist blocks of *becoming* whereby a grouping of heterogeneous singularities join together to form a multiplicity. *Becoming* is about constantly moving and growing along different lines of intensities. This can be demonstrated from the time we are born and as we grow into adulthood and our emotional complex grows from the simplistic unfounded cry of a baby to the intense emotions of stress and love. Such progression is not a seamless transition for Deleuze and Guattari (1987, 249) as they demonstrate the importance of thresholds, the space before the bifurcation between two multiplicities. Understood in this sense for Deleuze a threshold is representative of an in-between space between two objects. The creation of the online profile of the person in Facebook is a new threshold as the creation of this profile results in a bifurcation between two objects; the body and the digital profile. They may cross pathways and interact in different ways, but each is subjected to a different process of *becoming* growing outward rhizomatically from where they began.

Twitter is popularized and defined by the ability to utilize hash-tags and short comments to convey a specific meaning with "tweeting" even becoming part of Twitter discourse. In the recent Ferguson Shooting incident Twitter users all around North America began tweeting

#FergusonDecision (Time 2014). This assemblage of the Ferguson shooting was territorialized in Twitter's database, where the discourse was focused on a contested decision. Specific emotions of injustice were felt; the claim of modern racism and the significance of the authoritative white police officer and the purposed innocence of the black male became fused into a movement in time where Twitter users entered this assemblage. Through geo-tagging of twitter posts we can visualize the entering of people into this specific assemblage whereby they were *becoming* Ferguson injustice through a continued discussion and interaction (Time 2014). As the *becoming* of individuals enter into this assemblage, we can visualize the increase in intensity as it spreads like wildfire enveloping North America.

The analytical problem is how to explain the in-between space between events like the Ferguson shooting and other web 2.0 social events that also blend elements of the physical and bring with them elements of past events. One approach is to look at affect theory, a concept that is covered in depth in chapter five that focuses upon Deleuze's *plane of immanence* as a space for desires to flow from one object to the next. The *plane of immanence* is the virtual space whereby infinite possibilities for action or inaction are present (Deleuze and Guattari 1987). Turning to Massumi's (2015, 85) work he discusses how the recent Tunisia protest, proceeded by the protest in Tahrir Square, the Occupy Wall Street and the Quebec student protest all were connected through a transfer of invention which more specifically refers to his principle of affectivity that transfers intensity from one event to the next. The thresholds are felt between each event. The bifurcation occurs when the singularity or event's *becoming* intensity continues into another *becoming* of an event or singularity in a continual process. This coincides with Smith's application of Deleuze's depiction on life. Smith believed life in the Deleuzian sense was comprised of multiplicities which extend outwards rhizomatically in different directions in

an almost infinite number of possible events, whereby the body is subjected to the thresholds of these events (Smith 1997, xxxv). The body is therefore in a constant process of *becoming* on many different levels of existence as each event may represent a bifurcation point leading to another processes of *becoming*. It is the continual process of collapse and territorialisation that defines the existence of our reality (Sotirin 2011, 120). Deleuze's concept of desiring machines helps aid in understanding and bringing together the functioning of assemblages so that we can inform how the different elements operate.

Desiring Machines? The Functioning of Assemblages

Becoming is also closely associated with the notion of desire. *Becoming* is understood as the movement between assemblages or events and desire is the driving force behind that movement. The coming together of these desires through *becoming* upon the body can be analyzed within Deleuze's framework. Both concepts seek to guide the discussion on the functioning of assemblages and the role the body plays within the mechanism of a capitalist society.

Deleuze's approach to defining desire, seeks to break free from the limits placed on it by psychoanalytical thinking that posits desire as a result of "lack" or "lacking" (Ross 2005, 63). Instead of thinking of desire as a negative external force, Deleuze saw desire as a positive force on the *plane of immanence*. More generally, this notion of desire supports Deleuze's overall conception of life as comprised of material flows (Ross 2005, 63). Deleuze and Guattari in *Anti-Oedipus* (1977) understand the world as operating through, within and between desiring-machines. Desiring-machines are binary machines that obey laws of connectivity, one machine is always connected to another in which the "production of production" occurs (Deleuze and

Guattari 1997, 5). This production synthesis is conceptualized by the existence of flow-producing machines, which are connected to other machines that interpret or retrieve part of the flow. Desire for Deleuze is what propels, breaks and cuts into the flow of desiring machines. The rhizomatic lines of intensity that criss-cross, split and spread across life are therefore flown by desire through desiring-machines. Deleuze and Guattari (1977, 340) state “there are no desiring-machines that exist outside the social machines that they form on a large scale; and no social machines without the desiring-machines that inhabit them on a small scale.” Essentially, we are desiring-machines (the stomach is a desiring-machine for food connected to the desiring-machine of the mouth which seeks flavour). Society is comprised of desiring-machines, and Deleuze and Guattari’s focus in *Anti-Oedipus*, capitalism is a form of desiring-machines. Before continuing it is important to note a connection between assemblages and desiring machines, being that they are the same thing. Deleuze and Guattari in *Anti-Oedipus* refer to them as desiring-machines and later in refining this discussion in *A Thousand Plateaus* refer to desiring machines as assemblages (Buchanan 2014, 12). I have separated them here for the purpose of explaining them separately in isolation for clarity as each term references a different aspect of the desiring-machine/assemblage unit. Throughout the course of this thesis, the operation of Facebook will be referred to as an assemblage but this at no point negates or fails to appreciate the flows of desire that move inward and outward within Facebook’s existence.

Deleuze’s conception of desire and desiring machines informs the usage and purpose of data within the Facebook assemblage. Data is understood as a desire as it is transformed from the body to the digital, then to be quantified, packaged and sold as a commodity for capital and empowers Facebook to engage in modulation to control bodies through these desires. As such, a machine exists within the framework of a society of control and flows carry a code of data across

an array of connected machines. Deleuze's traditional discussion of the desiring-machine was simplistic in its flow, all the machines were connected and the flow transitioned from machine to machine and closely resembled the disciplined societies. Justification is found within Deleuze as the advent of big data can be understood as a process of *becoming*, that resulted from the bifurcation point that Magoulas and Lorica (2009, 2) point out in computational manageability in terms of performance and storage.

In further breaking down data, data is reflective of the tools which Thrift (2005) spoke of that are becoming independent of human control. The algorithm is the desiring-machine of the big data regime; it controls the flows of data as desire. Data is surpassing a threshold beyond human control, where it is being employed for specific socio-technical purposes. Data is highly fluid because data itself is neutral as Rosenberg (2013) believed data exists pre-argument. Therefore, the same data can be subjected to different analytics to serve different purposes all the while remaining the same. The utility and reuse of data as a desire within the big data regime makes it highly sought after and valuable for it helps to serve the specific intentions of the algorithm. Similar to how Foucault discussed confession, data is representative of the translation of desire through confession to be presented in digital format. As body's project these desires outward, Facebook retrieves them to be analyzed and acted upon within the societies of control.

Societies of Control

In his essay "Postscript on the Societies of Control," Deleuze introduces the concepts of individual and the society of control. Deleuze (1992, 3-4) begins by recognizing the work of Foucault, however, states there is a birth of new forces that have placed the disciplines in crisis, the societies of control. While disciplines sought enclosures of mold (normative beings), the

societies of control seek modulation; a continual process of change from point to point (Deleuze 1992, 4). Arguably, Deleuze is referring to the process of *becoming* and the transition from singularity to singularity, whereby each event or occurrence acts upon you and transforms you. The mechanisms of Deleuze's societies of control are inseparable, communicating through a *numerical* language (not always binary). Specifically, Deleuze is speaking of desiring-machines, which are all connected to the flows of desire which are filled with numerical values that are not always binary. Therefore, their numeracy may represent data that seeks to explain biological, scientific, historical, social or political information. The societies of control replace Foucault's conception of the school and examination in favour of perpetual training because within the societies of control "one is never finished with anything" (Deleuze 1992, 5). Furthermore, Deleuze (1992, 5) argues where the disciplinary society had the signature that represents the individual within the mass, societies of control have the code known as the password representing "dividuals" within "banks." Deleuze then recognizes the evolution of machines within societies, noting that technological growth caused by capitalism has led to the creation of the computer, the machine of the societies of control (Deleuze 1992, 6). Relying on Guattari, Deleuze (1992, 7) writes of an imaginary city that through modulation identifies and tracks dividuals and that may or may not grant access based on the information contained within the dividual.

In Deleuze's discussion of societies of control he makes reference to the functions of law by relying on Franz Kafka's *The Trial* (1956). Deleuze sees law of the disciplinary system as the *apparent acquittal* (a term used by Kafka to describe a halt in the legal process of a case with the possibility of continuation in another case) and law of control societies as *limitless postponements* (Kafka uses this term to describe a legal process that is always acting but

judgement is seemingly delayed but always present) (Deleuze 1992, 5). Deleuze (1992, 5) warns his readers if law is hesitant, it will itself fall into crisis akin to the disciplinary society transitioning from discipline to control. The problem arises that the law of the disciplinary society, transitions from discipline to discipline, for example administrative law to criminal law. In the societies of control, connectedness and modulation are inseparable from the individual. Since the entire network of the societies of control is comprised with flows of desire in a fluid nature, law must similarly become fluid to adapt and shift to these new societies. Law must be able to flow amongst the collective machines of the societies of control. Law should have its *becomings* in the singularities of jurisprudence, as it grows rhizomatically with the societies of control. In essence, law must begin to deconstruct the boundaries of disciplines in favour of a fluid dynamic system of law whereby it is in constant variation of its form. This thesis seeks to explore the threshold between the law of the discipline and law of the societies of control, in relation to big data, Facebook and dataveillance.

The central argumentative point on law within the societies of control is that it must become a modulating mechanism and not a disciplining mechanism. Modulation is flexible and fluid, it is open to variation in real time and it does not produce individuals (Bogard 2009, 22). Foucault relied on the prison as the model of his disciplined society (Foucault, 1995) but Deleuze's societies of control relies on the corporation as the central unit (Deleuze, 1992, 6). Bogard (2009, 21) explains this is due to Deleuze's focus on capitalism as "breaking down the walls in order to deconstruct every desire" essentially to maximize power and money out of society. This is why modulation prevails. It must be able to deconstruct and capitalize on every desire as it occurs in order to survive and simultaneously it must do so through bodies as individuals.

By taking the Deleuzian approach and applying it to a problem in law requires we accept a series of assumptions and implications. Due to Deleuze's focus on the singularity in jurisprudence, he seemingly refutes the concept of universal rights. For Deleuze, rights are to be created in the case based on the specific situation, not universally applied to all situations that appear to ascribe similar qualities (Lefebvre 2006, 409). Deleuze also disagrees with Habermas' approach to communicative action because it causes rights to be confused and generalized through a false consensus of applying the retrospective form of the law in the case. Instead for Deleuze, rights are to be created in collaboration to the case they are acting upon. Therefore, I must operate under the assumption that the singularity or event is the site at which the law is to be born out of. Instead of understanding law as that which evolves out of a specific right and what a right would have originally intended or had been consented to as a right. Deleuze's view of law sees concrete cases acting as the creation of right specific to the case (Lefebvre 2006, 411-14). Therefore, instead of having a series of rights that fall along a plane of justification, instead we encounter the unique specificity of right that is moving through the case into a new right. In terms of the focus on big data based surveillance shifting the conception of legal personhood, the implications of Deleuze's view on rights should inform how we approach issues of privacy and commercial expression so they are not understood as universally being applied but as being generated uniquely through the specific case of Facebook's usage of big data.

There is an inherent problem in the way law is traditionally framed in terms of its structure because law is structured. Within Deleuze's work he violently opposes the notion of an organism due to the submission of organs to a pre-described organization and purpose. MacLean (2012, 152), shows that the traditional understanding of law is dualistic and relies on specific dichotomies; thought/action, meaning/application and rule/fact. MacLean believes central to this

understanding is the relation between universal and particulars (as was discussed above). Therefore, law is traditionally understood in the relation between legal professionals and the application of law. That is because law is seen as an organism and its organs are statues, judges and legal professionals all of whom affix a specific stratification upon a legal system. In understanding law as this totality, leads to a failure to truly understanding the nature of flows in desiring-machines and its relation to the whole of its parts. (Deleuze, 1977, 44). The assumption of law as an organism needs to be broken down so that law can be freed to form its own connections, so law can find its own *becomings*, instead of stratifying its existence.

As already indicated there is tension between Deleuze and universal rights, however, this reasoning also resonates in juridical decisions. Lefebvre (2007) attempts to challenge the teleological organization of the legal system in decisions by injecting a Deleuzian framework from which he produces a Law without Organs. In Dworkin's *Laws Empire* (1988), it is presumed that all judges subject the case to an existing ready made rule whereby judgement is simply the application of the best fitting rule or decision. Lefebvre challenges Dworkin's teleological view of law on three grounds; reflective judgement (presumes a system of law) which forces each organ back to the organism, integrity (law's necessity to deploy arguments to support a new interpretations of the law based on what already existed) which mistakenly relies on the past to assure the present discovery and judging law in natural purposes forces all elements of law to a central organism that gives it meaning as a whole (Lefebvre 2007, 193-5). Lefebvre argues such problems remove the creativity and critical creation in jurisprudence because the basis is focused on the past. More specifically, it is the ignorance of failing to appreciate the singularity that leads to this occurrence. Lefebvre also notes that this framing of

law prevents the process of *becoming*, as each part is understood as a definitive function and is no longer creative due to its assignment which is stratified by the whole system as an organism.

In applying Lefebvre's arguments, we must separate law from the system that confines it. As already noted, law projecting into the past is problematic but not entirely. Common law principles are important and fundamental to our legal system, however, we can restrict their creativity and function through the naturalistic tendencies Lefebvre puts forth. Unfortunately, there is a paradox, if we completely free law (make it organ-less) in that if we free it from the system that confines it, it subsequently is unable to be a part of the system it seeks to regulate. Similarly, if law is over subjected to the functions of the past and universal principles than law would become completely controlled by the system that creates it. Therefore, a proper construction of a Deleuzian approach to law seeks to achieve *becomings* in the singularities of the case to be creative but must balance the common law approach of looking backward insofar as it does not force the case to fit the law but have the law fit the case.

In applying the Deleuzian framework to law, the individual and the societies of control both present a unique implication to understanding law. While it may seem easy to make the assumption that law's constraints of the legal person are incompatible with Deleuze's individual within the societies of control due to the restrictions placed by law, this is not the case. While law attempts to categorize and create a dichotomy between a legal and non-legal person, what is occurring is that law is modulating the requirements by specifying the divided elements of the person that in culmination support a claim or reject to personhood. In essence, it is the same logical action as Guattari's imagined city, unless a person meets on some divided level of themselves, the requirement for access will be denied. Therefore, law has the capacity to be a tool of modulation for the societies of control. The dilemma lies in the creation of the

requirements that form the modulation component of law's legal person. If we fail to appreciate the difference in singularities, then we return to the previous error in placing rights among a plane of justification. The implication is that we must be aware of the special differences that emanate from the case of Facebook that may give rise to a new form of legal personhood in this singularity as an example.

Deleuze's "Postscripts on the Societies of Control" is a very short essay in comparison to his larger works, however, it is fraught with an undertone he never fully addresses. That specific undertone is the interaction and tension between technological determinism and technological instrumentalism. It appears on first read that Deleuze may be slightly supportive of technological determinism. Deleuze (1992, 5) even differentiates between the disciplined societies as represented by the mole in the hole (disciplined subject in an enclosed space) in contrast to the serpent of the societies of control. Deleuze's (1992, 6) last sentence warns that "the coils of the serpent are even more complex than the burrows of a molehill." This relates back to the discussion of technological determinism/instrumentalism as Deleuze is a creative man in his word choice. On many occasions Deleuze writes with profanities and obscurities to convey a message due to the symbolic nature of the words. The same is true of the dichotomy between the mole and the serpent. Andrew Skinner (2001, 44) discusses the duality of the serpent in holy texts from the Bible and Book of Mormon, as representative of both good and evil. Evil having the capacity to represent control as emanating from technological determinism and good as represented by technological instrumentalism. Yet, the dichotomy may not be that simple. Would a system of big data analytics that is largely represented by technological instrumentalism with full control over the system make it good, even if it is being used to control individual's?

How does the serpent in its complexity represent the societies of control? The answer lies in the failure of Deleuze to explicitly answer whether technological determinism of the computer reigned supreme or whether a person behind the computer was the controller of the machines that modulates the societies of control. However, it is the duality of the serpent that leaves open the door to the possibility that if a person or persons do control the technology, then conflict between those who use the machine for good and those for evil are in a constant struggle which complexes the whole system. Thereby rendering the system open, instead of enclosed like the disciplined society because the figurative heads of the disciplines (doctor, professor and the chief executive officer of the factory) are replaced by the those who have the ability to modulate through the computer, which is free of social or disciplined categorization. Therefore, Deleuze appears to be both deterministic and instrumental. The implication is that we must establish how big data and surveillance in Facebook act to support a deterministic or instrumental form of technology in the absence of Deleuze's clear distinction. This leads to a series of questions that need to be addressed here. How does Facebook use data and what does an application of Deleuze tell us? What kinds of legal concerns result from applying Deleuze to our understanding of Facebook's use of big data?

The Facebook Assemblage of Control

“There was of course no way of knowing whether you were being watched at any given moment... but at any rate they could plug in your wire whenever they wanted to” (Orwell 2008, 4-5). Orwell used this description of his fictional “Thought Police” in his work *Nineteen Eighty Four* to depict an omniscience authority empowered by the connectivity between and towards individuals that was open to abuse. Today, Facebook has 1.49 billion active monthly users, of

which on average 968 million users are active daily (Facebook 2015a). This means Facebook connects with approximately 20% of the world's population in one month or approximately 203 times the population of Canada. More importantly, Facebook holds data on this many users. All of which can be accessed at any time without any of its user's knowing. While Facebook is not the authoritative Thought Police of Orwell's work, they do represent a modern day assemblage of control.

In returning to Bogard's (2009, 21) approach to modulation in the societies of control, he views them as decoding desires in the creation of individuals. What is most important, is that Bogard (2009, 21) reaffirms Deleuze's view that the language of flows within this society is numerical, which for Bogard represents the information of people. Today we understand that the numerical language for information is known as data. The reason for focusing on Facebook becomes ever so evident because it maps so efficiently with this corporate unit of Deleuze's societies of control. For Bogard (2009, 22) the difference between discipline and modulation is that discipline occurs in a rigid enclosure and modulation adapts to the fluid changing format of the system. Bogard notes it is no longer about control over the body through physical enclosure, but rather the distribution of information to separate and distribute. Since societies of control create individuals, Bogard (1996) argues that they are not self-regulating but are rather controlled in advance and are more designed than docile due to this pre-emptive manipulation in comparison to Foucault's disciplinary society.

This is why Facebook becomes classified as a modern day institution in the society of control. Facebook is responsible for connecting people (more specifically the data of people) and holding them in data centers the same way Deleuze spoke of holding individuals in banks. Again, Deleuze's conception maps on here as there are no signatures within Facebook, instead we are

represented and granted access by a password, a code. Furthermore, users access Facebook through a computer, Deleuze's modern machine of societies of control. In the interest of clarification, smartphones are also computers because they both contain central processing units, random access memory, storage, graphics processors, inputs and outputs, display and power sources. It is not coincidence that we find similarities between societies of control and Facebook. After all Facebook is a corporate entity that seeks to decode desires into money and power for capital gain.

In Search of a New Model of Surveillance

Recalling from the last chapter, there are a few gaps between Foucault's disciplinary society and the big data Facebook assemblage. The first being the distinction between the digital profile and the body, which through Deleuze is understood as being the same abstract machine because the Facebook digital profile is only one of a potentially limitless number of assemblages that form the body. The second gap was the problem of the algorithm exercising its authority preemptively upon the body which is separate from the post-action disciplinary/normative balance that is corrective. The last gap is one Deleuzian thought can provide guidance which is the inability to track subjects consistently through different institutions. The digital trace acts as a system of observation through each institution and effectively removes the spaces that cannot be observed directly. Since the digital trace acts to combine locations into a fluid connected system of observation whereby the observed never leaves the gaze of the observer it is represented as a mechanism of modulation. This explains why within Facebook's assemblage of control, data is recorded every time a user connects on any device (computer/tablet/smartphone) because the control mechanism is independent of time and space.

In societies of control the process of modulation does not respond post-action, however, it does seek a different form of training that is pre-emptive and this revelation through Deleuze aids in filling in the second gap. What changes from panoptic to control societies, is the elimination of discretion. This is echoed by Lyon (2014, 6) where he is critical to the notion that the algorithm begins to automate the process of control. In furthering Lyon's argument, it is not so much that the process has become automatic, it is that there is a release in the human control over the process of analyzing populations and controlling bodies. Fundamentally at the core, the issue is that the algorithm represents a form of technological determinism because the data that informs the algorithm now decides irrelevant of societal and human discretion.

Haggerty and Ericson (2000) were the first to apply Deleuze's societies of control to surveillance literature in their article "The Surveillant Assemblage." Haggerty and Ericson (2000, 612) note that surveillance predominantly is applied upon the body that first must be known, however, it is abstracted from its territorial setting and then resembled in a series of data flows. This is understood as the creation of the dividual or the *becoming* of the digital self referred to previously. Haggerty and Ericson argue that the reasoning for this transformation lies in the ability to render the body mobile and comparable. Effectively, the digital self exists because data flows are without limits to territory and since its flows are digital unlike the body this allows for control to be constantly present everywhere. Additionally, the digital self allows for social sorting because it is comparable based on numerous traits that define the characteristics of our existence. Haggerty and Ericson (2000, 615) also note that the growth of the surveillant assemblage is rhizomatic, which are aided by technological advances in connections between and with devices that monitor bodies. Big data is a threshold point for the rhizomatic growth of the surveillant assemblage and represents a point of departure, whereby, unprecedented lines of

intensity have made more connections than ever before. Reflecting on Facebook, entering its assemblage is increasingly easier every day as Facebook supports more platforms and the widespread growth of the internet access across the planet. Furthermore, this is demonstrated through the growth in Facebook users, all of which help to inform the system of big data. In fact, Facebook is helping to institutionalize this rhizomatic growth, insofar as on October 5, 2015 Facebook announced plans to deliver Internet access from space using a satellite called the AMOS-6 that will launch in 2016 to provide Internet access to sub-Saharan Africa (Zuckerberg, 2015).

I disagree with Haggerty and Ericson in their belief that the surveillant assemblage results in a partial levelling of the hierarchy of surveillance. Haggerty and Ericson rely on Mathiesen's (1997) synopticism (the many watching the few) and growth of the then technological advances to justify a levelling of the hierarchy of surveillance. While there has been growing research intended to evaluate the new horizontal or social surveillance of web 2.0, this levelling of the surveillance hierarchy has not occurred. The cost of maintaining and implementing big data architectures is enormous. Facebook relies on a Hadoop (cheaper alternative to traditional methods) architecture for their data storage, which still costs around 1 million dollars per petabyte (1 million gigabytes) (Bantleman 2012). Bantleman (2012) notes the cost can be quite high for companies like Yahoo that hold around 200 petabytes of data. Essentially the ability to engage in big data practices and analytics creates a dichotomy between the powerful who can afford and manage the large scale creation of data and those that can not. Esposti (2014, 217) refers to companies that can engage in big data analytics as either analytical competitors (analyze their own data) and analytical deputies (analyze others data). The companies that are unable to analyze their own data sell it to analytical deputies (companies that analyze data for profit) to

increase revenues. Unlike in disciplinary societies where power was held within the disciplines, the ability to engage in the analytical component of dataveillance is the empowering element within the societies of control as it grants the power to engage in modulation. While power becomes de-territorialized in the fluidity of the societies of control, those with the capacity to organize the flows of data into large databases have the ability to modulate the function of power within the societies of control. I view this as the subjective control over data as the source of power within the societies of control. It is the ability to traverse from data into information and information into knowledge that grants a subjective entity the ability to modulate and control bodies. This process informs and creates the algorithm. The hierarchy of surveillance transitions from the disciplines to those who can generate the knowledge from data to self-dictate their power for their own ends in societies of control.

This assessment implies that societies of control are a totalizing system based on the subjective control over data. While we may theorize the possibility of this existence within the imagined city of Guattari, the truth is that we have not reached this point yet. Recall that our focus on Facebook is but one example of a machine within the societies of control that are growing alongside the disciplinary societies. It is in the totalizing connection of these different machines that we may find totalitarian societies of control. Muir (2012) applies Deleuzian discourse to the films *Erasing David* and *Minority Report*, where she notes within *Minority Report* that the ability of surveillance measures to penetrate all spaces in order to control subjects requires a multifaceted approach from different institutions. Societies of control of the future will rely on the connections forged between the subjective controllers of data to govern all institutions from the corporation to possibly even the state.

The Legal Problems

The purpose of this thesis is to explore the problems within law resulting from big data surveillance related to Facebook that can be usefully understood through Deleuzian concepts. From the above discussion three legal rights require a new *becoming* to be saved from crises within the singularity of their relationship to the Facebook big data paradigm. This is because these legal rights are starting to be challenged as the Facebook environment converges with the physical world. The first is the concept of legal personhood, which is shifted by the growth of the dividual and status of the dividual as either person or property within the societies of control. Legal personhood is entering a crisis because the data that forms the digital profile is being treated as non-personal or as property of Facebook. The question is whether the data of the dividual is an element of the ontological body? If we accept that the dividual is an assemblage which is an element in the being of the body, then the sale of this organized digital profile is not merely property but an ontological extension of being. Through Deleuze we can explore the way law is in crisis itself because law does not conceptualize the different planes of existence of which the dividual is one aspect of. The existence of a digital self, created through the Facebook assemblage and tracked through our interactions with others is the unit of analysis that modulation is applied upon. It is through the data holder's relationship with the digital self upon which we find the subjective data holder deriving the power to modulate the body in the physical world. The dividual in the Facebook assemblage of control represents a new level of existence that is always connected to the body. Legal personhood needs to step outside the physical and rational dimensions of ascribing personhood to understand the unique relationship between the dividual and the body as part of an infinite assemblage.

The second legal problem has its *becoming* in the transition from the structured spaces of disciplinary societies to the fluid immateriality of societies of control. This second legal problem is the issue of privacy and how our traditional definitions of privacy dictate the difference between private and public space along with private and public information. As the societies of control function through de-territorializing space, how does this affect our understanding of the public/private domain in a fluid network of desires? Furthermore, as a result of the data flows of the control society whereby the body is divided into the “dividual”, how does the dividual as a medium of communication between Facebook and the body, alter our understanding of what is private information? Privacy concerns are a growing issue and at present within the usage of big data in modern technologies that issue needs to be assessed and responded to. Within the introduction of Haggerty and Ericson’s (2000) rhizomatic growth of surveillance technologies, the penetration of technology into new spaces is occurring. The ability to access web 2.0 services like Facebook through the smartphone, the tablet and the watch are examples of new technologies breaking down the barriers to the public virtual world. As these interactions are becoming increasingly available in the physical world, the objective belief upon which privacy rests is collapsing along with the enclosures that once held it together. Kitchin (2014, 170) notes that people are largely unaware of what information applications and services are retrieving on them and how it can be used to inform unified profiles. Wigan and Clarke (2013, 52-3) argue that companies gain large amounts of data on people to make inferences about them without their consent further advocating problems of privacy.

The final legal problem is the contested battle between commercial expression and the free rational actor. As shown, big data analytics that Facebook and others employ seek to pre-emptively modulate the behaviours of bodies through a process of influencing their decisions. Rouvroy and

Berns (2013) explain that big data seeks to reduce the unpredictability of the future by considering the possibility of an actuality being contained in the data, meaning that reality will reveal itself if it is correctly probed and analyzed. Reigeluth (2014, 251) takes this insight to suggest that the new social outcast will be the one who denies the objective self portrayed by the traces of one's self in data. This is understood in relation to Deleuze's *plane of immanence* as a space for the limitless possibilities of action and inaction, this space is being manipulated by the data analytics to overly influence certain actions or beliefs over others. This big data based consumerism challenges the fundamental rational economic actor, a requirement that is usually engaged when considering a legal person. This legal problem represents the danger presented by Facebook as a deterministic technology through which it attempts to influence and control the economic choices of bodies. The ability of Facebook to utilize big data to prime virtual environments towards individual's economic choice over empowers the protection of commercial expression. Commercial expression is meant to inform an audience of a desired product, not influence the body through the use of data analytics whereby the pre-constructed environment and events are potentially influencing your decision. This examination will result in a focus upon the implications of the individual within neoliberal markets based on the works by Brian Massumi and the competing issue of commercial expression in modulation.

The previous three legal problems that stem from Facebook's big data paradigm have not been chosen at random. They represent consistent legal problems that plague societies of control. That is, they are the only rights that will consistently be engaged within the singularity of the case within a society of control in relation to a corporate unit. While other rights such as mobility are affected by this paradigm, the effect upon these rights results from the larger implications of these three rights being constantly in crisis. For example, Adey's (2004) depiction of the airport

as a control mechanism and its restrictions upon mobility are predicated on the inability of privacy laws to protect personal information or data and create the ability to modulate these specific spaces. This problem also stems from the failure of recognizing the individual as an extension of legal personhood through treating the digital profile as property. The restriction of the mobility of the person is representative of the pre-emptive influence of big data analytics on their free rational choice. Throughout this discussion it will be important to remember that difference within each legal problem stems from a specific difference within the case and not from relying on a presubscribed law upon which the case must fit.

Outlining and Validating this Approach

In this chapter I have brought together Deleuze and Facebook's usage of big data to expose a series of legal problems. Through Deleuze's societies of control the numerical language is understood as data represented by the flows of desire. This is empowered by Deleuze's concept of modulation which sees change in constant motion from event to event which is a reflection of the algorithm continually acting upon the body by re-territorializing the environment of each login. It's only through Deleuze that we can frame the operation of the Facebook assemblage by understanding that the algorithm operates as a desiring machine, connecting and cutting into the flows of data by decoding the body from the physical to the digital. It is through the algorithm as the control entity that we expose the technological soft determinism. This operation rooted in the algorithm is a function of technology in analytics and societies participation in the mass sharing of information in web 2.0 services. This analysis through Deleuze brings forth and frames the problem between consumerism and commercial expression through which priming through modulation seeks to control the economic subject.

Furthermore, applying Deleuze's conception of thresholds and *becoming*, opens the debate in whether big data has surpassed a threshold point in big data analytics. That threshold being the soft-determinism in balancing both the influence of technology and society. Big data analytics is seeking to gain more data through the social participation in web 2.0 as people share more across multiple devices. Data analytics are penetrating into new devices every year seeking to demolish the private sphere socially. Ultimately these bodies that are being extracted from for data have the ability to restrict that retrieval through privacy setting but as Solove (2013) argues people simply accept the conditions. These operations in conjunction are shifting the public and private divide of space which is achieved through applying Deleuze and leads to the legal problem of maintaining privacy within the societies of control.

Finally, it is through an understanding of the digital profile as both a dividual but also that the dividual is an assemblage that forms the personality of the body. As the body is continually subjected to the transformation of the physical into the digital so that both may co-exist harmoniously, that dividual is forming a part of the personality of the controlled body. Haggerty and Ericson (2000) attempt to frame this problem through the rhizome noting the mass growth of contemporary data based surveillance technologies. The discussion that has been absent is the affect that this shift in personality has upon the legal person because personality is evolving to be as much physical as it is digital. In essence we are experiencing the merging between the user and the body. The following chapters will seek to address these issues beginning with a discussion on the legal person.

Chapter 3: Dividual, Legal or Non-Legal Persons?

Framing the Dividual

Every login a user makes into the servers of Facebook to enjoy the connectivity results in a more aggregate form of the “dividual.” In applying Haggerty’s (2000, 612) digital self where the body is abstracted from its territorial setting and resembled in data flows, every connection increases or provides new flows of data that are forming the digital self or dividual. As users continually enter and leave this assemblage, something unique is occurring which is the shifting of the assemblage of Facebook. The interaction of users within the assemblage is being recorded and preserved so that their presence is immortal and simultaneously becomes part of the assemblage for others to witness. The recording of bodies into datasets has occurred for centuries, just not in the digital format. The power of the digital format makes storing data easier than paper or analog methods. The recent growth of big data-based technologies have the capacity and ability to record instantaneously within large groups and represents the newest shift in a long line of *becoming*. Examples date back as far as the ancient Romans who used a quinquennial census (occurring every 5 years) to keep track of taxation and military eligibility (Rosenstein 2009, 28). This ability to record and track individuals is largely inefficient when compared to contemporary systems. When a person attends a sporting event, a concert or public event, Facebook allows them to geotag and post to their profile their attendance in the event. Furthermore, users can upload pictures of themselves at the event while simultaneously linking the event’s website or Facebook event page with it. Purchases from online retailers like Amazon (2015) provide the option post-transaction to share your transaction with Facebook.

Therefore, all of our actions in the physical world have the capacity to be transformed into the data flows of the societies of control. This occurs within the sociotechnical intention to store our individuals in these large databases to empower data based analytics. The capacity for the transformation of bodies into individuals is changing. While Releiguth (2014) and Esposti (2014) previously spoke of the interactions users make or the traces users leave behind in the digital world, they have only considered the interactions that affect a single user by that user. However, with respect to Facebook, other users have the ability to post information to your profile whether its pictures, attending events, or general personal information. Not only are users responsible for transforming their bodies into individuals, so too are the others with whom they choose to interact with in the Facebook assemblage. Additionally, through the implementation of data analytics within the data feedback loop, Facebook is constantly generating more metadata on the body as well. This constant two-way communication is merging the existence of the individual with the body through the assemblages that form the body. As noted in chapter two, this is known as metadata. Kitchin (2014, 8) describes metadata as data about data, metadata is the specific context associated with the data or dataset as a whole. The data that is created through the analytical and behaviour manipulation steps of dataveillance is metadata. Metadata is used to help inform the data owner, in this case Facebook, to know more about the body and by extension inform the individual. From this analysis we can derive three methods from which the body is being transformed into the individual; by a user's individual actions, by the actions of other users, and by the data holder. All of which are occurring within an assemblage of Facebook that exists in the digital, all the while being entered into from the physical world.

Since Facebook shares this data with the Facebook group of companies who then sell it to advertisers, the legal assumption is that this data is the property of Facebook. Property in the

form of aggregated sets of data-based profiles treated as commodities as they have value to the targeted businesses and marketers. After all, these databased profiles are held on storage drives which is in the physical property of Facebook held at each of their data centers. However, the dividual is more than just simple property. It is the transformation of the body into the digital self that, when coupled with big data has the potential to surpass simple data and become an accurate signifier of the person. Effectively it is an image of the self conveyed in a different format from the lived person. The body is represented as an infinite number of assemblages that come together to form this abstract machine of the body. As I exemplified earlier we can understand the stomach and the mouth as desiring machines, seeking a specific desire and these assemblages combine with other operations in the body to form the body. The dividual being held in data acts as an accurate signifier of the person and represents a further assemblage of the person. This begs the question, does the dividual within Facebook have the potential to be considered a legal person or at minimum an extension of that legal principle for its connection to the body?

Legal personhood is an important principle in law as affirmation upon any subject or object grants said subject or object the ability to engage with specific legal rights otherwise not afforded to non-legal persons. Framing the definition or concept of legal personhood begins with a fundamental implication that the concept of legal personhood is not a specific area of law but instead is a series of different legal realms (criminal, tort or contracts) that define the relations and liabilities of the person (Tur 1987, 123). This is in line with Deleuzian thought. Recall that Deleuze understood *becomings* as lines of intensity growing outward in a rhizomatic fashion. Each different area of law informs a different aspect of this legal person and the collective whole of these lines of intensities inform an abstract machine of the legal person. This represents a part within the larger abstract machine of law. Furthermore, Dewey (1926) notes that the practice and

theories relating to the conception of the legal person have simultaneously been dependent upon non-legal considerations whether social, political, or philosophical. What is occurring here is the crisscrossing of the legal with the social amongst these rhizomatic *becoming's* of law's legal person.

The Concept of Legal Person?

Legal personhood or legal personality is a contested concept in law as scholars attempt to argue it's formation and application from different approaches. Naffine (2009, 20), in her work *Law's Meaning of Life*, differentiates the approaches to legal personhood by separating them into two distinct categories: legalists and realists. The legalists see law as having the power to grant and construct legal personhood in any construction it wishes to grant because law creates its own concepts (Naffine 2009, 20). Naffine views that the legalists are looking inward on law to determine the formation of legal personhood. Legalists would challenge the crisscrossing of the social and the legal upon which Dewey (1926) argued because to them law is an abstract system of operations that exists outside the world of the social. This is in contrast to the realists, who see the legal person being based in either rationality, religion or nature (Naffine 2009, 20,167). Unlike the legalists, the realists are looking outward from law to gain an understanding from the physical world to influence the legal world. However, for the realists each of the different disciplines (rationality, sanctity and biology) subscribes to a specific authoritative belief system to inform the conception of legal personhood. This stratification of the legal person needs to be deconstructed in favour of a more fluid approach that becomes compatible within the societies of control.

Deleuze and Guattari in *What is Philosophy?* (1994) view the object of philosophy as the creation of concepts that are new in that they carry an element of the creator inherent in them. Therefore, we must be weary of concepts that we have not created as it would be wrong to rely on these ready-made concepts, especially of universals, because they negate the essence of philosophy in the always changing creation of concepts. Deleuze believed that the purpose of concepts was not to provide simplicity through organization as it detracts from the uniqueness of experience but rather to move beyond experiences to new possibilities (see Stagoll 2005, 50). For Deleuze, concepts are meant to express the possibility of future situations and the variables that lead to the production of that situation such that these variables are the independent effects upon the event's circumstances (see Stagoll 2005, 50). To reiterate, concepts for Deleuze are not about representation but about being creative to inform the contingencies of each event. Therefore, by applying this Deleuzian approach to legal personhood I am not trying to simply organize categorically the different approaches to legal personality as Naffine shows. Using a Deleuzian approach, the task is to look not at the difference between approaches, but to investigate the variables that are creating the different approaches or informing each of the approaches. This requires that we evaluate each approach in search of explaining a conception of legal personhood that can then be applied to the Facebook assemblage. As the legalists and realists debate the existence of the legal person, they are standing upon a plane of *justification* which is contra-Deleuze. They are placing upon the person a stratified conception of the legal person that the body must conform to. However, the opposite is the case for Deleuze. The importance of difference in the Deleuzian approach is in analyzing how the individual is unique and how the individual gives rise to legal personhood is particularly salient and will be analyzed here.

The realists differ from the legalists because the realists accept the intrinsic metaphysical properties of the person in informing their approach, meanwhile the legalists disregard the metaphysical in favour of intellectual freedom (Naffine 2009, 26). Legalists therefore accept that law must establish the sufficient and necessary conditions required for legal personhood and only then build the legal person. This view has been replicated in the writing of legalists. Keeton (1930) explains that a legal system has the capacity to ascribe a personality to any being or object that it chooses. Salmond (1960) also argues that law can grant any being the title of legal person so long as they are capable of rights and duties, where it is these rights and duties that define the attributes of the legal person. In addition, Kelsen (1967) views the legal person as being formed by the fusion of legal rights and norms into a single legal unity. Therefore, the legalist approach to the individual would see law as having all the power to decide whether the conditions of the individual align with the person that the specific system of law defines as a person. Since the legalists are willing to set aside the metaphysical element of the legal person, there is no limitation on the application of legal personality to objects, or in this case, individuals. On the other side, this also presents a limitation in the legalist approach because it presumes that law itself grants the authority of personhood which is primarily arbitrary and secondly fails to address how a threshold of when personhood comes to exist. Additionally, the legalist approach also assumes that any being afforded legal rights, being that they are recognized as such whether natural or the manmade, actually can engage with these rights. Salmond's (1960) definition of the legal person is the only legalist approach outlined that states the implicit assumption of the person's capacity to exercise rights as a condition for legal personhood. In reliance on the *habeas corpus* principle, Salmond requires that a legal actor be present in law to exercise a right. For example, a legal person must bring forth a claim in tort law to exercise a right that may have

been impaired by another legal person. In criminal law, an accused who stands trial is presumed to be a legal person and has certain rights such as the presumption of innocence. This is where the legalists assume that the legal person can actually exercise these rights, as they accept the formation of the legal person results from these inherent legal rights and duties. But with criminal law as an example, the presumption of innocence is afforded automatically not enforced by a legal person and therefore not all rights need inherent application to justify a legal person.

In summary, the legalists grant law the authority to place upon any being the title of legal person because only law has the authority to do so. Fundamentally, the legalist stance is premised and connected to Salmond's (1960) assertion that the legal person is born by being afforded rights and duties that can be exercised. Naffine (2009, 55) views this assertion as problematic because rights and duties are directly linked to the understanding of the human being and therefore present a limitation to any non-human being. One such example is the existence of software based artificial intelligence responsible for the formation of contracts. The legal personhood of these electronic agents is highly contested (see Weitzenboeck 2001). These artificial intelligence agents lack the metaphysical existence to enforce rights and duties because they do not exist in the physical world. As such they cannot be legal persons. Therefore, a reliance on the legalist perspective limits legal personhood to a metaphysical standard that as Naffine (2009) argues is limited to human-like entities that can enforce legal rights and duties.

In transitioning to the realists, we immediately can solve the issue of threshold present in the legalist approach. That is because as mentioned previously the realists ascribe to specific belief systems that derive the threshold of legal personhood. In properly applying the Deleuzian framework, the view of the authoritative belief system providing the threshold points of *becoming's* between legal and non-legal persons negates the importance of the singularity due to

the reliance on a universal. Simultaneously we find ourselves returning to the same debate on concepts by allowing the authoritative disciplines to grant them their own personality and universality. While I progress through the three disciplines of the realists I won't repeat this implication but will address it afterwards in drawing upon a new Deleuzian approach to legal personhood as seen through the dividual within the Facebook assemblage.

Beginning with the first discipline of the realists, the rationalists, as the title suggests believe the legal person is represented by the autonomous person who can rationalize in the ability to contract freely and in self interest (Naffine 2009, 61). Waldron (1999, 222) describes the rationalist approach to the legal person as recognizing a being that can "settle disputes, exert sovereignty over its life, and respect the sovereignty of others." Rationalist critics like Kramer (1998, 62) assert that the ability to exercise a will or right is reflective of the self-determinative, competent and authorized agent which forms the legal person. Additionally, speaking of criminal law, Gardner (2003, 159,164) writes that when we have committed a wrong it is our nature to hunt for justifications in rationality as the legal person possess a developed ability to reason. Naffine (2009, 74-5), in response to Gardner, addresses that he places extra weight upon the rational legal person by extending the concept beyond common sense reason but to this level of "developed." Having understood the rationalist perspective to the legal person, can this threshold for the dividual be applied? The problem arises from the contextual setting of the dividual within the societies of control. Unlike the disciplinary society where a person is trained post-action thus implying the autonomy of action is either normalized or not and then corrected, the societies of control modulate by pre-existing before the "autonomous" action and preventing the action from occurring. The assemblage of Facebook is constantly shifting and each access event is subjected to the conditions of the dataset that creates the specific digital space the user will enter. This

represents the element of determinism in the Facebook assemblage. Naturally speaking within the societies of control, autonomous action would appear impossible, yet it is not. Modulation is not necessarily totalizing in every action as Massumi argues in chapter five.

Muir (2012, 274) explores the concept of modulation in the film *Minority Report* where the world is framed by biometric scanners that provide access, usually through the use of iris scanning. This limits the main character's ability to access certain spaces, however, the main character's autonomy still exists within the ability to choose whether he wishes to access areas or not. Yet, the inability to act completely free and in self-interest is clearly hindered here as his autonomy to make rational decisions is limited. As the film later shows, the main character replaces his eyeballs with another person's to avoid detection and move freely, and it is only then that he is able to reconnect with his autonomy (*Minority Report*, 2002). The dividual within the Facebook assemblage is very limited in terms of autonomy as it's existence is brought into being through the transformation of the body into the digital. The actions of the dividual are a reflection of the body in digital format and therefore, the rational and self-interested actor is not the actions of the dividual, but the lived person existing through the immanence of the dividual. As Naffine (2009, 61) notes, the creation story of the rationalist approach begins with the ability to contract, of which contract law can help inform the requirements of this creation. One of the most quintessential elements of contract law and a main requirement of the ability to enter into contracts is the principle of an intention to be bound (Hepple, 1970). A party must show an intention that they seek to extend to another party an agreement which must also be reciprocally intended by other party. This is why Barrert (1986, 305) reasons that the basis of a contractual agreement extends beyond the promise found in the intention but stems from the notion of consent. The ability to intend, followed by the ability to consent informs the rational contractual

person. Therefore, if we are to understand the dividual as a rationalist legal person then the dividual must be capable of intention and consent. Neither capacity is found within the dividual, instead the rationalist person in the Facebook case study is the body not the dividual. The contractual agreement for using Facebook, known as the “Statement of Rights and Responsibilities” is not entered into intentionally by the dividual as it pre-exists its creation. Additionally, the consent to be bound is a burden held by the body to satisfy the qualifications for access to the service under section 4 (Facebook 2015d). Once, the dividual begins to be formed through the continual usage and transfer of the body to the digital, the consent and intention to add more information to the system is dictated by the choices formed by the body. Where modulation enters the relationship, is in Facebook’s datavelliance whereby they analyze the data of your dividual and then make predictions to modulate the body through a modification of behaviour. For example, in the use of targeted advertising based on your preferences and posts, the central focus of chapter five. What this does represent is the acknowledgement that the dividual acts as a medium of communication between the body and the surveilling party, in this case Facebook. This issue will be a focus that is directly examined in the next chapter on privacy, however, for now it is important to note its existence.

The second discipline of the realists is the religionists who see the legal person as being found in the natural person because the natural person is believed to possess some innate or absolute value that is recognized in law (Naffine 2009, 101). Naffine (2009, 105) notes that this approach abandons a single attribute to human life in favour of a belief in an intrinsic dignity and that’s where the approach ends, it’s a matter of belief. Finnis (2002, 4) argues that it is impossible to accept an equality for all beings whether animal or human without accepting that there is something innate in humans that bifurcates them from other sub-rational creatures. In

earlier work by Finnis (2000, 14), he ascribes that specific innate quality within humans to the soul which is granted upon humans at conception. Dworkin (2004, 16,19) believes that humans are objectively valuable, whether we ascribe that value to God or not. Additionally, Dworkin (2004) also believes in the detached value of human life whereby even if a human being does not satisfy the qualities of legal personhood (foetus), they are still persons because they will be persons at some point or in the case of the past where persons at some time (mentally incapacitated individual). The problem encountered with the religionist approach is that it encloses the conception of the legal person into a narrow subjective approach that renders it, in Deleuze's terms, into an organism. It is constrained and consumed by a presubscribed strata based on belief. Belief is not a justification in law for the affirmation of a right because belief is a rhetorical concept. Law is a system of epistemology and rhetoric is not compatible with an epistemological system. Law by being epistemological is a system of facts and knowledge's not a system of unfounded claims to a perception based in belief. In terms of applying this approach to the individual it is impractical because there is no evidence to suggest the notion of a soul or entity within the individual unless we accept the body and the individual are a single unit.

In moving onto the final realist approach, the naturalists introduce some key principles that extend the conception of the legal person beyond humans by turning to principles of existence. Naffine (2009, 124) describes the naturalist approach as removing/adjusting the wall between the human and animal divide. Furthermore, Naffine (2009, 127) notes that law must recognize humans as having unique and separate needs/abilities that while these needs/abilities separate them from other species it does not presuppose humans are above all other species. Peter Singer (1975) believes that species as an organizational framework is morally irrelevant and since law and morality are intertwined, species as a concept is also legally irrelevant. Where

Singer differentiates on personhood is the capacity for sentience which contains two elements: the ability to suffer and the sense of one's self (see Naffine 2009, 127). Others like Wise (2002) attempt to break down the wall by differentiating animals not by sentiment but by mental capacity. However, such attempts return us to the rationalist approach whereby drawing the threshold of mental capacity becomes a subjective standard that discriminates and re-enforces the dividing wall. Lastly, Dawkins addresses a prevalent presumption in legal personhood that tends to go unnoticed. Dawkins (2004) acknowledges that definitions or approaches to legal personhood tend to place emphasis on the traditional characteristics of the human being and apply them back on an objective and therefore incorrect standard. The naturalist approach separates itself from the other approaches by focusing on eliminating the barriers between natural beings of which law presumes a hierarchy with humans at the top. Naffine (2009, 16) believes there is a fear that if we stop seeing humans as superior and start understanding ourselves as natural beings we are afraid of losing our agency or spiritual value. What the naturalist approach does expose us to is the problem of attempting to enclose the concept of personality into a singular characteristic whether mental capacity, physical features or emotional intelligence. We always return to the problem outlined by Dawkins (2004), that we are continually approaching personality from a subjective characteristic and then attempt to re-apply it as an objective standard. The societies of control operate within a world where enclosures are broken down in favour of fluidity. Our approach to legal personhood must replicate the fluidity of the societies of control if we are to appreciate the uniqueness of the case. Naffine's work is seminal because she attempts to persuade us with a fluid attempt at defining the legal person, the relational person.

Naffine (2009, 169) provides a new approach to legal personhood by introducing the relational person by defining a legal person in terms of the relations a person holds in society because in law “one’s legal nature, in this view, is always reliant in a relation with another.” This approach thereby avoids the need to look for inherent characteristics by turning to the social and legal realm as a whole to find the existence of the legal person. Naffine argues the creation story of the person in law is reflected in the formation of the person in society in terms of the relations the person holds and vice versa. This approach provides no direction in terms of where an entity may surpass into legal personhood based on its relations. In essence, how do we determine the thresholds between relations where certain relations are supportive towards legal personhood while others are opposed to the creation of legal relations. In answering this question, it forces law to turn to an authority for which to find the threshold of the relational person in defining what relations constitute legal relations. The authority for legal relations is law itself and the relation forces the analysis to return to a legalist perspective. This is why we must investigate the specific case of the Facebook assemblage in order to find the true singularity in the legal person as found within the event.

A New Concept: The Contextual Person

A Deleuzian approach for a new concept (as following his approach to concepts) of legal personality will first separate the variables that are at play in the formation of the different approaches to legal personhood. Next, I will frame the existence of these variables within our specific case in law. All of Naffine’s five different approaches to legal personhood construct the concept from a different vantage point drawing on specific authorities or characteristics to define

the existence of the legal person. Within the Facebook assemblage, these vantage spaces are no longer concrete instead, they become displaced in the fluid movement of the flows of data.

Recall Smith's (1997) approach to the conception of life for Deleuze, in chapter two as an understanding of the person. Within Smith's chaotic depiction of life, the existence of the person is not found within a singular form but within a series of thresholds and multiplicities.

Collectively, a person (that which inhabits the body) may be understood as a collective whole, a multitude of *becoming's* crossing multiple lines of intensities and having crossed certain thresholds and not others. After all these features help define the personality of humans.

Additionally, human beings may also be understood by the events that they are a part of. For example, in the 1951 National League Final, Bobby Thompson hit a homerun in the ninth inning that came to be known as "the shot heard around the world." In this singular event, Bobby Thompson helped define a collective event (baseball game), but also that event defined him as a person and became a part of his relation within society.

The problem in the application of the legal person in law, is that unlike Deleuze's view of life, law presumes a singular form in being. Law restricts its focus to understanding personhood on a singular plane of existence. Essentially, the legal person is totalizing in the sense it can only be granted upon a singular being in a rigid, narrow space. Each of the five above approaches are defined by a singular characteristic or definition. However, such approaches are ignorant of the collective existence of the being in the multiplicities and occurrences along the rhizomatic lines of intensities that crisscross and extend in different directions and through infinite assemblages each defining the person.

Therefore, the legal person needs to be understood contextually as the *contextual person*. Essentially, in the same way Deleuze encourages us to evaluate the singularity of every case or

event, the same must be done with the legal person. In order to appreciate fully the conception of a legal person we need to look at the contextual elements that form the specific person in law. This is done by evaluating the potentially infinite rhizomatic connections that form the person within the event or assemblage. Within Facebook's assemblage the dividual is represented by a transformation of the body into a digital form. Certain lines of flight that define the person break off of the body and enter the digital to form the dividual. This transformative process is also cyclical in nature because these lines of flight return back to the real person in their interaction between Facebook and the body. This is representative of a soft technological determinism. People and technology both have a role to play in influencing each other. The multiplicities of these transformations reconfigure the person to be understood as interconnected within the digital and the body, in essence fusing the dividual with the body. Thereby we enter the convergence of Facebook and everyday life. In law this results in the recognition that the dividual is not to be treated as a separate legal entity to be ascribed its own form of personhood or property. Instead, the dividual needs to be understood as an extension of the physical person that exists simultaneously in both the body and the digital Facebook assemblage.

Understanding the legal person as contextualized also reveals a second assumption in law regarding the application of legal personality. Legal personality being either applicable or not is due to it being in essence a binary concept. In reality, there are many instances where situations of limited or partial personality may exist due to situational factors. Dworkin (2004) is the only critic of legal personality to address the possibility of finding legal personality where it might not be present based on what he called detached value. While Dworkin's approach still positions legal personhood as a binary, it reveals a way to shift the paradigm towards an approach that looks at degrees of personality based on potential future or past personality.

The understanding of the contextual person allows us to look at the potential degrees of personality by examining the unique factors of people who may be considered outliers to the standardized person. In fact, our legal system already acknowledges these *situations* in the limited application of adult sentences to youth offenders (*Youth Criminal Justice Act* SC 2002 c.1 s. 72(1)). The recognition of taking what the law considers “a person of diminished legal responsibility” and transforming them into a full legal person is representative of contextualizing the legal person. Additionally, recognizing youth as having a diminished legal responsibility is also representative of a contextual approach as the law recognizes a degree to which legal personality and responsibility should apply.

Where the contextual approach suffers from a potential limitation is where Naffine’s five different approaches also suffered the same problem. That is the problem of threshold in setting a distinctive mark at which to determine when the legal person becomes engaged or not. While the acceptance of degrees of legal personalities helps to remove a binary barrier at the threshold of legal and non-legal personality, there still remains a threshold where the simplest degree of legal personhood can be found. In responding to this limitation, I turn to the work of Wittgenstein. Wittgenstein’s approach to conceptualizing language can also be applied to legal personhood to define the threshold of legal personality. Wittgenstein (1967, 31), in discussing language as a concept, notes that language is represented as a phenomenon in which there is not one single element that is common but rather every word is related to another in some different fashion. Instead what we find is a “complicated network of similarities overlapping and crisscrossing...” in which we find a web of connections absent of any one common denominator (Wittgenstein 1967, 32). Wittgenstein (1967, 32) refers to this understanding of concepts as “family resemblances” because members of a family may differ across characteristics but always to some

degree bear a resemblance to their family. By applying Wittgenstein's family resemblances approach to legal personhood we can frame the threshold of personhood more fluidly to fit within the societies of control. The minimum threshold to meet the qualification for legal personhood would then require some form of connection to the legal person as has been framed. By turning to the different approaches brought forth by Naffine, we can find a series of different placeholders that can serve as justifications for the resemblance of personhood. For example, under this conception animals of high rationalism such as primates that are capable of basic rational thinking may be considered as legal persons but only at a limited degree due to their inability to fully satisfy numerous deep rooted connections for full legal personhood.

In returning this discussion to the individual within the assemblage of Facebook I will differentiate the contextual approach from the above approaches. Within the assemblage of Facebook, the physical and digital worlds are becoming territorialized so that personality exists within different planes of existence at the same time. The personality of the body is interacting with Facebook in the physical transformation to the digital through datavelliance. Meanwhile, Facebook through notifications and communication returns the interaction to the embodiment of that personality contained within the body of the physical world. Personality is defined both in terms of what the physical brings to the digital and the returning influence of the digital to the physical. It is therefore irrelevant that the metaphysical body exists only within the physical world because the assemblage of Facebook is influencing and representing that personality within the individual. Through an application of the family resemblances approach, the Facebook individual holds social relations to other users in the same fashion the physical person holds relations to other persons. Further, these same relations may be the same relations that exist both in the digital Facebook environment as in the physical world. The individual represents the

personality absent of the body, to deny the application of legal personhood on a metaphysical ground negates these different planes of existence that are flowing through the Facebook assemblage. In contextualizing that the aggregated data of the dividual within Facebook is more than just a simple collection of data points does not necessarily insist that the dividual is a full legal person. The dividual is not autonomous, nor is it rational. The dividual within Facebook can only be as rational as the physical person projects themselves to be. This leads me to conclude that the dividual is best understood as an extension of legal personality. This is because while the dividual within Facebook represents certain lines of flight that are breaking off of the physical person, these lines of flight are representative of a process of *becoming* a digital personality. A person can grow rhizomatically in the physical and digital world through Facebook, however, it is the same personality that is operating through the body and the dividual that is growing in both physical and digital worlds. This leads to a crisis in law because law is restricting legal personhood to the narrow conception as presented by the above concepts which negate the importance of the singularity that Deleuze advocates which can be found in the contextual person.

Summarizing the Crisis of Legal Personhood

This chapter began with a discussion noting that the recording of bodies into datasets is not a new contemporary process but can be dated as far back as the Romans. This chapter then looked into the dividual and what defines the dividual within the Facebook assemblage. The dividual is a commodity that is sold by Facebook and is presumed as property. However, the question arises as to whether the dividual is more than just simple aggregated data. This transitioned into an investigation into five different approaches to legal personality being;

legalists, rationalists, religionists, naturalists and the relation approach. The legalists argued that law had the sovereign authority to grant any object or being legal personality so long as that being or object could exercise those rights or duties. The rationalists saw legal personality as being fundamentally applied to rational beings capable of contracting or consenting to relations. The religionists ascribed to a belief that all humans are legal persons by virtue of an absolute or innate quality that defines the person. The naturalists sought to deconstruct the divide between humans and animals because for them it discriminates humans from animals without justification. Lastly, the relational approach defined legal personality as being representative of an entity that is capable of social relations and by extension of that ability should be afforded legal personality.

It was concluded that these approaches all ascribe personality to a single criteria and negate the application of the Facebook assemblage. Our understanding of legal personhood is already flawed by its reliance on a singular universal approach. The Facebook case study through an understanding of the dividual, amplifies that discussion to another level because the dividual is an informed assemblage that is an function of the personality within the body. The reason Facebook as an assemblage changes this aspect is not the sole result of the presence of Facebook. Other web 2.0 services have the potential for the same results but it is the use of Facebook as a representation of the physical body that exemplifies this problem. While data held by private corporations outside of the context of assemblage would be easily characterized of as property. Such an approach would be ignorant of the extension of the metaphysical person between the body and the dividual that underpins this relationship.

As Thrift (2005) shows that technology and humans influence each other, the same is true of the dividual and the body in the physical world. This reasoning lead to an understanding that

the individual should be seen as an extension of legal personality. I believe as we move forward we need to abandon metaphysical limitations because we are moving towards more digital societies. The individual within Facebook is only one example of the transitions that we are beginning to experience in contemporary society. This conclusion is important in contemporary society as “smart technology” like the smart watches or home monitoring equipment that the body interacts with in everyday life is further intertwining humans and technology.

Chapter 4: Decentralizing Privacy

The Collapse of Enclosures

Within Foucault's disciplinary society, enclosures provided a space where events could occur outside or within the gaze of hierarchical observation. For example, this created private spaces such as one's domicile and spaces such as the prison. The first conception of privacy can be traced all the way back to Aristotle who saw the household as the *oikos* and the larger society as the *polis* and thereby began to draw a private versus public divide within society (see Roy 1999). However, with the rise of web 2.0 services, the enclosures that once formed the private sphere have begun to be broken down in favour of the fluid nature of Deleuze's societies of control. Not only has the space which is considered private been dismantled but also the conception of privacy is in need of adapting to this fluidity to accommodate protecting both persons and their dividuals in the Facebook assemblage.

The Facebook assemblage draws a unique question upon privacy due to the usage of the dividual as a medium of communication whereby modulation flows from Facebook and its advertisers to the dividual so that it can be applied upon the body. This engages questions regarding privacy and how the information or more specifically data is flowing amongst the system to allow for the operation of modulation. Without the data to inform, analyze and act upon, the power of modulation is limited which reinforces the earlier notion of power being subjected to those with control over data. In order to gain this power through modulation, the *oikos* must begin to infiltrate the *polis* by removing the barriers that hold together its enclosure so that the information contained in that private space may become public or non-private.

The problem of privacy within the realm of big data environments like Facebook is a concern of big data critiques. The work of Burkell (2014) exposes the debate of whether or not Facebook is considered public or private space. In other words, whether or not there has been a collapse of the enclosures that form a private space even when people are attempting to restrict access through the friend list or other tools. Specifically looking at Facebook, Burkell and her colleagues analyze the responses of individuals who use the Facebook's service. They find although most individuals are actively engaging in restricting the access to the information contained in their Facebook accounts, they are still gearing them towards a large audience of viewers (Burkell et al. 2014, 980). This can be seen as a synoptic function based off of Mathiesen's (1997) synopticon model of the many observing the few. We can see that the Facebook user is projecting themselves outward. However, it is Marwick's (2012) work on social surveillance that exposes that in web 2.0 services we tend to surveil each other thereby resulting in a more lateral regime where we each are infiltrating each others information. This becomes akin to the public sphere of life whereby anyone within the same space can be watching anyone and vice versa. Burkell (2014, 983) ultimately concludes in her work that the boundaries of the private divide no longer exist within Facebook and it must be considered a public space. Even though people are attempting to restrict access they still share and provide data that would suggest that the fundamental belief is that Facebook is a public space. This has been achieved through the rhizomatic growth of Facebook to penetrate devices in new spaces. In addressing these privacy concerns, I will draw upon the work of Solove to act as the backbone for this analysis. This is for two reasons. The first is his desire to de-stratify privacy from approaches that seek to restrain it to a single essence concept. Instead Solove's (2006) conception of privacy as a taxonomy of problems can be informative in the case of the individual. Secondly, Solove's

later work in *Understanding Privacy* (2008) provides a framework to begin considering contemporary privacy concerns that I intend to critique to fit within the fluidity of the Facebook assemblage.

While Burkell's work primarily focuses on the interaction between users to inform the public/private divide she does not evaluate the existence of the dividual or digital self which helps further advance the collapse of the enclosures that provide privacy. Applying Marwick's (2012) social surveillance to show that we each surveil each other within the Facebook service, would allow us to understand that Facebook is subsequently surveilling the interactions of its user's social surveillance. Creating a system of surveilling the surveillers in which nothing can be considered private. This becomes the assumption upon which privacy rests within the operation of control in Facebook. In order to maintain the power to modulate, Facebook must retrieve all the data possible in rendering the expectation of the Facebook environment as public in order to legalize or justify the retrieval of the information. There can be no privacy within the public sphere when a secondary surveilling entity to the social interactions of people is in a constant form of recording data. This is representative of Deleuze's separation from the *apparent acquittal* of the disciplinary societies and the *limitless postponements* of the societies of control. Facebook is represented by the limitless postponements. Facebook is always watching, always recording and retrieving data until they begin the process of modulation in seeking behavioural manipulation. Facebook's ability to deconstruct the private space in favour of a more open and fluid space is incompatible with a rigid approach to privacy. Therefore, big data regimes have surpassed a threshold point in the *becoming* of big data analytics. That is the ability to invade new spaces through the dividual and the body, using them as a trace to track their

movements irrelevant of time and space. Thus I turn to find the enclosures that form privacy and adapt them to the fluid nature of Deleuze's societies of control.

Unpacking Privacy

Samuel Warren and Louis Brandeis (1890) wrote one of the first articles to formally articulate the meaning of having a right to privacy in the *Harvard Law Review*. In this article Warren and Brandeis (1890, 195) define privacy as "the right to be let alone" as first applied in a decision by Justice Cooley. Warren and Brandeis saw the right to be let alone as extending towards a right that allowed an individual to protect the publication (in any form or expression) of their thoughts, expressions and emotions. However, this approach assumes a notion of personal control over information in that the person in question will always be present to prevent or limit the actions of others. This is echoed by Gavison (1980, 438) who argues that the right to be let alone does not apply to non-personal decisions such as the centralization of data storage. The Warren and Brandeis' enclosure to privacy is strictly built around the personal and the direct interactions with that person. In terms of the individual we cannot directly frame them as being in a direct interaction with others who wish to use the data that forms them. Specifically, when Facebook sells a user's data (individual), that interaction occurs between Facebook and the advertiser and at no point is the individual or body directly interacting. Instead interaction only occurs *post facto* when the advertiser uses the data of the individual to communicate to the body. In essence the ability of privacy to leave its enclosure to the fluid nature of the societies of control is incompatible as it does not account for the presence of the individual.

William Prosser (1960) attempts to re-evaluate the laws of privacy by looking at the common law application by judges in assessing legal arguments for privacy protections. Prosser

(1960, 389-401) argues that there are four unique privacy protections: the protection against intrusion into a person's solitude: public disclosure of private facts; negative use of a person's name and finally, appropriation where a person's name is used without consent for capital gain. Prosser's final privacy protection against the commercialized sale of a person's name for capital is the earliest representation of the need to protect information regarding the person. However, the user in accepting the "Statements and Responsibilities" of Facebook agrees to forego their private information as per their "Data Policy" (Facebook 2015b and 2015d). This introduces a larger issue of privacy.

The problem arises when we begin to evaluate the difference between the consent to share this information and the inability or impossibility to effectively manage the continued consent of what information is being shared. As Solove (2013, 1880) notes the principle of managing one's privacy "takes refuge in consent". However, Solove (2013, 1881-3) argues there are cognitive limitations to people being able to effectively manage their privacy. Solove contends that people do not read the privacy policies and are therefore uninformed or those who did read the privacy policies lack the expertise to fully comprehend the terms of agreement and are unable to understand the degree to which they give away their privacy. He further argues that even if one was to surpass the cognitive limitations they would not be able to effectively manage the structural problem of maintaining privacy. Solove (2013, 1883-9) draws on three problems, the first is the problem of scale because while one might be able to manage a few entities, there are too many entities present in totality for a person to effectively manage without foregoing some aspect of privacy. The second problem is that even if a person allows the release of small amounts of non-sensitive information, entities can collectively aggregate that information to form a more holistic picture of information that was never intended to be released to just one

centralized unit (Solove 2013, 1889-91). The last structural problem is that people are unable to understand the long term harm of giving away their information because while they agree to release information early on, the harms usually do not surface until a significant amount of time has surpassed (Solove 2013, 1891).

To frame this problem in Deleuzian terms, the problem that Solove provides is one of temporality and is the same problem forwarded by Kafka in *The Trial*. A person agrees to release information through the terms of the agreement to a web 2.0 service like Facebook. The agreement is formed and unless the entity to which the agreement is made changes the terms and notifies the person, the legal process is presumed halted (apparent acquittal). However, in praxis the system of information retrieval is always present and the person is largely unaware of its actions. Additionally, the operation occurs rhizomatically as it aggregates data from different devices thereby leading to a new form of information (an aggregated profile) that the initial consent was not granting. In this sense the consent is presumed always present even as the process shifts and continues to operate akin to Kafka's *limitless postponements*. In this scenario the person is largely unaware to what is actually occurring until temporally they are made aware. Therefore, if one was to redress and shift the concept of privacy as a legal protection to the societies of control it needs to account for the temporal shift of data and the aggregation affects.

A New Privacy Framework

In forming a new framework to allow privacy to be more fluid requires the removal of the constraints that others have placed upon it. In doing so I will rely on Solove as a privacy theorist due to his method in primarily seeking to give privacy a more fluid nature. Recall that Warren and Brandeis (1890) focused on privacy as a right to be let alone, while Prosser (1960) saw

privacy as being enforced across four different planes of justification. Both individuals place specific enclosures on privacy that need to be removed to inform a new privacy framework within the societies of control. It is important to note that within the societies of control power is derived from the ability to retrieve and analyze large amounts of data. Privacy can be seen as a limitation in the ability to retrieve that data and thus power and privacy within the societies of control are in competition with each other. This is because privacy limits the power of modulation by derailing the flows of data. Thus while the suggestions here for re-drawing privacy may be effective in terms of limiting the power of modulation and respecting individual rights, the role of control entities like Facebook is to limit or deviate this right. Most significantly is the fact that within these web 2.0 services, it is the services that tend to dictate the rules and terms. Thereby rendering the user powerless and forces the user to abide by the services rules. Thereby capacity for resistance to the power of modulation in the control society may be to enforce a right to privacy within the study of Facebook.

In beginning to find a new approach to privacy I turn to the earlier work of Solove (2009, 43) because he claims to seek an intention to de-centralize privacy as a single essence concept. Additionally, by using Solove's method for approaching a new theory of privacy allows us to deconstruct analytical problems in theorizing privacy. Solove (2009, 40) presents four dimensions to approaching privacy from his own "pluralist" perspective as method, generality, variability and focus. The first dimension, method addresses the need to remove the sufficient and necessary conditions for privacy. In other words, as has already been stated remove the enclosures that form them. As a solution Solove (2009, 41), akin to my approach to legal personhood relies on the work of Wittgenstein's family resemblances to inform his method of privacy. Solove (2009, 43) resorts to this approach so that privacy may no longer have rigid

boundaries by placing it in a constant flux. Solove's (2006) previous work on defining privacy as a taxonomy of related functions is a reflection of his reliance on Wittgenstein.

The second dimension, generality, is in opposition with Deleuzian principles because it seeks to rely on a universal plane of justification for its existence. The reason for this tension is because Solove is a pragmatist, believing in the idea that there are universal truths while Deleuze is more cautious and resistant to universals because to him they limit creativity and reject in his view pure differences. As Solove (2009, 49) argues, context lacks direction and it is in the presence of generalizations of specific privacy problems upon which we can find an appropriate balance. Yet, this inherently lacks direction itself because only through the creation of a privacy problems can one find a need for the protection of privacy. Since we understand modulation through big data analytics to be pre-emptive within the societies of control, focusing on privacy problems restricts the focus to specific temporal past events without addressing future concerns. Context in specificity should drive a theory of privacy in approaching issues related to computing based systems like Facebook or other web services. As Schaub (2015) argues most computational programs and web services largely set static configurations for privacy that are absent of the context that underpin the use of these programs. A person's expectation for privacy may be in contention with these static settings and become overlooked. As privacy shifts into the digital information world it should be seen to grow creating new forms of privacy protections, each being a new law but protecting similar values in a process of *becoming* specific to the contextual elements that inform the need for privacy.

Therefore, when Solove (2006, 488) discusses a taxonomy of privacy problems being information processing, dissemination, invasions and collection, he is focusing on making different problems fit or constrain to a specific universal umbrella term he calls privacy. Instead

privacy needs to be de-stratified by removing the focus on generality in favour of specificity to the context of the singularity. However, the taxonomy model can still help inform resemblances to which the privacy concerns may grow outward from and help to inform the possible scenarios upon which the need for privacy can be drawn.

The reason for specificity lies in the common law principle of the reasonable expectation of privacy. When a privacy problem is presented before the courts the test for judges to apply in instances of a privacy infraction is whether the individual who was harmed had a reasonable expectation of privacy, which traditionally in Canada is enshrined under section 8 of the *Canadian Charter of Rights and Freedoms* (*R v Spencer* [2014] 2 SCR 212; *R v Tessling* [2004] 3 SCR 432; *R v Edwards* [1996] 1 SCR 128). In every case the potential for a different set of subjective expectations is tested against an objective (universal) standard of what is to be expected thereby stratifying the principle of privacy. As shown by Burkell and her colleagues (2014), people fashion their Facebook profiles to a mass audience thereby establishing that there is no expectation of privacy within Facebook. This objective belief leads to the contention that a problem of aggregation is not occurring because we accept the generalization and ignore the unique privacy problem. Furthermore, we ignore the process of *becoming* responsible for creating the conditions that gives rise to the privacy event itself. The aggregation of data creates the individual, at which point individuals on a molar scale can be retrieved, analyzed and compared to data analytics at the population level. In the shifting of the societies of control, if we continue to apply this objective standard to new and unforeseen problems in privacy we will negate the importance of the singularity in jurisprudence. Since there is a reliance on this universal justification, it forces the singularity of the case to constrain itself to the law to find an appropriate violation of privacy. Essentially, aggregation of a digital profile is not a privacy

violation because people have agreed to release small bits of information. In order to prove a violation of privacy because of this universal standard requires that it is shown that rather it is an objective issue and not relevant to the singularity of the case. For Deleuze, jurisprudence focuses on the singularity and the case should define the law, not the law defining the case like we find in the creation of the individual within the societies of control. The insight gained from this example is that generalization leads to enclosures which limit law within the societies of control and in order to find fluidity there needs to be a focus on specificity to empower law to function.

Solove's (2009, 50) third principle towards theorizing privacy is variability due to the shifting nature of privacy as a result of institutions and technology. Solove argues that what people consider to be private is a function of our relativity in terms of culture and time. For this reason, he argues that in approaching privacy we need to address cultural and historical contexts but not allow for too much variability and again turns to generality (Solove, 2009, 50). Solove's middle ground approach in attempting to balance universals by guiding them with elements of specificity leaves an unclear directional path for privacy advocates to adequately resist the power of modulation. Similar to the reasoning discussed above, the need to turn to the contextual and specific elements of the case to create the variability is a positive function. Variability results from the unique and difference of every case, not the constraining and manipulation of privacy problems as advanced by Solove.

Solove's (2009, 67) final step is called focus, which is designed to provide direction for privacy and for which he continues his reliance on privacy problems. The belief relies on the presumption that privacy problems create a desire for privacy (Solove 2009, 76). Privacy is an avenue to avoid social frictions and grant individuals the freedom to engage in worthwhile activity outside the frame of society (Solove 2009, 76). The main reliance for this view is based

on the application of Dershowitz (2004, 6-9) who believes that in the occurrence of wrongs, rights become formed to combat those wrongs. I intend to address the need of privacy by conceptualizing the variables that are leading privacy into crises within the Facebook assemblage. By doing so I will examine the underlying variables that give rise to the need for privacy within the use of big data surveillance.

Conceptualizing the Need for Privacy

As discussed in chapter two, there is a specific assemblage which we understand as the Facebook assemblage. Within it there are specific functions, emotions and language that define and operate the assemblage. Most importantly is the ability to control through modulation the lives of bodies through the individual. Privacy as a right not only protects information and people as depicted by Solove, but also is an escape from the constraints of society. In approaching the problem of privacy and re-framing this value within the societies of control will require that we adopt Solove's approach but with the reconsiderations discussed above.

The need to protect the private space of Aristotle's *oikos* is becoming important in the operation of the Facebook assemblage because the reliance of an objective standard to justify the data retrieval of bodies is attempting to enter into every space that can be deemed public. Facebook has plans to integrate location based services that will enable more data based evidence to help explain where we spend our money, the people who we might associate with at these places and the places we like to frequently visit (Honan 2009; Klitou 2014, 178). Amazon, the online shopping service, allows you to connect with Facebook to share what you buy and share what you read through their Kindle service (Amazon 2015). The intention is to increase the power of modulation through the removal of its resistant force, privacy. This occurs through a

normalization of what we should expect to be private, thereby relying on the objective standards test of privacy infringement under the law. However, as previously mentioned many individuals are unaware of the extent or scale to which they agree to release information. Ellison and her colleagues (2011, 30) resonate this view finding that users are potentially willing to forgo private information in social networks to gain social capital without understanding the negative effects on their privacy. Therefore, it appears that people are seeking instant gratification for using services prior to considering the long term privacy effects. This itself becomes a privacy problem that exists specifically in relation to the Facebook assemblage as a result of the gained social capital. However, there is a larger rhizomatic map of which this central problem that extends outwards to convey separate privacy problems each of which is a distinctive element from each other that I will examine next.

The failure of individuals to fully appreciate the scale to which their privacy is invaded in exchange for social capital coupled with the system and structural problems leads to a series of privacy concerns. These crises for the law of privacy are: secondary use, aggregation, exclusion and decisional interference which is discussed in the next chapter under the contestation of commercial expression. Secondary use is defined as using data that was collected for one purpose but is now being used for another purpose that is unrelated to the original purpose without the consent of the person to whom the information belongs (Solove 2006, 518-20). Examples of secondary use include the use of medical records for research whereby concerns are drawn as to whether information recorded for non-research purposes can be reused for research (see Lowrance, 2003). This problem finds its *becoming* in the inability of individuals to track where their information or data is sent and how it may be used. While the transformation from the physical to the digital creates the individual, it simultaneously relinquishes control over

information from the body to the data holder and/or modulator resulting in the potential for the operation of secondary use.

Aggregation and the dividual coexist in the same creation as the dividual relies on the aggregation of data to form its existence. Aggregation is the problem of small bits of information that alone are not very telling of a story but when combined together, come together to form a larger more accurate picture of the person (Solove 2006, 505-10). The problem of aggregation reflects the power of modulation because the more data that is aggregately held, increases the possibility of data analytics to create more data to inform new understandings or in this case modulation. In the United States, the Supreme Court affirmed that there is a distinction to be made between the scattered small bits of disclosed data and the release of a complete full set of data with the latter being a violation of a person's privacy (*United States Department of Justice v Reporters Committee for Freedom of the Press* [1989] 489 US 749). This is reflective of Kitchin's (2014, 21) knowledge pyramid, in the sense that aggregation extends the base of the knowledge pyramid horizontally in including more data which proportionally represents an increase in the above knowledge levels. This is why modulators like Facebook seek out the use of third party plugins like Amazon, whereby you can share additional data to help aid in improving and increasing the data potential of your dividual beings.

The instant gratification of individuals to increase their social capital in return for information leads to a problem known as exclusion. Exclusion can be defined as the failure of corporations and governments to properly and effectively notify people regarding their data based records (Solove, 2006, 521-2). Exclusion is a unique problem for privacy because the harm caused by exclusion is a result of being excluded from how our data is being used and collected (Solove 2006, 521-2). Exclusion results directly from the inability of people to fully

appreciate the effects of disclosing data to third parties. Ignorance of the usage of personal data does not give rise to a need for questioning the “status quo” of using services like Facebook. Individuals presume a sense of false security in their online account without considering the largest insecurity which is the release of their data. Solove (2006) sees the problem relating to exclusion as one which renders people powerless and vulnerable and this is why the disclosure of data retrieval methods by corporations and governments is kept limited to preserve the capacity for modulation.

Each of the above privacy problems in their own specific case, represents a tool or desire to maintain or create the capacity for modulation. As established the central problem from which these ancillary problems flow outwards from is the imbalance between the instant gratification for social capital and the lack of knowledge or structural limitations. Moore (2003) views privacy as a key factor in human well-being, as privacy is a relative right to control access over bodies and information. Moore’s approach is limited by its reliance on the capacity for knowledge regarding the use of personal data which is largely overlooked by people.

The end result of this failure to adequately control data is in the final privacy problem known as decisional interference. Decisional interference is understood as the invasion into the decision making of an individual about their own private affairs (Solove 2006, 553-7). Dataveillance academics have understood this problem as the behavioural manipulation component of data based surveillance. Clarke (2001, 13) notes that the manipulation of behaviour can occur either by targeting specific behaviour or by the notion that people understand they are always being watched. We can therefore understand behavioural manipulation as being a privacy problem that embodies an element of the physical in influencing behaviour and socially through a dimension of surveilled versus surveillor dynamic. The work of

big data analytics infringes upon privacy at its deepest protection because it seeks to invade one of the sacred private functions of the person, the ability to render choice autonomously.

Privacy in the 21st Century

It is not surprising that we find a large range of privacy problems as we transition to a society that gathers and analyzes large amounts of data with web 2.0 services. From the discussion in this chapter, I have focused on a few privacy problems and have shown why we must decentralize privacy from the objective standards test. However, there is a case to be made that the above privacy problems are not exhaustive and in fact there are a larger range of issues. While this is undoubtedly true, the above problems are related to the power and maintenance of modulation which renders them essential to our case study on Facebook. Additionally, it begs the question of why has there been a sudden outgrowth of privacy based problems recently? Privacy has always operated as a right that is used to protect one person from the actions of another person. But with the growth of the dividual as our digital replicated image, privacy must come to terms with this third actor that is largely passed over. The flows of the dividual are as we see from the privacy aspect largely controlled by corporations and this is logically so since they hold the data that forms the dividual. In essence what we are experiencing is a crisis that is based on understanding that data is beginning to mean more than just simple property. Privacy law is in crises because data is gaining an intensity in meaning and is surpassing a threshold of property that was never previously anticipated.

The solution for the legal dilemma of privacy as it continues to whither cannot be easily solved due to the structural scale of big data. Even if the legal requirement for corporations and governments was to notify and provide clear and transparent information on the usage of all data

held on the person it still would not solve the problem. Neither party could logically manage the scale of individuals and vice versa. No individual could effectively manage the scale of notices from corporations. Furthermore, there is no guarantee that even if people were educated on the usage of their individual and the ability to manage their data that we would see an actual change in behaviour. The consistent variable throughout the privacy discussion is the focus on modulation and the ability to influence the body. While privacy can act as a resistance to modulation it may not be best suited to effectively manage that task. The shift in privacy towards the 21st century brings with it a substantial challenge to privacy as maintaining itself as a right that can be properly protected in law moving forward. Is privacy in such a crisis that it will forever become a legal right of the past?

Chapter 5: Commercial Expression and the Rational Actor

Modulation's Focus

In chapter three I discussed the shift of the digital profile as being more than simple data represented by Deleuze's *dividual* as an extension of legal personhood. In chapter 4, I explored the role of privacy and its simultaneous need to transition along with the societies of control to act as resistance to the power of modulation. In this chapter, I will explore how Facebook's use of the *dividual's* data, combined with the failure of privacy to properly limit the data retrieval of Facebook, grants Facebook the power to influence its users through Massumi's (2015) concept of priming. As noted, for Bogard (2009, 21), the mechanism of modulation seeks to breakdown desires in return for power and capital gain. Facebook operates to breakdown the desires of the *dividual* in exchange for advertising power and control. Facebook grants advertisers the ability to choose from 11 unique attributes that are associated with the person which include location, age, sex and education (Dunay, Krueger and Elad 2011, 17). Due to this capacity for mass information on a large scale, Facebook grants advertisers the ability to target their ads to the person that is likely to buy their product. Furthermore, Facebook's advertising tools give advertisers the ability to analyze their success and make recommendations on what attributes advertisements and other tools need to be geared towards to boost performance (Dunay, Krueger and Elad 2011, 137-57). Modulation within the Facebook assemblage operates to encourage a manipulation of behaviour directed at the purchase of advertised products.

According to Shankar and Hollinger (2007), there is two forms of online advertising that can occur: intrusive and non-intrusive. Intrusive advertising is when a user is presented with an advertisement for a product when they were not intentionally seeking it and it is presented. This

is in contrast to the non-intrusive advertisement whereby the user is initially seeking a product and it is presented to them based on that interest. The vast amount of data held by Facebook allow its advertisers to target specific people who may be interested in a product based on data analytics and intrusively advertise towards them. Applying Reigeluth's (2014) work on digital traces argues that advertisers can target individuals through the use of cookie data to present them with ads for websites they have previously visited.

While in theory this may suggest a logical influence on the person to encourage the operation of modulation to influence a purchase of a product, more evidence is required. Recent work by Duffett (2015) supports three important conclusions regarding the use of Facebook and advertising. The first suggests that brand and product awareness is undoubtedly increased as a result of Facebook advertising and additionally, this was supported by the notion that product knowledge gained from advertising was positively correlated. Secondly, when people use both mobile and computer devices to access Facebook it results in the most effective Facebook marketing communication. This is due in part to the ability to combine data gained from mobile applications like location data that is unavailable to the computer platform, which results in a more aggregate individual that can more accurately be analyzed. The third implication is that the more time (over 2 hours) that people spend on Facebook results in more effective advertising. This is similarly represented by the capacity to use aggregate data from prolonged use to support this conclusion.

Additional research by Dehghani and Tumer (2015) has supported assertions regarding the efficacy of Facebook advertising. Again we find three significant implications of evidence to support modulation within the Facebook societies of control. Primarily, the brand image of a product was found to have a statistically significant effect on the products brand equity, with

brand equity defined as the perceived benefit of the product relied on by the brand's image. Secondly, and most importantly, the inclusion of a brand image through Facebook advertising leads to a statistically significant positive result on the intention to purchase the brand's product. Lastly, the same results were found when a brand successfully included the brand's equity in its Facebook advertising.

Quantitative studies are subject to limitations and the extrapolation of their results needs to be contextualized. Neither study confirmed the actualization of a purchase, in a sense never confirming that the process of modulation had fully worked. However, we cannot deny that even if a purchase never occurred, at some level there was a deviation in intention or manipulation of behaviour that was created by Facebook. While the latter study by Dehghani and Tumer (2015) suggests that there is a connection with the intent to purchase, whether or not it displays completion of this examination within modulation remains evidence that even if a small percentage were to purchase the advertised product, modulation is completely successful in changing behaviour. Foucault's means of correct training accounted for deviance from disciplinary power in the form of continued training through normalization. Within the societies of control, whereby dataveillance acts as the new form of observation and control, the feedback loop now intensifies the continued training of normalization. With every revolution of the feedback loop, more knowledge is gained and the power of modulation is increased through perpetual training. This is because more data is added to your individual image and more analytics can lead to more insights about the body. This is represented in the study by Duffet (2015) whereby the effectiveness of advertising on Facebook increased alongside an increase in usage. The ability of corporations to use the Facebook platform of advertising to control the economic purchases of people within a "free market" raises a challenge to a fundamental principle in law,

the balance of commercial expression in relation to consumerism. Consumerism being defined as that which is in the best interests of the consumer.

This challenges the role and implications of corporations exploiting the individual through commercial expression upon the body. Within Canada it is the *Canadian Charter of Rights and Freedoms* (1982) (hereinafter *Charter*) that sets out a series of fundamental freedoms, specifically the right to “freedom of thought, belief, opinion and expression, including freedom of the press and other media of communication.” The capacity or potential for corporations to engage with modulation through the individual in influencing the body to purchase or support a brand or product grants an abundance of power to corporations. As such the expression of the individual in economic interests is in contention with the premise of commercial expression. As will be shown later in the chapter, the protection of the economic interests of the person needs to be protected by the state in restricting the otherwise presumptuous protection of commercial expression through section 2(b) of the *Charter*.

The Individual and Affect

Within the Facebook assemblage every action by the body that is transformed into the individual can find its *becoming* in either the physical or the digital world. The re-occurring theme of this thesis affirms this *becoming* as Facebook’s assemblage is both a system that influences the body through the individual and vice versa that the assemblage of Facebook requires the coming together of bodies in the digital. In explaining the surpassing of the threshold for action within the assemblage, I turn to affective studies that rely on Deleuze to direct the discussion.

Affect is a unique word and concept within the English language as it represents the usage of both a verb and a noun and appears in many of Deleuze’s seminal works. The Oxford

Dictionary defines affect as a verb meaning both “have an affect on; make a difference to” and “touch the feelings of; move emotionally” and also defines affect as a noun meaning “emotion or desire as influencing behaviour” (Oxford, 2016). Affect in its definition implies a relationship between two entities at a level that is intangible or supernatural. Deleuze saw affect as an independent function whether it was operating emotionally or physiologically by operating across historical, spatial and temporal lines while remaining autonomous (Colman 2005, 11). Affects according to Deleuze are *becomings* (Deleuze and Guattari 1987, 256). The affective function for Deleuze “operates as a dynamic of desire within an assemblage to manipulate meaning and relations...yielding different affects” (Colman 2005, 11). We can understand affect within the Facebook societies of control as being the manipulation of the individual within the assemblage due to its relations or *becoming's* as it flows through different singularities or events in the Facebook assemblage.

Massumi's “The Autonomy of Affect” (1995) explores and introduces a social sciences approach to conceptualizing affect. Massumi (1995, 84-5) begins his text by exploring the results of a study that was investigating cognition by having three different groups of young children each watch a manipulated version of a short film involving a man and a snowman. The study by Sturm (1987) outlines an odd conclusion in that image reception finds its primacy in the affective response. Reflecting on this study Massumi (1995, 90) notes that the problem with this study may have been that the cognitive effects were not found because the researchers were looking at the brain and not the *body*. Before proceeding it is essential to make sense of this statement.

There is a need to address our assumptions both academically and personally. We assume we are cognitively aware of everything around us and that happens within us and that our brains are the

central hub of this operation. Massumi is attempting to display that our cognition and perception is subjective to some degree because of some other force, in this case affect.

Massumi outlines that affect and emotion are two different functions. Emotion can be understood as qualified intensity as it is the fusion of intensity with function and meaning (Massumi 1995, 88). Emotion is defined as the coming together of intensity and perceptions that provide qualification. This is in contrast to affect which is unqualified. Massumi (1995, 90) sees the body not as absorbing stimulations but as infolding contexts (intensities). In explaining intensity Massumi defines it as incipience, which refers to the English word incipient meaning the initial step of an event or becoming (note the Deleuzian undertone). Therefore, we can understand affect as having its beginning in the intensity of the event or *becoming* that results from the affect between two entities. As Massumi (1995, 91) describes, intensities are also “pathways of action and expression that are then reduced, inhibited, prevented from actualizing themselves completely – all but one.” That one intensity to which Massumi describes as the action or expression that enters our conscious awareness.

Massumi defines the field of these intensities where they exist as the virtual, which he also refers to as a realm of potential (borrowing from Deleuze’s *plane of immanence*). Within the virtual the potential for intensities combine and intensities are infolded, where they are reduced to create from the limitless potentials a will which will emerge. According to Massumi (1995, 91), this will registers consciously within the person by “dint of inhibition.” Here within the virtual, affect represents the point of bifurcation where “a physical system paradoxically embodies multiple and normally mutually exclusive potentials, only one of which is “selected” (Massumi 1995, 93). In other words, within the assemblage of an event the affect between the body and an element of the assemblage interact within the virtual exchange of intensities. At this

threshold a will emerges out of the realm of potential to enter the body's consciousness. The operation of affective theory explains the role of technological determinism as the algorithm's power to influence the intensities created in the Facebook assemblage that will be infolded on the body to become wills of action or inaction.

This is why Massumi specifies that experience and intensities accompany one another. Affect for Massumi (1995, 96) is two sided, it involves the participation of the actual and the virtual, as intensities arise in one and return to the other. Note the relation to the phenomenon that we are exploring between the convergence of the technological and the physical. He defines affects as "virtual synaesthetic perspectives anchored in (functionally limited by) the actually existing, particular things that embody them" (Massumi 1995, 94). For affect is to be understood as autonomous but only to the degree to which it is able to emerge from an entity. Its potential for emergence is determined by its passing through the body to become qualified in perception and cognition so that it may be captured and acted upon.

Applying Massumi's affective argument to the Facebook societies of control, leads to the revelation that modulation by the algorithm operates at the affective level. This is occurring through the exposure of specific intensities upon your individual leading to the possibility of new wills immersing into your consciousness thereby altering your behaviour. However, not every intensity that the body is exposed to at an affective level is converted into a will. This is a struggle for autonomy between the algorithm in determining the affective intensities to be placed upon the body and the autonomy of the body in choosing how to act. This is reflective of soft determinism, whereby technology attempts to influence the future choices of the body but there still remains a degree of control within the body. In essence Massumi's affective theory aids to explain how the body becomes influenced by Facebook's assemblage. However, within the

context of behaviour manipulation in Facebook's use of advertising through big data analytics, does the ability to influence and act upon the individual surpass a threshold of commercial expression?

Massumi in *The Power at the End of the Economy* (2015, 5) introduces that the economic subject is unlike the juridical subject of law or the civil subject of society because economic subjects are "not called upon to renounce their self-interest for the general good." Furthermore, Massumi (2015, 5) claims that rationality and affectivity cannot be safely held apart. For Massumi (2015, 32), "neoliberal life oscillates around the zone of indistinction between affectivity (affectability) and rationality". While Massumi (2015, 6-7) never fully develops this zone of indistinction, its resemblance to the virtual is replayed out as he refers to the zone of indistinction being "at the heart of every act" and as a space "between rational calculation and affectivity." Since the zone of indistinction is at the heart of every act it becomes intertwined with the notion of bare activity, a concept Massumi relies on Luhman to form. Bare activity is understood as the non-conscious and therefore non-present within a person's cognitive perception of which there is a "churning" of intensity of a mutual range of potentials (Massumi 2015, 20).

Up to this point how a will emerges or how an intensity that forms a will is chosen to become an intention has been left unanswered. Harris (2012, 7-14) argues that the origin of our will is pre-determined by occurring in the physical system of the brain and then the notion of intention enters our consciousness. Massumi is at odds with this approach because he believes the body itself is responsible for infolding intensities that pass through the body to enter our conscious awareness.

The possibility of elements operating upon the body outside of the mind's conscious awareness support the notions of determinism. This is further complicated by Massumi's (2015, 19) belief that what causes choice to occur is a blend between the person and no one by translating the French word *personne* which can take on both forms. Ultimately, he concludes that the event decides as "exclusive states come together" in the playing out of an event (Massumi 2015, 19). Therefore, the person is merely present in the event while the event's potential moves through them. This is because at a decisive moment, Massumi (2015, 19) holds that "the self is no more in a state of determinate activity than in a cognitive state" as the self is absorbed within the "readiness potential that is intensely over determined." Turning to linguistics Massumi (2015, 20) finds a word that is used to describe a choice that is decided for itself and that comes from a state of unknown and still has the potential to produce knowledge, intuition. Applying this to the Facebook assemblage at which each login event, the interaction for which the body is exposed to is already pre-determined for them and their actions will be largely representative of this over determination. The assemblage of Facebook is already deciding what the body will experience and within that pre-determined existence lies the triggers that will influence what the body will do there. This is the technology of the Facebook assemblage which can be understood to be technologically determinative but is not fully determinative.

Massumi's claim launches an assault onto the presumption of rational choice and in the ability of the person to fully contemplate a decision. However, his claims should not instantly be eschewed as a completed assault upon the notion of agency. Massumi relies on the work by Dijksterhuis et al, (2006) whom found that there was a negative correlation between rational decision making and consumer satisfaction. This for Massumi (2015, 5) refutes the importance of rational decision making because he believes paradoxically that the rationality of a subject in

terms of economics is measured affectively by “the currency of satisfaction.” This in turns leads Massumi down a path to find the contention between choice blindness theory and the notion of the rational economic man. Relying on Hall et al, (2010) who found that when an individual’s choice in terms of preference in tea was revisited with a new tea that was effectively in opposition to the original tea’s taste, that two-thirds of subjects never noticed the difference and convincingly explained their preference for this new opposition without noticing. Massumi (2015, 24) therefore “points to an experiential plasticity that belies any notion of an underlying principle of personal preference as having the sovereign power to determine action.” In essence, arguing that individual autonomous choice is subject to the conditions of situations in which a person is being presented with a possibility to be de-void of choice. Within the Facebook assemblage soft determinism dictates the pre-determined technological environment to which the body enters and frames the conditions through which the autonomous body can decide action or inaction. Therefore, it can be said that an action that is formed by the unknown which passes through us and enters our consciousness does not fully negate the possibility of liberty to act but may restrict the range of choices a body can make.

This experiential plasticity between rational choice and affective conditioning leads Massumi (2015, 29) to conclude that the central power of modulation is priming. Massumi see’s modulation’s force of priming as orienting and activating which unlike the mold of the disciplinary society cannot guarantee the same degree of uniformity. It is in the fusion of the affective and of the dividual through which priming operates. It is in the relational field of the dividual where priming’s situational emphasis triggers activity to flow through the person to induce participation rather than punish or reward as seen within the disciplinary society (Massumi 2015, 30). Priming operates as an “inductive power” as it allows things to surface and

come to the fore thereby bringing things to be, rather than conforming or negating them (Massumi 2015, 30). Priming is understood as saturating life, thereby encouraging people to unconsciously learn to navigate the ecology of a neoliberal priming environment. Thus for Massumi (2015, 30), “the neoliberal denizen is ultimately as self-priming as it is conditioned by the machinations of others.” People navigate life between the operation of their own tendencies and through the affect of others’ upon them which in turn leads me to return to where we began with Massumi at which point “choice and non choice enter an active zone of indistinction” (1995, 30).

Therefore, in returning to our case study of the Facebook societies of control, the application of Massumi displays a crisis between affect, autonomy and the body. Having understood priming as the mechanism through which modulation flows through the dividual onto the body as theorized by Massumi renders the dividual to become highly subjected to the power of modulation. Recall that Lyon (2014) suggests big data by itself is represented as technologically deterministic especially when data based analytics are pre-emptive and automatic. As the dividual is continually submerged within the data feedback loop of datavelliance this virtual space is also virtual in the Massumi and Deleuzian sense. It can be understood as existing within a zone of indistinction, whereby a limitless potential of intensities and flows of desire created by both the body and Facebook data analytics converge. The data feedback loop operates as a deterministic function upon our dividual selves, whereby the body is drawn in as the neoliberal subject and becomes repositioned between Massumi’s oscillatory process of the affective represented by the dividual and rationality as the grounding of the body. The re-positioning of the body within the oscillatory dimension of the capitalist economic model renders the body susceptible to the influence of modulation through the dividual, which as

previously discussed represents a method of communication. Rational choice is then subjected to the conditions that are placed upon the body where instrumentalism in control over technology is limited by these same conditions.

The final process of the feedback loop is the operation of behavioural manipulation, which as stated within the societies of control operates as modulating, specifically within Facebook through the conversion of the body into the individual to exploit capital gain. The space of the feedback loop is conceived of as virtual, filled with intensities that have not yet to become wills. Intentions that are the modulating mechanism of priming seek to exploit the release of specific desired intensities so they can transition from the unconscious to the conscious. As the below studies show, priming allows for the introduction of sensory or situational cues which act to influence the products you want to buy, the food you want to eat and even potentially re-enforce your political beliefs. Massumi's affront to agency claims a strong alliance to the influential affective powers that are released during an event, so strong that the event decides the outcome.

While much of Facebook's data is generated from the body in the sense that it is through a user's interaction within the software which leaves behind the content to be enjoyed, when a body is exposed to the advertising regime of Facebook, it is largely pre-determined and engineered. Priming is a deterministic function, it truly seeks to determine what the body will do but, since priming is largely orienting and activating it is not as deterministic as Massumi states. Remember that Facebook allows advertisers access to 11 different qualities of the person. Coupled with having possessed the information that you have brought into Facebook and continue to bring along as a digital trace monitors you, empowers advertisers to know at an affective level where you may be susceptible to priming.

Validating the Power of Priming

Priming is a strong process and there is valid, social psychological work to reinforce this notion of situational affectability. Pliner and Zec (2007) tested the affective power of priming and food consumption. Pliner and Zec gave the exact same amount of food to two groups, one ate in a traditional meal order format (appetizer, main, dessert) while the other did not eat in a meal format. Overall, when offered more food it was the non-meal order participants who ate more of this extra food post initial consumption due to the belief, that the meal order condition was primed. The meal order condition believed that they had already eaten a full meal, thereby affecting their food consumption. This study exposes the power of priming when an affective force alters the tendencies of people that according to Masumi are used to navigate life.

In another study by Callan et al, (2010) they found that the affective power of words act as a prime to manipulate behaviour across several different tests. Participants were either exposed to words on a computer screen that were related to law (e.g. illegal, court, lawyer) or neutral words (e.g. prior, important, activity) for a mere 25 milliseconds. In reality these participants would not have been consciously aware of these words as they were displayed too fast. Participants primed with legal terms were found to use more competitive words when filling out word fragments than the neutrally primed participants. It was additionally discovered that participants primed with legal terms whom then read an interaction between two people, measured the two people as less trustworthy and rated the overall interaction as more adversarial than their neutral counterparts. Instead of priming by using unconscious and rapid word displays, the researchers administered a legal and neutral word puzzle and then participants were set to respond to a fake socio-political issue. Again, those who were primed with legal terms, were more opposed to the position of the socio-political issue if it conflicted with their self-interest in

comparison to their neutral counterparts. Using the word search puzzle and then having the participants play a prisoner dilemma style game, was the only study by the researchers where the priming of legal terms did not lead to competitive responses overall. However, those who were already predisposed to being competitive were found to be more competitive than their fellow non-predisposed grouping when primed by legal terms. Therefore, Massumi's theoretical application of priming as the primary function of modulation in terms of the event deciding through a fusion of intensities within this zone of indistinction can be understood in light of these results. The flow of affective desires between persons and objects or other persons passes through the person to enter our consciousness only then were its intensity to emerge as a will that will be acted upon is subjected to the intensity of the event and the tendencies of the person. Every singularity is therefore both a product of its affect upon the person and of the person within the singularity. This reaffirms Thrift's (2005) position of technological soft determinism whereby technology is both influencing on bodies and vice versa.

Drawing on one last study as it directly relates to the internet, is the work by Mandel and Johnson (2002) whose research questions whether visual priming cues online affect preferences for consumer choice. In this study researchers manipulated the background imagery of a website advertising either a car or a couch and the participants were primed either for a quality (using clouds for comfort or orange background for safety) or price (using a green background with dollar signs or pennies). The researchers also accounted for expertise dividing the results amongst experts and novices in terms of product knowledge. The results indicate that overall visual priming influences the decision making of both novices and experts on quality and price, however, the mechanism through which the priming operated differed. Priming on novices leads them to conduct more research into the product's specific primed element which in turn leads to

an affectively positive choice in preference. Priming on experts is hypothesized to have resulted on them relying on *selective* internal memories through which the visual prime affected their preference (Johnson 2002, 242). The reason for the importance of this study is two fold. First, it displays the capacity of technology and web based applications like Facebook to actively engage in priming successfully. Secondly and more importantly it shows that priming has the capacity to operate both on the under educated and the highly educated. In essence, resistance to priming may not be reflective of knowledge or experience relating to the intended manipulation but rather priming upon an expert may in fact encourage or re-enforce unconscious wills regarding specific behaviours.

In grounding priming in Facebook for example, John Smith is a user on Facebook and likes innovative technologies. John's friend list is comprised of others who share similar interests. Tech Giant A is releasing a new product, call it the "new" device, but John does not know it exists. However, John's friend Jane likes the page for Tech Giant A. Facebook informs John that Jane likes the page for Tech Giant A and provides him the option for liking the page as well. This is the first step in the priming process. Up until this point, John has not or ever before considered purchasing or researching this "new" device. If John accepts to view the page, or better yet like the page, modulation has succeeded. His behaviour has changed and the data feedback loop continues. Moving forward, maybe now John is bombarded with advertisements for the "new" device every time he logs into the Facebook service because he liked or viewed the page. If John clicks on the advertisement and it links him to a purchase page, then again modulation has occurred. But maybe John does not feel like buying it today for any personal reason and finally the modulation of the control societies has ceased. Recall that the data feedback loop never stops churning and even as John has declined the purchase this behaviour is

recorded. Three days later, after already having been primed on multiple occasions repeatedly, John is once again exposed to the same advertisement except with a bonus 15% off the purchase price for a limited time. Now, John buys the “new” device, when originally there was no intention or will to purchase.

While this example may seem far fetched, in actuality such an operation is occurring within the interaction of every Facebook user multiple times a day and at multiple times in a single login event. The changing of price in the above example is known as price discrimination, resulting in a manipulation in the price of a product. A recent study by Hannak (2014), found that 9 online sites had been engaging in either price discrimination or price steering (directing customers to more expensive products). User’s were being given different prices because of the operation system of the device, the existence of an account on the website and their history of interactions with the website. User’s were also being price steered based on the operating system of their devices when connected to the website. This further exemplifies the deterministic effects of the technology. The algorithm is deciding what the body is exposed to based on the device which is technological. While economic choice remains with the body, that choice is becoming clouded by the pre-determined environments that are created by technology.

Even if John’s behaviour deviated at any of the above steps, data would have been retrieved to be analyzed, reapplied and tested against his actions. Data is determinative and every time John is accessing Facebook there is a predetermined environment that was seeking to affectively influence him. At any given moment John, as a neoliberal body, is positioned within the churning of a system whereby his experience is being influenced for him, while his rational, conscious existence is becoming aware of these affective wills and intentions. Each unique prime further represents an event in its own intensities. With each event acting to build upon the

intensity of the last, until the flow of desire cuts into the conscious action of the person. The resultant operation draws into question a concern over the degree to which an individual's capacity to act rationally, free of undue influence and autonomously within the societies of control. Big data based analytics are responsible for creating a data based ecosystem where Deleuze's societies of control may enter and operate with a higher degree of potency. Furthermore, while this chapter has predominately focused on advertising within Facebook, other foci of control exist. For example, the ability to create movements for change or support causes for socio-political developments may be affectively priming. Ultimately I return to the role law has to play in conceptualizing and understanding this notion of commercial expression.

The Crisis of Economic Choice within Control

Law's ability to protect and guarantee a liberal economic society within the societies of control is entering a crisis. The introduction of big data and web 2.0 services has shifted communication and expression through empowerment with modulation to function in limiting individual economic expression. As Massumi argues, the expression of wills in the body is subjected to factors outside of the immediate body. Whether this be existential factors or a playing out of an event, or even the economic power of priming, the end result is a limitation on truly rational, fully autonomous thought or action. Commercial expression through digital advertisement has transitioned from the words, pictures and images on paper or screen to become a tool that analyzes the essence of the body to take advantage of the bodies interests, for their economic gain. Thereby there is a crisis developing between commercial expression and the expression of the self at a new affective level of operation.

The Supreme Court of Canada on numerous accounts has been asked to comment on the notion of commercial expression. In *Ford v Quebec (Attorney General)* [1988] 2 SCR 712, the court found that corporations are constitutionally entitled to commercial expression in the protection of speech designed to generate a profit. The court argued that commercial expression “plays a significant role in enabling individuals to make informed economic choices” (*Ford v Quebec* 1988, 767). The court accepts that commercial expression underpins the informed economic choice of individuals. In the contemporary Facebook assemblage, the use of commercial expression through big data based analytics is not supportive of this informed economic choice. Instead the conduct of targeted advertising through the exploitation of the individual reverses the notion of informed economic choice. This leads to determined economic choice which unlike informed choice which acts as a tenet of autonomy, rather acts as a bulwark upon autonomy. The Supreme Court has in previous decisions supported the ban of commercial expression where it runs the potential for manipulation of vulnerable groups. In *Irwin Toy Ltd v Quebec (Attorney General)* [1989] 1 SCR 927, the court found that the Quebec *Consumer Protection Act* which prohibited the direct advertisement to children under the age of thirteen, was a limitation upon commercial expression guaranteed under section 2(b) of the *Charter* but was reasonably saved by section 1. The court stated that, “advertisers are prevented from capitalizing on the inability of children either to differentiate between fact or fiction or to acknowledge and thereby resist or treat with some skepticism the persuasive intent behind the advertisement” (*Irwin Toy Ltd* 1989, 992). This decision by the Supreme Court represents the potential for the manipulation of vulnerable groups who are not consciously aware of the effects that advertisements can have. The assumption is that the adult’s mind is different because it is developed and therefore a stratum is placed between these two groups.

However, it is possible that the adult mind can be influenced or manipulated when direct advertisement through Facebook operates at an affective level. Targeted modulation within societies of control differs from the notion of the mass advertisement (one advertisement for everyone). The notion of the mass advertisement is represented in the Foucauldian/Mathieson (1997) sense by a synoptic function of the many watching the few. It was not pre-determined, not generated specifically at the individual or presented in a subjective experience created and modified by the advertiser. The Facebook modulation of behaviour through advertising represents a power dynamic in which Deleuze's central unit of the corporation takes control over the subjective experience each user has in their interaction. Your individual self is always being acted upon and analyzed so that when you return your experience can be pre-determined with the presence of further priming and data gathering. The ability to make informed economic choice is clouded by the affective operations of desire that are being communicated to you through the individual. The manipulation upon the underdeveloped mind of the unknown is logically equivalent to the manipulation of the known as in both scenarios' there is skepticism to the potentially influential element that can be exploited.

Shankar and Hollinger (2007) noted the existence of intrusive and non-intrusive advertising in online environments. Either can be understood as a representation of modulating the embodied person. As the neoliberal economic subject is placed within the data feedback loop, they are unable to escape the oscillatory process of affectability and rationality that form their online and embodied existence. As each event plays out, the creation of that event is the product of the corporation in this case, Facebook. They are responsible for creating the "virtual" whereby there are limitless intensities ready to emerge through the body of the unconscious to become conscious. The ability to cut into the specific intensities that will influence the real user's

behaviour using big data analytics pre-determines the environment to allow for priming through situational cues that will affect the body and mind. Therefore, it is here where we find the crisis in law between corporate expression and the free rational economic person within the societies of control and the need for state intervention.

Conclusion

Data is Changing the Game

In 2011 Peter Sondergaard, the Senior Vice President of Gartner Research, stated that “information is the oil of the 21st century, and analytics is the combustion engine” (Gartner, 2011). The commodification of extracting data from the physical world results from the convergence between the digital and the physical world. Deleuze’s view of the process of the corporate unit in the societies of control is now represented by its power to collect and analyze data. The above quote catches the essence of this power. Data has become the oil for the engine, without the combustion of analytics, data is in itself absent of value.

This thesis explores the way Facebook as a corporate unit engages with data-based surveillance and analytics in the societies of control. Through this investigation I show how the convergence of the digital and the physical leads to a series of crises in law. The creation of the digital profile as represented by the individual with the Facebook assemblage introduces a problem to legal personhood by not recognizing multiple planes of existence. We need to contextualize our approach and understanding towards legal personhood to contain degrees of existence. This finding is essential to appreciate the existence of the person within the contemporary data based society. Legal personhood is designed to afford rights and protections, however, misinterpreting the importance of the individual may lead to future problems concerning the status of digital profiles.

Information is becoming the commodity of the 21st century, however, it is simultaneously arriving with a cost. Oil as a commodity presents a number of environmental harms and information when produced or rather retrieved is also not immune from the potential of harms.

To protect against these harms, I argue privacy as a legal right can be used as a form of resistance to the power of modulation. While privacy should be protecting the retrieval of our information from the real into the digital toolbox of the corporate unit, privacy is in crisis due to the scale of data retrieval. The structural limitations placed upon the real person limit and hinder the capacity of the real person to manage their dividual counterpart. The continuation of big data based analytics will continue to lead to a mass violation upon privacy unless otherwise halted.

I employ Bogard's (2009) conception of modulation transforming desires into the creation of the dividual for the purpose of commercial expression. Modulation in my study of Facebook and big data, is pre-emptive and by relying on Massumi is centered in the operation of priming. This thesis argues that the power of modulation within Facebook to alter behaviour through priming is achieved by implementing targeted advertising regimes operating at an affective level. The use of these behaviour manipulation techniques challenges and shifts the balance between commercial expression and the economic actor to the point that rational economic choice is being heavily influenced by technology. The conclusions on the affective power of priming conceptualize the function of the algorithm to control and shape the influence upon the dividual. Through Massumi, I display how the body is being positioned between a pre-determined influence of technology and rationality clouded by affective forces that impairs rational economic choice. This chapter justifies the need to re-examine the way the law treats dividual's as property and not as an assemblage that forms the body. Big data analytics need to be restricted to protect against commercial entities that seek to use them for the purpose of priming specific behaviours.

This thesis provides a framework to analyze and conceptualize the convergence between the digital and the physical through the use of big data. In doing so and by focusing on the above

legal crises we can begin to see where law's future may become challenged. This convergence is similar to a parallel universe or an extra dimension within our world. The digital information world, can be understood as interacting with us in our everyday functions as we respond and interact with it. Represented by Deleuze's conception of the *plane of immanence*, this new dimension or parallel universe contains the limitless potential for action and inaction. Eisenberg (2008, 22) has already referred to this as the parallel information universe, whereby it should be embraced as a tool for the librarian in meeting the needs of people in terms of information gathering. While I have throughout this thesis treated the physical and the digital as separate heuristic tools that are merging together through a specific examination of each as they relate to these legal problems, the relationship is much more fluid. Critics like Eisenberg argue this notion of a parallel universe but the merging between these two worlds is not equally divided or paralleled. As the body interacts with the assemblage of Facebook, the user is projecting themselves outward to connect with others but there is not an equal response from Facebook in the digital world. When Facebook communicates through notification or advertising, the communication is directed at the user but does not always occur to the same degree that the body self-projects itself in Facebook. Instead the relationship is representative of the fluid movement between the ebb and flow of communication. The ability of Facebook to analyze the population of individuals and priming through notification or advertisement is representing of the ebb, the outgoing flow. Meanwhile as Foucault discusses confession, the confession of the body in digital space whereby the body brings forth the truth in communication is representative of the flow, as the incoming tide. Nonetheless, the use of a parallel information universe can act as a metaphor to understand that if we accept the concept of parallel universes there may be different existences to our digital selves. In this paper, I have only focused upon one of those alternative selves, the

Facebook profile. However, as Relieguth (2014) spoke on digital traces there may be hundreds or even thousands of different versions of your digital profile in existence. Each of these different individual's are fragmented across the spatial existence of unique databases and each one may present a different set of legal problems or challenges. The above toolbox of examining the societies of control can aid in the analysis of legal challenges specific to big data usage. At this point though, I will consider one last implication that Deleuze leads us in thinking about the future of big data analytics.

Becoming Data?

Bill Gates said, "the internet is becoming the town square for the village of tomorrow" (Young, 2016). Technological innovations like the printing press, the telephone, the computer and the internet have all served to change the operation and nature of society. As Bill Gates has suggested, the internet in its ability to connect people in the digital realm has opened the pathway to a new digital environment. The meeting places of tomorrow and of the future will use data and technology in their creation and operation. In 2016 there can be no greater example of the fusion between the physical and the digital as the meeting place of tomorrow, then the advent of virtual reality. The concept itself combines the language and syntax of both worlds being fused into one. The year 2016 is already being named the year of virtual reality or is being discussed as such an eventful year for the technology (Cellan-Jones 2016; Hern 2015; Morris 2015). User's will be able to enter virtual worlds while they simultaneously exist in the physical world, meanwhile they will be interacting with others in this digitally created ecosystem. Every interaction, every creation, every account used to interact, act and connect will be subjected to the same data retrieval and analysis techniques discussed in terms of Facebook. The only difference this

technology puts forth is the ability to embody your individual because the physical become the virtual image.

Not everyone will embrace this technology and not everyone uses web 2.0 services like Facebook. Not all of us plug into the same “system” or grid, with some bodies even attempting to live as far away from this “system” as possible. This “system” is the information world, the universe of information that exists around and through us. The degree to which people are participating in the system and avoid the system as resistance, question whether it is possible to “escape” the societies of control and avoid the process of *becoming* data. *Becoming* data represents the process of transition that within my conception of Deleuze and Facebook is undergoing on a larger global scale as the body is being transformed into data in all avenues of life. Encapsulated in the discussion of personhood within the societies of control is the notion that our existence is *becoming* both a physical and digital reality. The two-part implication of this actualization, is can we escape the process of *becoming* data and to what extent are we shifting into data.

The usage of big data analytics is an automated process through the reliance on algorithms (Lyon, 2014). The question is whether or not this function extends to those who try to avoid it. Technological determinism can be hard to escape. Rose (2003) wrote that even if someone was actively seeking to avoid determinism by writing an essay in hand format, it would still need to be published by being transformed into a computer format. The inability to hide from technological determinism is ever present in today’s society.

Let me start by suggesting that someone wanted to live outside the big data regimes that seek to gather profiled data about them and that this person never went online. However, they owned a loyalty card and collected points on every store that accepted it. Retailers over 10 years

ago started using loyalty cards to aggregate data on the consumer at point of sale machines that identify the consumer, the date and time of the purchase and what exactly was purchased (Coll 2013, 202). While you may have never intended to be tracked digitally, this loyalty company now knows your consumer choices. This data can be analyzed to suggest possible promotions that will influence your decisions based on your profiled economic interests.

Assume that this non-internet being never owned a loyalty card but lives at a residence where a smart meter for hydro billing is attached and is operational. Electric utility companies may have access to what products consumers are using, when they are being used and for how long (Cavoukian, Polonetsky and Wolf 2010, 284). Cavoukian and colleagues (2010, 284) suggest this information would create a digital profile about your home regarding when you do your dishes or laundry, whether you leave the lights on, when an alarm system is activated and even when you may shower. This data can be sold to corporations that have an interest in analyzing it to find products that may support your home lifestyle.

I will extend this example to the limits of big data's reach and assume this non-internet, non-loyalty card owning, non-electrical grid person is outside all of these systems. In even extending the argument further, I will assume this person buys their groceries with cash and does not own a debit, credit or other associated payment card that tracks them. Sadly, even they are identifiable and traceable to a certain degree. Ferguson (2013) outlines that certain products when scanned act as "triggers" for the employees at supermarkets to offer incentives like "coupon-at-till" systems which will match a consumer to a product. It would be nearly impossible to aggregate a specific profile on the individual purchaser but nonetheless the data could be used to assess how to influence the purchase of cash consumers as a population. Either way a degree of technological determinism in the datavelliance of the 21st century creeps

through. While certain remote and completely unattached spaces may exist where a person can escape *becoming* data, for the large part it is inescapable and is consuming society slowly.

The extent to which bodies are *becoming* data is reflective in comparison to the degree at which technological determinism is able to overcome instrumentalism. Determinism is constantly seeking to add as many bodies to the “system” so more data can be gathered, analyzed and controlled. As the future of web 2.0 services become more restrictive of choice so to does the notion of a rational body and further the body slips into docility. Instrumentalism is still an apart of the “system” today, displayed by the small spaces of escape from the societies of control, however, as this thesis displays determinism is largely overpowering the system. The notion of soft determinism is increasingly shifting towards a hard determinism in absolute control.

Aggregation is the central problem that enables the process of *becoming data* to the extent that corporations can organize individuals. Aggregation creates the individual, aggregating more data feeds into the individual and only when the individual becomes dis-aggregated will the process of *becoming* data end. The societies of control that Deleuze theorized are replacing the disciplinary societies’ institutions and this thesis supports that advancement. Where the future problem lies is in the ability to aggregate the multiple parallel individuals, each of which is being held by a different data holder into a unified system of control. While this has not fully occurred, it is beginning to occur at a small level and this degree of *becoming data* is the next frontier.

BDEX (Big Data Exchange) is the world’s first and only “real-time data marketplace” where corporations can literally buy and sell the big data they own (BDEX, 2016). Consider it the questionably legal exchange of individual beings and the power that potentially could be gained in this system is limitless. This is the end point of *becoming* data and this *becoming*

represents the pure transition into the societies of control. BDEX represents a bifurcation point whereby a threshold is broken because of the mass aggregation of your individual profiles are being sourced from multiple source points instead of just one. This will lead to an aggregated profile where the corporate unit may be capable of analyzing possible information about your preferences that you do not even know you have. These corporations may even be able to know more about how you respond to commercial primes than you are consciously aware of. The creation of this marketplace relies on two key pillars. One, the ability to mass aggregate data on people. Two, the structural limitations both in legal recognition and in human error in reading, understanding or managing the scale to which our online interactions are tracked and recorded.

Final Thoughts

There are some implications that future research in the field of big data and legal studies should focus on. Throughout this thesis the presumption is that Facebook represents one area where the societies of control are replacing disciplinary institutions. It cannot be denied the presence of *becoming* data and the larger infiltration of the societies of control is on the rise. Future research should look at the implications of big data analytics in other streams of life like car monitoring by car insurance companies. That data is highly valuable not just to the insurance companies but also to retail businesses and even gas companies. That data if GPS enabled will allow information on the gas stations you frequent, the gas you buy, what shopping centers you visit most, what routes you commonly take, etc... Most of this data on its own is useless. It is the organized and aggregated forms of these data points that reveal that intimate picture of the person.

Another example is FitBit the popular health monitor wristband and software. Fitbit's "transparent" privacy policy, states that they sell de-identified data "to interested audiences" (Fitbit, 2016). Imagine the power that data has for health insurance companies. This is real data that could be used to determine rates and premiums that affect other bodies whom share individual characteristics. Most users of Fitbit, probably never read the privacy policy or understand the larger implications that every action they are taking is being recorded. The research on the legal implications of big data are only starting to be explored and there are still many issues to come.

I discussed my fascination with technological innovation at the beginning of this thesis. That fascination continues today, however, the use of big data analytics by corporate entities is the first technology of my life that is truly frightening to consider. It represents the closest form of Orwellian commercial surveillance in non-fiction. It appears that every new technological innovation contains two fundamental ingredients for success. The first is providing a convenience or entertainment value that justifies the purchase for the consumer. The second is the recording element that provides the company data that it can sell or use for capital gain. As you use the next smartphone, game console, smart watch or go on the internet, just remember, your never alone.

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