SOCIAL MEDIA AND THE CHANGING IDENTITY

An Undergraduate Research Scholars Thesis

by

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ABSTRACT

Social Media and the Changing Identity

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Literature Review

To provide an understanding of identity, social media, and the theories surrounding the

former and latter, this piece extenuates notions and theories from a variety of focuses. Walter

Ong, Marshal McLuhan, and Kenneth Burke are the most cited sources pertaining to the

rhetorical impacts in this thesis. Michael Foucault, Jaques Ellul, and Brian Rotman provide a

theoretical framework for understanding identity and how power structures it. The remainder of

the relevant research is pulled from cognitive, and psychological case studies on social media

and the internet.

Thesis Statement

Externalizing identity through virtual media alters perceptual proximities and identities in

a way that is necessary to be noted. Social media, and the rhetorical structures it is built on,

changes the way that humans understand themselves.

Theoretical Framework

This argument proceeds by analyzing the way that identity is changed by the structures it

is extenuated through. Therefore, this piece will closely analyze the structures of the internet and

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social media and apply rhetorical theory as a lens to understand the changes the medium brings to identity.

Project Description

This thesis uses former literature on orality, literacy, pluralism, and power structures and applies their theoretical framework in order to provide insight into the rhetorical impacts of social media. Specifically, Facebook is the medium that is analyzed, and considering its recent prominence and worldwide rise, it is important to analyze how externalizing identity changes the way humans perceive themselves.

In the first chapter, identity is explained within the larger historical context as it has changed from the times of orality to the now virtually connected world. Brian Rotman and Walter Ong provide the theoretical research that explains the shifts and continuities in identities as humans extend themselves into new forms of expression. Moreover, Facebook is a virtual world where humans externalize their identities and this shapes their behaviors, interactions, and epistemologies.

In the second chapter, the rhetorical impacts of Facebook are explained by examining how identity is structured by power. This research relies on Foucault's and Elull's studies.

Chapter two focuses on propaganda and underlying forces that determine social behavior. These structures will be proven to influence the way we understand ourselves.

In the third chapter, Facebook's Newsfeed algorithm is analyzed and explained. This explanation draws upon case studies permitted by crawling and mining the graph. This chapter focuses on explaining how humans understand themselves in the context of their communication patterns, and this explains how non-serial forms of information radically change and pluralize identity.

Identity is something that is determined by the way that humans express it. As McLuhan famously noted, the medium is the message, or, the structures of the medium (Facebook), control the way that we understand ourselves within the context of the entity. This thesis provides a theoretical lens to understand how identity externalization has rhetorical impacts.

DEDICATION

I would like to dedicate this paper to those that have supported my endeavors.

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I would like to thank Dr. Joshua DiCaglio for working with me on this thesis. His mentorship and unparalleled patience has made me wish to continue into Academia. I cannot say enough to thank him for his guidance and support throughout the course of this research.

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INTRODUCTION

Online Social Networks (OSNs) are reaching an integrated prominence in modern society. Social Networks such as Facebook and Twitter are internet interfaces that support communication, social networking, and information sharing for communities around the world. Facebook was launched in 2006, and, today, the network supports over two billion online users. Facebook 's eminence over other OSNs has made it particularly interesting for study. Specifically, its interface supports various social experiences, and, as of 2012, supports a Newsfeed that provides its users with relevant news, ads, and user activity. The Newsfeed is a growing location to receive information. As of 2016 62% of Americans receive their news from OSNs and over 42% of them receive their news from Facebook. All things equal Facebook has come to dominate internet activity. This paper takes an interdisciplinary approach and explores the emergence of Online Social Networks, like Facebook, to understand some of its many impacts.

When Facebook started it was hoped to be an interface that promoted networking amongst University Students. Over the years, Facebook grew expanding its user network from college students, to high school students, to the public. Facebook provided users with the unique ability to post pictures, statuses, and provide friends with a personalized portfolio of existence and this could all be done in one place. Facebook's eminence developed in the context of a broadband revolution that provided people around the world with the ability to connect on the World Wide Web. The ability to maintain friendships online provided humans with an ability that was both new and unique.

As Facebook expanded, its interface advanced. The original logic of the site was to create a network of friendships by mutually agreeing to an online friendship. This friendship was then maintained by the choice of viewing another's profile which consisted of general information such as age, sex, interests, and pictures. But as Facebook and users friend lists grew, they developed a new more efficient way to view activity in the friendship network. Thus, in 2012 Facebook introduced and integrated the Newsfeed.

The Facebook Newsfeed was constructed using an algorithm that created what they named the Social Graph. A Social Graph is constructed with nodes and edges determined by interactions with the people or things that one interacts with. Nodes are distinguishable properties such as a person, an interest, or a website. Edges are the distance between a node. Likewise, the Social Graph is constructed by monitoring user interactions. Adding a friend on Facebook would establish a node and an edge between the adder and the added. The edge would be determined by how often one interacts with that node.

The Newsfeed operates by monitoring your interactions between various nodes determining the edge length between each node and then providing you with "news" based on the algorithms determination of relevancy. The general overview of the Social Graph is outlined in its page for developers and has been researched by various scholars in the field of Computer Science. Those scholars researched Facebook by crawling the interface which is an advanced method of tracing out nodes and edges. Doing so allowed crawlers to determine things such as the size of the network, the average length of the edge, and the daily interactions between users. This information is extremely valuable for researching OSNs.

Following the emergence of the Newsfeed, Facebook increased its privacy parameters hoping to maintain the integrity of its information and user privacy. Hence, most research has

stopped monitoring the way that the algorithm determines information mainly because researchers can no longer crawl the interface. This occurrence happened in 2012; and after, Facebook became much more difficult and to crawl and research, and the research has abruptly turned from the algorithmic structure towards the more societal implications and practical uses of social network.

Crawling capabilities are now limited, but this does not mean that research can no longer proceed. This paper researches the form of social media by analyzing crawler research and interlaying it with scholarship in rhetoric. This allows us to understand the implicit structuring impacts Facebook has on the identity. Likewise, to maintain a scholarly integrity, this paper uses a broad interdisciplinary approach to determine the impacts of Facebook's form. This allows us to build an abstract understanding of the impacts of OSNs without relying on new research by crawlers.

Using an interdisciplinary approach, this thesis aims to understand the impacts of Facebook and social networks more broadly through a process that I am calling "identity externalization". Identity externalization is the process of using external qualities such as descriptions or commodities to reflect the inner identity. Identity is reflected to others and then back on oneself by externalizing value and belief structures through behavior. Behavior externalizes identity with actions. The actions reflect the desired value and belief structures one submits to. The actions could include buying clothes, posting a status, or even being charitable. However, this identity is both socially situated and personally conceived. The way that we interact with things in public is reflective of our personally conceived identity which adheres to normative rules when we identify ourselves with this conception. We act in a way that defines the way people view us. It has been said that our identity is in a theatre and we act differently for

different audiences. A basic example of this is the way that you interact with your mother in-law, versus a boss, or even a good friend. We interact in a way that adheres to our audience but still maintains the integrity of the identity we desire. These interactions are traces of our externalized identity, and Facebook platforms a domain where identities are externalized in a public normative sphere.

Facebook's entire structure is built around cultivating and making use of this structure of identity-making. When users join Facebook they create a profile providing the website with personal information. After users adds a picture and publish personal information, they begin the social networking process by adding friends to their network. The identity is thus externalized into the internet medium because it is placed in an external domain that tracks and publishes interactions amongst friend circles. The interactions we make on Facebook, the posts we publish, pictures we post, are all interactions that are meant to develop, reinforce, and solidify our ideas about who we are.

While we identify with this identity structure, the identity derived and presented in OSN's built using interactions that are mapped and processed through algorithms. The processing of the social graph creates a human-computer hybrid version of our identity that is then presented back at us *as if it is about ourselves*. Facebook does this by logging user interactions charting the behaviors across the Social Graph. The Social Graph is the product of user identity externalization and interaction, combining our actions with a background processing and filtration within the software. This creates an algorithmically derived identity that is then used to determine what is available within the interface and how it is presented. As we identify with this algorithmically derived identity, this creates a loop, amplifying a user's prior behaviors, cementing the identity in a way that reflects back positively. However, the structure of

these identities does not reflect the complexity and diversity of preferences, personalities, and information needs but rather is structured in a manner that is easily processed and, most importantly, *serves the purpose of Facebook's interface*. The result is thus an amplified clustering of individuals that interact and identify with similar content in a manner that is more fragmented, canalized, and categorized. The purpose this research is to thus trace out the structure of this amplification of what Marshal McLuhan famously calls "retribalization" as it has developed in OSNs. How does identity externalization through Facebook restructure consciousness? How does Facebook's retribalization function?

The Newsfeed has only existed for a mere four years; however, the way that it structures consciousness is a continuation of the developments and changes long noted by researchers in media studies. The way that we examine its impacts is theoretical and rhetorical in nature. We understand Facebook by examining the way that it utilizes various linguistic forms. The linguistic forms dominate the way that we externalize identity and understand our own. The forms are in direct relation with larger power structures that act as invisible hands that structure our identity. The application of these broad theories provides us with a unique insight to study the way that Facebook amplifies or intensifies the preexisting structures of identity. The linguistic limits of language are explained in the first chapter drawing on Walter Ong's explanation of linguistic forms, Marshal McLuhan's explanation of proxemics impacts of communication, and Brian Rotman's explanation of changes in identity with the emergence of each form. These authors' research help place the Newsfeed's method of structuring communication in the longer pre-existing history of oral, written, and electronic mediums of communication.

The second chapter delves into the power structures that structure identity. It explores Michael Foucault's lectures on neoliberalism and Jaques Ellul's *Propaganda* to explain the how language is structured for economic practices. It would be irresponsible to claim that Facebook is an entity that acts independently without the influence and normative structures of society. Rather, I will be examining how Facebook's structure and form fits within or amplifies preexisting biopolitical and neoliberal power structures that function by regulating identity.

The first and second chapter provide a theoretical framework to approach the question of identity externalization. They focus on understanding man's epistemology by understanding his conscious structures as products of language and power. The third chapter thus applies this theoretical framework and uncovers both the implicit and explicit structures of Facebook, and how these structures, dependent on both linguistic and power structures, determine the way that the externalized identity understands the information it encounters.

Different from inherent linguistic and power structures, Facebook additionally changes identity by placing barriers on information. By externalizing identity to a website that provides "news" you are provided with information that falls within a relevancy range. This relevancy range is determined within parameters determined by the algorithm. Certain distances are deemed irrelevant for user information. This range of information is controlled by a radius that controls what information is permissible. The information that is outside the radius is not transmitted to the user; thus, the information the user receives is solely within this radius. Facebook places electronic barriers on information providing users only with information that falls within the user's social radius. These barriers yield societal tribalization.

Facebook has become a major news source for millions of people around the world. But the way that it determines the information one receives has often been overlooked in recent scholarship. Additionally, the prominence of Facebook calls scholars to examine its form. Why are we so interested in it? Why are so many users using Facebook? It seems we have become caught up in a system that amplifies self-approval through community networks. But what if the information we receive in our networks are blinding? And, if information builds knowledge, and knowledge builds values and beliefs, which in turn determines behavior, or the externalized identity, then how will this information, or constriction of it, change the way we understand existence as we move forward into a world view controlled by algorithmic interpretations of our life?

CHAPTER I

THE RHETORICAL EPISTEMOLOGY

Information is transmitted in a number of different ways and each way seems to have particular limits on the way that we form our sense of identity. Language limits identity because each form permits or obstructs various methods of understanding ourselves or our world. As humans have advanced, their communication methods have as well. These advancements in communication not only change the way that people communicate, but also the way we understand the information received. In recent time, the way humans communicate information has been changed immensely. For example, the internet has provided humans the opportunity to communicate multi-modal information instantly through electronic systems. This system is a vessel for personal and non-personal information. Facebook has emerged as the world's second most used website solely behind Google. Facebook, an Online Social Network, provides its' users with an online interface capable of instant messaging, photo sharing, and news sharing, along with many other capabilities. Examining Facebook through the context of prior rhetorical research allows us to see the way that OSNs utilize and amplify certain forms of information. As will be proven, the forms of communication we use determine the way we understand ourselves and build our identity; thus, we will begin chronologically delving into various forms of communication.

The priority of the first chapter is to provide a theoretical framework to understand how Facebook alters perception through its linguistic limits. Media studies has shown us that each linguistic form of transmitting information limits the identity in certain ways. In this chapter, we unpack each form to understand the way information changes identity.

The first chapter compiles prior scholarship on the impacts of each linguistic form to explain how their combination on OSNs restructure the way we understand and describe our existence. Examining these authors allows us to understand the horizons of each form, and the way that each form restructures consciousness as it is integrated into society. These scholars provide us with a vocabulary to discuss information according to how limits or shapes consciousness and therefore the possibilities of what we do, what we say, and how we say it. In tracing this rhetorical power of media, we can see how the development of forms of media, from the oral to the multi-modal, is itself the development of structures of persuasion. The history of media will help us see how Facebook's restructuring of the way we perceive ourselves and organize ourselves both differs from but also develops the effects and possibility of previous media. Since these occurrences are products of language, these authors explain how Facebook changes epistemology.

The rhetoricians cited in this work provide a conceptual framework because they study the organizational means of transmitting information efficiently. Aristotle, the father of Rhetoric, described it as "not simply the practice of persuasion, but the practice of identifying the means of persuasion in all given scenarios" (Aristotle). In past and recent literature, rhetoricians have studied how changes in information determine humans' epistemologies. Epistemology can be understood as the way we use information to understand our existence. Various disciplines aim to identify epistemology because it is an abstract way to understand the way we think. In this chapter, we identify the means by which knowledge is transferred and converted between mediums. Because we function through the limitations of these media, this transference and conversion is itself an essential, unavoidable, yet less apparent aspect of the persuasive power of any communication. McLuhan and subsequent scholars in media studies help us see how

persuasion is embedded in the form of language. Here, I will further examine how these forms create and work with identity as an additional element embedded within the media, in order to further cement their persuasive power. McLuhan is a key scholar here because McLuhan addresses the changes non-linear mediums bring, such as the television, and how they will shape society.

From a rhetorical perspective, knowledge has a number of major transformations and all of these transformations change mans' epistemology because the limit identity in different ways. For tens of thousands of years' human have used communication to structure the way they operate and understand life. We use language to categorize objects, communicate, and to reflect our feelings. The transformations we have made as a society has changed the way that we approach all aspects of our lives because each form has certain limits that shape our identity and proximity of identity. Knowledge was once streamed through oral communication limiting knowledge to geographical regions, which McLuhan calls "tribes." As the spoken language was converted from an oral process to a visual process through the alphabetization of the spoken language, man's knowledge changed in an unutterable way. While the written language changed the ways that humans could communicate, it did not dominate the way that humans did until the rise of the printing press in the 15th century. As writing was a compliment to the spoken word, the printing press was a compliment to the written word. Electricity provided the next major evolution of knowledge, the medium permitting the creation of mediums that transmitted knowledge instantly. Electricity allowed information to move instantly, but it was not until the age of the television, radio, and internet, that knowledge was contracted through the former mediums by the majority. Today, the internet is a compliment to print and electronic media, its spreads multi-modal information instantly.

All of these transformations change epistemologies because language limits the way we understand ourselves; for example, the printing press changed the capability for people to receive news. All of the former changes brought about large proxemics changes because they all changed the ability for communication to travel. These proxemics changes are the main focus of McLuhan; he approaches these changes by analyzing how individual mediums change scale or pace of society with the introduction of each medium. Furthermore, he seeks to examine the way that communication mediums situate people either geographically or philosophically. His prominent work was written during the 1960s examining the transition from written information to multi-modal media. The next scholar, Walter Ong allows us to extend McLuhan's proxemic notions by providing us with a vocabulary to discuss the limits of linguistic choices. His scholarship was prominent during the late 1960s to 1990s and his focus is considerably more concerned with analyzing linguistic structures to identify the way each form changes consciousness. Brian Rotman research is an extension of Jaques Derrida's notion of presence, and his research falls somewhere between the former and later authors. He researches the plurality of language and how it impacts identity. He allows us to understand both McLuhan and Ong's work in terms of identity. He explains why we come to understand certain forms, or why we organize society the way that we do. Together, these scholars provide the background and framework to supply an understanding of Social Media's functions.

McLuhan and Tribalization

McLuhan is famous for coining "The Medium is the Message". In his words, "this is merely to say that the personal and social consequences of any medium — that is, of any extension of ourselves — results from the new scale that is introduced into our affairs by each extension of ourselves, or by any new technology" (McLuhan, 1). His main premise is that each

medium introduced to our society ultimately changes it in some way, and that change is the message. A basic example of this saying is exemplified through McLuhan's brief discussion of the lightbulb. Do not think of the message as something with content. Content is a product of the medium but it is not the message. Take the lightbulb. The bulb has no content; however, it changes society by removing the restrictions day light placed on man. The integration of the lightbulb changes society by allowing it to operate in the light at later hours; by allowing doctors to perform surgeries at night; by allowing stores to stay open later. The message are the impacts the medium bring and like the lightbulb, linguistic forms and mediums have impacts.

McLuhan is concerned with mediums and their proxemic limits. Specifically, oral culture, literate, and electronic culture. He contends that before the alphabetization of the language, humans were bound together by tribes of knowledge. Their identity was shaped by the tribe and limited by the proxemic shortcomings of the oral language. For example, oral culture was geographically bound. There were physical barriers to the transmission of knowledge. Humans did not have the transportation capabilities to move information across long distance. Thus, information and knowledge were constricted to tribes of thought; and, therefore, identity was limited to a small proxemic place. Moreover, McLuhan later establishes that after the alphabetization, knowledge could be transferred distances, breaking down the once proxemic short comings of the oral form. The written language was stagnant, and the written phonetic sounds did not change as they were transported. This transformation from oral to literate culture allowed regions, empires, and philosophies to dominate the world, reshaping the once separate tribes into kingdoms of thought. In McLuhan's eyes, the last major proxemic change that a medium brought was the electronic age of non-linear modes of communication. The change that

the electronic age brought about was the creation of a global village interconnected by ideological tribes of thought that co-exist together like human's oral ancestors once did.

McLuhan's research allows us to understand that the integration of various forms of information brings about a proxemic impact. He is less focused on the horizons each linguistic form embodies and is more focused on how humans use the medium as extensions of themselves. The next author, Walter Ong, explains why each medium has a proxemic affect by delving into the actual horizons of language.

Ong & Orality

Ong clarifies the proxemics impacts of medium by examining the way communication is limited in each form. Ong does this by tracking communication forms as they have progressed examining the limitations by examining the forms capabilities. One of the most interesting points he makes is regarding the organization of knowledge through memory. The majority of Ong's research is drawn from his book *Orality and Literature* which studies primary oral cultures, or cultures with a total unfamiliarity to writing. His research allows us to understand the proxemics impacts McLuhan speaks of because his work gives us a vocabulary to define why language limits people polemically. His book draws upon a vast amount of research from case studies of oral society, and interestingly the Homeric epics. It was through the study of Homeric epics that many literary scholars looked past the previous negligent ones who overlooked the concept of a completely oral culture, which is different than how oral cultures exist today. Moreover, his explanation of the psychodynamics and limitations of oral culture provide us with a way to understand how communication limits identity.

Ong argues that the memory structures of an oral society, are different from a literate society. This change in turn changes the way we understand ourselves because the structure one

receives their information with determines the way one views the world. Organizationally, knowledge in oral culture is limited to what one can remember. To remember, "oral cultures" developed mnemonic patterns, shaped for oral reoccurrence in balanced patterns, in repetition or antithesis, in alliterations and assonances, in epithetic and other formulary expressions, in proverbs which are constantly heard by everyone's (Ong 34). In other words, there are two ways to gain knowledge in the oral world, through apprenticeship such as someone learning to hunt from another hunter, or from formulaic methods of partial memorization. As Ong explains, sound is not stationary. By the time one would hear the word, the word would be gone. Thus, it was imperative for knowledge to be learned through patterns or apprenticeship or it faced the fate of being lost forever. The inability for orality to stand time was a limitation of the oral structure. This limitation kept the oral identity from structuring itself with knowledge that had been forgotten.

Beyond memorization, Ong explains how oral communication itself is quite different from literate communication. To do so Ong uses a number of case studies of primary oral societies; this allows him to separate out the differences between oral and literate society. He starts by separating his research into a number of categories starting with the explanation of oral language being additive rather than subordinate. Essentially, in oral culture there are less superfluous words even simple ones such as and, when, then, thus, while. Those words were not necessary for oral language, those words simply provide written language with fluency.

Additionally, oral language is aggregative rather than analytic, meaning that most of the expression "carries a load of epithets formulary baggage" such as the beautiful princess or the brave soldier (Ong, 38). While Ong does not specifically note the following in his work, it is easy to assume that these tags assigned to words provide the speaker with further associations

that allow the expression formula used to be remembered better. These associations are used by marketers in the modern day for memory purposes. This baggage associated with hero figures and community leaders would have helped the identity take its idealistic form. In oral society, redundancy is key, because as stated before, speech is instant and memory is limited in a way that written language is not. "Eliminating redundancy on a significant scale demands a timeobviating technology, writing, which imposes some kind of strain on the psyche in preventing expression from falling into its more natural patterns" (Ong, 40). There are a number of other instance where oral culture is drastically different from written culture such as how oral culture is based on the current paradigm of knowledge since old paradigms are lost without ways of keeping track of history, or how in the oral tradition things that are normally abstract such as "tree" are not abstract all. Moreover, categorizes, geometrical, definitions, and self-analysis are all abstractions that only writing allows. In summary, "persons who have interiorized writing not only write but also speak literately, which is to say that they organize, to varying degrees, even their oral expression in thought patterns and verbal patterns that they would not know of unless they could write" (Ong, 56).

Taking a step back to readdress the proxemic limits of language Ong helps us understand McLuhan's theory of the proximities of language. McLuhan is not as focused on the structural limits of oral communication but on the ability for language to change scale and pace. But these concepts are interchangeable because the proximity of language is determined by the structures that limit the linguistic form. In oral terms, orality was geographically limited, man was trivialized, because its form did not permit a way to perfectly transport information around the world. Knowledge was limited by what one could remember which is reliant on a human to remember. It is obvious through Ong's case studies that oral culture's linguistic practices are

used in order to better remember things. If someone was to move information from point a to point b, then a pilgrim had to transport it, and when he did, there was no guarantee that the receiver of the communication would receive the message as it was intended because there would be no way to perfectly remember what was originally said nor anyway to check. Sound is not timeless. However, the written word allows for sound to be captured in a more timeless medium. This does not mean the meaning in timeless, but the phonic sounds are so. But what we see here, and what is important, is that orality limited man's capability to have a global identity, or one built on history. Language limits identity.

Ong & Literacy

Ong moves on from defining orality and its limitations to explain writing, alphabetization, and how it restructures consciousness. One of the key points about writing that Rotman later explains is that writing is context free, "written discourse has been detached from its author" (Ong, 77). Writing places a vast distance between the "audience" and the communicator. In this way, the way that we describe things is completely changed. In oral culture the word I means oneself. In the written form, it could mean a baker, the girl, or a great number of different things. Additionally, the development of writing essentially took sound out of time and place and reproduced it in a visual form. Instead of knowledge being limited to what the mind could recall, knowledge was extended to a much more enduring medium. The written language was not limited by geographical boundaries, no, language could be transmitted verbatim across miles that it could never before—it is evident. It did not "reduce orality, but enhanced it, making it possible to organize the "principles" or constituents of oratory into a scientific 'art', a sequentially ordered body of explanation that showed how and way oratory achieved and could be made to achieve in various specific effects (Ong, 78)."

Beyond the proxemic impacts, writing restructures consciousness in a number of ways. First, "Writing makes possible increasingly articulate introspectively, opening the psyche as never before not only to the external objective world quite distinct from itself but also to the interior self against who the objective world is set. Writing makes possible the great introspective religious traditions such as Buddhism, Judaism, Christianity, and Islam. All of these religions have texts which people live by" (Ong, 104) Additionally, writing was a highly logical form. That is to say that each letter is supposed to logically represent its oral counterpart and with this almost mathematical deconstruction of the oral language deductive reasoning and western logic became integrated into the way we speak. The literate mind evaluates its actions according to logic. It categorizes its identity into logically conceived groups that were no longer geographic but based on ideology. Ong's research on oral and written forms explain how tribalization and detribalization could happen. He proves this by examining the horizons each language embodies. We see that the alphabet delimited the identity allowing humans to think in global terms. This expansion of knowledge, paired with introspectiveness changed the way we understood ourselves.

The Unforeseen Limitations of Literacy

The transformation from oral to literate culture was slow moving. Although man had the capacity to extend its knowledge base on to a surface, initially, the mind still thought in oral structures. Additionally, at first, written language was not widely adopted across the world. While it was among the Greeks and Romans, whom provided literature that laid the framework for the Western World, it is too narrow of a perspective to simply look at Greek and Roman cultures. As Ong notes, even intellectuals, such as Socrates, in *Phaedrus*, resisted the written language because it undermined the ability to hold the author accountable. If a man were to be

inherently wrong about a subject in a crowd, one would likely challenge the speaker. But the distance is different with books, there is simply no way to challenge the written word effectively. No matter what, those words will be written as long as the book exists, and that is a noticeable difference from oral culture. In oral culture only accepted paradigms, or thoughts, continued on while the other ones fell back (similar to social media), this kept the identity structure centered around the accepted or remembered paradigms.

Philosophies, kingdoms, and religions expanded with the emergence of written language, but the common man in the newly literate age only knew what he knew. In many places, especially in medieval time, oral communication continued on as the dominant form of communication. Writing had not been internalized within the Western world during the Middle Ages. Monks and scholars were often the only ones who were literate, and those that were, often were literate in the classical languages of Greek and Latin, while their illiterate counterparts did not speak those languages. Written language allowed for more than organization of knowledge and memory structures, but also for a reorganization of people, especially those whom were illiterate. The middle ages mark a transitory phase of human life where the knowledge disparity in regions of the world were as large as they possibly have ever been. Those times are great examples of how knowledge can be provided, tainted, or withheld, to push men of all likes into epistemologies that are heresy. In the Western tradition, it was not until the printing press that the disparity of knowledge was crushed allowing the written language to reach a potential it had longed for since the Greek philosophers considered it 15 centuries prior.

Literacy was a barrier to knowledge during these times. If someone was unable to read they were unable to understand many of the laws they were ruled by. The way their identity was shaped was by the laws of the literate, but their own perception of identity was shaped by the

structure of the oral language. Additionally, the laws governing bodies of people were often in languages that were indecipherable by the common man. These barriers kept men in the dark ages halting the major societal progressions of the ancient Greeks. Orality was a form of communication that was proximally revolved around the people that spoke it. Apparently, the people only spoke in forms of communication that they could understand and were ruled by those same languages as well. The written law grew philosophies and kingdoms over areas that were of different languages. This inhibited some and empowered others. This barrier is a major and notable difference in the oral and literate society.

The Rise of The Press

Freedom of knowledge discourse dominated the 16th and 17th century. Religious censorship became the center of discussion among scholars and philosophers like Loche and Milton. While these philosophers eventually swayed their legislatures to change their publishing laws, at least, in part, the laws ultimately placed censorship into the hands of the publishers removing the censorship responsibilities from the church or state. Nevertheless, the 16th and 17th century are a point in history where scholars can point to the changes in literacy and historically see the vast changes occurring with society. The restriction of literacy ultimately restricts the way that people understand themselves because people use information to build their identity. The best example is the example of early England. England was a land conquered by a number of people from the Germanic tribes, to the Celtic people, to the Romans, then Anglo Saxon tribes. The Romans Catholic monks presiding in the Isles are responsible for maintaining many of the works which shaped the scholars' epistemology of the world. There was a now lost library of York England that was filled with some of the most coveted Roman and Greek texts relating to Christianity, philosophy, rhetoric, and countless other subjects. Moreover, as written

knowledge became more prevalent for men other than monks, thanks to French King

Charlemagne and his British underling Alcuin, an English Monk who came to France in 781 to
direct the school (Bizzelle,437), schools were developed for a larger group of clergymen to be
educated in Roman and Greek religious texts. The problem was that as the Roman church
emerged as a power in a now sovereign Britain. The British were being ruled under the Catholic
law and the Catholic Latin bible was only readable by the educated clergy. In the second decade
of the 16th century the Bible was translated to English and produced in great quantities; this was
only possible by the invention of the printing press developed just 30 years earlier by England's
William Caxton. The printing press allowed for language to be distributed in mass amounts and
amplified the identity impacts literacy brought about.

The printing press, ignited a change in epistemology and leadership in England.

Removing the barriers of knowledge (literacy, language, and censorship) uprooted the grounded religion of Catholicism. A number of factors contributed to this including the availability of the King James Bible, the rise in publishing, and the emergence of the pamphlet. Together all of these entities were modes of mass transportation of information made available by the printing press, a medium that channeled the written language in masses. The availability of this information led to the construction of attitudes, beliefs, knowledge, and culture, all things traced back to the language they were provide with via the press. However, what is apparent is that the press was not what changed the religious culture in England. Of course, the press changed the proxemics of information by increasing the pace of distribution because, before, the great literate works were often hand copied by monks and other scholars. The cultural change that occurred was from the availability of knowledge and the deconstructed censorship. Linguistically speaking that was what the printing press brought to the people of England.

What is evident from England is that the access to information builds peoples' knowledge, perception, and epistemology. Before, the country was ruled and identified with the Catholic religion. After, the country converted from Catholicism switching their entire religion becoming Protestant. This literate awakening was permitted by the availability of knowledge, because of the press, and the emergence of mass information led to a vast change in identity in the country of England.

Censorship and Impacts

The massive transformation in epistemology marked by an increased literacy provides scholars a great perspective on how selective knowledge could manipulate the way that people see the world. Most of the time, as in England, knowledge is controlled to maintain some underlying power structure (i.e. English Licensing Order of 1644). Nazi Germany, and propaganda. Propaganda is different from the former and later, because instead of manipulating knowledge through selectivity, it manipulates knowledge by overloading media sources. England is a great example of what happens when knowledge is not censored. The press deregulated censorship and brought an abundance of knowledge that changed the cultural terrain.

Controlled knowledge is a perversion of the concept of truth. Remarkably truth is something that communication alone enables its existence. Truth is fairly subjective, determined by epistemology, but nevertheless, it is the guiding principle of most of Western society—truth being the underlying concept behind any virtue. Knowledge is different from truth, but it creates truth. Truth is relative to one's perception of truth in comparison to their identity, whether orally based, literate based, or based through a non-lineal global perception. Furthermore, when knowledge is tainted with manipulation, it ultimately taints truth. It is not because the things that are restricted are not necessarily true, but because they could be untrue. Truth, from any

perception, is only as timeless as the people that perceive it to be and must be challenged. What is evident here, is that governments used restriction to shape identity in a way that was positive for their existence. The literate shift moved power from the hands of the kings into the induvial.

One thing to consider is that when countries such as England turned over publishing rights to the public, knowledge was no longer controlled by the kings but instead by the people that published it. In that way knowledge has the ability to be controlled by popular thought. But nevertheless, it is important for knowledge to be unrestricted so that societal progression carries on through the Dissoi Logoi.

As we have seen, each choice of media has its various limits. The knowledge that operates within these limits create perception of truth and this perception leads to what we will or will not be persuaded by. Literacy is not something that people are born with. That is a limit in it of itself. But the former grander discussion of McLuhan's proxemics, Ong's structures, and the printing press leave us with the next medium that restructures consciousness. multi modal media.

Multi-Modal Media and The Global Village

The emergence of electronic information changed the way that humans understand themselves. Multi modal information prominently emerged following the rise of electricity. Multi modal information can be understood as combining multiple forms of communicating information in into one form. The form of multi-modal information is only understood by the processes of prior forms of information. It is often said by scholars that we live in the 21st century but still think like the men of the Renaissance. Why is this? This is because as we come across forms of multi-modal information i.e film, pictures, television, and we understand the information by providing a context to it. Without context, the information is as foreign as any indecipherable language.

Much of the current scholarship studies the form of multi modal information and tries to understand how it changes the way we perceive society, ourselves, and the world around us. To explain the way that multi modal information is reliant on preexisting communicative forms, it is easiest to abstract the forms for sake of example. A picture speaks a thousand words, but what words does one use to describe the picture? The paradox of multi modal information arises in this lack of context. These words are reliant on a vocabulary that the viewer has gained over time. He thus uses this vocabulary to provide context to the picture to understand what is happening. Hence, each person has a certain linguistic vocabulary that they use to understand, and it is often relies on our preexisting conceived value set which is both normative and proxemic. When people assign context to an object that lacks a logicalness, they subjectively do so. Subjectivity leads people to group together in collective tribes on the basis of identification. They uniquely come together with some sort of overlap of understanding the subjective context and this tribalizes members on the basis of identification.

Kenneth Burke, a rhetorician concerned with identification explains these phenomena well when describing terminisite screens. Terministic screens can be understood as a way we understand information or talk about information based on our tribe and our normative value set. A simple example of the subjectivity of language is shown when people talk about abortion. The word fetus, and baby, may indeed hold various values based on preexisting values among people. Similarly, a picture of someone of a baby may evoke different ways to describe or think of it amongst different groups of people who have experienced life differently. Thus, it is evident that the lack of context in multi modal information leads people to apply terminstic screens which are formed through the creation of identity. This context that people assign to information which

lacks uniformity is reliant on many normative structures and thus as McLuhan contends, it has a tribalization impact on society.

Terministic screens and the need for context in multi modal media creates tribalization. But why? This is because the application of context onto multi modal information holds no uniformity. We understand new experiences or new information using our identity, our previous set of values and beliefs, to determine our behavioral interaction with the new information. Burke argues that identification is the basis by which we make these interactions and we are persuaded by information. But what we value, what we identify with is normatively created, and we rely on others to help us understand ourselves; thus, what we identify with relies on the proxemic subjective assignment of meaning through identification or disassociation. Hence, we associate with likeminded people which identify closely with our own ego structure tribalizing us into McLuhan's global village.

Tribalization via multi modal information deconstructs the literate logical identity into an untraceable place. As previously proven, the written language was logical, used to construct laws and moral boundaries. The natural logic behind a statement such as: if you do x, you will receive y punishment, dominated the way that humans understood society. Once information leaped from a linear logical process to a multi modal function the way people understood content changed drastically.

The internet functions like the printing press did with writing. It is able to platform the mass production of multi modal information through its electronic existence. Social media takes this linguistic impact and even further intensifies it by providing a single interface, and a single website, that promotes and platforms information. Beyond the subjective retribalizing aspects of

multi modal media, the internet also contains structures that determine memory, knowledge, and electronic proxemics.

The internet embodies the global village linguistically in the sense that it takes the nonlinear modes of media and intensifies it by bringing it all together. So, in that way people subjectively co-identify with certain things. However, Social Media, which operates within the Internet medium, further intensifies tribalization through other means as well. SNS create a Social Graph which places virtual barriers around knowledge eliminating access to certain information, much like physical barriers did in the oral world. This will be elaborated on more later, but for now, it is important to first look at the internet from a rhetorical perspective.

The internet is brilliantly strange to most. Due to its complexity, the internet is something that is not fully grasped by the general public or scholars. However, it seems that most of the globalized business world has been integrated within its form. With the rise of social media, most of our identities have been integrated within it. What we we have come to understand is that the form of communication used limits the way we understand our identity. The internet limits us in various ways; there is an effect on our knowledge, our memory, and our proximities. Starting in reverse order, like oral culture, literate culture, or now electronic culture, the internet has an extreme proxemic effect. The oral culture limited communication and identity due to its inability to perfectly travel distance. The literate culture could perfectly communicate over any distance, but it was reliant on other mediums such as horses, cars, trains, planes. The electronic culture that society exists in today is a culture where information is spread rapidly. The speed of information is instantaneous. What we noticed in each shift was that the proximity had just as much to do with the ability to transport information as it did with the way language organizes us into groups. The natural multi-modality of the internet provides a platform for us to apply

terminstic screens onto information without context. In this way, the internet intensifies the proxemics impacts multi-modality brings to identity by intensifying multi-modality and platforming social sites to collectively understand the information.

Memory structures have also changed with the rise of the electronic age. In oral culture things were remembered with systematic methods of semi-memorization. All people knew is what they knew this kept the identity in a present schema. The literate society extended their memory capacity by extenuating their memory on to the timeless pieces of material that permitted their written language. Their memory was externalized beyond the capacity of their brain and into history books allowing the formation of their values to draw upon historical philosophies. The internet changes memory in a way that is similar and different from the prior two-forms. In one way memory is infinite among the databases that store knowledge allowing identity to be crafted using a historical and large amount of information. However, not all things published online are timeless like physical books. For example, The Newsfeed is different because the information published on it is not timeless. The Newsfeed changes every day, so while you may bring your perceptions, and knowledge forward, the actual content disappears from your visual preceptors as the days go by; thus, in a similar way to oral society, we live in continual virtual presence.

Thus, the internet changes our epistemology by presenting us with a continually shifting yet present flow of knowledge. Its combination of the memory and the proxemic impacts of the internet are thus more complex and difficult to trace out. For example, knowledge is not free in the sense that literate knowledge was free. In a library one could scan the shelves and pick at random whatever book he or she wishes. In the online age, algorithms pick and choose which bits and pieces of information are provided to you based on your prior interactions. That is the

proxemics impact and it keeps our identity in a proxemic place of understanding on a larger global virtual map. On the other hand, information is so rapid, that our mental capacity to remember all things published is impossible, and again it keeps schemas in the present world.

Facebook is a part of a larger unit of websites and corporations that build their news and adds based on algorithms. Essentially, they track your user behavior like a credit score tracks all your purchases. They don't simply rely on your Facebook behavior, but your internet behavior. They track your internet behavior by buying 3rd party data from other websites. Additionally, there are 65 million websites that are integrated with Facebook and your behavior on those websites is ultimately linked to the Social Graph. Furthermore, the Social Graph is essentially a virtual world. It is different for everyone. Essentially it is a world built with lines (edges) and dots (nodes) that compile an algorithmically based world of knowledge for you. Once the algorithms determination of your identity is created, the graph maintains the information you build your future identity with by presenting you with only material that falls within your identities graph. They do this by creating a radius or a distance that draws the line between relevant and irrelevant.

As we will see, the result of these structures is that Facebook further retribalizes the world, because If your node is too far from another, then your identity is virtually separated on the larger map, keeping you geographically bound to your collective tribe of thought. This is the proxemic impact of Facebook. Social media, and, in large part, electronic media retribalize the world. What you know, and what you see is ultimately determined by your own thoughts and your electronic tribes. In this way, the computer algorithm builds your identity. It aims to keep you within an identity for purposes of efficiency and larger power structures.

Linguistic Progress

As shown by this chapter communication has taken many forms over time and the integration of each form accompanies a change in the way we perceive society due to a variety of factors. This chapter outlined the major shifts in communication to prove that language limits identity. In the modern day, we see that we use terminstic screens to understand information which limits our identity to a tribe that we identify with. Since Facebook is used by 79% of online Americans, and is a place where we build our identity, understanding languages limitations are imperative for this study. The remainder of this thesis shifts its focus from how language limits identity to how power structures it. This shift allows us to understand the ultimate inherent goals of Facebook, and to understand the additional normative qualities that structure identity.

CHAPTER II

THE POWER OF KNOWLEDGE

Language limits identity. Power structures and makes use of identity. Limits, in this context, are the horizons in which communication operates within which limit the way we understand ourselves. A limit of multi-modality was its lack of context which limited humanitites' ability to uniformly understand content; this limit's impact was the formation of tribes on the basis of identification. Power structures the things that we identify with. Power seeks to influence the way that we behave and to influence the way that we build our values and beliefs.

The goal of this chapter is to provide a theoretical framework identifying guiding power structures that shape the identity so that we can understand how the Social Graph intensifies various power practices. What we unveil in this chapter is that language is used to structure the way we exist for the sake of reinforcing current power structures. We start with neoliberalism which shapes what we identify with. We then explain that propaganda is the vessel that helps shape our value and belief sets.

To begin, lets first address how language is influenced by power. As is evident from the previous chapter, communication is limited and these limits shape the way we view ourselves. For example, power seeks to influence the logic or deductive reasoning of language. Power structures identity by creating categories on the premise of logic; and, what we see here, is that one of the reasons literacy transformed the proxemics of identity is because power influenced what objects or what people fit in certain categories based on a set of criteria i.e. the rich, the poor.

One of the interesting aspects of Ong's *Orality and Literacy* is his fieldwork with completely oral societies. In these societies, participants were provided with various things that the literate person, or even a person who is surrounded by literate, can group together. These groupings are what we consider categories. What his research shows is that the primary oral cultures are unable to place objects in their respective categories. "One series consisted of drawings of objects hammer, saw, log, hatchet. Illiterate subjects consistently thought of the group not in categorical terms (three tools, the log not a tool) but in terms of practical situations" (Ong, 52). "The illiterate subjects seemed not to operate with formal deductive procedures at all. Subjects seemed not to operate with formal deductive procedures, they would not fit their thinking into pure logical forms" (Ong, 53). This research makes basic sense, and of course in primary oral culture there wasn't a sense of perfected logic, because that was invented by the literate. It was invented by the Greeks. This logic is what validates things as fitting in or fitting out, being wrong or right, the logic creates truth with language. Literacy creates logic which allows governments to create deductive categories. Power seeks to structure the categories we come to deduce. Power constructs lines of wrong and right, rational and irrational; lines that are not existent without the logic of written language. Moreover, governments use the logic of the written language as a validation system, and this allows humans to be placed, by power, into various categories. What we know now is power structures the way we understand ourselves through language.

The next discourse is capitalism and the goals of neoliberalism which is best tracked by Michael Foucault in his lectures on *The Birth of Biopolitics*. His work focuses on the tracking the neoliberalism as it evolves from the middle of the 17th century to the time of his lectures during the 1970s. Foucault is famous for his work on power structures. He helps us understand how our

identities are structured to achieve the goals of neoliberalism. These guiding principles are not real, but the logic makes them valid, and gives the structures the appearance of truth. But evidently, the logic we use to make decisions is just a product of the written language. Foucault's lecture begins by discussing the political nature prior to the 16th century and the way that governments operated.

Neoliberalism

Before beginning, for clarity, I will try to define neoliberalism. Neoliberalism is an economic philosophy that promotes a free trade society. In the past few centuries, Western society's economic and societal practices have been guided by this philosophy. Foucault helps explain all of this much better, but it is important to note that neoliberalism is not capitalism, or democracy, but rather a guiding principle that both aim to maintain. The goal is to explain the way that neoliberalism has structured identity and this will be most clear if we start with neoliberalism's roots.

According to Foucault, in the 16th century, the government was limited by the rules that it set out. If there is a nature specific to the objects and operations of governmentality, then the consequence of this is that governmental practice can only do what it had to by respecting this nature. These laws were bound to nature. It was a social contract. "If it were to disrupt nature, if it were not to take it into account or go against laws determined by this naturalness specific to the objects it deals with, it would immediately suffer negative consequences" (Foucault, 16). But as the 18th century begins to emerge the way that governments thought in Western society begin to change. This change occurs because Western countries began to develop liberal practice, and what is 'right' or 'wrong' changed.

Being banal here, prior to the transformation the only rights and wrongs were the actions the Government chose to take according to their laws. With the emergence of the market economy, it was then in the direct interest to protect the economy. "The market must be that which reveals something like a truth. "This does not mean that prices are, in the strict sense, true, and that there are true prices and false prices. But what is discovered at this moment, at once in governmental practice and in reflection on this governmental practice, is that in as much as prices are determined in accordance with the natural mechanisms of the market they constitute a standard of truth which enables us to discern which governmental practices are correct and which are erroneous". In other words, it is the natural mechanism of the market and the formation of a natural price that enables us to falsify and verify governmental practice when, on the basis of these elements, we examine what government does, the measures it takes, and the rules it imposes. Thus the market constitutes a site of verdiction" (Foucault, 32). In short, the government must work in accordance to truth. The market place thus limits the way that the government operates because it must work in this economic accordance protecting free trade. Hence, it is not only the market place that limits government, because it is the people that create the prices in the market. Humans changed from being people ruled by laws in totality, to a group of enterprises that set the truths which governments were guided by.

The economy "produces political signs that enable the structures, mechanisms, and justifications of power to function. The free market, the economically free market, binds and manifest political bonds" (Foucault, Ch. 4). The economy and liberalist practices are a structure that form and structure the way we build our identities out of information.

Tracing Neoliberalism

18th century liberalism is defined by Foucault as, "free exchange between two partners who through this exchange establish the equivalence of two values." Thus, the States function was to ensure the smooth running of these transactions. Later, neoliberalism emerges and the focus of the government slightly changes. "Capitalistic countries seek obtaining a society that is not oriented towards commodity and the uniformity of the commodity but towards the multiplicity and differentiation of enterprises" (Foucault, Ch. 6). Essentially neoliberalism is focused on what Foucault calls a game. This game is something that the government desires everyone to be a part of. But the game is ultimately regulated by the Government (i.e. what goods come in and go out; what raw materials are purchased; removing monopoly). The game is centered on ensuring ultimate efficiency, and providing the most competitive prices. And this game is not inherently real, but the way that government rules in order to maintain the game makes the political economy a real thing. A man plays a part in the game because he himself is a commodity; he is an enterprise that not only sets the price, but creates the object. The man is like a machine whose existence is enabled by the commodification of human labor. This wave of neoliberalism stratified the commodities that one could identify with. It sought to destroy monopoly which spread the things people identify with in a similarly stratified way.

Foucault's next major discussion is on the discussion of human labor, what does human labor produce? Human labor produces capital. In return for this production the worker is provided with currency that is then used to buy other capital. Thus, the consumer is a producer because he not only produces capital for others, but produces capital with his desires. The capital that workers make is for other people. The other people simply produce its value. If it is of no value, then the material will not be produced. "The man of consumption is not one of the terms

of exchange. The man of consumption, insofar as he consumes, is a producer. He produces his own satisfaction. We should think of consumption as an enterprise activity by which the individual, precisely on the basis of the capital he has at his disposal, will produce something that will be his own satisfaction" What he produces is based on what he identifies with, which is only permitted by a large number of players being able to play "the game" (Foucault, Ch. 9). This shows us neoliberalism structures our identity through language to organize principles to create our satisfaction. We produce value in the things we identify with. The categories that have been linguistically derived reflect back on the identity.

Humans are producers. But what they ultimately produce is ultimately guided by unconscious forces. Humans as producers are simply playing the game that the market creates. They go to work to make money, so that they can spend their money on things that others work for. The value of the commodity that they purchase is determined by the true market price which is determined by humans. Overtime, by the stratification of value and commodities neoliberalism permits, humans begin to stratify into groups that co identify with similar things that reflect a similar identity. This is the ultimate goal of neoliberalism in its later stages, specifically when Foucault is speaking, specifically after the turn of the 20th century.

Corporations aim to provide a market to satisfy the things that people have assigned value to. But inherently, everyone determines values differently. It is still evident in society today. Take Warren Buffet the multi billionaire American born man. He could purchase any car money could buy, however he drives a piece of crap. Why does he do this? Because a nice car is of no value to him. Maybe spending time with his family is. Maybe having a really nice TV is of value to him. Thus, the ambiguity of value is evident: value is ambiguous, while true value is created in a market place, the market does not want their to be one "true" totalizing object. Thus, the goal

of neoliberalism after the 20th century was not to provide consumers with a few commodities, but with as many as possible. Each would have two levels of value. It's market value, and its intrinsic value. And as producers of value, humans in the Western world produced the commodities which were sold back to them. As a whole they produced a mass amount of commodities that were all different from one another and in a way normative. For the sake of this paper, we can understand normative as a social pressure that pushes our interactions in certain directions to achieve a desired social appearance.

Liberalism creates a culture, a game, which people live within. As stated, the goal of government is to allow everyone to participate in this game. But players play the game differently, because their intrinsic values are unconscious and largely normative. It is interesting to now interlay Kenneth Burke into this discussion because he states that peoples behave and are persuaded by identification. In other words, said player plays the game to buy x or y. He wants to buy x or y because this is reflective of the person he perceives himself to be, or the person he wants to be. The player doesn't simply buy a car in this day an age, he buys a car, with a specific color, type, model, new, used, fast, slow, because it reflects back positively on his identity or the ego he wants to externalize to his network. The way we identify is, again, normative. We identify with the things that have perceived value to us, either because they are like us, or because we want them to reflect the identity that others view us by. So, what this all means is that humans make decisions within this game, but these decisions are based out of identification. This structures identity because the purchase of non-essential commodities is the identity in its externalized form. The way that certain people identify with commodities externalizes identity to positively reinforce back on the normative identity structure that it hopes to satisfy.

Foucault describes this phenomenon as a product of the civil society he says much more eloquently that, "For in a civil society, that which joins men together is indeed a mechanism analogous to that of interest, but they are not interests in the strict sense, they are not economic interests, civil society is much more than the association of different economic subjects, although the form in which this bond is established is such that economic subjects will be able to find a place and economic egoism to play a role within it." So, applying this theory back on to Burke, it would seem that people make their identification with other things on the basis of the way that they value certain items. Thus, an entire culture develops around commodities. Consumer culture, Coffee culture, car culture, clothing culture, alcohol culture, these are all cultures that are are simply categories structured by the practice of neoliberalism and made identifiable by the identification of the ego based commodity game. In modern day humans not only create the market, they create the culture, they create their society.

Thus, Neoliberalism cultivates a certain kind of person, what Foucault calls homo economics, who also relates to his/her own identity in a particular way. "Homo economics is someone who accepts reality. Rational conduct is any conduct which is sensitive to modifications in the variables of the environment and which respond to this in a non-random way, in a systematic way, and economics can therefore be defined as the science of the systematic nature of responses to environmental variables" (Foucault Ch 11). Thus, humans come to respond to the culture they situate themselves with rational based on a truth that is ultimately determined by the market places' logic. As marketers, or economic theorist, the study is then how does x make y perform z? That is the overall goal which leads us to ways that producers produce things we identify with. In other words, neoliberalism makes us interested in our identity and externalizes it according to externalized and systematic environmental variables. Homo economics is

In review, liberalism structures the way we identify with commodity or philosophy. It organizes people on the basis of identification very similarly to the way the multi modal information does. The structure is a product of the game that creates a market that people assign value to through identification. The game is an ego based game and the way you play is determined by the way you want to. There are normative pressures that push your identity in certain directions, and neoliberalism creates a structure by allowing you to create your own, to create the value for the things that you would buy, and then to re-affirm your beliefs by providing you with that commodity.

Propaganda

The relationship between neoliberalism and media is most apparent in early studies of propaganda. Propaganda is the guiding vessel that helps shape and influence people's values or how they play the game. Most scholarship pulled to compile this section is pulled from another French scholar Jacques Ellul who is interested in Propaganda, particularly the goals of propaganda. What is evident is that goals of propaganda are essentially the same as the goals of marketers: to create monolithic individuals whose values are so set in place that communication and capitalism can be transmitted in its most applicable and efficient form.

Propaganda studies man's interactions in order to further guide man's behavior. Whether that is consumer behavior, or ideological behavior, propaganda aims to cultivate the culture. In the older world the salesman says "please buy a piano". In the modern world this is reversed, the consumer asks to buy the piano. The old propagandist tried to promote their product or ideology by providing the consumer with information that would he would identify with. The new propagandist makes the culture that the consumer wants to identify with. The new propagandist realizes that people have already created the ego structure that wants the piano. The "game" is

ego driven and people come together through identification and similar perceptions on intrinsic values. As the mechanical society permitted more commodities to be made, people naturally interlocked into groups with similar core value structures. The propagandist utilizes the interlocking to provide the commodities the consumer had already produced value in. So, while people are organized by the two-party system which inherently value different commodities and practices, people are also organized by normative values, which were once more regionally limited, but with the rise of media which electronically connected all types, the regional barriers were broken, but groups of people were still assembled by what they identified as valuable. Thus, the new propaganda recognizes these interlocking forms. "New propaganda takes account not merely of the individual, nor even of the mass mind alone, but also and especially of the anatomy of society, with its' interlocking group formations and loyalties. It sees the individual not only as a cell in the social organism but as a cell organized into the social unit. Touch a nerve at a sensitive spot and you get an automatic response from certain specific members of the organism" (Bernays). The whole justification for propaganda is thus in accordance with neoliberalism's externalization of economic variables (or some such connection back to the previous section)

According to Ellul, for propaganda to succeed, society must first have two qualities: "it must be both an individualist and mass society" (Ellul, 92). These concepts seem to be competing but Ellul explains that "individualistic society must be a mass society, because the first move toward liberation of the individual is to break up the small groups that are an organic fact of the entire society. In this process the individual frees himself completely from family, village, parish, or brotherhood bonds—only to find himself directly within the entire society. When individuals are not held together by local structures, the only form which they can live

together is in an unstructured mass society" (Ellul, 90). This occurrence of individualistic stratification within the mass society is a product of neoliberalism and communication and one that propaganda takes advantage of. Moreover, the emergence of the lone individual within mass society presents propagandists with a variety of functions. "An individual can be influenced by forces such as propaganda only when he is cut off from membership in local groups. Because such groups are organic and have a well-structured material, spiritual, and emotional life, they are not easily penetrated by propaganda" (Ellul, 91). Following the impacts of neoliberalism and the gradual deconstruction of family and religion during the American 20th century, the individual found himself alone without a group of ideology to conform to during challenging situations. This left the individual very targetable by propaganda. "In a mass society they (people) are more detached from reality, more manipulable, more numerous, more likely to provoke intense but fleeting emotions, and at the same time less significant, less inherent in personal life" (Ellul, 94). Neoliberalism stratified what people identify with leaving people in groups that were targetable and enforceable by the forces of propaganda.

Similar to Ellul's discussion, Facebook cultivates a mass society that operates within an American culture that has been largely deconstructed by the philosophical organic groups that were existent prior to multi modal information. Additionally, this mass society cultivates the need for a leader. "The leader or expert who enjoyed authority and prestige among the mass is the man who best speaks for that mass. The ordinary man must see himself reflected in his leader. The leader must be a sublimation of the 'ordinary man'. He must not seem to be of a different quality. The ordinary man must not feel that the leader transcends him". These leaders in the mass society provide the glue to hold the interlocking forms together during times of

dissonance. They are the men that speak for the group so that the group can exist without questioning the nature of their value sets.

After neoliberalism deconstructs large community structures, and identity is organized into interlocking formations the propagandist achieves his structuring of the identity through a variety of forms. These forms are vertical and horizontal propaganda, and political and sociological propaganda. These forms are the way that the propagandist actually persuade the propagandee to act following the study of the interlocking group formations.

Vertical propaganda is from the top down. It is the form of propaganda that researchers associate with classical propaganda. "One trait of vertical propaganda is that the progandee remains alone even though he is part of a crowd. His shouts of enthusiasm or hatred, though part of the shouts of the crowd, do not put him in communication with others; his shouts are only a response to the leader; this kind of propaganda requires a passive attitude from those subjected to it. They are seized, they are manipulated, they are committed, they experience what they are asked to experience. Vertical propaganda is by far the most widespread. It is primarily useful for agitation propaganda" (Ellul, 81).

A great way to conceptualize vertical propaganda is to examine the way that the Catholic church controlled and limited information during its prominence before the 17th century. They dominated the information spread through the control of the information. In more modern times, vertical propaganda is more prominent but it is used in more covert forms. Politicians attempt to dominate the media and thus control the stories the media publishes. This domination allows politicians to receive a large spotlight on their actions and their actions are then reported by the media. In the most recent presidential campaign of 2016 the presidential nominees used social media like never before utilizing the totalizing forms of information that partisans would be

provided with via their Social Graph. This allowed candidates to speak directly to their followers, however, these followers were still not in communication with the leader, they were only experienced to whatever the candidate shared or acted upon.

Horizontal propaganda is different from the vertical form. Ellul describes horizontal propaganda most concisely explaining that, "Horizontal propaganda is a much more recent development. It is known in two forms: Chinese propaganda and group dynamics in human relations. The first is political propaganda; the second is sociological propaganda; both are integration propaganda. It is horizontal because it is made inside the group (not from the top), where, in principle, all individuals are equal and there is no leader. Its content is presented in didactic fashion and addressed to the group. The leader is only there as a sort of animator or discussion leader. Only in speaking will the individual gradually discover his convictions (which also will be those of the group), become irrevocably involved, and help others to form their opinions (which are identical) Each individual helps to form the opinion of the group, but the group helps each individual to discover the correct line. The Progress is slow yet still aims to cultivate certain attitudes and beliefs.

Horizontal and vertical propaganda are both integration propaganda embodied by the Social Graph. Horizontal operates via political leaders as discussed. Horizontal propaganda aims to make beliefs sets and attitudes by cultivating a culture that believes in such things. When discussions become relevant in the Newsfeed members are often caught up in a cognitive dissonance on such issues. They use their network, normative influences, and leaders to help them decipher their convictions and opinions.

The other forms of propaganda that Ellul discusses are quite similar to horizontal and vertical propaganda but they allow us to understand the goals of each influence in a different

way. Moreover, "Political propaganda involves techniques of influence employed by a government, a party, an administration, a pressure group, with a view to changing the behavior of the public. The choice of methods used is deliberate and calculated' these desired goals are clearly distinguished and quite precise though generally limited. These types of propaganda can be distinguished from advertising: the latter has economic ends, the former political ends. Political propaganda can be either strategic or tactical. The formal establishes the general line, the array of arguments, the staggering of the campaigns; the latter seeks to obtain immediate results within that framework such as wartime pamphlets and loudspeakers to obtain the immediate surrender of the enemy" (Ellul, 82). Political propaganda aims to cultivate certain attitudes and beliefs about a certain politically charged subject in hopes of uniting member for or against a certain initiative. This form of propaganda is vertical.

Sociological propaganda is different from its counterpart and is a horizontal method of distributing influential information. "Sociological propaganda seeks to integrate the maximum number of individuals into itself, to unify its' member's behavior according to pattern, to spread its style of life abroad, and thus to impose itself on other groups. Sociological propaganda basically is the penetration of an ideology by means of its sociological context. Propaganda as it is traditionally known implies an attempt to spread an ideology through the mass media of communication in order to lead the public to accept some political or economic structure or to participate in some action. The existing economic, political and sociological factors progressively allow an ideology to penetrate individuals or masses. It is based on a general climate, an atmosphere that influences people imperceptibly without having the appearance of propaganda. It gets to man through his customs and through his most unconscious habits" (Ellul, 83).

Sociological propaganda can be understood as the propaganda that emanates out of successive responses from a certain group of people that cultivate culture. These responses are what the propagandist studies in order to transmit political or vertical propaganda most precisely. We can see this, for instance, in... elect Donald Trump utilized. Following the laws passed by former president Barack Obama, a number of members in the United States joined together in unity feeling as if the modern societies approach to political correctness did not reflect their core beliefs. This friction, or sociological occurrence, can be understood as a form of sociological propaganda because these discussions brought groups of people into interlocking groups of thought that were then utilized by politicians.

What we see here is that horizontal and sociological propaganda are a product of political and vertical propaganda. Even more, the group that horizontal or sociological propaganda creates is a product of the terministic screen. In a top down fashion, Political or Vertical propaganda send content down a latter of communication. Various groups view the content differently based on their identity and their values which are a product of their tribe. In the tribe the members discuss the content and assign value and meaning to the information horizontally and amongst themselves without a leader. This strengthens the bonds of identification and develops a stronger tribe.

The last function of propaganda worthy of discussion is crystallization. For the propagandist to understand the interlocking forms of society he desires that people are monolithic individuals who beliefs are stagnant and reliable. This stagnation of beliefs provides propaganda the opportunity to distribute ideology best and most successfully. Ellul defines crystallization by describing the ultimate impact of propaganda. He says, "Propaganda furnishes objectives, organizes the traits of an individuals personality into a system, and freezes them into

a mold. In this fashion, propaganda standardizes current ideas, hardens prevailing stereotypes, and furnishes thought patterns in all areas. Thus, it codifies social, political, and moral standards. Through such a process of intense rationalization, propaganda builds monolithic individuals. It eliminates inner conflicts, tensions, self-criticism, self-doubt. And in this fashion it builds a one dimensional being. Crystallization closes one's mind to all new ideas. The individual now has a set of prejudices and beliefs as well as objective justifications. He thus actually comes to hate everything opposed to what propaganda has made him acquire. One can almost postulate that those who call every idea they do not share propaganda are themselves almost completely products of propaganda" (Ellul, 163).

Modern Propaganda aims to reinforce the structures of identity that are products of neoliberalism. It uses interlocking identity structures as the basis by which it persuades. The Facebook Social Graph and the propaganda that operates within it, leads to a crystallization impact on individuals. This occurrence is not unique to Facebook, but is intensified by Facebook. According to Ellul this crystallization is a product of propaganda, and also the group structures it manipulates. According to him, "the neurotic anxiously seeks the esteem and affection of the largest number of people, just as the propaganda can live only in accord with his comrades, sharing the same reflexes and judgements with those of his group" (Ellul, 163). It is in this quote that is obvious how influential Facebook is in promoting crystallization. The people one associates itself with in the Social Graph help re-affirm the identity one has come to externalize. Moreover, Facebook as a product of communication and neoliberalism platforms all of these forms of propaganda and the way that Facebook intensifies this occurrence will be further explained in chapter 3 and 5.

Facebook: A Product of Neoliberalism and Propaganda

Facebook has been created in a society that uses communication that is structured by neoliberalism through propaganda. Facebook organizes preexisting individuals into a social network by monitoring the way one externalizes their identity. When an individual joins Facebook they create their externalized identity through the form of an online profile and behave accordingly. People externalize their identities by publishing attributes and interests that reflect their ego. However, this ego that they have come to acquire has been heavily influenced by the goals of neoliberalism and propaganda. As stated, the ultimate goals of propaganda and neoliberalism are a form of ego stratification and building monolithic individuals that are then producers of market value. Furthermore, Facebook users have assumedly built some sort of ego-identity structure upon arriving on Facebook, and, this stratification effect of the former are the reason why everyone does not display the same interests, qualities, and statuses.

Understanding Facebook as a product of neoliberalism, propaganda, and communication, allows us to move forward with the remainder of the thesis and understand not only what the impacts are of identity externalization, but, also, how the algorithm actually functions to change our perceptions and intensify the identity structures created by communication, neoliberalism, and propaganda. The remainder of the thesis analyzes how both linguistic and power structures work together to stratify identity into bubbles of perception, and then turns to the algorithm to prove how these structures are further intensified.

CHAPTER III

THE FACEBOOK ALGORITHM

In 2006 Mark Zuckerberg developed and created Facebook with the hope of providing University students the opportunity to network together in a social sphere. Furthermore, upon joining Facebook users were asked to provide an email to create an account, and to set up a profile viewable by friends that displayed information such as pictures, statuses, interests, and organizations. Over the last 11 years Facebook has grown becoming a platform that provides users with news, information, adds, and social networking capabilities. It is a website that enables the publishing of information through the World Wide Web and it compiles multi modal information in a single place.

After creating an account users begin to make interactions with other users and information. These interactions can be defined as befriending, clicks, likes, comments, and shares. These interactions are actions that users make socially connecting with other users and enterprises around the world. Originally, Facebook was a database of profiles in which each profile chronologically stored information on a Facebook wall. This wall was like a forum that was accessible to the user and the user's friends to post information, photos, events, and network. As Facebook grew, the developers desired to have a home page that listed all of the interactions that occurred in a user's network. Thus, in 2012, Facebook developed the Newsfeed which functioned in this way. Since the amount of activity that occurred in a user's network was so immense and vast, Facebook developed an algorithm to determine what would appear in the Newsfeed. This algorithm has been called the Social Graph, and the Social Graph, created an

electronic map of all user interactions to determine which information should be presented in the Newsfeed.

The Social Graph is built with nodes and edges. A node is something you interact with such as a friend, an organization, or even a website. The edges are what connect the nodes back to the electronic ego structure and the edge length is determined by how frequently you interact with the node. As one makes interactions on the Facebook interface the Social Graph is constructed, and an algorithm is used to determine the items in ones Newsfeed. This algorithm has the capability of determining the information that a user comes across; thus, it limits information in certain ways. The limitation that it puts on information has impacts on the user's identity and epistemology and this chapter explains how.

Graph Mining and Crawling

Before 2012, a bevy of research was conducted by various computer scientist and researchers from around the world to determine the form of the Social Graph. Researchers made this progress in hopes of understanding several things such as the size of a network, finding influential nodes, and researching connectivity. During this time of research Facebook had existed for six years and it had been easier to "mine" or "crawl" due to its privacy settings. Mining can be understood as a process of locating information within a Social Graph for research or marketing purposes. Mining allowed developers and researchers to compile statistics and trends within the Social Graph. Crawling can be understood as the process of starting at a node and tracing out the other nodes in which the node is connected. Crawling allows researchers to configure the shape and size of the Social Graph. Unfortunately, after 2012 Facebook ramped up its security to ensure that their data was neither mined nor crawled. These security measures have made it very difficult to research Facebook, and the Social Graph which originated in 2012.

However, the research that was conducted was ample enough for further research to be conducted using theoretical guidelines and a vocabulary to describe the graph. The following definitions help us understand the way that the graph is composed and it is thanks to crawlers and miners that these explanations are possible.

Nodes

As stated, nodes are the electronic placeholders for what people interact with. Nodes encompass a variety of different entities (Wilson). For Facebook to track what the user interacts with and represent these actions with nodes, it must track user behavior. Interestingly, Facebook tracks information from a wide variety of websites and things and uses this information to make a Social Graph that is representative of the online interactions one has made. The interactions that Facebook tracks are not limited to Facebook alone. It has various other ways of measuring online activity. Facebook is integrated with 65 million websites, and this integration allows Facebook to track user interactions on these websites as well. Thus, the information presented on your Newsfeed can be a product of your Facebook activity and online activity. Additionally, Facebook purchases user data from 3rd party corporations. These 3rd party data companies compile user information from users' interactions on websites. The corporations then analyze the data and turn it into statistical analytics which are then sold back to Facebook. Facebook compiles nodes from a variety of places.

Edges

Edges can be understood as the frequency in which someone interacts with a node. As stated, nodes don't have to be people they can enterprises and abstract principles. For example, if one interacts with a node quite frequently that is labeled "Trump articles" the node length would be shorter than something that you did not interact with often, for example, "Clinton articles".

The frequency of node interaction determines the edge length and the length of these edges is how the Social Graph algorithmically derives what information you interact with the most.

The Social Graph

Over time the Social Graph uses user interactions to compile an algorithm that determines the information on the Newsfeed. Facebook 's Newsfeed is not chronologically ordered such as Twitters but instead ordered by interaction frequency. The Social Graph is used for more than deciding which information to provide to you, it is used by exterior developers and marketing agencies to market to the users. Many users have often commented on the strange occurrence of searching for a commodity on a different online website and then an ad marketing the exact commodity in their Newsfeed. Facebook uses a vast network of information tracking to provide marketers with the ability to market to people who have already interacted with their product or similar product.

Facebook is currently the largest OSNs and is used by two billion users worldwide. These users use the interface to communicate information whether pictures, articles, or writing, to a variety of their friends. However, what users' friends see is determined by the Social Graph. The user's friends will only see the activity if the edge length and relevancy falls within a determined radius. This radius is the algorithmically derived line of relevant and irrelevant and is reliant on user interaction and community interaction.

The Social Graph changes the way humans perceive their identity and society because it determines the information that they are provided with. The Social Graph aims to provide individuals with information they have positively interacted with. The interaction positivity is determined by the frequency one likes, comments, or shares information. Thus, it is evident that the Social Graph is not trying to present you with nodes you are unfamiliar with and have little

interaction with, but instead with nodes that you have consistently interacted with over time.

These nodes are not just friends, but concepts, keywords, organizations, so in the long run, the nodes you are presented with are solely the things you have positively interacted with in the past.

The Social Graph essentially abstracts a person's identity and ego by charting interactions and determining favorability. It monitors any time you externalize your identity which for the algorithm is anytime you interact with another node. The Social Graph targets these certain attributes about your identity in hopes of providing you with similar information, and also sharing these nodes with marketers so that they may provide you with commodities that are favorable as well.

The Radius Effect

The radius is a what we will use to describe the cut-off line in the Newsfeed. What we understand from crawler research is that there is an algorithmically derived line that separates information into the category of relevant and irrelevant by calculating a user's edge distance. The nodes that fall within this radius are displayed on the users Newsfeed and the radius is always monitoring the way you interact with the nodes within to create a perfectly accurate radius. Theoretically overtime a representative radius is derived to represent the information a user interacts with most (Wilson). This allows the exterior information to be removed from the Newsfeed and the interior information to be viewed more. Assuming the user uses Facebook at a constant rate, the amount of interactions with the nodes within the radius increases. With the increase in interactions the edge length for the nodes within the radius shortens. The algorithm configures the edge distance shortening and decreases the size of the radius accordingly in an attempt to make the Newsfeed more efficient.

To understand the way that the radius customizes information I created my own Social Graph model using nodes and edges to construct my virtual identity. I followed the following procedures to ensure the accuracy of the graph so that it would be theoretically precise enough to represent the way the Facebook Social Graph determines Newsfeed information. I followed the following procedures:

From there I charted various nodes placing them in their respective interaction / relevancy range. Since this graph is a theoretical model aimed at examining the radius effect and not constructing my actual behavior, the nodes were loosely organized on this range. I used various nodes such as a node that represented my home town, my friends, my interests. Those were the "base nodes" from there I constructed a number of subordinating nodes. These sub nodes are simply nodes that originate from a base node but something that can be interacted with. For example, A base node may share, pictures, statuses, and news, these entities are sub nodes and are plotted according to the interaction relevancy range.

After charting all of the nodes and their accompanying sub nodes, I then drew the edges from the center of my identity to the place at which the node existed on the graph. Additionally, I made sure to connect all nodes with the other nodes it was a part of. For example, if a friend of mine (node) was also subordinate to another group such as "home town friends" these nodes would be linked by an edge. After drawing edges from the center of the graph out to each respective node I developed a theoretical radius that can be used to show the radius' impact on perception.

To determine the radius, I decided to take the mean length of each individual nodes' edge from the center of the graph. After I determined the mean length, I used this as my radius from the center of my identity graph. Obviously, the radius was a circle encompassing nodes and my

identity inside of it. But there were also a number of base nodes and sub nodes that did not fall within the radius.

After I finished making the Social Graph and its' encompassing radius I determined a number of observations. First and most obviously, there were a number of nodes that did not exist inside the radius of the Social Graph. This means that these nodes would no longer be presented to me in the Newsfeed unless I made an interaction with them in the future that was not from the Newsfeed. Over time this would mean that since these nodes do not appear in my Newsfeed I would interact with them less frequently and their edge length would continue to grow removing the chance I come across their information in the Newsfeed. On the other hand, the nodes that remained inside of the Radius would be the information that I would come across in the Newsfeed, and as long as the amount of time and interactions I made on Facebook stayed constant, I would interact with this material inside of the radius more frequently and this would overtime decrease the size of the radius and the material I interacted with.

Another notable observation is that certain base nodes could fall outside the radius however the sub nodes could be within and vice versa. For example, if node x fell outside the radius but the sub node x1 fell within the radius then that information would still be received. Less abstractly, imagine a user has a friend that they don't interact with very often, they don't like his pictures, statuses, or click on their profile. If, however, one interacted with a certain sub node of theirs, possibly "the news they shared," and that sub node fell within the radius, then that information would still be viewable. What this shows is that the radius has an impact on the way that you perceive your friends. Over time, the only interactions you would make with that base node would be through its' sub node, and this would determine the way you perceive the base

node. It would determine the way that the user views their friends and it would only and always be in a way that reaffirms the things you have positively interacted with.

The radius has an impact on the way that we receive information and perceive the nodes that are within it. Evermore, if a sub radius is created to eliminate the outliers the radius becomes even smaller making the amount of information presented less stratified as well. The radius is thus a barrier that controls the flow of information into your Newsfeed. This barrier determines the way that you perceive your social network along with the things you interact with.

Keyword Nodes

In 2012 Beiming Sun and Vincent NG, researchers for The Hong Kong Polytechnic University, displayed the way that keyword nodes work. They outline that types of posts are also nodes and are organized by their keywords. The type of post can be determined by the role it plays and be characterized in four types: root, follower, starter, and connector (Sun). A root node is "a node discussing a topic or a subtopic within a certain period, so it is not related to any others" (Sun). A follower is "a response (e.g. reply, comment or share) of a post or a new post talking on the same topic as another post before, which means it is explicitly or implicitly related to others" (Sun). A starter "are the nodes who point to a few but maybe be pointed by many others, i.e., they are of high in-degree and low out-degree". Last, "a connector connects two or more starters as the only bridge, which means some starters will be disconnected without this node" (Sun).

The former vocabulary helps explain the way that keywords are connected by human interactions, but how do Graph configure keywords? The graph determines keywords by examining content similarity. To understand how it examines content similarity a number of terms must be defined. Sun and NG explain this best. "Consider K is a set of keywords and each

keyword is defined by a set of synonyms and association scores". So if related posts have sets of related keywords by association or synonym edges can be drawn between the activity.

Abstractly, let Trump, GOP, and, Immigration define a topic. President could be considered a synonym of Trump, Republican a synonym of GOP, and Ban as a synonym or association of Immigration. These synonyms and associations would draw edges between the nodes and relate the content.

The next thing Sun and NG discuss is edge weight to determine relevance between posts.

This is how the distance is determined between each node. The "weight of each edge is the degree of relevance between two posts and high weight edges indicate strong relationships. Edge weight is determined by two factors: the content relevance, and the time interval between posts."

The types of posts determine who is spreading the keyword or who is connecting the keyword. The edge weight is a algorithmically constructed number that determine relevance. As Facebook is a large enterprise for news, media, and discourse, these keyword nodes can be placed in your radius by your previous interaction with keywords of synonyms or associations. Therefore, it is evident, that nodes can be topics and Sun and NG provide us with a theoretical understanding of how these are composed.

Highly Connected Nodes

When people first started crawling Facebook they noticed the occurrence of highly connected nodes (HCNs) that produced much of the information in the Newsfeed. A highly connected node can be determined by its impact on the users Social Graph when it is removed. When HCNs are removed they radically change the look of the graph. Marketers and researchers research HCNs because they are also the most influential users in the Social radius and this is because they are highly connected with other nodes and make interactions most frequently.

Furthermore, crawling research by Christo Wilson, Alessandra Sala, Krishna

Puttaswamy, and Ben Zhao of the University of California Santa Barbara enabled us to have a statistical understanding of the relevancy of highly connected nodes. They crawled the Social Graph and found a number of things. First, 90% of users interact with only 20% of their friends for 70% of their interactions. 100% of interactions are only from 60% of friends. Additionally, they found that half of all interactions are generated by the 10% most well connected users and nearly all of interactions can be attributed to only the top 50% of users. This research shows that "the distribution of each users interactions is skewed heavily towards a fraction of his or her friends" (Wilson).

This research provides us with many deducible observations about activity on Facebook and specifically HCNs. First, much of information on the Newsfeed is derived from highly connected nodes, and these nodes are highly connected because they have made many interactions with other nodes. It follows that things that fall within the interaction time interval of the radius is vastly influenced by the people who post. It is deductible and logical to assume that people interact more with information shared from people that post the most information. A user would not be very likely to interact with a user who had very little interactions because this would mean their time intervals between interactions would be large enough to inhibit frequent interactions between other users in the Newsfeed. More banally, someone who posts less will not be seen in the Newsfeed as often even if their nodes would fall within the radius if they did simply because of the time interval paradox.

This research shows that the actual closeness of relationships offline does not determine the way that one interacts online. Looping back to the way the we understand an externalized identity: an identity that acts within a theater, it is evident that social media is socially constructed realm that reinforces identity structures but not in a way that is necessarily similar to the way we would if we had the choice. People's Newsfeeds are compiled with mostly highly active and connected nodes that fill the feed with their interactions. A close offline friend of a user's who posts less would be unlikely to be shown on the Newsfeed because his lack of interactions would lead to a decrease in the frequency you interacted with their nodes thus placing their information outside of the Social Graph. The implications of this are that users receive almost all of their information from a group of individuals that may or may not be the friends they would interact with the most if that user was to consciously construct their own Newsfeed.

The Facebook Algorithm

Facebook is a highly advanced platform that constructs a socially connected world. Since the emergence of the Newsfeed, people spend their time on the Newsfeed much more than interacting with personal profiles. Each Newsfeed is different for every person, and this would be the case even if a user had the exact same friend set as another. The Newsfeed is determined by interactions and frequency. The line that separates relevant or irrelevant information, or, the radius, is what controls the information in and out of the Newsfeed. Thus, the radius is a barrier to information.

The remainder of this paper sets out to determine the impact of externalizing identity through Facebook. The first chapter provided a theoretical framework to understand how the structures Facebook uses allows us to linguistically understand our reality. The second chapter provided a theoretical framework to understand the ultimate goals of neoliberalism and propaganda, which are both phenomenon that encompass Facebook. This chapter has provided us with a vocabulary to move forward with the actual impacts of identity externalization by

explaining the way the Facebook algorithm organizes information. The remainder of this paper uses these theoretical guidelines and algorithmic vocabulary to discuss the impacts of identity externalization.

CHAPTER IV

THE IMPACTS OF IDENTITY EXTERNALIZATION

The ultimate goal of this thesis is to provide a theoretical understanding and algorithmic vocabulary to define the impacts of identity externalization. So far, we have learned that language limits identity, power structures what we identify with, and we will now explain how Facebook intensifies these phenomena. This chapter seeks to place the Facebook algorithm within the larger discussion of some of the theories discussed in chapter one and two. Specifically, how does the algorithm's form exemplify or intensify certain aspects of these the relationship between media, persuasion, and power? Where does Facebook divert from these theories at hand? What can be understood as the implicit and explicit goals of Facebook? How will creating a profile and viewing information on the Newsfeed determine one's epistemology and restructure their consciousness?

In the beginning, information was bound to geographic regions due to physical barriers that prevented languages transmission of distance. Additionally, the oral language was structured in a way that it limited memory because there was no way to record information in a form that was visual and timeless. If you recall, the spoken sound is gone by the time you hear the phonetic sound wave. The alphabetization of the language restructured society by its' visual form which could stand the test of time and travel distance. Structurally the written philosophies and laws that were permissible and spreadable by the written language had various limits such as the inability for people to read, language barriers, and censorship. Those structures were reduced with the emergence of the press which abled information to be mass produced in its alphabetized form for all language bringing people's epistemologies together into domains and empires of

collective thought and understanding. The alphabet also brought about logic to a language; a linear language that was permitted by linear successions of letters and logic. This language allowed humans to think in deductible logic-based terms and this restructured the way that humans organized thought. Electricity gave rise to multi modal information such as the photograph and television. This information form lacked the linearity of its' preceding form thus humans placed a subjective context into the information to provide themselves with coherence. This subjective placement of context retribalized human beings into tribes of thought that co-identified with things they valued similarly.

The Global Village

Facebook operates within the confines of this communication history and platforms all forms of information and especially multi modal information. Facebook's algorithm uses nodes and edges to create the information that a user is presented with on a Newsfeed and thus it intensifies the global village. As discussed, members join Facebook with a preexisting attitude set and value range. Facebook as a curator of communication becomes a platform for people to apply their terministic screens based when confronting information. As shown by McLuhan this multi-modality creates a range of subjectivity from the placement of context into the form of media. Over time Facebook monitors how you interact with information, the people that interact with the information similarly and it constructs a tribe that shares similar terministic screens.

These subjective experiences and contexts which people use to build their values and attitudes reflects on the way that they value or perceive their own identity. This identity structure, dependent on their values and attitudes, is then externalized into the internet domain by creating a profile that reflects them. Thus, when people join Facebook, they have already been theoretically tribalized by the multi modal media they have used to build their perception.

However, Facebook takes this occurrence and intensifies it through creating a newsfeed that provides you with a tribe of collective thought that it then attaches to your own sense of self.

For the large part, attitudes and values determine the way that humans behave when rationally doing so. Similar to consumerism, just as an ego based choice of value is based on identification, the things that one interacts with on Facebook is based on identification. It is in this interaction that the identity is externalized because this interaction is presented in a public domain and is reflective of the way you wish to be perceived. The way that the social graph amplifies this identity structure is by situating you with items you most strongly identify with.

The radius serves to provide you with the information you have interacted with frequently and positively. As discussed in chapter 3, the kind of information or the kind of node or sub node that falls within the radius is entirely dependent on this frequency interaction scale. The information you receive will fall within this scale and ultimately promote your past behaviors. It does this by providing a user with the nodes that reflect the user's past behavior. This information further reaffirms users pre-existing beliefs. Over time, the radius begins to shrink due to elimination of nodes you do not interact with. This time interval cut-off-line then changes the size of your radius over time. Hence, if a user's time and interactions stay constant on Facebook their interactions with the things they interact with becomes a shorter time interval. This increases frequency of interactions and decreases the radius because the average edge lengths shortens.

The smaller the radius becomes of relevant and irrelevant information, the more intensified a person's beliefs, attitudes, and behaviors get. Information builds attitudes, and beliefs, which determines rational behavior. Thus, this radius affect promotes a person to behave in a systematic way. It promotes this by re-affirming past interactions with similar information.

These interactions are composed of value based subjective multi modal media. The algorithm provides you with only certain information that you can interact with, thus you behave more frequently with the material presented. It is essentially a long looping trackable cycle of behavior which is cultivated by the information it provides you.

The radius constricts information in a tribalizing way because it promotes personalized information that is specific to a person's subjective beliefs. Since everyone is receiving information that is simply subjective to their own ego structure, it intensifies peoples' own epistemologies and virtually separates those beliefs from others. The radius does not let in things that people do not interact with in some way, thus things that can challenge or uproot certain thought processes are eliminated. The "tribe" effect is not only from this personalized information, but also from highly connected nodes. The highly connected nodes that make up the majority of the information on the Newsfeed are those nodes that you interact with most frequently and positively thus the highly connected nodes are like the tribe leaders of the information you receive and interact with. It seems that Marshal McLuhan's thesis of retribalization is totally and completely reinforced and intensified using the electronic barriers of information through the Facebook algorithm.

Facebook: A Mass Information Distributer

Facebook's ability to provide users with an enormous amount of information that reaffirms their beliefs is a product of electronic storage and the smaller barriers to publish both news and information. Websites and Blogs all over the internet publish news on millions of different topics. Most of these publishers are biased in some way or another. The enormous number of different articles allows people to receive tailor fitted news through the medium of the internet. This tailor fitted news provides people with even further reassurance of their beliefs.

Something that has been talked about quite frequently is media polarization. The media has not as much polarized as it has stratified. In the centuries since the press, the newspaper, especially in America, was the main way people received news. There was often only one newspaper, and because of this, the newspaper was aimed at satisfying many its readers by providing neutral news in a bipartisan country. However, the emergence of the internet and the blog created a society with hundreds of different news sources which have all have been stratified to meet the desires of groups of people. This a product of neoliberalism as much as it is the internet because the increase in stratification of the news is due to targeting certain ideological markets.

Facebook is often integrated into news sites. They not only monitor interactions but they use keyword synonyms and edge based associations to determine the news that you receive.

Earlier it was stated that 66% of Americans receive their news now from OSNs. This major stratification of news will simply further intensify the identity cementing them in their village they rely on for social reassurance.

Memory

A limit discussed during chapter one was the ability for information to stand time. The oral society formed formulaic structures to remember information because without these practices information could not stand the test of time. Additionally, since there was no way to keep an accurate history during this time, people lived in schemas that were very much in the present. Old schemas had the capability to be completely lost and forgotten from humans' memory. The written language visualized sound and made it timeless. The capacity to recall information could be reduced for the literate mind, and the memory could be transferred to books and libraries. Like its' preceding forms, the Facebook wall also has an impact on memory.

The Facebook Newsfeed is always changing. As you interact with and click on nodes the algorithm updates the wall configuring the perfected Social Graph. Even if you refresh the Facebook Newsfeed the feed will have changed after interaction. Additionally, because of this constant changing of the information presented to the user, there is no viable way to view information after a certain point in time. The wall is not chronological, nor does it store its information that way. There would be no way to go back and see the news on your Newsfeed from years before.

Therefore, it is apparent that this electronic way of displaying information is not as timeless as the word written on paper. It cannot stand the test of time, and, because of this, it keeps our minds in a more present state. It keeps the identity in a present schema. Users build values and attitudes by reading reaffirming information but they may not be able to recall, nor have the capability to recall the information that built those attitudes. A user could not remember all of his interactions, but, interestingly, the computer keeps this log. This interaction log could be abstracted to an external memory choosing the information based on past interactions. Much like our brains would choose a book in a vast library based on the previous attitudes we've built on the book or with things associated with the book. This presence that Facebook keeps information in changes the way that humans understand and cognitively remember information.

Guiding Structures

Chapter two examined the way that society was structured by certain philosophies, permissible by communication. Since the 17th century Western culture has been heavily influenced by the adaptation of economic practices such as neoliberalism. The linguistic limits of language help us understand why we understand ourselves the way we do based in the communication form that we choose to use. The second chapter provides a different theoretical

ability to apply to the Social Graph. It provides us with the ability to understand how Facebook amplifies power which structures the identity.

Facebook is a product of the Western world. It is publicly owned by humans whom are products of Western philosophy. It is a revenue generating site based on marketing procedures of the neoliberal economy we operate within. The theories discussed in chapter two provide us with a vocabulary to discuss why the Social Graph reaffirm power structures that are products of neoliberalism and organize us into interlocking group formations.

Neoliberalism

Thinking back, Chapter two discussed how Facebook amplified identity structures.

Facebook is embodied by neoliberalism. Neoliberalism's goals are intensified by the Social

Graph. The market is a game that the government desires everyone to play. Neoliberalism aims to have as many players in the game as possible. The innumerable items bought in this game are because human produce their value based on what they identify with. This value and identification means is a subjective placement of meaning. This subjectivity creates many different values on various commodities.

The Social Graph provides marketers with the unique ability to sample customers and market in the same place. The Social Graph allows marketers to identity the users that positively identify with their products or philosophies. By externalizing an identity into a system that tracks user interactions, every interaction produces a value on certain items. The amount you interact with something increases its values, the amount you interact with something also leads to further identification. In addition, Facebook provides consumers to display pictures of the clothing they wear, the commodities they buy, and the consumer choices they make. The creation of the game

by neoliberalism creates a consumer culture that is stratified across various commodities and Facebook promotes this culture with the placement of similar nodes within the radius.

Facebook: A Vessel for Propaganda

The majority of the scholarship on Propaganda was pulled from Jaques Ellul. His scholarship illustrates the aims and goals of propaganda which are also further exemplified and intensified by identity externalization through Facebook. If you recall, "New propaganda takes account not merely of the individual, nor even of the mass mind alone, but also and especially of the anatomy of society, with its' interlocking group formations and loyalties. It sees the individual not only as a cell in the social organism but as a cell organized into the social unit.

Touch a nerve at a sensitive spot and you get an automatic response from certain specific members of the organism" (Bernays). Facebook uses an algorithm to provide information that is based on identification. These identity structures become situated within electronic networks that reflect their network that applies normative pressure. This tribalization impact reinforces formations and loyalties and the algorithm tracks these interactions.

Facebook also promotes a variety of different forms of propaganda. To do so, the individual user must be deconstructed of his organic groups and become a "mass individual". The natural multi-modality of the information in modern society deconstructs organic structures through the subjectivity of information. Though the subjectivity of modern day information, man is placed into a mass society operating through his collective tribe of people he co-identifies with based on his perceived identity. Facebook promotes mass society because it places the individual in the external domain that is dominated by public activity. This public activity applies normative pressures on the users and the user is always "acting" to satisfy his group. Thus, the

individual is not acting as a single identity but a group identity, following the tribe to maintain the externalized identities integrity.

Beyond the tribalization impact Facebook has on the proxemics of identity structure, it allows the propagandist to analyze the way people will respond to certain specific types of information, and this allows marketers to "touch a nerve at a sensitive sport and get' an automatic response from certain members of the group". The tracking nature of the algorithm situates propagandists with the ability to monitor what the user has previously identified with, or how the user has interacted with certain forms of keywords. Beyond that, the Social Graph uses past information to determine the information that will reaffirm past interactions and behaviors. This aspect of the graph cultivates a systematic social existence. Tracking past behaviors allows marketers to not only study old trends, but it allows the algorithm to provide users with similar information to promote similar trends in the future. These implicit structures of the Social Graph intensify the goals of the new propagandist.

After the individual has become a product of mass society and organized into interlocking formations, then the propagandist can proceed with the various forms of propaganda. Vertical propaganda is most easily recognizable in Facebook with politics. During the political year, the Newsfeed is dominated by people's opinions and beliefs on certain political occurrences and candidates. The politicians serve as the top of the Vertical. The information they provide to the public via the media trickles down into the news, into the Newsfeed, and thus becomes the center of conversation amongst the groupings of people within the social network.

The horizontal propaganda occurs as a product of response from the vertical propaganda.

The way that people respond to certain occurrences creates a culture, creates a community belief

based on how people identify with certain forms of information. Even more, people identify with certain forms of new vertical propaganda to maintain their community identities integrity.

Remember that users are operating as a single cell in a larger organism. But the organism usually determines the way that the individual reacts. The amount someone interacts with a certain belief or keyword or association(node) the more likely that node is to serve as an influence on the way that a human understands their political existence.

Moreover, as discussed, political propaganda is one that takes the form of the verticality of propaganda, and, recently, politicians have used encompassing forms of media such as Social media to directly correspond with their partisan base while keeping their partisan base alone within the masses. Social propaganda is the reaction or the kinds of interactions that people make to horizontal, vertical, and political propaganda. This is further intensified by the radius effect. If you recall, sociological propaganda aims to "integrate the maximum number of individuals into itself, to unify its' member's behavior according to pattern, to spread its style of life abroad, and thus to impose itself on other groups". In the Social Graph, sociological propaganda is intensified because the radius takes the impacts of this form of propaganda and strengthens it using a radius. This radius confines the information that people come across and build their perceptions with. This allows users to become integrated into synonymous forms of ideology that constitute their existence and epistemology.

Crystallization

The goal of propaganda is to crystalize human beings into monolithic individuals of existence. These individuals should be so reaffirmed in their attitudes and beliefs they strongly disagree with conflicting beliefs and strongly identity with reaffirming beliefs. Moreover, it was stated earlier that the goal of this process is to "eliminate inner conflicts, tensions, self-criticism,

self-doubt. And in this fashion, it builds a one dimensional being. Crystallization closes one's mind to all new ideas. The individual now has a set of prejudices and beliefs as well as objective justifications. He thus actually comes to hate everything opposed to what propaganda has made him acquire" (Ellul, 163). Facebook intensifies the occurrence of crystallization in two way identifiable ways.

Facebook is built using multi modal information that is compiled via other online interfaces and websites. The natural subjectivity of the media stratifies people's personalities and this creates a difference in the type of material humans interact with. On Facebook, these interactions are obviously charted and when the radius is drawn it has the impact of perfectly eliminating inner conflicts, tensions, self-criticism, and self-doubt by always providing its' user with material they have interacted with positively and frequently in the past. In this way, the way that one perceives their world is confined by the barriers on information the Social Graph interlays. It thus locks the individual into his preexisting prejudice and justifications intensifying this occurrence. "The individual comes to hate everything opposed to what propaganda has made him acquire" (Ellul, 163).

Discussed earlier was the phenomenon of the Social Graph radius shrinking. This is a product of a constant interaction rate with a decrease in the information interacted with. This is a product of the radius, and as this rate stays constant, and the information decreases, the interaction frequency rate at which a user interacts goes up decreasing the edge length of the radius. This shrinking effect is crystallization in its full embodiment. Over time the information that the Newsfeed provides you with becomes more filled with only the things you interact with, locking you into a crystalized space, narrowing your perspective, and eliminating the chance

your value structures are challenged. The crystallization impact intensifies the identity, closes it to new information, and guards it from challenging beliefs.

Highly Connected Nodes

As discussed earlier, HCNs or highly connected nodes are those that make up a majority relevancy rate within your graph and are highly connected to a variety of other nodes, because these nodes compile nearly the entire Newsfeed. These nodes are like the leaders that Ellul talks about in his discussion of propaganda. "The leader or expert who enjoyed authority and prestige among the mass is the man who best speaks for that mass. The ordinary man must see himself reflected in his leader. The leader must be a sublimation of the 'ordinary man'. He must not seem to be of a different quality. The ordinary man must not feel that the leader transcends him". The highly-connected nodes serve as the leaders within the propaganda cultivating Newsfeed. These nodes are nodes that people have identified with greatly and these nodes serve as the people that are often the "starter" nodes, as discussed in chapter 3. The "connector nodes" are the group of people that share the information the highly-connected node transmits. Ellul also talks about the deconstruction of the interlocking group formations with the removal of the leader. The leader serves as the glue that reaffirms people beliefs when they are most challenged, usually during collective turmoil. Interestingly, these highly connected nodes deconstruct much of the Social Graph and radius upon their removal. The similarities between these two concepts are striking and seemingly unmistaken.

Identity Externalization

Externalizing identity through Facebook generates many implications in the way that users perceive themselves, their society, and the information that they come across. It changes the way that users consciously perceive society by changing the memory function of their brains,

using multi modal information, and proximally placing users in tribes or networks of similar thought. As a product of neoliberalism, Facebook intensifies the identity structures neoliberalism creates because the game aims to stratify individuals to produce value in more commodities. Propagandists use these trends to influence individuals in a large number of ways. It seems the most apparent impact of identity externalization through Facebook is the crystallization impact that is from the propaganda, neoliberalism, and communication form Facebook platforms. This crystallization confines users to other new information and ultimately structures the way they behave, and interact with information in the future.

These impacts call for a grander body of research to be conducted on these effects. The conclusion lays out the reasons why this externalization will change the way that humans interact and understand each other, and calls for research to be undertaken to study further implications. Facebook is the second most used website in the world. Facebook has over 2 billion users, which is the size of the population at the beginning of the 20th century. Today over 66 percent of Americans receive their news from OSNs. 44% of individuals receive their news from Facebook. Facebook is by no means the only website that constructs interaction graphs, over 100 million websites do as we'll; however, Facebook has become a corner stone of information society in the modern world, and the impact of identity externalization is monumental.

CONCLUSION

Our interdisciplinary approach should leave you with three things. Language limits identity. Power structures it. Facebook intensifies identity. The algorithm which is a product of user interaction tracking creates virtual societies filled with user appropriate specific, pictures, and information. Looking to the future there are many things that should be addressed moving forward.

As we can see, the Social Graph, and algorithms alike, function by tracking user interaction. This tracking has amplified the village impact that neoliberalism and multi-modality brought to the human race. This tracking has separated our ideologies across a virtual world and made sure that our paths do not cross in this world of mass information. This ideology is then adopted as an essential part of oneself and thereby perpetuated, replicated, and continually externalized within the system. In the months while writing this thesis, the FCC rolled back tracking laws put in place by the Obama Administration and has allowed cable and internet providers to track user interactions.

I think it is important to note that multi-modality and its impacts on identity are something that may not be removable because they are inherently inevitable. The way we understand content is based on our ego structure. It seems that no matter what we do as a society we will all view content with no context in a subjective way which will naturally segregate our understanding by the process of identification. However, I think something that is changeable are the intensifications of identity segregation through the banning of user interaction tracking.

Looking to the future, it seems that as we continue to become more and more stratified and our

electronic villages reach greater ideological distances, it will make the democratic process nearly impossible. Thus, it is important that tracking be regulated.

The majority of people that do not use social media are people over the age of 65. The average life span of an American would give them 12 more years until they are, grimly, gone, and our American society is left with a population which over 90% use social media. Over time, the American map will no longer represent a country but a collection of tribes that all think independently. How will the two-party system serve such a diverse and stratified group of people? How will people find common ground?

Another question that has become eminent during my time writing this thesis is fake news and the roll of it in the political process. I think that fake news is just as important in the nonpolitical spheres as well, but, nevertheless, fake news directly undermines reasonable thinking; fake news is also used to manipulate markets, people, interests. What researchers have found regarding fake news is that robots act as people in social networks either retweeting or liking material so that it reaches a relevancy that promotes it into a newsfeed or Twitter feed and trickles down through others' websites or newsfeeds.

I think that there is a larger problem than fake news and it is the lack of uniformity of news. The rise of the blog and millions of opinion-based websites leaves us in a society where we use our terminsitic screens to self-select the content that we identify with. What we see here is that the logic of language has been funneled through the channel of intense neoliberalism practice structuring the language to structure the identity. The form of news has pluralized itself. The media approaches media by analyzing the way people pluralize their values into it. By studying the people, media creates news that directly markets a set of opinions on facts in a tailor-fitted way. Media is so vast and large that it works in a trickle-down way. News breaks in a

certain place, and the facts, or speculation, are picked up by various websites and then by more websites, and slowly the news makes its way into our newsfeed through the most identity appropriate site where we then take the opinionated media and apply our own theories and opinions on the matter. It is political and horizontal propaganda in its truest form. This lack of uniformity and trickle-down effect, which is permitted by the internet society, creates a society that is lost within the innumerable amounts of ever changing news, opinions, and incongruities.

Social media and the internet alike are so recent and unstudied that they are much like an untamed beast we have let into our homes. Through regulation and research, I think that algorithms can and will be used for things that are good for humanity rather than segregating.

Looking to the future, it is up to the scholars, the politicians, and the public to recognize the way that social media changes the way we think.

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