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The Internet as a Social Contract

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THE INTERNET AS A SOCIAL CONTRACT

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THE INTERNET AS A SOCIAL CONTRACT

by

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Thesis

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Abstract

The Internet is a complex network, with both physical and virtual aspects, and is composed of a vast community of individuals at various levels. This complexity makes exploring ethical issues on the Internet difficult because the many relationships that occur among the individual Internet entities make Internet governance difficult and varied. But the social contract theories of Thomas Hobbes, John Locke, and Jean-Jacques Rousseau can provide a practical way of understanding Internet governance by investigating these relationships that have formed among the individuals of the Internet through their interactions. Previous research investigated using social contract theory for Internet governance, but it was limited to Rousseauian social contract theory and it did not give due consideration to the physical structure of the Internet which contributes to existing Internet governance. Research conducted for this thesis shows that Hobbesian and Lockean principles are also at work on the Internet, and it shows how the physical aspect of the Internet must be considered along with the virtual aspect of the Internet. This research showed that it is possible to understand the Internet, both its physical and virtual aspects, and the various relationships of individual Internet entities at all levels through the classical social contract theories of Hobbes, Locke, and Rousseau. This understanding then makes it possible to navigate the complexity of Internet governance as a first step in exploring Internet ethics.
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Chapter 1-Introduction

When I first decided to pursue a Philosophy degree after earning Computer Science degrees and working as a software engineer, my simple goal was to explore how to successfully merge ethics and technology. It has long been my personal opinion that humans are quick to embrace new technology because it’s faster or better before fully understanding the ethical considerations of using that new technology. Now that I work in computer security, I turned my attention to the Internet because it has become a haven for identity theft, viruses, privacy concerns, and other ethical quandaries. I set out to explore how either an existing ethical system, such as Utilitarianism, or a new ethical system could be used to address ethical issues in the Internet; but, I quickly realized that this problem is more complicated than I had originally thought. At this point, I decided that I needed to first understand how interactions and relationships occur on the Internet before understanding how to investigate ethical issues on the Internet. What my research confirmed, and what this thesis demonstrates, is that one way to understand the complexity of the Internet is through classical social contract theory. Through the lens of classical social contract theory, the complexities of the Internet and the various levels and relationships can be managed in a more practical way; and, this way of understanding the Internet can provide a foundation to investigate ethical issues on the Internet.

To provide some necessary background, part of the complication in understanding ethical issues on the Internet resulted in how the Internet first began. The Advanced Research Projects Agency Network (ARPANET) was first conceived as a method of allowing researchers to benefit from supercomputers at various geographic locations by connecting them through a network. The first ARPANET consisted of only four nodes at the
following locations: the University of California at Los Angeles (UCLA); the Stanford Research Institute; the UC Santa Barbara; and the University of Utah. With this network in place, researchers in UCLA could benefit from computing resources in the University of Utah, for example. From those humble beginnings in 1969, the Internet as we know it today was begun (ARPANET). In the past 41 years, the Internet has grown from a 4-node research-oriented network to a network composed of thousands of computers that is used for a variety of tasks including research, financing, and social networking. But now that it is so vast, it cannot be organized and controlled as easily as the original 4-node ARPANET, which makes present Internet governance complicated. This complication in Internet governance is a first difficulty in better understanding the complexity of emerging ethical issues that are bound up with ever-increasing Internet use, which is why I turned to classical social contract theory as it has a history of exploring practical governance issues in communities.

Despite the complication of governance, the Internet has certainly given humanity many benefits. Every day the Internet is used by many millions of people to perform research for school, check their bank accounts, shop, and to connect with friends from far-off places. Internet electronic (or e-) mail has allowed people to connect with each other more easily and quickly than the postal service. People are also staying socially connected with websites like www.facebook.com and www.myspace.com, social networking sites that allow people to post biographies and view other people’s biographies.¹ For the first time in history, ordinary people can connect to people in other countries regularly and quickly. On websites like www.kiva.org, people can lend money to people in other nations to help them defeat

¹ www.facebook.com is a property of facebook. www.myspace.com is a property of myspace
poverty\textsuperscript{2}. Even corporations and companies are connecting through the Internet. It is rare to find a business that does not have its own website to promote its products. Websites like www.amazon.com and www.ebay.com have even made online buying and selling a practical reality\textsuperscript{3}. I personally know people who make their living or supplement their income by selling on eBay\textsuperscript{©}. And, I’m sure you know someone close to you who also buys and sells on eBay\textsuperscript{©}. But while the Internet has connected the world and its people in many different ways, it has created an environment that cannot be practically regulated morally. As noted before, Internet governance is problematic; but, another reason Internet ethical issues are complicated is that the Internet is composed of individuals on different levels.

Because the Internet is composed of individuals, a main advantage of the Internet is that it is decentralized. Any person, any company, any government, and any country can participate and interact with the Internet; anyone has the ability to host a website. However, there is no ultimate central authority that controls the information that is available on the Internet or how it is structured, which is why governance is difficult because there is no ultimate authority to provide top-down management. Additionally, the fact that the Internet is also international creates problems in legal regulation. For example if a hacker\textsuperscript{4} in India breaks into a computer in Russia via a computer network in Brazil, under what country’s laws should the hacker be brought to justice? The hacker is ultimately responsible, but do the owners of the networks the hacker used share responsibility in the hacker’s actions?

\textsuperscript{2} www.kiva.org is a property of kiva.

\textsuperscript{3} www.amazon.com is a registered property of amazon.com. www.ebay.com and eBay\textsuperscript{©} are registered properties of eBay\textsuperscript{©}.

\textsuperscript{4} A hacker is a person who is capable of bypassing computer security to achieve an objective, such as stealing information, breaking into a bank account, or spreading misinformation. Most hackers that are malicious are dubbed crackers (for criminal hackers). Ethical hackers are people that use these skills to test computer security for clients (with their permission and knowledge) so that the client can improve computer security against malicious hackers.
Because there is no ultimate central regulation authority, it is very difficult to control what happens on the Internet because of the decentralization; this decentralization also contributes to difficulty in navigating ethical issues on the Internet.

But, the decentralization of the Internet serves a clear purpose in allowing the Internet to be used in sharing information and providing other services to all of its users. Since the Internet is decentralized, it is highly adaptable and functional. For example, a person is able to access his personal e-mail inbox anywhere in the world. Also if a part of the Internet is down, it is usually limited to a certain region. The Internet as a whole never goes down completely. This situation will be explained further, but it results from there being multiple redundant paths for information to travel across the Internet because of the underlying physical infrastructure of the virtual Internet. But, these underlying redundancies also ensure that there are many different relationships and interactions that can result on the Internet. At this point, understanding that the Internet is decentralized and that it can promote various relationships and interactions, I decided to understand how people interact on the Internet and how the Internet is organized by applying classical social contract theory to the Internet. As noted earlier, the Internet is composed of individual entities on many levels: individuals; companies; countries; etc. Classical social contract theory has explored how individuals can form practical communities for survival and governance. As such, I explored classical social contract theory as a way of understanding how the individuals of the Internet interact in a community. By understanding this community, it then becomes possible to explore ethical issues of the Internet through classical social contract theory.

The philosophers Thomas Hobbes, John Locke, and Jean-Jacques Rousseau all developed social contract theories to show how people form governments to solve the
problems that living in a natural state entail. They understood that in the state of nature people are left on their own to ensure their own survival and achieve their own goals. But when governments are instituted, the governments allow for a community to provide for the people and protect them better than they can on their own in the state of nature. In this way, people form governments to improve their living conditions. As the Internet is decentralized and largely unregulated, for the purposes of this project I define it is a modern state of nature with regards to the Internet users as they are individual entities interacting on a level field. But, I confirmed that there is an implicit social contract that allows for Internet users to interact with each other in this state of nature, despite some complications.

Hobbes, Locke, and Rousseau all recognized that a central authority was necessary to organize people and create a stable community. In the United States of America, which is partly based on Locke’s social contract theory, each city and state and, of course, the nation has a central government. At any group level, even in companies, people can recognize a central authority for guidance and to relay their viewpoint. Authority recognition is a very important characteristic of a community. Unfortunately, the decentralized nature of the Internet means there is no central authority. While people and companies are in charge of controlling their own networks, there is no ultimate authority on the Internet to which all people, all companies, and all nations must answer. Because there is no ultimate central authority, there are no universally written laws or regulations on Internet behavior and ethics.

An additional drawback to this decentralization is that trust becomes problematic on the Internet. It is difficult to place trust in something when you cannot recognize it. In the physical world, people can take their issues and grievances to city representatives, state representatives, and national representatives. As such, they can personally recognize the
representatives’ authority and understand that their representatives can help them. The people are able to place their trust in the representatives and hold them accountable. But, if the people cannot recognize authority on the Internet, in what do they place their trust?

An additional problem with trust on the Internet is that it is very easy to be anonymous on the Internet. For example if a person posts a picture of another person on the Internet and claims that the photograph is of himself, it is very difficult for someone who has never met the person to spot the deception. The Internet user would attempt to validate the picture through other Internet sources or outside sources, like books, magazines, or movies, but there can be no absolute certainty unless the Internet user actually meets the person in the physical world. The picture could be of the person, but perhaps the photograph is 10-years old. The Internet user would not know for certain unless he meets the person because in the virtual world of the Internet it is possible to be anonymous. How then can you place trust in the Internet? Yet trust is an essential principle on the Internet. Many people trust the medical advice given on www.webmd.com. Many people must trust that their banking and credit card websites are secure. People must trust their Internet Service Providers (ISPs) to provide secure and continuous access to the Internet. So, trust is being placed in the Internet and its many parts in some fashion. But how is trust placed without a central regulating authority? The issues of decentralization and trust led me to investigate social contract theory as a way of understanding how some of these interactions and relationships exist and flourish on the Internet.

I surmise that rules, morals, and trust exist on the Internet partly because there is an implicit social contract on the Internet. By implicit, I mean that there is a social contract at

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5 www.webmd.com and WebMD® are trademarked properties of WebMD®.
work on the Internet, but it is not explicitly written down or governed by any one entity. Instead, it is formed through the various interactions and relationships that are taking place on the Internet. By understanding these interactions and relationships, patterns emerge which reveal how this social contract is being used and what it constitutes. One example in this implicit social contract is that it is not polite to use all capital letters when e-mailing. It became synonymous with anger. This guidance is written down now, but it is unclear when it actually began. How did using capital letters become the Internet equivalent to yelling in the physical world? Along with this rule, there are others that guide people in using the Internet. In my research, I confirmed that there are implicit social contracts at work in the Internet through various relationships and interactions at different levels; I believe the rules developed through these implicit social contracts. And, understanding how these rules have formed helps show how ethical issues can be addressed on the Internet through classical social contract theory.

As stated before, Hobbes, Locke, and Rousseau recognized that there were natural laws by which humans lived. One of these laws is survival. People naturally act in their own self-interests to survive day-to-day. This survival involved growing food, making clothes, and building homes. But when people grouped together in larger groups, it was easier to survive. They gave up some of the freedom they had as individuals in nature to work under a collective set of rules that allowed them to survive more efficiently. Jobs could be separated so that some grew food, some made clothes, and some made homes for the benefit of everyone. These collective rules then formed into laws, and some people were tasked to regulate these laws. In so doing, governments formed. So for a social contract to work, the people give up some freedom and submit to governments in order for the governments to
serve their needs. But how is this goal accomplished on the Internet? There is no central government in the Internet community, but people’s needs are still being met on the Internet. What my research uncovered is that while there is no central government in the Internet community, the individuals of the Internet interact with each other through implicit social contracts. There are hints of these implicit contracts in how people’s needs are met on the Internet.

People are being entertained daily by exploring www.hulu.com and www.youtube.com. People even recognize some websites as being authorities in certain areas. Both eBay® and Amazon are respected in online shopping. For example, eBay® has been around since 1995 and has over 84 million users worldwide (About eBay). People are trusting Facebook and MySpace™ to share information about themselves. MySpace™ has been around since 2003 and has thousands of users (MySpace). The sheer numbers of users indicates that some trust is placed in these websites, otherwise they would not continue to exist. Considering that personal information, such as age, birthplace, and interests, is being shared shows that a good amount of trust is being given to websites and the Internet. People are also placing trust in online banking and finances. Without a central authority, this recognition and trust is happening without a central explicit agreement. Most websites have a usage policy, but how did they develop without a central authority? Most of these usage policies are even similar. For example, the following is the opening statement from Amazon’s Conditions of Use:

Welcome to Amazon.com. Amazon Services LLC and/or its affiliates ("Amazon") provide website features to you subject to the following conditions. If you visit or shop at Amazon.com, you accept these conditions. Please read them carefully. In addition, when you use any current

6 www.hulu.com is a property of hulu™. www.youtube.com is a property of YouTube, LLC.
or future Amazon service or business (e.g., Your Profile, Gift Cards, Unbox, or Your Media Library) you also will be subject to the guidelines, terms and agreements ("Terms") applicable to such service or business. If these conditions are inconsistent with such Terms, the Terms will control… (Conditions of Use).

Now, consider the following statement from eBay®’s Your User Agreement:

Before you may become a member of eBay, you must read and accept all of the terms in, and linked to, this User Agreement and the eBay Privacy Policy. We strongly recommend that, as you read this User Agreement, you also access and read the linked information. By accepting this User Agreement, you agree that this User Agreement and Privacy Policy will apply whenever you use eBay sites or services, or when you use the tools we make available to interact with eBay sites and services. If you use another eBay site, you agree to accept the User Agreement and Privacy Policy applicable to that site. Some eBay sites, services and tools may have additional or other terms that we provide to you when you use those sites, services or tools. (Your User Agreement).

The similarity in these two statements indicates that there was some agreement about what is needed when using these websites. Considering that these are different companies, this agreement is likely implicit; the actual situation is that both companies separately determined that it was important for users to agree to certain usage and privacy policies to use the websites. Both companies also determined that it was important to post these policies so that users could find them easily. Part of this determination comes from conforming to United States privacy laws, but the wording is also similar. In fact, usage and privacy policies are so similar that there are privacy policy generators on the Internet. There is clearly some implicit understanding of what these policies should contain, but how did it originate?

And, it is not just privacy policies that show similar attitudes. There is agreement about e-mail (no all-capital letters), security (be wary of e-mail from unknown users), and
“twittering” (Mason). This agreement about etiquette, morals, etc. is implicitly agreed upon by Internet users, even if these guidelines become explicitly written at some point. Those people that do not follow the rules are ignored or ostracized until they conform. Websites that lose trust lose visitors. Thus far, I’ve shown that authority recognition and trust exist on the Internet without an ultimate central authority. I’ve also demonstrated that similar attitudes and guidelines exist on the Internet without such an authority. What we are left to consider is that the similarities may have developed through some type of implicit social contract, which I describe in this thesis, which Internet users have developed over the years through their various interactions.

This thesis will demonstrate how this implicit social contract developed by exploring the views of Thomas Hobbes, John Locke, and Jean-Jacques Rousseau. Previous work in investigating social contract theory for Internet governance failed to recognize that this implicit social contract is already in place. Understanding this implicit social contract is a first step to discovering how ethics could be practically addressed on the Internet. While I will not fully explore this ethical problem, I show how classical social contract theory exists on the Internet as this preliminary step to addressing the ethical and moral issues related to Internet use. From what I know of the Internet through my experience over the last 14 years of Internet surfing, I discovered that multiple classical social contract theories can actually be applied to the Internet depending on which interactions and relationships are explored. In other words, one social contract theory cannot explain the Internet completely on its own.

For this thesis, I first explain the social contract theories of Hobbes, Locke, and Rousseau. In the next chapter as I explain their theories, I also highlight characteristics of

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7Twittering is the latest Internet-related phenomenon that allows users to quickly update other people on their
their theories that help in understanding the Internet. In my third chapter, I apply these characteristics to the Internet and show how these social contract theories have developed on the Internet. Part of my research in this area involved conducting field investigations on specific Internet practices to better understand how social contract theory is present on the Internet. I also address the physical infrastructure of the Internet that was not explored fully in previous work in this area, but that is essential to understanding social contract theory on the Internet. In my conclusion, I show how this new understanding of the Internet through the lens of classical social contract theory can aid in exploring ethical issues on the Internet.
Chapter 2-The Social Contract Theory Through the Ages

It is important to first understand classical social contract theory to understand how it applies to the Internet. In this chapter, I first discuss Thomas Hobbes, John Locke, and Jean-Jacques Rousseau separately to illustrate their individual approaches to social contract theory. As I perform this explanation, I will draw attention to key points of their theories that will aid in better understanding the Internet. I then describe the parallel concepts from each of their theories that I apply to how the Internet is used and implicitly governed. First, I discuss Hobbes and his theory.

Thomas Hobbes (1588-1679) is the father of modern social contract theory. His seminal work *Leviathan* (1651) is just that: an immense tome of political theory. In his work, Hobbes laid out how an individual human in the state of nature develops society to improve survival. The society eventually culminates in the Leviathan, a sovereign who holds ultimate authority over all people in the society. In his time, Hobbes was greatly criticized for his points of view; for example, he was criticized by Sir Robert Filmer and the Church. And to this day, Hobbes’s ideas are still hotly debated. But the ideas of natural laws, natural rights, and the social contract that Hobbes developed served to influence other political theorists, such as John Locke and Jean-Jacques Rousseau; and, these ideas formed important foundations in political theory that continue to influence society in the present.

According to Hobbes, anarchy was worse than despotism. This view, which is apparent in his social contract theory, was certainly influenced by events in his life. Hobbes was educated at Oxford and became a tutor for an aristocratic family; he became deeply involved in the English Civil War because of his connections in the aristocratic circles and political writings supporting monarchical authority. He left for France in 1640 for his safety
due to the civil unrest towards the monarchy. It is in France that he wrote *Leviathan* and first proposed that men must be kept in check through a sovereign. He desired to explain how society breaks down and what it would take to prevent such a breakdown. Although he presented a solution to utter chaos, his book was not well-received. The French were offended by his views on Catholicism, so Hobbes fled back to England. The English Parliament incredulously blamed *Leviathan* for the Plague of 1665 and the Great Fire of 1666. Hobbes also had religious critics who saw his materialist philosophy and attacks against religion as blasphemous (Hobbes xi-xvi). As Jennifer J. Popiel stated, “The theory of government in *Leviathan* used as its basis not divine right, or the idea that the absolute head of state was put into place by God, but the idea of a social contract” (Hobbes xiv). Even though many of his ideas generated controversy in his time and after his death, he still proposed important fundamentals that served as the basis for many political theories.

First, to understand Hobbes’s social contract theory, it is important to understand man’s natural state as Hobbes understood it. For Hobbes, it is from this natural state that man will first form, then join society. And, it is in this society that Hobbes’s Leviathan will take shape. According to Hobbes:

> Nature hath made men so equall, in the faculties of body, and mind; as that though there bee found one man sometimes manifestly stronger in body, or of quicker mind then another; yet when all is reckoned together, the difference between man, and man, is not so considerable, as that one man can thereupon claim to himselfe any benefit, to which another may not pretend, as well as he. For as to the strength of body, the weakest has strength enough to kill the strongest, either by secret machination, or by confederacy with others, that are in the same danger with himselfe. (Hobbes 75).

In this statement from Hobbes, we see several important points. First, he has stated that all men are equal in abilities, both physically and mentally, in nature. What Hobbes means is
that even if there are smarter and stronger people, the differences among people are not so great that a person cannot compensate for them. This statement also means no one is born with rights over another person because everyone has equal abilities. This quote also introduces the reader to the idea of natural rights: the rights that every person is given simply by living. Another important point seen in this passage is the idea that people can band together to increase their power. In this statement, we see the first beginnings of society as Hobbes described. People form society to increase their strength and power in managing and preserving their lives. But, there is still more to explore in Hobbes’s state of nature. Hobbes stated:

From this equality of ability, ariseth equality of hope in the attaining of our Ends. And therefore if any two men desire the same thing, which nevertheless they cannot both enjoy, they become enemies; and in the way to their End, (which is principally their owne conservation, and sometimes their delectation only,) endeavour to destroy, or subdue one an other. And from hence it comes to passe, that where an Invader hath no more to feare, than an other mans single power; if one plant, sow, build, or possesse a convenient Seat, others may probably be expected to come prepared with forces united, to dispossesse, and deprive him, not only of the fruit of his labour, but also of his life, or liberty. And the Invader again is in the like danger of another.

And from this diffidence of one another, there is no way for any man to secure himselfe, so reasonable, as Anticipation; that is, by force, or wiles, to master the persons of all men he can, so long, till he see no other power great enough to endanger him: And this is no more than his own conservation requireth, and is generally allowed. (Hobbes 76).

First, we see more of the natural rights that Hobbes has defined. Besides everyone having equality of mind and body, everyone also has equal right to the goods in nature, such as water and land. They also have the right to labor for goods. It is also in this passage that we first see how Hobbes’s state of nature differs from those of his successors, Locke and Rousseau. He has described that since all people have equal abilities in nature, they all have the same opportunity and ability to reach their ends. But if two people want to enjoy the
same end and cannot both enjoy it, they will fight against each other as enemies. Having the power to subdue or destroy another person may require that people band together to unite their individual powers and abilities into something greater. But, it is also possible that some people will exercise their ability in anticipating to prevent future attacks. This idea of anticipation is important in Hobbes’s state of nature, so it deserves further explanation.

For Hobbes, since all men had the same capabilities and were competing for the same limited resources, it was reasonable that some people would join together to increase their strength against others. But, it was also reasonable that people would anticipate that others would act against them. If so, it was within their natural rights to attack preemptively. So, the state of nature becomes a real-life chess match where everyone acts to achieve their ends and defends or attacks to prevent others from taking the resources for which they have worked. This state of nature is what led Hobbes to state, “Hereby it is manifest, that during the time men live without a common Power to keep them all in awe, they are in that condition which is called Warre; and such a warre, as is of every man, against every man” (Hobbes 77). As Gregory S. Kavka stated, “…the real conclusion that Hobbes draws…is that the state of nature is a state of war of all against all, punctuated by frequent violence, in which the participants correctly perceive themselves to be in constant danger” (Kavka 2). In other words, because of the real-life chess match among people, the state of nature becomes a perpetual state of war. It is important to realize that this is how Hobbes saw nature to understand why he developed his ideas for society the way he did; he favored strong government to control the chaos he saw in the state of nature. This point is not without its critics though. Kavka describes Hobbes’s conclusions succinctly in the following:
...Hobbes constructs an elegant and insightful argument for the state of nature being a state of war. Imagine people in a state of nature, in which there is no common power over them to punish them for robbing, assaulting, and killing one another. As forward-looking creatures vulnerable to death at the hands of virtually any of their fellows, they will rightly be quite concerned about their future security. Lacking a system of law enforcement, they cannot expect potential attackers to be effectively deterred by fear of counterviolence. For due to the rough equality of people’s natural powers, and the advantages of striking first, potential attackers will realize that they have a good chance of success...Nor can one expect potential attackers—whose altruism is, at most, limited—to refrain from attack out of concern for their potential victims. Thus, each person in the state of nature must fear violence by others who may attack for any of three reasons...First, glory seekers may attack simply because they enjoy conquest. Second, competitors may attack to remove one as an obstacle to the satisfaction of their desires. Third, and most important, even “moderate” people, who have no desire for power or glory for its own sake and who may have no specific quarrels with one, may, for defensive purposes, engage in anticipatory violence against one...That is, they may attack to remove one as a potential future threat to themselves, or to conquer one to use one’s power to deter or defend against future attacks by others. In these circumstances, eventual involvement in violent conflict is not unlikely. And since anticipation generally improves one's chances of success, it is the most reasonable course of action for rational persons caring about their future well-being (and caring much less, if at all, about the well-being of others) to follow. (Kavka 3-4).

So, the state of nature becomes a state of war because people will commit violence because they choose to, they need to for achieving their ends, or they need to commit violence against possible future threats. From this description of the state of nature as a state of war, which seems reasonable when presented, Hobbes concludes that people have three choices left to them: stay in the state of nature, form a government with limited power and authority, or form a commonwealth under a sovereign of unlimited power and authority (Kavka 4). Of these choices, Hobbes concluded that the second choice will not allow people to leave the state of nature because if power is simply limited, the government itself will dissolve because it does not have enough power to control the various groups that people will form to meet their own ends as they would in the state of nature. So, people are left with the sovereign
being the only solution to leaving the state of nature. The sovereign, with unlimited power and authority, is the only authority that can control the people and take them out of the state of nature. This insight from Hobbes is important to understand in the context of the Internet because as I explained earlier the Internet is a community of individuals and there is no central authority over the entire Internet; the Internet is then similar to the state of nature that Hobbes described.

Before moving on to the sovereign’s powers and authority, it is important to realize that the reason that Hobbes believes an absolute sovereign is the solution, even with the threat of tyranny and despotism, is that he sees the state of nature as a perpetual state of war. A tyrannical sovereign, even the worst kind of dictator, is not as bad as the anarchy that results in the perpetual state of war. But, this view of humanity is very bleak. It was stated that “…other secular philosophers who were supportive of constitutional monarchies, such as John Locke, took issue with what they saw as Hobbes’ [sic] pessimism about human nature and corresponding willingness to take away personal freedom and choice” (Hobbes xv). As Kavka states about Hobbes’s argument, “…it overlooks the possibility of rational present cooperation based on the expectation of future cooperation…” (Kavka 18). In other words, Hobbes’s main argument for proposing that people form a society in which power is given over to a sovereign is flawed in the sense that he views humans as only capable of living in a perpetual state of war. He denies the possibility that people can work together in the present so that their future is better assured. Instead, Hobbes determined that the most reasonable choice for humans was to act out of anticipation of future attacks or to attack preemptively to gain the upper hand. The irony is that if Hobbes is so pessimistic about human nature, it is more likely that his sovereign will be a tyrant. But as Hobbes understood the situation, no
tyrant was worse than the state of nature. Hobbes’s state of nature is important to understand because of the following: 1) Locke and Rousseau have differing views of the state of nature; and 2) it is through understanding these various views of the state of nature that the state of nature of the Internet can first be explored. At this point though, we can understand that Hobbes, because of his particular view of the state of nature, may have viewed the Internet community as composed of self-interested people with equal capabilities who strive to survive through mistrust of their fellow Internet users.

With Hobbes’s state of nature and his argument for people forming a government controlled by an ultimate sovereign developing, it is now time to examine Hobbes’s sovereign and its powers. First, it is important to understand how Hobbes viewed the sovereign and his limits and why a tyrant is possible in Hobbes’s theory. Hobbes stated the following:

> Nevertheless we are not to understand, that by such Liberty, the Soveraign Power of life, and death, is either abolished, or limited. For it has been already shewn, that nothing the Soveraign Representative can doe to a Subject, on what pretence soever, can properly be called Injustice, or Injury; because every Subject is Author of every act the Soveraign doth; so that he never wanteth Right to anything, otherwise, than as he himself is the Subject of God, and bound thereby to observe the laws of Nature. (Hobbes 135).

So according to Hobbes, we see that the sovereign has no limits on his powers. The sovereign has power over life and death. And, since the sovereign is empowered by the subjects, which will be explained further, the sovereign can do no wrong. In fact, Hobbes explicitly stated that the sovereign’s actions cannot be accused of injustice or punished by his subjects when he stated that “…whatsoever he doth, it can be no injury to any of his Subjects; nor ought he to be by any of them accused of Injustice…and consequently to that which was sayd last, no man that hath Soveraigne power can justly be put to death, or
otherwise in any manner by his Subjects punished” (Hobbes 111). From these short excerpts from *Leviathan*, we see that Hobbes views the sovereign’s powers as absolute. However, he does contradict himself somewhat. Hobbes stated:

The Obligation of Subjects to the Soveraign, is understood to last as long, and no longer, than the power lasteth, by which he is able to protect them. For the right men have by Nature to protect themselves, when none else can protect them, can by no Convenant be relinquished. (Hobbes 140).

What Hobbes means in this statement is that subjects only need to obey the sovereign as long as the sovereign can protect them. For example if a country is invaded and the sovereign is not able to protect the subjects, the subjects are under no obligation to obey the sovereign. Hobbes’s reasoning for this point, from the second part of the statement, is that all people have in the state of nature the right to protect themselves and no agreement or contract can take that right away. So if the sovereign cannot protect the subjects, the subjects are free to take their protection into their own hands and break their contract with the government.

But from this statement, we can also infer that the sovereign should not have the power to kill subjects without cause. If the sovereign is killing subjects indiscriminately, then he is no longer protecting the subjects. This situation would free the subjects to assume their own protection. Killing subjects indiscriminately is not a power the sovereign can have, so we now see a limit to Hobbes’s sovereign. From this exploration, it is now understood that Hobbes’s sovereign has unlimited powers except when the sovereign can no longer protect the people or is directly sacrificing subjects for no cause. In other words, it is permissible for the sovereign to send people to war where they may die or execute criminals because these actions aid in protecting the subjects as a whole. As Hobbes stated:

And because the End of this Institution, is the Peace and Defence of them all; and whosoever has right to the End, has right to the Means; it belongeth of
Right, to whatsoever Man, or Assembly that hath the Soveraignty, to be Judge both of the meanes of Peace and Defence; and also of the hindrances, and disturbances of the same; and to do whatsoever he shall think necessary to be done, both before hand, for the preserving of Peace and Security, by prevention of Discord at home, and Hostility from abroad; and, when Peace and Security are lost, for the recovery of the same. (Hobbes 112).

But if the sovereign is killing subjects and this killing is not for the benefit of the community, then the sovereign is not fulfilling his part of the social contract and the subjects have the right to disobey. So, Hobbes’s sovereign has no limits on power as long as he ensures the protection of the community. Before moving on, I want to note that an Internet equivalent for Hobbes’s sovereign may be the owner of a network that resides on the Internet. Or, it could be the owner of a single computer on the Internet. Essentially, the only requirement for an Internet sovereign, according to Hobbes, would be an individual or small group of individuals that have absolute control over an Internet community. Of course, an ethical issue can be mentioned at this point; an Internet sovereign can employ measures to protect a computer or network, but should that sovereign also have the ability to attack other computers and networks out of anticipation of future attacks? This situation may arise as Hobbes understood the state of nature, but the Internet does not have to be a state of war. With these points understood, it is time to explore how Hobbes’s sovereign originally receives its power from the community.

At this point, Hobbes has shown that all people are born equal in the sense that everyone is endowed with the same physical and mental capabilities. There are differences among people, but Hobbes’s conjecture is that there are no differences that cannot be overcome. Since everyone is equal, each person is capable of pursuing his desires. These desires include basic survival, property, etc. But for Hobbes, the main characteristic of this
natural state is that there is no power that keeps people in check. Each person is also free and capable to pursue whatever means in pursuing his desires. As Hobbes stated:

And because the condition of Man...is a condition of Warre of everyone against everyone; in which case everyone is governed by his own Reason; and there is nothing he can make use of, that may not be a help unto him, in preserving his life against his enemies; It followeth, that in such a condition, every man has a Right to everything; even to one anothers body. And therefore, as long as this naturall Right of every man to everything endureth, there can be no security to any man, (how strong or wise soever he be,) of living out the time, which Nature ordinarily alloweth men to live. (Hobbes 79-80).

For Hobbes, this situation means that people will use violence to reach their ends simply because they can. As there is no power to keep people in check, violence will also go unchecked. Violence will result from simple desire, eliminating obstacles, or eliminating future threats to one’s safety or advancement. This state of nature, as stated before, is a state of war which leads to the conclusion that the only way to leave the state of nature, or war, is to institute a governing body that has the power to keep people in check. But, where does this governing body get its power? It receives it from the individuals in the society. According to Hobbes:

If a Covenant be made, wherein neither of the parties performe presently, but trust one another; in the condition of meer Nature, (which is a condition of Warre of every man against every man,) upon any reasonable suspition, it is Voyd: But if there be a common Power set over them both, with right and force sufficient to compell performance; it is not Voyd. For he that performeth first, has no assurance the other will performe after; because the bonds of words are too weak to bridle mens ambition, avarice, anger, and other Passions, without the feare of some coërerce Power; which in the condition of meer Nature, where all men are equall, and judges of the justnesse of their own fears, cannot possibly be supposed. And therfore he which performeth first, does but betray himselfe to his enemy; contrary to the Right (he can never abandon) of defending his life, and means of living.

But in a civill estate, where there is a Power set up to constrain those that would otherwise violate their faith, that feare is no more reasonable; and for
that cause, he which by the Convenant is to perform first, is obliged so to do. (Hobbes 84).

As Hobbes pointed out, there is no power in nature to compel anyone to do anything. So if two men come to an agreement, but one man realizes that he can do better for himself by breaking that agreement, there is no power that will prevent him from breaking that agreement. But if men and women are formed in a civil state, or commonwealth, there is a power that can compel everyone to honor agreements and work towards the common good. Even though the first man who agrees to the social contract is at a disadvantage, since all others can simply ignore the social contract, he should be obliged to agree to the social contract because it will be the only way to set up a civil state that will supremely benefit everyone and take everyone out of the state of war. For Hobbes, the commonwealth is the only guaranteed way out of the state of nature because it guarantees security so everyone can act without violence since it is no longer needed. As Hobbes stated:

The finall Cause, End, or Designe of men, (who naturally love Liberty, and Dominion over others,) in the introduction of that restraint upon themselves, (in which wee see them live in Common-wealths,) is the foresight of their own preservation, and of a more contented life thereby; that is to say, of getting themselves out from that miserable condition of Warre, which is necessarily consequent (as hath been shewn) to the naturall Passions of men, when there is no visible Power to keep them in awe, and tye them by feare of punishment to the performance of their Covenants… (Hobbes 105).

In other words, the entire purpose of a commonwealth is to ensure everyone’s preservation by keeping everyone’s natural passions in check. And by ensuring everyone’s preservation, Hobbes conjectures that a commonwealth will allow people to live a better life.

This commonwealth will derive its power from the people that form the social contract. Hobbes stated:
The only way to erect such a Common Power, as may be able to defend them from the invasion of Forraigners, and the injuries of one another, and thereby to secure them in such sort, as that by their owne industrie, and by the fruities of the Earth, they may nourish themselves and live contentedly; is, to conferre all their power and strength upon one Man, or upon one Assembly of men, that may reduce all their Wills…and therein to submit their Wills, everyone to his Will, and their Judgements, to his Judgment. This is more than Consent, or Concord; it is a reall Unitie of them all, in one and the same Person, made by Convenant of every man with every man, in such manner, as if every man should say to every man, I Authorise and give up my Right of Governing my selfe, to this Man, or to this Assembly of men, on this condition, that thou give up thy Right to him, and Authorise all his Actions in like manner. This done, the Multitude so united in one Person, is called a COMMON-WEALTH…This is the Generation of that great LEVIATHAN, or rather (to speake more reverently) of that Mortall God, to which wee owe under the Immortall God, our peace and defence. (Hobbes 107-108).

In this passage, we see Hobbes’s ultimate end. The men and women who form the commonwealth collectively give up their right to govern themselves to either one person, or an assembly of persons. In giving up their right to govern themselves, they also agree to submit to the governing body’s will and judgment. But, an interesting aspect of Hobbes is that he sees the governing body as the equivalent of a living god. It is statements like these that brought Hobbes in opposition to religion; but the reason he made this statement is because he stressed that in order for the commonwealth to succeed, the people had to submit wholly to the government. In other words, the people had to look to the Leviathan, the sovereign, as a person, or assembly, with ultimate power and authority. Another important point to understand is that the sovereign is empowered by the people who agree to form the social contract. In other words, the people establish this contract to empower a sovereign that takes them out of the state of nature. This empowering is a conscious decision, but as I pointed out earlier the Internet is formed from an implicit social contract. For Hobbes's sovereign to appear on the Internet, I will show how a community of Internet users can
empower a single entity or small group of entities as a sovereign, even without an explicit agreement.

But, Hobbes’s argument for a sovereign does have some shortcomings besides allowing for despotic tyrants. Jean Hampton identified the following:

So, we now see that Hobbes’s social contract argument is invalid: That argument cannot show that people, as he has described them, can institute what Hobbes defines as an absolute sovereign. Indeed, let us spell out this invalidity precisely:

1. In order for peace to be secured, an absolute sovereign must be created, and an absolute sovereign is defined as one who is master of all his subject-slaves; this absolute sovereign is the final decider of all questions in the commonwealth, including the question whether or not he will continue to hold power, and in virtue of deciding this last question, he holds power permanently.
2. Hobbesian people empower a ruler by obeying his punishment commands, and they do so whenever they decide such obedience is conducive to their best interests.
3. But from (2), it follows that the ruler created by Hobbesian people does not decide all questions; in particular, he does not decide for his subjects the question whether or not they will obey his commands—including his punishment commands.
4. It follows from (3) that insofar as a ruler holds power only as long as his subjects obey his punishment commands, the subjects determine (by their decision whether or not to obey these commands) whether or not he will continue to hold power.
5. Hence, from (3) and (4), Hobbesian people cannot create a ruler who meets the definition of a sovereign in (1) (i.e., a ruler who decides all questions in the commonwealth and whose reign is permanent), which, from (1), means that they cannot secure peace. (Hampton 54-55).

Essentially, what Jean Hampton has illustrated is that there can be no absolute sovereign who decides all answers in the community because the sovereign cannot force the people to initially place him in power. In other words, the sovereign cannot place himself in power which means that the sovereign is not absolute. Additionally, the sovereign cannot decide to keep himself in power either. So, the essential flaw in Hobbes’s argument is that either it
does not fit with how he defines a sovereign or the social contract that grants Hobbes’s sovereignty power is not a true social contract. This ambiguity is not surprising as Hobbes creates paradoxes in his theories, such as the one explored above concerning the sovereign’s limits. According to Richard Tuck:

The common impression of Hobbes is of a theorist of absolute state power, an impression fostered by the very title of *Leviathan*…But there are some important qualifications to be introduced, which derive from Hobbes’s conception of the fundamental character of sovereign power…In *Leviathan*, at least, he frequently talks about the sovereign acting in some sense on behalf of his citizens, and seems to regard it as rational for a sovereign to do whatever he sincerely believes conduces to his own preservation and that of the people he represents. For the sovereign to do anything else, he repeatedly says…would be ‘a breach of trust, and of the Law of Nature’--though, as we shall see, he did not conclude from the fact that a sovereign might have no right to do something, that a subject might have the right to resist him. (Tuck 80-81).

In short, Hobbes’s sovereign is not really as absolute as it seems according to how Hobbes describes the sovereign; Hobbes’s sovereign has at least moral limits. Some of these moral limits result from the sovereign having to act to preserve the citizens in the same way he would preserve himself. For example, war may be necessary to preserve the safety of the community even though some of the citizens may perish in the war. This action would be just and proper, but simply exterminating citizens for no reason would not be a right action, as was addressed earlier. And, the sovereign should not act this way because it would be equivalent to exterminating himself. So even though Hobbes proposes that the citizens submit completely to the will of the sovereign, he does not actually make the sovereign all-powerful. Hobbes’s sovereign must protect the citizens or risk their disobedience.

Hobbes explores other concepts in *Leviathan* to flesh out his social contract theory. For example, he explored the nature of succession of the sovereign power. Hobbes stated that “...either he that is in possession, has right to dispose of the Succession, or else that right
is again in the dissolved Multitude” (Hobbes 123). Much of Hobbes’s theory is only understood after first exploring his state of nature and his idea of the sovereign as his other ideas derive from these important points. The ideas of natural rights and forming a government through consent are among the most important contributions Hobbes made to political theory. These ideas would later influence Locke and Rousseau, as I will show, even though they used them differently in their ends of government. It is also important to understand that much of the power that Hobbes invests in the sovereign is due to his pessimistic view of human nature. Because he felt humans on their own in the state of nature were brutal and self-serving, he felt that a sovereign with ultimate power and authority was necessary to control and guide humanity. He also felt that society must be united in a single cause, so he was critical about anything that may seek to divide society. Factions could result in conflict that would divide society against itself. But even though Hobbes had such a negative view of humanity, he still made important contributions to political theories that continue to influence society today. Before addressing Locke, I want to point out that in applying Hobbes’s social contract theory to the Internet, again, we must realize that he would see Internet users as being in a state of war. In other words, Internet users will act to better their conditions on the Internet even at the expense of other Internet users. This situation will result in Internet users not trusting each other.

With Hobbes’s social contract theory in hand, for the purposes of this thesis, the next important philosopher in social contract theory to understand is John Locke. Locke (1632-1704) was one of the most influential political philosophers for Western politics. In *The Second Treatise of Government* (1690), Locke laid out his idea of a social contract. An interesting note is that Locke’s ideas were just as influential during his time as they are now.
Consider the idea of natural rights. Today, we take for granted that humans are born with certain rights that are not due to any law or government. Many of us remember Thomas Jefferson’s famous words from the *Declaration of Independence* (1776):

> We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable rights, that among these are life, liberty and the pursuit of happiness. (Wilson 15).

This idea of natural rights began with Hobbes in *Leviathan*, but Locke further examined these rights and natural law; and, it is almost certain that Jefferson was influenced by Locke’s ideas. Another of Locke’s main ideas is that government can only rule with the consent of the governed. It is likely Jefferson was again influenced by Locke:

> That to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed. (Wilson 15).

While today these ideas do not seem new or revolutionary, it is due partly to Locke that these ideas and others became so influential in our time.

Before examining Locke’s ideas in detail, it is first important to understand the historical context in which he developed them. While Locke was writing his *Second Treatise*, the English monarchy was instituting conditions similar to those that led to the civil war in the 1640s that ended with Charles I being executed in 1649 (Locke ST viii). During Locke’s writing the monarchy had only been restored for 20 years, but was attempting to have absolute control over both the people and the Parliament. Locke was drawn into politics through his employer, the Earl of Shaftesbury. Due to his participation in the various political organizations opposing the monarchy, Locke was certainly influenced to write against monarchies and justify that power be kept with the people and Parliament. As his ideas are shown to develop in his treatise, it is important to understand this context. During
the primary writing of his treatises, Locke wrote in exile from England fearing arrest. The
political movement in which Locke was involved, which was formed over distaste with the
monarchy, caused the Glorious Revolution (1688-1689). James II was removed and replaced
by William and Mary (Locke ST viii). As Locke’s *Two Treatises of Government* were
published in 1690 anonymously, it has been conjectured that part of the purpose of the
treatises was to explain and justify why the revolution was necessary (Locke ST ix). This
point is important to note because whether it is true or not, it is at least true that Locke’s ideas
were influenced by events during his life. And, it is certainly possible that his writing and his
participation also helped influence those events in turn. With this historical background in
mind, Locke’s ideas are more clearly understood.

Locke begins his *Second Treatise* with a short essay on civil government in which he
started to define true political power. The first step in his argument is to attack the idea
perpetuated by Sir Robert Filmer and others of the time that the monarchy has the right to
rule because they are descendants of Adam, the first man. Locke’s first statement is “Firstly.
That Adam had not, either by natural right of fatherhood or by positive donation from God,
any such authority over his children, nor dominion over the world, as is pretended” (Locke
ST 1). Locke also states that even if Adam had such power, it does not mean his heirs were
entitled to it. He goes on to point out that there are also no natural laws that determine proper
succession of power in all instances, and that the time of Adam is so long ago that no one
race could claim to be his descendants and heirs. This first point is important to Locke
because as stated before, there was a souring towards the monarchy. But, this first step also
allowed for Locke to now show what he believed to be true political power in government
because he pointed out that what the monarchy claimed as their source of power was not true.
With Locke having pointed out that neither Adam nor his descendants had political power and that nature did not provide for any succession of power, Locke then defines his version of the state of nature and why it is important for his argument. According to Locke:

To understand political power aright, and derive it from its original, we must consider what estate all men are naturally in, and that is, a state of perfect freedom to order their actions, and dispose of their possessions and persons as they think fit, within the bounds of the law of Nature, without asking leave or depending upon the will of any other man.

A state also of equality, wherein all the power and jurisdiction is reciprocal, no one having more than another, there being nothing more evident than that creatures of the same species and rank, promiscuously born to all the same advantages of Nature, and the use of the same faculties, should also be equal one amongst another, without subordination or subjection, unless the lord and master of them all should, by any manifest declaration of his will, set one above another, and confer on him, by an evident and clear appointment, an undoubted right to dominion and sovereignty. (Locke ST 3).

With these first statements, Locke has explained that in the state of nature all persons are equal, no one person has more power than any other, and any person is free to do whatever he wants within the bounds of the law of nature. For example a person is free to walk anywhere he desires, but can only walk there as fast as he is capable and only as long as he has the energy to do so. If the person does want to continue walking, at certain points he will have to eat, rest, etc. in order to continue. This situation results from nature having put certain limits on our capabilities. People need air, water, food, and rest to survive. They can do whatever they want as long as they meet their needs. For most people, and Locke, the fact that we are given a life with these basic needs and the capabilities to fulfill them is proof that we do have natural rights. For Locke these natural rights are the beginning of political power, and everyone starts with the same amount of power. A. John Simmons points out, “…in Locke the primary point of the state of nature is not to reveal human nature in any of its particular guises, it is rather to describe a certain moral condition of men” (Simmons LSN...
As pointed out before this moral condition is that people are free to do what they want, but they have natural limitations and needs. In other words there are no limits on a person’s desires, but there are limits on a person’s capabilities in fulfilling those desires. With no limits on desires, the moral condition is that a person’s fulfillment of his desires is only limited by his capabilities in acting on those desires. The other part of the moral condition though is that since everyone is at the same level, there will be interaction among people to compete for resources to satisfy their needs and protect their lives so they can either cooperate or compete against each other.

The state of nature, as with Hobbes’s social contract theory, is central to understanding Locke’s political philosophy so this concept requires more discussion. First since every person is born alive, it is reasonable to conclude that everyone has the right to continue living as long as nature allows. In other words, any person is free to meet whatever needs require him to survive until such time that he dies naturally or through some unforeseen circumstance. With that in mind, every person requires air, water, food, and rest to survive. A person can simply breathe for air, but the person needs to labor to obtain water and food. The person may have to look for water, dig for water, gather food, grow food, make food, etc. Rest is also required after a certain amount of labor so that the person can continue to labor later on. Nature is an important judge in this condition. People can only use a certain amount of food in a certain amount of time. If the person does not get enough food, his survival is affected. If the person takes too much food, the food may spoil. Thus, it is wasted and useless to any person; this waste goes against nature. The concept of property becomes important here as well. According to Locke, “We see in commons, which remain so by compact, that it is the taking any part of what is common, and removing it out of the
state Nature leaves it in, which begins the property, without which the common is of no use…The labor that was mine, removing them out of that common state they were in, hath fixed my property in them” (Locke ST 17). In other words, everything in nature is available for everyone’s use. But when a person gathers food or water, it becomes his property for his use solely because he performed the labor for that gathering. I will further address Locke’s notion of property because it is another important component of Locke’s social contract theory; property also becomes important when discussing the Internet because Internet users have both physical property, such as computers, and virtual property, such as e-mail. It is also important to further explore Locke’s state of nature because it contrasts with Hobbes’s state of nature.

As pointed out earlier, everyone is born with the same right to survival and nature provides limits that everyone must surpass to survive. However, after survival, everyone is free to do whatever they want simply because nature provides no limits to desire. As Locke pointed out, this is “…perfect freedom…” (Locke ST 3). To put things simply, let us describe two people with different desires. One person desires to be a vegetarian. This person has the freedom to be a vegetarian, but must still work within the limits of nature to survive. For example even though the person chooses not to eat meat, the person must still eat to survive. The second person desires to be a meat-eater. This person also has the freedom to be a meat-eater, but must still work within the limits of nature to survive which includes laboring to hunt animals for food or raising animals for food. Now, consider that a person desires to simply profit from the labor of others to survive by possibly stealing food. This person still has freedom of desire and is still working within the limits of nature to survive. The only difference is that now this person intends to exploit others to survive.
Locke has a response to this situation, which he describes as the state of war. In describing the state of nature Locke stated, “But though this be a state of liberty, yet it is not a state of licence; though man in that state have an uncontrollable liberty to dispose of his person or possessions, yet he has not liberty to destroy himself, or so much as any creature in his possession, but where some nobler use than its bare preservation calls for it…And, being furnished with like faculties, sharing all in one community of Nature, there cannot be supposed any such subordination among us that may authorize us to destroy one another, as if we were made for one another’s uses, as the inferior ranks of creatures are for ours” (Locke ST 4). Simply put while those inferior to humans, such as animals, can be made use of for food or clothing, it is not natural for any human to exploit another human because all humans were given the same abilities and qualities to live in nature. And, any human who seeks to exploit others “…declares himself to live by another rule than that of reason and common equity…” (Locke ST 5). The state of war is when a human being decides not to live according to nature, and this situation is what leads Locke into his argument for civil government. But before addressing Locke’s form of government, it is important to note how Locke’s state of nature is both similar and dissimilar to Hobbes’s state of nature. Locke agreed with Hobbes that there is equality in nature and that people have the natural right to survive, but Locke did not see the state of nature as a perpetual state of war as did Hobbes. Instead, Locke saw the state of war as resulting when people denied the natural rights of others. Locke did not see that the state of war was perpetual because humans were constantly seeking to undermine each other. So in terms of the Internet, Locke would not see Internet users as constantly at odds with each other as Hobbes would. Locke would
recognize that there could be mutual cooperation between Internet users, as shown in further exploring Locke’s theory.

First, consider that Locke established that all humans have the right to survive. Second, according to Locke, it is fine to hunt animals because they do not have the same abilities as humans to live in nature. Third, Locke has established that someone who seeks to exploit other humans has decided to live outside of Nature’s laws. It is reasonable to conclude then that a person has the right to defend himself against a person who seeks to exploit him. And, this is exactly what Locke determined when he stated, “To be free from such force is the only security of my preservation, and reason bids me look on him as an enemy to my preservation who would take away that freedom which is the fence to it…” (Locke ST 11). Locke also stated, “Men living together according to reason without a common superior on earth, with authority to judge between them, is properly the state of Nature” (Locke ST 11). This point is another important contribution of Locke; men in the state of nature have the ability and authority to judge transgressions against nature. If a person threatens another person, that person has the right to judge and punish the transgression. As Locke stated:

And thus it is that every man in the state of Nature has a power to kill a murderer, both to deter others from doing the like injury (which no reparation can compensate) by the example of the punishment that attends it from everybody, and also to secure men from the attempts of a criminal who, having renounced reason, the common rule and measure God hath given to mankind, hath, by the unjust violence and slaughter he hath committed upon one, declared war against all mankind, and therefore may be destroyed as a lion or a tiger, one of those wild savage beasts with whom men can have no society nor security. And upon this is grounded that great law of Nature, “Whoso sheddeth man’s blood, by man shall his blood be shed.” (Locke ST 7).
Now it is understood that a human can kill to preserve his life, but also to prevent someone from taking it. And when killing is justified, it is because the person who is killed has stepped out of nature and become like an animal.

So if men have the freedom and power to take care of themselves, why would they consent to give power over to another like a government? Simply put, it is easier for men and women of like minds to pull their resources and properties together in common survival and defense. And, men can reason to improve their condition in life. As Locke stated in *An Essay Concerning Human Understanding*, “…it is the understanding that sets man above the rest of sensible beings, and gives him all the advantage and dominion which he has over them…” (Locke HU xxxv). So, Locke reasoned that men could form communities in order to live and protect their labor and property better. For example, let us consider a community of just two individuals. It is up to each individual to survive and live as they desire. But perhaps one is better skilled at hunting, and the other is better skilled at growing vegetables. They could choose to work together. One will do the hunting for the both of them; and the other will grow enough vegetables for the both of them. The other advantage is that two people have a better chance at defending themselves against a single outsider who threatens their survival and property than either of the people on his own. It is from simple beginnings such as this that political communities start. As Locke stated, “Men being, as has been said, by nature all free, equal, and independent, no one can be put out of this estate and subjected to the political power of another without his own consent, which is done by agreeing with other men, to join and unite into a community for their comfortable, safe, and peaceable living, one amongst another, in a secure enjoyment of their properties, and a greater security against any that are not of it…For, when any number of men have, by the consent of every
individual, made a community, they have thereby made that community one body, with a power to act as one body, which is only by the will and determination of the majority” (Locke ST 52). In this statement, we begin to understand why consent is of absolute importance to Locke. We have established how he showed that men are free to fulfill their desires. Their only limits are what they need to do to survive in order to live to fulfill their desires. It is clear that all men have this same charge, and it is also clear that men have the power to judge transgressions against them and their property in the interest of survival and their own freedom. Additionally, others may judge against these men in this community. So even though men benefit from joining a community because survival is easier and more secure, joining the community must be completely voluntary because in gaining those benefits they give up their power of judgment against transgressions to the community and open themselves for judgments against them. This is further illustrated by Locke when he stated:

The great and chief end, therefore, of men uniting into commonwealths, and putting themselves under government, is the preservation of their property; to which in the state of Nature there are many things wanting...Firstly, there wants an established, settled, known law, received and allowed by common consent to be the standard of right and wrong, and the common measure to decide all controversies between them...Secondly, in the state of Nature there wants a known and indifferent judge, with authority to determine all differences according to the established law...Thirdly, in the state of Nature there often wants power to back and support the sentence when right, and to give it due execution. (Locke ST 67-68).

As Locke points out, the benefits of men joining into political communities is that they gain a standard and common law. In the state of nature, there is no common law besides survival for men to follow. Aside from that basic need and all it entails, men simply follow their personal desires. Not all men have the same desires, so there are possibilities for problems
and conflicts between men. There are no impartial judges in nature; there is no natural objective authority that governs men. Even if there was a common law, there is the risk of men judging transgressions with a bias. Perhaps for some men, they would judge harshly for the smallest transgressions out of their own personal desires and prejudices. Last, in nature, a person is on his own. He may not be able to defend against another if that person is considerably stronger, but a community has more strength in protecting all its members. Before I address Locke’s community, I want to again highlight the importance of Locke’s notion of property. As stated above, a person’s labor in taking something out of the natural state fixes that something as his property. And, governments are instituted to ensure that a person’s property is protected. In fact, preserving property becomes the chief purpose of government. In applying Locke’s ideas to the Internet, this idea of property must be addressed. And in terms of the Internet, a person can have property. There are the different physical components of the Internet, such as routers and computers; and, there is also virtual property in the form of information a person owns on the Internet, such as e-mail inboxes. I will address the physical and virtual structure of the Internet later in this thesis, but for now it is important to just understand that a person can have property on the Internet which is an important consideration in applying Locke’s social contract theory to the Internet. Let us now return to Locke’s ideas of the political community.

A community has the benefit of one common law by which everyone can abide. Judges can be appointed to decide impartially by the common law, and the community can have the manpower to enforce the common law and protect the community. The community must also protect its citizens from those outside the community. As Locke points out, people join communities by consent so it is possible for people to be in the state of nature when
others are in communities. As Simmons so eloquently states of Locke’s state of nature, “A is in the state of nature with respect to B if and only if A has not voluntarily agreed to join (or is no longer a member of) a legitimate political community of which B is a member” (Simmons LSN 103). Locke stated this same point in that “…the whole community is one body in the state of Nature in respect of all other states or persons out of its community” (Locke ST 81). Again, it is important to note how Locke stresses consent because it is possible for men to not join any communities and continue to remain in the state of nature. If men are already supremely free in nature, then they must be willing to give up some of their freedom, such as the power to judge transgressions and kill for survival, to a community. The power must be given voluntarily otherwise men are not acting with the freedom that nature has given them. Another important point is that in Locke’s social contract theory, it is possible for an entire political community to be in the state of nature with regards to other communities. This point is important in the context of the Internet because, as stated earlier, the Internet is composed of individual entities such as companies. As a company can be understood as a community of individuals, it is then possible that this community is in the state of nature with regards to other communities such as other companies. In the state of nature on the Internet, we can then also see Lockean companies in the state of nature with individual Internet users. And as I describe further in this thesis, some of these Internet users can be Hobbesian or Lockean.

Locke believed that all men had two powers given by Nature. According to Locke, “The first is to do whatsoever he thinks fit for the preservation of himself and others within the permission of the law of Nature…The other power a man has in the state of Nature is the power to punish the crimes committed against that law” (Locke ST 68-69). So when men
give their powers to government, how should it take shape there? As stated before, Locke was almost certainly influenced to speak against a monarchy. His reasoning, even though Locke felt people were generally reasonable, was that power corrupts. As he stated, “For he that thinks absolute power purifies men’s blood, and corrects the baseness of human nature, need read but the history of this, or any other age, to be convinced to the contrary” (Locke ST 49). His expanded reasoning was that the power to make laws, legislative, and the power to enforce laws, executive, was too much to reside in one man. Locke stated, “For he being supposed to have all, both legislative and executive, power in himself alone, there is no judge to be found, no appeal lies open to anyone, who may fairly and indifferently, and with authority decide, and from whence relief and redress may be expected of any injury or inconveniency that may be suffered from him, or by his order” (Locke ST 48). This point is important because the entire benefit of government in preservation of property and safer survival for men depends on a common law with objective judgment. It is by this reasoning that Locke justified that a monarchy was not a proper civil government. Instead, there should be a legislative power and an executive power. Locke further described both of these powers. He stated:

Therefore in well-ordered commonwealths, where the good of the whole is so considered as it ought, the legislative power is put into the hands of divers persons who, duly assembled, have by themselves, or jointly with others, a power to make laws, which when they have done, being separated again, they are themselves subject to the laws they have made; which is a new and near tie upon them to take care that they make them for the public good.

…But because the laws that are at once, and in a short time made, have a constant and lasting force, and need a perpetual execution, or an attendance thereunto, therefore it is necessary there should be a power always in being which should see to the execution of the laws that are made, and remain in force. And thus the legislative and executive power come often to be separated. (Locke ST 80-81).
So Locke’s legislative power created a common law, then disbanded; but, his executive power remained in force to ensure the laws were followed. Locke also identified a federative power that represented the political community in dealing with those outside of the political community. Locke’s reasoning in separating the powers is not lost on us, even now. But it is interesting to note that he felt that once laws were made, the legislative power disbanded so all men involved lived under the same laws. It is most likely that Locke felt that when it was time for laws to be addressed or changed, a completely new legislative was called together and formed. The main point is that Locke felt that men and women could only make good laws for the benefit of everyone if they knew that they would live under these laws after they were made.

This situation brings another important consideration of Locke: what happens when the government is no longer working for the public good? In regards to power, Locke stated that “…nobody can transfer to another more power than he has in himself, and nobody has an absolute arbitrary power over himself, or over any other, to destroy his own life, or take away the life or property of another” (Locke ST 74). This idea even transfers to Locke’s thoughts of government. He stated that “…it is a mistake to think that the supreme or legislative power of any commonwealth can do what it will, and dispose of the estates of the subject arbitrarily, or take any part of them at pleasure” (Locke ST 76-77). Here is a final quote from Locke that seals this importance of consent: “…political power is that power which every man having in the state of Nature has given up into the hands of the society, and therein to the governors whom the society hath set over itself, with this express or tacit trust, that it shall be employed for their good and the preservation of their property” (Locke ST 97). While the men and women give up their power by consent, Simmons points out that this
is not a bad thing. He stated, “Consent is an act only a free person can perform; it is a use, not a breach, of one’s freedom” (Simmons PC 131). So consent is a freedom that men and women use to give a government power to work in their best interests to ensure safer survival and preserve their property, which is the result of their individual labor. It is not surprising then that Locke endorses dissolving the government when it no longer works for the people. It is possible that Locke was led toward this end as a separation from Hobbes, but he reasons this point logically. Locke stated:

The reason why men enter into society is the preservation of their property; and the end while they choose and authorize a legislative is that there may be laws made, and rules set, as guards and fences to the properties of all the society, to limit the power and moderate the dominion of every part and member of the society. For since it can never be supposed to be the will of the society that the legislative should have a power to destroy that which everyone designs to secure by entering into society, and for which the people submitted themselves to legislators of their own making: whenever the legislators endeavour to take away and destroy the property of the people, or to reduce them to slavery under arbitrary power, they put themselves into a state of war with the people, who are thereupon absolved from any farther obedience, and are left to the common refuge which God hath provided for all men against force and violence. (Locke ST 123-124).

In other words, men and women owe no allegiance to a government they voluntarily form to help them survive better and preserve the property they have earned when that government no longer works for them. And as Locke stated, “…when the government is dissolved, the people are at liberty to provide for themselves by erecting a new legislative differing from the other by the change of persons, or form, or both, as they shall find it most for their safety and good” (Locke ST 123). In the end, it becomes the duty of the people to erect a new government to ensure their public good when the old government no longer meets their needs. Again it is likely Locke was influenced by the political atmosphere of the time, but it does not change his reasoning and justification for the social contract and the logical claims.
he made. In terms of the Internet, Locke’s ideas on property become important; but, Locke’s ideas on political consent also become important because communities on the Internet that conform to Lockean principles will form by consent. Even if these relationships are between two parties, if the parties follow Lockean principles, voluntary consent is important; or, the parties can dissolve the relationship.

Locke details more ideas in his *Second Treatise of Government*, including how money is formed for use because it is not perishable, how slavery is justified when the slaves are would-be conquerors that were defeated justly, and how usurpers of power are never in the right. But, his most important and main contributions are the natural rights men and women have and how this allows them to form governments to improve their lot. Those governments are only formed and given power by consent; and when the government no longer works for the public good, it is up to the people to dissolve it and erect a new government. Additionally, the power of governments must remain separated to guard against tyranny. These ideas are central to understanding Locke’s social contract theory, and his judgments during his time stemmed from these foundations which have influenced Western politics through to the present time. And, his ideas can be applied to the Internet. I will explain this notion further; but, at this point, I do want to call attention to Locke’s reasoning about the state of nature and property. As stated before, Locke’s state of nature contrasts with Hobbes’s state of nature in that he did not see the state of nature as a perpetual state of war. This situation translates to the Internet in that Locke would not see Internet users as constantly seeking to outdo one another. In terms of property, Locke would recognize the different ways a person could have property on the Internet: physical and virtual. And as I also explained, Internet relationships following Lockean principles will require voluntary
consent. I will address these points later in this thesis, but now I turn my attention to Rousseau’s social contract theory.

The last philosopher to discuss in classical social contract theory before further comparing the different theories is Jean-Jacques Rousseau. Rousseau (1712-1778), known as the founding father of the Romantic Movement, was also a significant contributor to political thought. In *The Social Contract*, first published in 1762, Rousseau presents his version of social contract theory that differs in many ways from those theories of his predecessors. Hobbes felt that all political power should rest with an ultimate sovereign; Rousseau felt that all political power should be maintained by the people, who he felt formed the real sovereign. Locke felt governments were only legitimate if they were formed with the consent of the people and that the people had the right to rebel against governments that no longer had their consent. Rousseau felt that consent must be given not once, but repeatedly by the citizen throughout his lifetime (Rousseau xiv). In addition to presenting his social contract theory, Rousseau introduced the idea of the general will and popular sovereignty. Rousseau also saw government as the opportunity for people to improve morally and admired ancient societies, such as Sparta, for their community-first views (Rousseau xv). Before expanding on Rousseau’s social contract theory, let us first examine the historical context of the time in which Rousseau wrote.

Unlike Locke, Rousseau was actually famous and recognized in France during his time. He was a best-selling author before the French Revolution, and he even was asked to work on the constitutions for Corsica and Poland (Rousseau x-xi). He wrote on various subjects, including art and science. His career was not without controversy though. In *The Discourse on the Arts and Sciences*, Rousseau wrote how art, music, and drama can distract
the people from problems in a corrupt society (Rousseau x). His novel *Emile* was condemned by the Parisian parliament in 1762 (Rousseau xi). At a time where Europe was known for large monarchical states, Rousseau was proposing that the proper community of people was a city-state. This fact is not completely surprising when you know that Rousseau was born in Geneva, which was one of the last free states in Europe (Rousseau x-xii). It is also not surprising that Rousseau’s ideas and *The Social Contract* were embraced during the French Revolution. In a time where wealth and aristocracy ruled, people were eager to embrace a philosophy that proposed that people should have all the power in ruling. But, Rousseau also embraced a higher philosophy where “…the common good takes precedence over individual preference” (Rousseau xv). In the revolutionary ideas of popular sovereignty and the general will that Rousseau proposes, it is easy to lose sight that Rousseau was also proposing that the ideal government would also help people to improve morally. With this beginning background, let us explore Rousseau’s social contract.

In the introduction, Rousseau states:

I mean to inquire if, in the civil order, there can be any sure and legitimate rule of administration, men being taken as they are and laws as they might be. In this inquiry I shall endeavor always to unite what right sanctions with what is prescribed by interest, in order that justice and utility may in no case be divided.

I enter upon my task without proving the importance of the subject. I shall be asked if I am a prince or a legislator, to write on politics. I answer that I am neither, and that is why I do so. If I were a prince or a legislator, I should not waste time in saying what wants doing; I should do it, or hold my peace.

As I was a born a citizen of a free State, and a member of the Sovereign, I feel that, however feeble the influence my voice can have on public affairs, the right of voting on them makes it my duty to study them: and I am happy, when I reflect upon governments, to find my inquiries always furnish me with new reasons for loving that of my own country. (Rousseau 1).
The first insight we receive from Rousseau is that he will link what is right with what is desired. In other words, Rousseau wants to achieve a moral condition where wanting to do what is right is the primary interest. This point is important as it begins to show us that his highest goal for government is that it helps the people develop morally. The next insight is in Rousseau’s statement about entering the task without proving its importance. The first point is that Rousseau is demonstrating that just by being a citizen of the community, he has the right to critique politics. He expands on this point when he later states that his right to vote, no matter how small his influence, makes it his duty to study public affairs. The other point about Rousseau not justifying his task is as a statement against Hobbes. In *Leviathan*, Hobbes spends the first part of the book justifying not only his right to speak, but his right to be heard. When Rousseau immediately moved into his discussion of politics, he sent a clear message that his very living already justified his right to discuss politics. Another point that is made by Rousseau is the charge against the monarchy. Simply put, he stated that the responsibility of the government is to simply do what is right. Government should not be writing, but doing. The interesting aspect of this point is that it is generally distasteful for people to think about not knowing what the government is doing. People expect to know about laws that are in effect, if the government is declaring war on another nation, and who is being elected, for example. So, why does Rousseau charge government to simply act? We get a hint of this answer when Rousseau refers to himself as a member of the sovereign. He was not born to monarchy, and he states that he is not a prince or legislator. This statement is understood after reading further, but the answer is that the people are the sovereign. Rousseau is a member of the sovereign because he is a citizen of the community. The sovereign, or the true governing power, is the people. And if the people are doing what is
right, they know what is being done. This reason is why Rousseau can charge that
government’s duty is to simply do what needs to be done while still allowing that the people
will know what the government is doing. A final point on this introduction is that to fully
understand it, you need to know Rousseau’s theory. In other words, you need to know the end to understand the beginning. This “circular” reasoning is seen more in *The Social
Contract*, as we will see.

Rousseau begins the first of his four books of *The Social Contract* with the following, “Man is born free; and everywhere he is in chains” (Rousseau 2). Rousseau then goes on to say that he will attempt to determine what makes the chains legitimate. Like Locke, Rousseau agrees that there must be justification for the chains since they do not exist in nature. Rousseau states, “…the social order is a sacred right which is the basis of all other rights. Nevertheless, this right does not come from nature, and must therefore be founded on conventions. Before coming to that, I have to prove what I have just asserted” (Rousseau 2).

I want to make note of this point because Rousseau is clearly showing that the social contract is not a natural contract, but one that is constructed by humans in order to better their condition in life. This conclusion is also what Hobbes and Locke identified when they recognized that humans must form a social contract to empower a government that would remove them from the state of nature and improve their lives. For Hobbes, the government would keep order. For Locke, the government would ensure that private property was preserved. In terms of the Internet there is a unique opportunity to apply social contract theory because like the social contract itself, the Internet is an artificially created environment. With this start in identifying that social order does not naturally occur, Rousseau goes on to describe the beginnings of society. He states:
The most ancient of all societies, and the only one that is natural, is the family: and even so the children remain attached to the father only so long as they need him for their preservation. As soon as this need ceases, the natural bond is dissolved. The children, released from the obedience they owed to the father, and the father, released from the care he owed his children, return equally to independence. If they remain united, they continue so no longer naturally, but voluntarily; and the family itself is then maintained only by convention.

This common liberty results from the nature of man. His first law is to provide for his own preservation, his first cares are those which he owes to himself; and, as soon as he reaches years of discretion, he is the sole judge of the proper means of preserving himself, and consequently becomes his own master. (Rousseau 3).

In this quotation, we see Rousseau’s definition of the state of nature which is similar to that of Hobbes and Locke. The first point is that every man has a freedom and duty to survive. This freedom is why man must provide for himself. This point is similar to Locke because Locke believed that in the state of nature, man’s political power starts from his right to survive and the actions he takes to live. Hobbes also believed that man in the state of nature must survive, but he took it in a different direction from Locke and Rousseau as he saw it as a state of perpetual war. The most important insight Rousseau gives in this quotation is that the only natural society is the family. This point is important because the family becomes a model for Rousseau’s government and also because it highlights that society maintained by convention must be voluntary. For example in American society, the age of 18 is commonly thought of as the age of true adulthood. Some of the rights that 18 year-olds are granted are the right to vote and the right to join the military because now they are adults and are recognized as being able to judge the course of their lives. If an 18 year-old stays at home, he is voluntarily doing this because he now has the ability to choose his direction in life. Because this person is mature enough to live on his own, but chooses to stay at home, this must be a voluntary choice. It is a humble point, but it has many implications. One
implication is that a person who is mature enough to be able to decide his own life and what is proper for providing for himself can only participate in a community by his own volition. This idea is very much like Locke’s idea of political consent in justifying the legitimacy of government. On the idea of political consent, at least, Rousseau and Locke agree. Another point that is important from Rousseau’s discussion of the beginning of societies is that “[t]he family then may be called the first model of political societies: the ruler corresponds to the father, and the people to the children; and all, being born free and equal, alienate their liberty only for their own advantage” (Rousseau 3). Rousseau was concerned with the idea that family be the first model of political societies because he was concerned that people maintain their natural power, which is that they are free and equal to decide their own life and they only give up their liberty if it is for their betterment. We have seen this idea of voluntarily giving up liberty with Locke, and we see it again as Rousseau’s ideas develop. But at this point, we can at least understand that by Rousseau’s social contract theory, as with Hobbes and Locke, the Internet can still be viewed as individuals in the state of nature.

After Rousseau establishes the idea of voluntary participation in communities, he begins to investigate how political communities form. First, he attacks the idea that strength of force legitimizes governments. He states, “Force is a physical power, and I fail to see what moral effect it can have. To yield to force is an act of necessity, not of will—at most, an act of prudence. In what sense can it be a duty?” (Rousseau 5). In this quotation, we first see that Rousseau does not believe that force is a path to morality. His argument is that responding to force is simply a reflex, an act of survival. For example if someone is throwing a punch at another person, that person should dodge the punch or defend against it in another way. The response does not have any moral implications; it is a necessary way to
survive and preserve one’s life which is everyone’s natural right. But, there is a hint of where morality comes from in Rousseau’s quotation: will. The idea of will deciding morality will come up more in Rousseau’s theory. To further show that force does not justify right, Rousseau stated:

…if force creates right, the effect changes with the cause: every force that is greater than the first succeeds to its right. As soon as it is possible to disobey with impunity, disobedience is legitimate; and, the strongest being always in the right, the only thing that matters is to act so as to become the strongest. But what kind of right is that which perishes when force fails? If we must obey perforce, there is no need to obey because we ought; and if we are not forced to obey, we are under no obligation to do so. Clearly, the word “right” adds nothing to force: in this connection, it means absolutely nothing. (Rousseau 5).

Again, Rousseau has provided an argument against force as a justification for righteousness. To illustrate Rousseau’s point, consider the following example: one person has decided to build a park and has the force to make others build the park. Therefore, building the park is the right choice. Another person decides a golf course should be built instead of the park. This person has enough force to make others abandon building the park and build the golf course instead. By the original argument, the golf course is now the right choice because there was more force behind the decision. If someone decides to build something else and has the power to make others do it instead of the golf course, then that decision will be the right one and so on and so on. And, this changing of decisions is not wrong because it is being justified by force. By Rousseau’s argument, there is no moral value in this situation when right is only decided by force because the moral value is distorted and people act according to survival instinct, not morality. What becomes right is what is able to be forced upon the people against their will. An entity with more force can impose another will and so forth. Rousseau also realized that if you are only obeying an authority because of force, then
you do not have to obey that authority anymore when you have more force because then you can impose your own will against the authority’s will. This is why Rousseau stated, “Let us then admit that force does not create right, and that we are obliged to obey only legitimate powers” (Rousseau 6). This point is important because it justifies that legitimate political power cannot be formed from strength of force and that morality cannot be pursued through force. Rousseau will continue to weave this thread of legitimate power tied to morality throughout his fabric of social contract theory, as well as voluntary consent.

At this point, it is now understood that Rousseau defined the state of nature as everyone is responsible for their own preservation. When a person reaches a certain age, that person is the sole judge of his life. It is also understood that a government is only legitimate if the people voluntarily obey it and that political power is properly empowered by the people’s consent in relinquishing their own power. With Rousseau’s reasoning that force alone cannot lead to legitimate authority, he sets himself the task to determine what will create legitimate authority. His first step is to define the social contract:

…as the force and liberty of each man are the chief instruments of his self-preservation, how can he pledge them without harming his own interests, and neglecting the care he owes to himself? This difficulty, in its bearing on my present subject, may be stated in the following terms:

“The problem is to find a form of association which will defend and protect with the whole common force the person and goods of each associate, and in which each, while uniting himself with all, may still obey himself alone, and remain as free as before.” This is the fundamental problem of which the Social Contract provides the solution.

The clauses of this contract are so determined by the nature of the act that the slightest modification would make them vain and ineffective; so that, although they have perhaps never been formally set forth, they are everywhere the same and everywhere tacitly admitted and recognized, until, on the violation of the social compact, each regains his original rights and resumes his natural liberty, while losing the conventional liberty in favor of which he renounced it. (Rousseau 13-14).
So Rousseau’s social contract theory is that a group of people form a contract where each person retains his liberty, but the people gain the common force, or power, of all the participants in the contract to preserve themselves and their goods. But, the key difference between Rousseau’s theory and that of Hobbes and Locke is that he proposes that each person “…may still obey himself alone…” (Rousseau 13). In other words, Rousseau’s theory requires that the true power of the social contract rests with the individual person. Rousseau explains this concept as the following:

…each man, in giving himself to all, gives himself to nobody; and as there is no associate over which he does not acquire the same right as he yields others over himself, he gains an equivalent for everything he loses, and an increase of force for the preservation of what he has.

If then we discard from the social compact what is not of its essence, we shall find that it reduces itself to the following terms:

“Each of us puts his person and all his power in common under the supreme direction of the general will, and, in our corporate capacity, we receive each member as an indivisible part of the whole.” (Rousseau 14).

At this point, we reach the very essence of Rousseau’s social contract theory: the general will. There are several key points in this passage. First, each person that is a part of the social contract is no better or worse than any other person. Everyone has the same right and power in the whole. Second, each person gives up something to gain the force to preserve his possessions, but gains an equivalent in the community. For example a person may give up the right to kill others when they wrong him, but then the community will judge the transgressors for him and enforce the sentence. Last, the essence of the social contract is when it is formed according to the general will. The general will is central to understanding Rousseau’s social contract theory so it deserves further examination.
Arthur Ripstein stated of Rousseau, “While Hobbes is interested in the causal powers of institutions to motivate, and Locke in the possibility of legitimate institutions, Rousseau’s concern is with the possibility of institutions at all. Rousseau wants to know how an aggregate of persons can become a creator of rights and obligations, able to coerce its members on grounds of freedom” (Ripstein 219). Essentially, Rousseau wanted to understand how a social contract could legitimately form if each individual was to retain his individual rights and powers and how that social contract could direct its members. So, Rousseau developed the idea of the general will. The general will is akin to universal law, which is how Immanuel Kant was inspired by Rousseau in his description of the categorical imperative (Johnson). To understand the general will, first understand that each individual has different desires in life; therefore, each individual has a will that is distinct from the will of every other person. Now, according to Rousseau:

Our will is always for our own good, but we do not always see what that is; the people is never corrupted, but it is often deceived, and on such occasions only does it seem to will what is bad.

There is often a great deal of difference between the will of all and the general will; the latter considers only the common interest, while the former takes private interest into account, and is no more than a sum of particular wills: but take away from these same wills the pluses and minuses that cancel one another…and the general will remains as the sum of the differences. (Rousseau 30).

So, to Rousseau, the general will is will that is only concerned with the common good. The will of all is simply the summation of each person’s individual desires. For example, one person may desire that a hotel is built. Another person desires that a park is built instead. A third person desires that a baseball field is built. And so on. According to Rousseau, the general will is discovered when you eliminate the individual desires. In the above example, the desire to build the hotel cancels the desire to build the park or the baseball field. Any of
these choices is as likely to be the right one as any of the others. As Ripstein states, “If the general will governs the conditions of interaction of the community, it would survive the cancellation of any individual desires by conflicting desires. The general will is the ‘sum of the differences’ not because it is not canceled, but because it cannot be canceled by individual desires” (Ripstein 225). So in the above example, the desires of building the park and hotel and baseball field cancel each other, but the general will is that something should be built. A more specific general will could be that something should be built that is for the community to use without profiting a private entity. As such, building a park or baseball field is closer to the general will than building a hotel, but either the park or baseball field could be the right choice. Individuals may not agree on what should be built, but they all share the desire that something should be built and possibly that whatever is built is for the good of the public and not only a private entity. What is important to understand is that Rousseau saw the general will as the choice that emerged from the entire community as the right choice and that this general will is revealed when you eliminate the choices that are only concerned with an individual and not the community. One important thing to understand at this point is that each individual retains the same power as every other individual even though there is a general will that is concerned with the common good. In terms of the Internet, part of applying Rousseau’s social contract theory is in determining the general will of the collective of individual Internet entities which is what I attempted in my research and describe in the next chapter. With this definition of general will, it is time to turn to Rousseau’s sovereign.

According to Rousseau, the sovereign is the power of the community that acts in accordance with the general will to ensure the common good of all members of the
community. As such, Rousseau stated, “…the Sovereign, being formed wholly of the individuals who compose it, neither has nor can have any interest contrary to theirs; and consequently the sovereign power need give no guarantee to its subjects, because it is impossible for the body to wish to hurt all its members” (Rousseau 17). Again, each person’s interest is just as important as any other person’s interest. But, it is in discussing the sovereign that Rousseau makes a startling and controversial conclusion. He stated, “In order then that the social compact may not be an empty formula, it tacitly includes the undertaking, which alone can give force to the rest, that whoever refuses to obey the general will shall be compelled to do so by the whole body. This means nothing less than that he will be forced to be free; for this is the condition which, by giving each citizen to his country, secures him against all personal dependence” (Rousseau 18). At this point, we see the “socialist” part of Rousseau’s theory because the individual who is not in line with the general will shall be forced to follow the general will. But to completely understand this point objectively, we need to remember the context of Rousseau’s history. He was a great admirer of Sparta, an ancient society where everyone was taught to place the needs and preservation of the community above themselves. But in preserving the community, they also ensured their own personal survival. It is also important to remember that Rousseau’s highest goal for government is to help the individual develop morally. So in Rousseau’s theory, the general will represents what is good for everyone. As everyone maintains their individual rights within the sovereign, the highest moral good is that the sovereign, each person in the whole, acts in accordance with the general will. This statement simply means that the group collectively works for the common good. While it sounds harsh to force someone to follow the general will, Rousseau’s idea is that the individual should subjugate to the community to
achieve this highest moral good of acting with the general will which is for the common good. Again, the community is more important than the individual; but in ensuring the community’s survival and preservation, the individual also benefits. It is at this point, we also see more of Rousseau’s circular reasoning. According to Patrick Riley, “The standard which gives will its object is the very negation of voluntarism. And it is for this reason that Rousseau’s political system is somewhat paradoxical. The idea of general will, the paradox of cause and effect in the contractual situation, the circularity of the concept of virtue—all these are due to an attempt to fuse the advantages of a politics founded on will, and of one founded on reason and perfection” (Riley 185). As Rousseau defines the civil state, “Although, in this state, he deprives himself of some advantages which he got from nature, he gains in return others so great, his faculties are so stimulated and developed, his ideas so extended, his feelings so ennobled, and his whole soul so uplifted, that, did not the abuses of this new condition often degrade him below that which he left, he would be bound to bless continually the happy moment which took him from it forever, and, instead of a stupid and unimaginative animal, made him an intelligent being and a man” (Rousseau 19). So, the highest ideal of the sovereign and this community is to help individuals reach the moral point where each individual is focused in accordance with the general will for the common good. But, the sovereign is formed when people are already in accordance and making decisions for the general will as the sovereign is the result of the general will ensuring that there is a power that can enforce the general will. This situation results in a chicken and egg question: which came first, the sovereign or the general will? This weak point in Rousseau’s theory is a point of contention amongst Rousseau’s critics. And, it is a paradox that must be known when studying Rousseau because general will and sovereignty are the essential ingredients in
his theory. As he stated, “The first and most important deduction from the principles we have so far laid down is the general will alone can direct the State according to the object for which it was instituted, i.e., the common good: for if the clashing of particular interests made the establishment of societies necessary, the agreement of these very interests made it possible…It is solely on the basis of this common interest that every society should be governed” (Rousseau 26). Again, Rousseau is interested in a government that improves the morality of the individual as he understands that the common good should guide how society is governed. It is interesting that Rousseau agrees with Hobbes that the power should be kept with the sovereign. But because Rousseau sees the sovereign as empowered by the general will formed by every individual in the community, he is attempting to reconcile a government that can direct the collective of individuals towards the common good while at the same time each individual is completely free to govern himself. As Riley states: “The general will has continued to be taken seriously because it is an attempted (though not explicit) amalgam of two extremely important traditions of political thought, which may be called, roughly, ancient ‘cohesiveness’ and modern ‘voluntarism’” (Riley 167). These points are important to understand as we explore social contract theory in the Internet because the Internet is composed of many individual Internet users. Each person that goes online to perform some task or use some service is an individual with personal desires and an individual will. If we are to understand the Internet through Rousseau’s eyes, then we must understand how a general will could manifest itself on the Internet through this collective of individuals; however, the vagueness of Rousseau’s general will creates complications in applying his theory.
With Rousseau’s ideas of the general will and the sovereign understood, it is time to examine some of the practical consequences and results of Rousseau’s theory. First, in terms of laws, Rousseau stated that, “The people, being subject to the laws, ought to be their author: the conditions of the society ought to be regulated solely by those who come together to form it” (Rousseau 41). Again, the idea that the citizens make the laws stresses how Rousseau feels that the power of government rests with the individuals even though the individuals should act in accordance with the general will. In supporting this point, Rousseau devotes an entire section to voting. Rousseau stated, “When in the popular assembly a law is proposed, what the people is asked is not exactly whether it approves or rejects the proposal, but whether it is in conformity with the general will, which is their will. Each man, in giving his vote, states his opinion on that point; and the general will is found by counting votes” (Rousseau 116). In other words, every citizen votes on a law and the majority of the votes determine if the law is in accordance with the common good or not. The practical consequence of this theory though is that the size of the group of people has to be taken into consideration. As Rousseau identified, “In every body politic there is a maximum strength which it cannot exceed and which it only loses by increasing in size. Every extension of the social tie means it relaxation; and, generally speaking, a small State is stronger in proportion than a great one” (Rousseau 48). In other words, decisions are harder to make when there are many individuals as opposed to fewer individuals. And if every individual should have a vote on any law, voting becomes more impractical as the number of people grows. Size of land is also a factor. As Rousseau stated, “The men make the State, and the territory sustains the men; the right relation therefore is that the land should suffice for the maintenance of the inhabitants, and that there should be as many inhabitants as the land can maintain” (Rousseau
In other words if a group of people is living on land that cannot sustain them, it does not matter if the sovereign is working for the general will because it is not possible to preserve the citizens on land that is not able to support them.

But, there is another problem with general will and sovereignty as defined by Rousseau. As John Charvet stated:

Since the general will legitimatized constitution specifies a supreme popular legislative assembly operating a majority decision procedure, we can say that the constitutional sovereign—the final decision-making will—is the majority will of the people’s legislative assembly...This majority will may not, on occasion, will the general will. Since the general will is said to be sovereign, and indeed to possess absolute sovereignty, it must be sovereignty in a different sense from that in which the majority will is constitutional sovereign. Rousseau says that when the majority is not willing in accordance with the general will, freedom no longer exists...However, [Rousseau’s] account of the contract includes the standard contractarian argument, to be found in Hobbes and Locke and others, that a necessary condition of political society is the surrender by each contractor of the right of private judgement [sic] that he possessed in the state of nature... (Charvet 205-206).

There are two problems with Rousseau’s theory that Charvet has identified. First, the practical matter of government requires that a sovereign is in place to make decisions. But, this sovereign will follow majority will like in the above example of voting. However, the majority will may or may not agree with the general will which is concerned with the public good. So, there is a practical sovereign and the conceptual sovereign that Rousseau reveres. This situation creates the second problem. If majority will does not always coincide with Rousseau’s conceptual general will, then the majority will that is making decisions in the community is not always in line with the common good. Simply put, what if the majority will is wrong? According to Rousseau, most situations will require simply going along with the majority according to standard contract rules. But, this situation creates problems. For example, what if the majority decides to do away with income taxes? This decision would
not be for the common good because then the government would not have the funds to ensure the community’s preservation. So this decision is likely not in line with the general will, yet it will take precedence because it is in line with the majority will. And Rousseau would say that in order to benefit from the community contract, it is necessary to follow this decision. So each individual is supposed to be free, but each individual is forced to follow the majority. These situations are just some of the practical consequences that result from Rousseau’s theory that will transfer when applying Rousseau’s social contract theory to the Internet. In determining the general will of individual Internet users, it will likely require understanding the majority will as the majority will is easier to determine than the vague general will. However, the consequence is that the majority will does not always conform to the general will.

Rousseau’s social contract theory contains many other points, such as it is permissible for the sovereign to entrust enforcement power. If the power is entrusted to a representative body of people, a democracy is formed. If the power is entrusted with a small group of elite individuals, there is an aristocracy; and, if the power is entrusted in one person, there is a monarchy (Rousseau 69). But, the sovereign still maintains the true power. And, the people must continually consent to the laws and government. Even though Rousseau knew that changes to the government can be dangerous, he did state that it should be changed “…when it comes to be incompatible with the public good; but the circumspection this involves is a maxim of policy and not a rule of right, and the State is no more bound to leave civil authority in the hands of its rulers than military authority in the hands of its generals” (Rousseau 108). Rousseau also identified “That All Forms of Government Do Not Suit All Countries” (Rousseau 84). Again based on size of people and land, government would take
various forms. But whatever form government takes, it must be by a sovereign who works in accordance with the general will. And as every individual is charged with his own preservation, the contract with the sovereign must be formed voluntarily. There are the practical problems in Rousseau’s theory, such as the sovereign being necessary to direct the general will while concurrently being formed from the general will. And, there is the problem that practical majority will is not always in line with the conceptual general will. These problems result from the real-world consequences of executing a theory that attempts to ensure individual freedom while using government to guide everyone towards the common good. But, Rousseau’s ideas of the general will and the sovereign are central to understanding his social contract theory and two of his most important contributions to political theory.

Now that the social contract theories of Hobbes, Locke, and Rousseau have been presented, it is important to identify the major similarities and differences in order to show how the Internet is structured and how interactions between entities occur on the Internet according to social contract theory. The first similarity to understand is how they all describe the state of nature. Hobbes, Locke, and Rousseau agree that in the natural state men and women are essentially equal. People have equal abilities and capabilities. The people also share the need to survive; in most cases, people will have to labor to survive. And, all people also have their own desires that they seek to fulfill as long as they have ensured their survival. But, there is a key difference between how Hobbes viewed the state of nature as opposed to how Locke and Rousseau viewed the state of nature. Hobbes viewed the state of nature as chaotic where everyone warred against everyone. As such, Hobbes felt a sovereign was needed to control the people absolutely. To Hobbes, even a tyrant was preferable to the
anarchy of nature. On the other hand, Locke and Rousseau were not so damning of people in the state of nature. They did not feel nature was a haven for anarchy and war. Locke and Rousseau even allowed for the possibility that people in the state of nature could still cooperate to ensure their survival more easily, even if they were not in a formal community. It is for this reason that they were adamant that governments must have the consent of the people to rule over them. Since Locke and Rousseau did not see the state of nature as negatively as Hobbes did, people must be willing to give up some of their freedoms and natural rights to leave the state of nature and be ruled over by the government. If they choose not to give their consent, they can always continue to live in the state of nature. Additionally, this situation leaves the possibility that a community can be in the state of nature with regards to other people and communities. Each community is governed by laws, but they are in the state of nature in their relationships with each other. As I show these ideas applied to the Internet, we will see Hobbesians and Lockeans existing on the Internet. Hobbesians are distrusting; while Lockeans are reasonable and cooperative. And as there are individual Internet users on multiple levels, it is possible to see different social contract theories present in various ways.

Hobbes, Locke, and Rousseau also agreed that the purpose of government was to ensure that all members in the community meet the basic needs for survival. They agreed that government extended its power to control the community, with laws, to ensure that threats to the community, internal or external, are defended against. But, there are some subtle differences between the theories that I will highlight. First, as Hobbes viewed the state of nature as chaotic, his sovereign had absolute control over the community. People had to submit wholly to the sovereign, and the sovereign’s will was supreme. This situation could
result in tyranny, but this situation was better than Hobbes’s state of nature as long as the sovereign was not murdering the citizens without cause. In contrast, Locke was concerned that people were governed by their consent even after the community was established. As such, tyranny was a situation Locke wished to avoid. So, Locke’s form of government had separation of powers to ensure that no one person had too much power. Additionally, people did have the right to overthrow the government if it no longer served their interests. Locke felt the government not only should protect their natural rights, but also the fruits of their labors, like property. Rousseau was also concerned that government should rule with consent of the governed, but he also envisioned a sovereign. However, Rousseau’s sovereign is very different from Hobbes’s sovereign. Rousseau’s sovereign was charged to act with the general will, the will concerned with the common good of the community. As such, the sovereign was empowered and formed from the general will. Because of this situation, unlike Hobbes and Locke, Rousseau saw government as a way for the community to improve morally by always acting in accordance with the general will for the common good. And because the government was empowered by the general will, Rousseau’s sovereign is actually the collective of individuals of the community. With this in mind, Rousseau understood that factors, such as community size and distance between people, could affect the power of the sovereign to act because it was harder to coordinate decisions amongst large groups of people or across great distances. But, Rousseau probably did not envision the Internet where distance is not as much of a problem. While there are physical distances between the physical components that comprise the Internet, in the virtual side of the Internet distances are not as troublesome. It is possible to visit a website in another country and communicate with other users that are far away in seconds, so it is possible to have larger
communities on the Internet through Rousseau’s theory. With social contract theory and these key points understood, it is time to examine how the Internet is structured while exploring how the various social contract theories apply to the Internet.

As someone who is very familiar with the Internet through my career in computer security, I found it very illuminating to re-examine the structure of the Internet and the various interactions between individual Internet entities through the lens of classical social contract theory. I conducted several field investigations to better understand what I already know about the technical structure of the Internet, but also to reveal the characteristics of social contract theory that I expected to see based on my research of Hobbes, Locke, and Rousseau. From the beginning, I have stated that my purpose has been to show how classical social contract theory can help in understanding how Internet is currently implicitly governed. By understanding this Internet governance, it then becomes possible to explore ethical issues within this model. In the next chapter, I describe the technical structure of the Internet and how this structure has created an environment that is well-suited to realizing classical social contract theory because there are relationships that have formed that follow the theories of Hobbes, Locke, and Rousseau. As I describe the field investigations, I show how they reveal the relationships on the Internet that parallel the characteristics I have summarized from social contract theory. In doing so, I prove that Internet governance, in the form of the relationships and interactions among the individual Internet entities, can be understood through classical social contract theory in a practical way that allows for better exploring ethical issues on the Internet.
Chapter 3-The Social Contract in the Internet

The first thing that must be understood with regards to the Internet is that there are two aspects of the Internet: the virtual structure of the Internet and the physical structure of the Internet\(^8\). I alluded to these aspects earlier in my thesis, but I now explain them in detail. The virtual structure of the Internet is what we are all familiar with when we surf the Internet. From any computer in the world, we expect to be able to see the various websites we like to explore. And these websites are essentially the same whether we surf the Internet on a personal computer (PC), laptop, personal data assistant (PDA), personal cellular phone, etc. The physical structure of the Internet is the collective of physical devices, such as routers, servers, computers, etc., on which the virtual structure of the Internet, formed by the software of the various websites, resides. It is not necessary to understand all of the intricacies of networks and the various devices and systems that make the Internet possible, but it is important to understand the high-level view of how the Internet is structured so that the various interactions and relationships among Internet entities can be understood through social contract theory.

I will begin describing the building blocks of the Internet starting with single users, or single Internet entities. As I describe these building blocks, I will also show how the social contract views of Hobbes, Locke, and Rousseau appear in the interactions among these blocks. As this description unfolds, there are several key threads to pay attention to: 1) the state of nature at the building blocks; 2) the two parts of the Internet, the virtual and the

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\(^8\) For those of you familiar with the Open Systems Interconnection (OSI) network model or other network models, I hope you are not offended by these definitions. For the purpose of this thesis, it is only necessary to understand that there is a physical structure on which the Internet we see resides. For those of you who would like to understand more about networks, understanding the OSI model is a good start for further research.
physical; 3) the interactions among each of the Internet entities; and 4) how the views of Hobbes, Locke, and Rousseau appear through these interactions.

First, I begin with the most basic element of the Internet: single users. The following figure shows two single users: Alice and Bob.

![Figure 1: Single Internet Users](image)

In the above figure, Alice is using a PC and Bob is using a laptop. Even in this simple illustration of two single users, there are building blocks for the Internet. First, both Alice and Bob have local web pages on their machines. In other words, there is a local virtual Internet on each physical machine. Alice and Bob can each explore help pages, program information, directories, etc. using their Internet browsers. To clarify, a local machine, or local host, is what I am referring to as housing the local Internet. At this level I am describing, this local Internet does not have any connections to outside networks. It is strictly the virtual Internet environment that resides on the user’s local host machine. With that being stated, I will expand on the key threads that I mentioned earlier in this chapter.
First, the state of nature in this situation is that there are two individuals. These individuals do not have a connection to the outside Internet, the World Wide Web, just the local Internet on their individual machines. But, they are still able to explore this local Internet. The following figure shows an example of such local “surfing.”

![Figure 2: Local Surfing](image)

In this figure, I have explored the same directory on my computer: first, through the Windows® explorer most people are familiar with; then, through an Internet browser. This example is simply an illustration that there is a local Internet available to single users. In this state of nature, single users are able to explore freely on their computer with no restrictions. This statement means that single users have complete freedom in their local surfing, but it

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9 All figures are either original pictures, original compilations from referenced art, or original screenshots of referenced websites. The footnotes for each figure contain the abbreviated citations of any non-original material. The full citations are contained in the References section. (C) (L)
also means they are the only ones responsible for their local surfing. In other words if they want to maintain their local surfing, they need to take whatever steps are necessary to perform this surfing, such as preserving the physical structure on which this local Internet resides. This situation is similar to the state of nature Hobbes, Locke, and Rousseau described in that men in the state of nature are able to pursue their individual desires as long as their needs for survival are met. In this state of nature, the reason single users have this freedom and responsibility with regards to the local Internet is because they control this physical structure. In most cases, single users own this device. This situation brings us to the next thread.

As shown in the example above, there is a virtual part to the local Internet. In this example, it is the view of the directory I explored. But, there is also a physical structure to this local Internet. This physical structure at the highest level is the actual computer I used. At the lowest level, the physical structure comprises the actual bits of data saved on my hard drive in the computer. It is not important to understand this physical structure completely, but it is important to know that it exists. It is also important to understand, as stated earlier, that the physical structure has influence over the virtual structure. If the computer fails, the hard drive breaks, or there is a power outage, then I will not be able to explore the directory as above. If I want to explore this directory, or any other area on my computer, I must maintain the physical structure on which it resides. I must ensure that the computer works and that it has power. If I want to consider future use, I must also think of security, such as

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10 Windows® is a trademarked property of the Microsoft Corporation. Mozilla Firefox is a property of Mozilla Corporation.

11 An exception is that guest users on a local computer may not have the same authorization as administrators to explore all areas of the computer. If this is the case, then guest users will find some areas blocked. This situation may be the result of the guest user not owning the computer, but instead using the computer of another
physically protecting the computer so it is not damaged and backing up my data on multiple hard drives for redundancy. So in the first example, Alice and Bob are each responsible for their computers; and, Alice and Bob must maintain those computers in order to explore their local Internets. Another way that the physical structure influences the virtual structure is that computers have different capabilities in terms of performance. For example Alice’s computer may be able to store more data, but Bob’s laptop may process data faster and allow him to explore his directories quicker. The difference in physical performance will change the way the virtual structure is explored and used, which leads to the next thread of how interactions occur at this level.

Alice and Bob are free to explore their individual local Internets; since there are no connections to an outside network, Alice and Bob are restricted to their own individual local Internets. But, Alice and Bob are not limited in how they explore the local Internets. In other words, as with Locke’s and Rousseau’s definition of man in the state of nature, there are no limits on Alice’s and Bob’s desires. But, there are limits on their capabilities. They are free to explore the local Internets, but they are not capable of exploring beyond them at this point. This freedom leads to the last thread of how classical social contract theory applies to the single user.

As shown in the preceding sections, single Internet users are individuals with complete freedom and control in exploring the local Internet that resides on their individual machines. They essentially have no restrictions on where they wish to go within the individual or company. As such, the guest user does not have the same control over the physical structure because he doesn’t own it.
As stated earlier, the exception is that guests may not have full access to a computer’s resources as does an administrator. This situation is common in companies where employees have limited accounts that allow them to perform their job function, but only system administrators can control everything on the computer. This
a key component of Locke’s social contract theory as it is the result of a person’s labor. When a person owns a computer, they own the physical structure of the Internet and the virtual structure of the local Internet. The person has files on the computer, personal data, created documents, etc. Even if the person is using software he did not develop, he has labored to pay for the rights to use that software. He also owns his personal data associated with that software. For example if a person purchases a computer video game, he has paid for the right to use that game on his computer. Unless the game’s developers allow it, he may not have access to the source code from which the game is formed. But, he will own the right to use the computer game on his personal physical property which means he will also own the data on his computer associated with that game, such as saved games, personal game profiles, etc. It is important to recognize this property, both virtual and physical, because together they will help create a person’s identity on the Internet. The important point to understand at this level of investigation is that a single user can be viewed as Hobbes’s sovereign, in the sense of retaining ultimate control and power of the local Internet, or as a Lockean with the personal stake of protecting his property, both virtual and physical in the state of nature.

Having explored the single Internet user through classical social contract theory, it is time to consider what happens when Alice and Bob decide to connect their local Internets to facilitate more Internet surfing. The below figure shows some ways Alice and Bob may connect their local Internets to form a “larger” Internet.

situation allows a company to safeguard the computers it is responsible for, and this will be addressed further in this thesis. However, it is true that guests can explore the computer completely within their boundaries.
In this figure, we see Alice and Bob connecting their machines in three different ways. These ways are not the only ways they could connect their computers, but it illustrates some

\[ \text{Figure 3: Two-Person Network}^{13} \]

\[ \text{(C) (H) (L) (WF)} \]
common ways. In the first method, Alice and Bob connect their computers directly using a crossover Ethernet cable. In the second method, Alice and Bob connect their computers by connecting to a hub. A hub is a physical device that allows computers to connect together on a common communication medium, and it acts as a relay for sending the information between the machines connected on the hub. In the third method, Alice and Bob have established a wireless ad hoc network. It is not important to understand all of the particulars of how these different methods work, but it is important to understand that now Alice and Bob are connected on a network that joins their two machines allowing them to have a two-person Internet. The more technical term for this two-person Internet is a local area network (LAN). With this LAN established, let’s revisit the four threads that I have explored.

The first thread is the state of nature. We still have the situation that Alice and Bob are individuals with regards to the local Internet, but now there is a relationship to each other through the LAN they have established. We will revisit this relationship further; but for now it should be understood that if Alice and Bob wish to share information or explore the LAN, there has to be some type of agreement between them on how this interaction will occur. Secondly, we have already explored how the individual machines affect the virtual Internet, but now we must consider the physical connections and devices allowing the LAN. As stated earlier the examples shown above are not all-inclusive, but there are characteristics that all physical connections have in common. First, there is a limit on distance. Cables have a certain distance that can be used before signal degradation requires another device to amplify the signal to keep it strong. Even wireless connections have a distance limit. You can liken this to losing radio station signals from driving out of range of the transmitters. As before, the physical devices allowing the connections must be maintained, but they must also be
managed according to the agreement that Alice and Bob form for their interaction on this LAN. This point brings us to the next thread concerning interactions.

For Alice and Bob to interact, as stated already, they need an agreement about how they will utilize the LAN. For example, they could use the LAN to share their local machines completely. Or, they may only want to share some information. Maybe their LAN will be a temporary setup for a quick information transfer; or, they may want to set up a permanent LAN to facilitate long-term interaction. Additionally, they will need to account for how close they want to be to each other physically when connected to the LAN. For example, will they connect the LAN in the same room or will they want to be in separate rooms in the same house? In any case, Alice and Bob will have to create a physical structure that will facilitate the interaction they want to have on the LAN. As noted earlier, the physical infrastructure will influence how the virtual Internet will function. But, now how does social contract theory manifest itself in this LAN?

As noted before in the example of single users, both Alice and Bob are essentially Leviathans with regards to their personal local Internets or they can be viewed as Lockeans with personal property interests. But, in this LAN there is an additional relationship that has been established: the information sharing between Alice and Bob. And, it can take on one of two forms. If Thomas Hobbes was reviewing this LAN, he would see Alice and Bob as in the “state of war.” As such, he would expect Alice and Bob to not trust each other. Essentially, Hobbes would expect both Alice and Bob to act only in accordance with their personal best interests, even if it means that Alice and Bob may seek to improve their separate positions by undermining each other. Alice and Bob may have to set up the LAN for survival, but they would most likely desire a network that would facilitate the minimum
possible interaction they require. They may place a firewall, intrusion prevention system (IPS), and other components that would allow them to connect to share information; but, the components would also allow Alice and Bob to protect themselves from sharing too much information with each other. The components would also allow Alice and Bob to protect themselves from computer-based attacks from each other. Additionally, Alice and Bob may disconnect the network once it is no longer needed. With all of these safeguards in place, Alice and Bob may still seek to undermine each other to gain an upper hand over the other.

If John Locke was reviewing this LAN, he would recognize that Alice and Bob may be able to cooperate with each other without being distrustful. While he would approve of some basic protective components as a computer network equivalent of political checks and balances, he may not expect that Alice and Bob will simply use the LAN as an opportunity to attack each other to better their personal positions as Hobbes would. Locke would recognize that Alice and Bob can share the LAN and benefit mutually. But, Locke would also recognize that Alice and Bob have property they must protect. These properties Alice and Bob must protect are their local machines and contents, as was described earlier. For a Lockean relationship Alice and Bob would likely employ a basic network with some minimal protection, but they would not be immediately distrustful of each other. In this Lockean relationship, Alice and Bob could exchange information in a mutually beneficial way. The main point to understand is the point I established earlier in my description of classical social contract theory: the differing views of Hobbes and Locke in terms of social contract theory first develop from their differing views of how people act in the state of nature. As such, the differing views of how people act in the state of nature can also be translated to the Internet. Let me expand on this explanation with a practical example.
If I establish a connection with someone, or an outside network, that I do not trust or know well enough, I treat the situation as a Hobbesian situation. I make sure I have all of my software protections enabled: anti-virus software; firewall; anti-spyware; etc. If possible, I also place additional physical devices between my computer and the outside entity that further guard my computer. With these layers of protection, I will still disconnect from the outside entity when the connection is no longer required. These actions are in contrast to how I act when I connect my computer to a trusted network or friend. I simply connect my computer and begin using the established network connection. I act this way in this situation because even though I still have no physical control or ownership of the outside entity, I have a reasonable trust that the connection will not be abused or my property compromised by using the network. As with any exchange of services, there are costs and benefits to using outside networks. Each situation requires an assessment of these costs and benefits; and, this assessment will determine if the relationship to the outside entity should be Hobbesian or Lockean. This situation parallels a well-known maxim in computer security: security and convenience must be constantly balanced. As more security is placed on an information asset, it is usually less convenient to use that information asset. The more convenience in using an information asset usually indicates that it is less secure. The amount of security must be weighed against the usability of the information asset according to its intended function. For example, some video games that are played across the Internet require relaxing some protections on the computer and the local network to allow speed and real-time playing. But, online bank transactions require more security even if there is a cost in time to establish these connections.
These same threads and situations result if we add Charlie to the group. The following figure shows how this interaction might happen.

![Figure 4: Three-Person LAN](image)

In the above figure, Alice is connected directly to a wireless router by an Ethernet cable. Bob is connecting to the same wireless router using a wireless connection. Charlie is also connecting to the router wirelessly, but Charlie is using a PDA instead of a PC or laptop. As earlier, we see the same characteristics and threads under review. First, Alice, Bob, and

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14 (C) (L) (P) (WF) (WR)
Charlie are individuals with ownership and responsibility for their individual devices, but they now have a relationship with each other through the LAN. The LAN is influenced by the physical infrastructure. Alice, Bob, and Charlie are restricted by physical distance in their network based on the physical capabilities of the components used. Alice, Bob, and Charlie can also decide how their interactions through the LAN will occur. And, again, the interactions can be observed as Hobbesian, state of war, or Lockean, cooperative state of nature. The new aspect that is added, however, is that perhaps two out of the three users cooperate while distrusting the third. For example as Alice and Bob have been working with each other, they may allow each other more access to their individual local Internets. But, they distrust Charlie so they make sure their LAN is protected from him. In this example, Alice and Bob are acting in a Lockean way with each other while treating Charlie in a Hobbesian way as an outsider to their LAN. The following figure shows how these two LANs may interact. As shown there is a common area for both LANs, but there are distinct zones of interaction. The blue oval signifies how Alice and Bob establish rules for their interaction; and, the red oval signifies the rules that govern Charlie’s interaction with Alice and Bob.
Now while I have explored simple building blocks to this point, the Internet becomes formed from these building blocks. Individual users join LANs. LANs form into wide area networks (WANs) to cover more distance. WANs form into metropolitan area networks (MANs) to interact with WANs in a city. And, so on. The Internet is usually nicknamed the

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15 (C) (L) (P) (WF) (WR)
“Information Superhighway\textsuperscript{16}.” This is an appropriate nickname because of how these networks form. For example, consider the interstate highway system. It would be impractical for El Paso, Texas, to have a highway straight to New York City, New York, and to Atlanta, Georgia, and to every other city in the United States of America. It would not be possible to have that many highways leaving any one city. Instead, you have several major highways leaving a city. These highways lead to various junctions that connect to other highways. People can change highways and roads at various junctions in order to get to their ultimate destination. By designing the interstate highway system in this way, there are as minimal “connections” among cities as possible. Heavily travelled areas will have more highways than less travelled areas. And it is not necessary to spend the money, labor, and time to build highways over every square inch of the United States.

The same “road building” situation happens with the Internet. Cables, wireless connections, satellite connections, etc. all have physical limits. And, it would be impossible and impractical to connect every person to every other person in the world. While such a situation is practical for small LANs, the Internet requires a different solution. So there are routers, servers, and switches that serve as junctions on the “Information Superhighway.” These junctions allow people to interact with the various virtual facets of the Internet, no matter where they are physically located, as if they were directly connected to them. Consider the following figure:

\footnote{\textsuperscript{16} An interesting note is that during the course of developing my thesis, I was exposed to the art of Nam June Paik (1932-2006), who first used the term “electronic superhighway” and created works of art that explored how information and media has re-defined American culture (Nam June Paik). I think this is true of the Internet, which is why I explored it in this thesis.}
The above figure is a screenshot of what I see when I go to the Google™ home page on the virtual Internet. But, the following figure shows what happens when I trace my connection to Google™ starting from my home computer.

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17 (GG)

18 Google™ is a registered trademark and property of Google™.

19 Note: Some information has been blocked out for security reasons.
The above figure shows a `tracert` command to `www.google.com`, which anyone can execute from a home computer. This command traces my connection to Google™ through the various junctions, or “hops”, which the information from my computer has to go through in order for me to access the Google™ home page. As the figure shows, there were 12 “hops” between my home computer and the Google™ home page. By looking at the names and Internet Protocol (IP) addresses past my network, the information went through three routers in El Paso, Texas; then, to a router in Dallas, Texas; then through two routers in the Dallas-Ft. Worth, Texas area; and, then through three more routers, or servers, before reaching the server that hosted the Google™ home page. Let’s examine this typical Internet connection according to the threads I have detailed. First, for the state of nature, I am an

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20 An IP address is essentially the equivalent of a house number, but on the Internet. IP addressing allows routers and switches to direct data to where it needs to go.
individual in charge of my computer with property, both physical and virtual, that I own. But, I also manage two of the 13 connections shown above. So, I am the sovereign of my computer as well as those two routers. Those two routers are also physical properties I own that contain virtual properties I own. As shown in the two figures I can see the Google™ home page as part of the virtual Internet, but there is a definite physical infrastructure, part of which I control. But, in terms of interactions, while I have personal control of part of the physical infrastructure allowing me to communicate to the Internet, I have no control over any of the other points.

This situation described in the previous paragraph is the situation every Internet user is subject to; every Internet user has some physical control over the entry point to the Internet and perhaps some devices that help this connection, but every Internet user does not have complete control over how he connects to the Internet. As I’ve stated several times already, the physical infrastructure affects the virtual structure of the Internet. For example if I decide to not go on the Internet from my home computer, I can simply shut down my router. This shutdown effectively takes my computer off the Internet, and there is nothing anyone can do through the virtual Internet to change it back. On the same note if the router in Dallas shuts down, my interaction with the Internet will be affected. It is possible that the shutdown will prevent me from reaching certain websites, but it is more likely that my traffic will simply be routed through other “hops” and junctions to get me to my virtual destination. The benefit of having an Internet that is formed from many connecting nodes with redundant connections and multiple paths, just like the interstate highway, is that traffic can simply be re-routed

21 An exception to this situation is a person connecting to the Internet from a work computer. In this case, it is likely that the company retains complete control of the computer and restricts the employee in how he interacts with the Internet (i.e. not visiting pornographic sites, not downloading pirated material, etc.). In some cases, this policy is outlined in an explicit acceptable use agreement.
when one connection is down. This situation is likened to a detour on the highway or city street when there is construction and the road is closed. These redundant connections also allow for multiple relationships to exist on the Internet between Internet entities. Unlike in Rousseau’s time, it is now possible for individuals to interact across great physical distances instantly through the virtual Internet. But, the physical infrastructure cannot be ignored; it is possible to control this physical infrastructure as a Hobbesian or a Lockean. And, the way the physical aspect of the Internet is controlled will affect how the virtual aspect of the Internet is used. The first field investigation I conducted shows the physical and virtual aspects of the Internet and how they can be viewed through social contract theory.

For my first field investigation, I traveled around El Paso with my netbook to various WiFi hotspots to access www.yahoo.com. Like any good study, I minimized the variables as much as possible so I could note the variations with some certainty. The first variable I entered into the study is that when I used my netbook at home, I employed a wired connection to the Internet. When I used the netbook around El Paso, I used a wireless connection to the Internet. As I’ve described before, the type of physical connection is not relevant. There are differences in signal strength and distance, but both connection types allowed me to connect to the Internet. So for this investigation, this variable is not an issue. The other variable I introduced into the study was location. This variable is an important one because I was accessing the Internet from different physical locations. The result that I expected from this variable, and that is shown below, is that I would be routed through different physical relays, or “hops”, to get me to www.yahoo.com. The last variable that was introduced into the study was necessarily time as I had to travel to the different physical

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22 www.yahoo.com is a property of Yahoo! Inc.
locations. The following figures are screenshots from the various locations. In each case, the following were the constants:

1. The same netbook was used at all locations.

2. The destination website was the same at all locations (www.yahoo.com).

3. The same command was used at all locations (tracert www.yahoo.com).

As you review each figure, note the differences in the tracert results. There are also differences in the trends noted by the Yahoo!® website. I will address these trends later in this thesis as they are an important indication of Rousseauean social contract theory. While it is not clearly shown in the screenshot, in each case, the Yahoo!® website looked essentially the same.  

![Figure 8: Accessing Yahoo!® From West El Paso](Image)

23 Note: Some information has been blocked out for security reasons.

24 (YH1), Note: My desktop background that is partially seen in Figures 8-17 is a Watchmen background that is copyrighted by Paramount Pictures, Legendary Pictures, DC Comics, and Warner Bros. Studios.
Figure 9: Accessing Yahoo® From Central El Paso

Figure 10: Accessing Yahoo® From East El Paso

25 (YH2)
26 (YH3)
Figure 11: Accessing Yahoo!® From Far East El Paso

Figure 12: Accessing Yahoo!® From Home (Northeast El Paso)

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(YH4)

(YH5)
The following table indicates the key points shown in the above screenshots.

<table>
<thead>
<tr>
<th>Physical Location</th>
<th>Connection Type</th>
<th>Entry Internet Protocol (IP) Address</th>
<th>Destination IP Address</th>
<th>Time Accessed</th>
<th>Date Accessed</th>
<th>Number of Hops</th>
</tr>
</thead>
<tbody>
<tr>
<td>West El Paso</td>
<td>Wireless</td>
<td>10.128.43.129</td>
<td>209.191.122.70</td>
<td>6:56 P.M.</td>
<td>4 September 2010</td>
<td>14</td>
</tr>
<tr>
<td>Central El Paso</td>
<td>Wireless</td>
<td>209.136.32.113</td>
<td>72.30.2.43</td>
<td>7:30 P.M.</td>
<td>4 September 2010</td>
<td>8</td>
</tr>
<tr>
<td>East El Paso</td>
<td>Wireless</td>
<td>10.247.238.1</td>
<td>209.191.122.70</td>
<td>8:39 P.M.</td>
<td>4 September 2010</td>
<td>13</td>
</tr>
<tr>
<td>Far East El Paso</td>
<td>Wireless</td>
<td>216.253.7.205</td>
<td>72.30.2.43</td>
<td>9:45 P.M.</td>
<td>4 September 2010</td>
<td>10</td>
</tr>
<tr>
<td>Home (Northeast El Paso)</td>
<td>Wired</td>
<td><em><strong>.</strong></em>.<em>.</em></td>
<td>209.191.122.70</td>
<td>10:42 P.M.</td>
<td>4 September 2010</td>
<td>14</td>
</tr>
</tbody>
</table>

The bold data indicates one constant: the date accessed. The other constants were that the same netbook was used and the same destination website (www.yahoo.com) was accessed from all five locations. Additionally, as shown above, the same tracert command was used at all of the locations. From the above table and the screenshots, there are a few characteristics that can be ascertained from investigating the variations. First, even though the Yahoo!® home page looked essentially the same, there are at least two redundant destinations that host this website that are accessible from El Paso, noted by the following IP addresses:\(^{31}\): 209.191.122.70 and 72.30.2.43. Second, by the changes in the number of hops and the various IP addresses of each of these hops, there are clearly differing relays to the

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\(^{29}\) Table 1 is a compilation of data obtained from Figures 8-12, derived from (YH1), (YH2), (YH3), (YH4), and (YH5).

\(^{30}\) The number of hops includes the entry and destination points.

\(^{31}\) Internet Protocol (IP) addresses are the virtual Internet addresses of physical devices. It is possible to fake this address, and it is possible for a physical device to have multiple IP addresses. Detecting these differences requires sophisticated techniques that I am not allowed to use on networks without permission from the owners.
Yahoo!® home page from El Paso depending on from where in El Paso you attempt to gain access to the Yahoo!® home page. There are surely other relays available around El Paso. But this small study illustrated the point that while the virtual structure of the Internet, in this case the Yahoo!® home page, is essentially the same, there are different physical structures that allow a connection from a single user to the website. Although the physical structures from each of the physical locations had some commonalities, there are enough differences to make this claim.

But, there are other important variations to note that illustrate how differently users can control access to the virtual Internet. First, note Figure 8 which shows the access from West El Paso. The phrase “Request timed out” shows up in the tracert command results. This phrase indicates that the businesses past the West El Paso business employ security precautions to prevent this command from disclosing the IP addresses of the devices they control. Since the IP addresses of eight relays are not shown, it is not possible to determine how many distinct businesses control these relays. Another important variation is that the businesses at West El Paso and East El Paso require users to agree to an acceptable use agreement to access the virtual Internet from these locations. The other businesses, excluding my home network, simply allow users to connect directly to the Internet. The West and East El Paso businesses employ these acceptable use agreements to protect themselves from any liability should users abuse their access to the virtual Internet. What is important to realize is that if a user does not agree to the terms of the acceptable use agreements, then he will not be allowed to access the virtual Internet at these businesses. In other words, the West and East El Paso businesses exert more control over their physical structure to control how users access the virtual Internet that exists past these businesses.
This situation is a perfect example of Hobbesian principles at work. The West and East El Paso businesses act as sovereigns on their physical infrastructure, which in turn controls who can access the virtual Internet through their physical infrastructure. The Central and Far East El Paso businesses simply allow users to connect to the virtual Internet. It is possible that they have legal documentation that exempts them from liability should the users abuse their access to the virtual Internet, but it is not announced explicitly as with the West and East El Paso businesses. Even though the West and East El Paso businesses have an explicit agreement to use their Internet access, the social contract relationship that is developed is implicit as it is not the purpose of the agreement. And, the users do not have to agree to the acceptable use agreement; but if they don’t, they cannot use the Internet access from these businesses. This agreement is likened to political consent. Even if we decide to view the West and East El Paso businesses as Lockean, we still see a clear difference in how they regard their property when compared to the Central and Far East El Paso businesses because they employ more protections to safeguard their physical and virtual property.

In the larger sense, if we consider businesses on the Internet, they are essentially single Internet entities just as single users. The only difference is that they control more physical assets than the average single Internet user. But, the relationships I have described scale in this direction. If a company decides to place itself and its employees on the Internet, then there is still physical and virtual property that must be controlled and protected. Many companies require their employees to sign acceptable use agreements that state how they are allowed and not allowed to use the Internet through the company’s information assets. Additionally, many companies block certain websites out of concern for content, security, and productivity. All of the companies I have worked for have had strict rules against
visiting pornographic sites or video sites from company information assets. At a company where I was a security guard during college, the computers were also physically locked down to prevent theft. We can understand this relationship as Hobbesian because the company is controlling the physical and virtual structure of the local Internet, but it can also be viewed as Lockean because the company is essentially protecting its property out of concern for business survival. And, the employees are accepting the rules of the company for their own career survival. At the same time, the company may have connections to other companies, or other branches of the same company, so there are Lockean business relationships of mutual cooperation in order to exchange information. But the company must also guard itself against competitors and other threats, so the company will at the same time act Hobbesian to guard against threats to its survival. The important point to understand is that a case can be made to understand the Internet relationships we are exploring through classical social contract theory. But, the other important point to understand is that in the dynamic environment of the Internet, with its many paths and redundancies, it is possible to employ different relationships at different levels depending on the needs of the Internet entity. Ultimately, it is possible for a single Internet entity to have Hobbesian and Lockean principles at the same time depending on who or what the entity relates with on the Internet.

In my study, I established that there are different physical structures that allow single users to access the virtual Internet. The building blocks that I have described are present on the Internet. There are single users, small LANs, WANs, MANs, etc. all present on the Internet and interacting with each other. I have described how social contract theory applies to the building blocks I’ve described, but how does social contract theory apply to the larger Internet? There are certainly Hobbesian and Lockean principles at work. Internet users,
including companies, can be mistrustful of others and employ protections to ensure that their physical and virtual property is controlled and protected. At the same time, there are Lockeian relationships as Internet users must have trustful and cooperative relationships with other Internet entities in order to share information, such as banking information, medical information, etc. Additionally, Internet users must also trust entities they do not physically know because those entities protect their virtual property. For example, many users must trust other entities that store the virtual property of medical information, e-mail inboxes, banking information, etc. So, a complication results in that Internet users are not able to protect all of their virtual property; they must trust that other Internet entities are protecting their virtual property. In some cases this situation prompts users to only share the minimum amount of information, as Hobbes would, or to trust that there will be no abuse of their virtual property, as Locke might. But Locke would understand that there could be some abuses, so he would also favor having some protection of virtual property. He might favor that Internet users share information only with entities that can be explicitly trusted or that Internet users share the minimal information at the beginning of the relationship and gradually build trust over time. It is clear that both Hobbesian and Lockeian principles can be used to describe Internet relationships, but I think there is more to describing the Internet; and, I think we can better understand the Internet if we also recognize how Rousseauian social contract principles can be used in the Internet.

Like Hobbes and Locke, Rousseau recognized that individuals in the state of nature had the right to survive. But unlike Hobbes and Locke, Rousseau proposed a political community where the individuals still retained the ultimate power. Understanding this point, the Internet is a wonderful environment to explore this principle because there are many
individual users with no clear central control. And in the Internet, it is possible for these many individual users to interact quickly and efficiently. Another important point from Rousseau’s theory is that he recognized a general will, which was the will that worked for the common good. Rousseau’s ideal community was the community where the individuals in the community retained ultimate power and made decisions according to the general will. To explore this concept further and to illustrate how I surmise Rousseau’s social contract theory applies to the World Wide Web, I conducted three more investigations.

During my first study, I noticed that the trends that were listed on the Yahoo!® home page changed frequently. To understand this phenomenon more clearly, I conducted a second study. In this study, I again had controls and variables. The controls were that I accessed the Yahoo!® home page from the same laptop, the same physical location, and on the same night, October 5, 2010. The other control was that I repeated this access every 15 minutes or so. I wanted to track the changing trends to see how they changed over time in a more controlled manner than during my first investigation. While the time intervals were fairly consistent, the important control was that I repeated the same steps at each interval. In the following figures, pay attention to the changing trends.
Figure 13: Accessing Yahoo!® At 7:01 P.M.  

Figure 14: Accessing Yahoo!® At 7:18 P.M.  

(YH6)  

(YH7)
Figure 15: Accessing Yahoo!® At 7:34 P.M.  

Figure 16: Accessing Yahoo!® At 7:51 P.M.  

34 (YH8)  
35 (YH9)
The following table synopsizes the above figures so that the changes in the trends are more easily seen.
Table 2: Variations in Yahoo!® Trends

<table>
<thead>
<tr>
<th>Time Accessed / Position</th>
<th>7:01 P.M.</th>
<th>7:18 P.M.</th>
<th>7:34 P.M.</th>
<th>7:51 P.M.</th>
<th>8:07 P.M.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. UFO Sightings</td>
<td>UFO Sightings</td>
<td>UFO Sightings</td>
<td>UFO Sightings</td>
<td>UFO Sightings</td>
<td>Lion Attack</td>
</tr>
<tr>
<td>2. Marlo Thomas</td>
<td>Lion Attack</td>
<td>Lion Attack</td>
<td>Rumer Willis</td>
<td>Bret Michaels</td>
<td></td>
</tr>
<tr>
<td>3. Rumer Willis</td>
<td>Rumer Willis</td>
<td>Rumer Willis</td>
<td>Lion Attack</td>
<td>Dana Delany</td>
<td></td>
</tr>
<tr>
<td>4. Stock Prices</td>
<td>Stock Prices</td>
<td>Stock Prices</td>
<td>Stock Prices</td>
<td>Stock Prices</td>
<td></td>
</tr>
<tr>
<td>5. Weight Loss</td>
<td>Weight Loss</td>
<td>Weight Loss</td>
<td>Weight Loss</td>
<td>Weight Loss</td>
<td></td>
</tr>
<tr>
<td>6. Susan Boyle</td>
<td>Marlo Thomas</td>
<td>Marlo Thomas</td>
<td>Marlo Thomas</td>
<td>Jay Cutler</td>
<td></td>
</tr>
<tr>
<td>7. Lisa Rinna</td>
<td>Susan Boyle</td>
<td>Lisa Rinna</td>
<td>Lisa Rinna</td>
<td>Danny DeVito</td>
<td></td>
</tr>
<tr>
<td>8. Keira Knightley</td>
<td>Lisa Rinna</td>
<td>Susan Boyle</td>
<td>Jay Cutler</td>
<td>Taylor Swift</td>
<td></td>
</tr>
<tr>
<td>9. Chile Mine Rescue</td>
<td>Taylor Swift</td>
<td>Keira Knightley</td>
<td>Taylor Swift</td>
<td>David Archuleta</td>
<td></td>
</tr>
<tr>
<td>10. Social Security</td>
<td>Social Security</td>
<td>Social Security</td>
<td>Social Security</td>
<td>Social Security</td>
<td></td>
</tr>
</tbody>
</table>

I will not explain all of the trends, but I will draw out some points. During the course of about an hour, “Stock Prices” and “Weight Loss” stayed at positions 4 and 5 while “Social Security” stayed at position 10. “UFO Sightings” remained at the top until “Lion Attack” took over the top spot. In fact, “Lion Attack” moved from position 2, then 3, then finally to the top (YH6) (YH7) (YH8) (YH9) (YH10). According to "Yahoo Testing New 'Infinite Browse' Module with News; 'Yahoo Trending Now' List Moves to Home Page," the Trending Now list on the Yahoo!® home page indicates the popular searches that people are making on the Yahoo!® search engine (Yahoo Testing New…Home Page). In other words, the position of an item in the list indicates its popularity in searching by Internet users. The

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37 Table 2 is compiled from data collected from Figures 13-17, derived from (YH6), (YH7), (YH8), (YH9), and (YH10).
higher the position of an item, the more Internet users are searching for that item using the Yahoo!® search engine. I suspect that the active understanding and tracking of these trends can give a hint of the general will in the sense that they are an indication of where the interests of individuals are focused towards. As I explored before, the majority will does not always conform to general will; but for practical purposes, the general will can be explored through understanding the majority will. By understanding what the majority of Internet users are exploring on the Internet, the general will of the Internet can also be explored. But, this concept demanded further investigation. First, the trends that show up on the Yahoo!® Trending Now list are only those trends that result from the Yahoo!® search engine. Second, the Yahoo!® Trending Now lists I explored in my study are for a specific region 38. There are different Trending Now lists when other regions around the world are considered. Given that I could not address exploring the Trending Now lists around the world, I decided to at least address the first issue by exploring search trends according to Google™. I conducted the same study on November 6, 2010, but using the Google™ Trends site. The following figures show the screenshots from my tracking of Google™ Trends 39.

38 For this second study, I accessed Yahoo!® from a hotel in Washington, D.C. While I do know the Yahoo!® Trending Now list is constrained to a particular region, I do not know the extent of that region, so the data I collected could be for the hotel, the entire D.C area, the Northeast region of the U.S., the entire U.S., etc.

39 I conducted this study and the subsequent study from my home in El Paso, TX.
Figure 18: Google™ Trends at 12:20 P.M.\textsuperscript{40}

Figure 19: Google™ Trends at 12:36 P.M.\textsuperscript{41}

\textsuperscript{40} (GT1)

\textsuperscript{41} (GT2)
Figure 20: Google™ Trends at 12:51 P.M.\textsuperscript{42}

Figure 21: Google™ Trends at 1:06 P.M.\textsuperscript{43}

\textsuperscript{42} (GT3)

\textsuperscript{43} (GT4)
According to About Google™ Trends:

Hot Topics allows you to see a snapshot of what people are saying, by viewing the topics with the most buzz in the news, on Twitter, FriendFeed, or on other similar sources. Hot Topics are updated regularly…Hot Searches reflects what people are searching for on Google today. Rather than showing the most popular searches overall, which would always be generic terms like “weather,” Hot Searches highlights searches that experience sudden surges in popularity, and updates that information hourly. Our algorithm analyzes millions of web searches performed on Google and displays those searches that deviate the most from their historic traffic pattern.  (About Google™ Trends).

This explanation shows why the “Hot Searches” didn’t change much over the course of my third study while the “Hot Topics” changed frequently.  The following table shows the “Hot Topics” variation over the course of my study.

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44 (GT5)
Table 3: Variations in Google™ Trends Hot Topics

<table>
<thead>
<tr>
<th>Time Accessed / Position</th>
<th>12:20 P.M.</th>
<th>12:36 P.M.</th>
<th>12:51 P.M.</th>
<th>1:06 P.M.</th>
<th>1:22 P.M.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. cam newton</td>
<td>x box kinect</td>
<td>x box kinect</td>
<td>kinect</td>
<td>healthcare reform</td>
<td></td>
</tr>
<tr>
<td>2. derek jeter</td>
<td>cam newton</td>
<td>30 rock</td>
<td>ben bernanke</td>
<td>ben bernanke</td>
<td></td>
</tr>
<tr>
<td>3. andy irons</td>
<td>andy irons</td>
<td>nick lachey</td>
<td>cam newton auburn</td>
<td>breeders cup 2010</td>
<td></td>
</tr>
<tr>
<td>4. election results</td>
<td>derek jeter</td>
<td>vanessa minnillo</td>
<td>breeders cup 2010</td>
<td>cam newton auburn</td>
<td></td>
</tr>
<tr>
<td>5. chris matthews</td>
<td>election results</td>
<td>rudy fernandez</td>
<td>love the way you lie part 2</td>
<td>love the way you lie part 2</td>
<td></td>
</tr>
<tr>
<td>6. cuba plane crash</td>
<td>ipad update</td>
<td>mobile technology</td>
<td>30 rock</td>
<td>red wings</td>
<td></td>
</tr>
<tr>
<td>7. oprah winfrey</td>
<td>chris matthews</td>
<td>50 most popular women</td>
<td>malloy</td>
<td>clearwire</td>
<td></td>
</tr>
<tr>
<td>8. space shuttle</td>
<td>cooks source magazine</td>
<td>skyfire iphone</td>
<td>senkaku</td>
<td>julien hug bachelorette</td>
<td></td>
</tr>
<tr>
<td>9. love the way you lie part 2 lyrics</td>
<td>dash nyc</td>
<td>austin collie</td>
<td>rudy fernandez</td>
<td>undercovers</td>
<td></td>
</tr>
<tr>
<td>10. mehserle sentencing</td>
<td>space shuttle</td>
<td>amber alert</td>
<td>elizabeth smart</td>
<td>skyfire iphone</td>
<td></td>
</tr>
</tbody>
</table>

This study was conducted on a different date and from a different physical location, so the data cannot be directly compared to the data collected from the Yahoo!® Trending Now list. However, the data does show that over time the trends tracked on Google™ also vary frequently as with the Yahoo!® search engine.

But to better understand the nature of Internet trends, I conducted another field investigation across two days to track the trends as identified by both Yahoo!® and Google™. For this investigation, I accessed both the Yahoo!® Trending Now list and the Google™ Trends site at the same time and from the same physical location. I repeated this

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45 Table 3 was compiled from data collected from Figures 18-22, derived from (GT1), (GT2), (GT3), (GT4),
access every fifteen minutes for an hour on November 13, 2010, and, again, on November 15, 2010. I hoped that there would be some similarity or other indication that Yahoo!® and Google™ were identifying the same trends across the Internet. On November 13, I did not find any similarities between the two sites. This result shows how very differently Yahoo!® and Google™ track Internet trends. The screenshots from this investigation are in the appendix. However on November 15, a similarity did appear in my observations. At 12:45 A.M. and, again, at 1:00 A.M., “Sarah Palin” showed up in the Yahoo!® Trending Now list and “sarah palin alaska” showed up in the Google™ Hot Searches (GT11) (GT12) (YH16) (YH17). These results are shown in the figures below. So despite the differences between how these two companies track Internet trends, at these points in time both Yahoo!® and Google™ identified “Sarah Palin” as a topic of interest on the Internet. What this indicates is that if the Internet trends are tracked over time from multiple sources, more patterns will emerge that will better indicate the true Internet trends. Understanding what the majority of Internet users are exploring and how they are using the Internet will hint at the general will of the collective of individual Internet users. Rousseau may not have envisioned his general will would be explored in this fashion, but the key to Rousseau’s social contract theory is understanding the general will of the individuals in a community. As such, the general will of the Internet must be explored through the wills of the individual Internet entities in the community of the Internet; and, tracking Internet trends can become a tool in exploring these wills.
Figure 23: Yahoo!® Trending Now List and Google™ Trends at 12:45 A.M., 15 Nov. 46

Figure 24: Yahoo!® Trending Now List and Google™ Trends at 1:00 A.M., 15 Nov. 47

46 (GT11) (YH16)
47 (GT12) (YH17)
But, there are problems with tracking Internet trends. As stated earlier, the Yahoo!®
Trending Now list only shows what Yahoo!® identifies as trends as the Google™ Trends site
only shows what Google™ identifies as trends. Also, the data collection performed by
Google™ is not perfect. According to About Google™ Trends, “The data Trends produces
may contain inaccuracies for a number of reasons, including data-sampling issues and a
variety of approximations that are used to compute results. We hope you find this service
interesting and entertaining, but you probably wouldn’t want to write your Ph.D. dissertation
based on the information provided by Trends.” And, there are also peculiarities with the
Google™ search engine. For example, according to Glen Levy:

The query, "Why Wont My Parakeet Eat My Diarrhea?" has rocketed to the
top of the Google charts by being a peculiar beneficiary of Google's automatic
search function, which fills out a phrase if a user begins a question with "Why
will not..." In layman’s terms, Google takes previous searches from around the
world and the specific user and combines them to come up with the
suggestion…Clearly, some people have at some point in time have [sic]
genuinely wanted to know about the aforementioned parakeet and/or diarrhea.
And by word of mouth (and articles such as this), the surreal question has
captured on with people trying out the search function to see the end result for
themselves. Hilarity, presumably, has ensued. (Levy).

This article identifies two issues with the Google™ search engine and search engines, in
general. First, the programming that helps search engines perform more efficiently for users
can produce unexpected results, such as the question above, that do not necessarily make
sense. Second, people’s searches can be influenced by the search engine, even when the
searches do not make sense, or from other sources in the Internet, such as the above article.
In other words, it becomes problematic to determine which has the greater influence in
popular Internet searches: the actual searches people perform or the programming behind the
search engines themselves. It is most likely influenced by both sources, but it becomes

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difficult to determine which is most responsible for the Internet search trends. Also when
Internet users see the trends, it may fuel more searches for those trends as users explore why
they are trends in the first place. However, even with these issues, people still show interest
in exploring trends. For example, Yahoo! posts the weekly search trends every Friday.
Pamela Woon from ABC News presents these trends every week on ABC. In "Weekly
Yahoo! Search Trends-November 5, 2010," the trends that were identified were searches for
“Daylight Savings Time” and “Holiday Shopping” (Weekly Yahoo!…2010). These trends
are not surprising when in the non-virtual world, Daylight Savings Time took place on
November 7, 2010, and Christmas is just around the corner from November 5.

While the issue of studying Internet trends, in terms of how people are using the
Internet, is a large issue that cannot be fully explored in this thesis, it is clear that trends can
be one data point in understanding how the collective of individuals on the Internet are
focused. As such, Internet trends are an indicator of Rousseau’s general will in the Internet
community. There are the same issues that Rousseau identified, such as general will helps
form the sovereign at the same time the sovereign influences the general will, in the sense
that search trends can influence more searching that fuels the trends that are being shown.
Also the search trends track the majority in searching, and as stated earlier, the majority will
does not always conform to the general will. While there are problems in understanding the
Internet trends, there are also problems with Rousseau’s general will in that Rousseau
vaguely describes the general will because it is intended to be vague so that it conforms to
what is good for everyone. However, understanding the collective of individuals on the
Internet through Rousseau’s social contract theory provides a new way to understand Internet
relationships, as with the theories of Hobbes and Locke, which presents a new way to
investigate Internet ethical issues through these relationships and how they govern the Internet community. With these investigations and studies, a new picture of the Internet emerges.

![Figure 25: The Internet as a Social Contract](image)

In my example above, I show a Hobbesian Individual. This person would be the Internet user that mistrusts other Internet users. As such he does not have a connection to the other individual, only the Hobbesian Company. The Hobbesian Company has a Lockean Relationship with the Hobbesian Individual. This relationship could be a business relationship that is necessary, such as banking. In the Hobbesian Company, the company has Lockean Relationships with its employees as necessary for business productivity. The employees have Lockean Relationships with each other as they must cooperate to survive in the company. The Hobbesian Company also extends control over its property and employees. The Hobbesian Company has a Lockean Relationship with the Locke Individual. The Locke Individual differs from the Hobbesian Individual in that the
Lockean would not generally mistrust the other Internet users. Over the entire Internet cloud, Rousseau’s general will emerges. The main point to understand in this investigation that I have conducted is that the structure of the Internet allows for multiple relationships and multiple ways to understand classical social contract theory in the Internet. Additionally, Internet users can take on different aspects of social contract theory depending on the Internet relationships they are maintaining. This aspect of classical social contract theory in the Internet is not surprising when you remember that single Internet users can have multiple virtual identities on the Internet. Personally, I have six different e-mail addresses. Four addresses are connected to me personally for banking, education, and other Internet tasks that require my identity be known. But, two addresses are designed with non-personal information. I use these addresses when I want to contact a website or Internet user I do not personally know or trust. In a sense, I have Lockean relationships with those entities that I trust or with which I have a business or personal relationship. But, I become Hobbesian when I deal with entities I do not personally know. So even at the single user level, both Lockean and Hobbesian principles can emerge.

I am not the first person to explore social contract theory on the Internet. In “Social Contract for the Internet Community? Historical and Philosophical Theories as Basis for the Inclusion of Civil Society in Internet Governance?,” Rolf H. Weber and Romana Weber propose Rousseauean social contract theory as a solution for Internet governance (Weber). They stated:

Netizens are affected by decisions taken with regard to Internet governance and should therefore be able to influence such. However, the heterogeneity of Internet users requires special efforts in order to find a method of consensus building which includes all interested parties and creates the opportunity to make decisions acceptable for as large a part of the civil community as possible. Notwithstanding the fact that the Internet society is a newly
emerging civil society, considerations taken into account in earlier contexts can lead to valuable lessons. In this respect, a theory which seems to offer a feasible approach encompasses the concept of a so-called “social contract” that is historically and philosophically addressing issues of civil society’s participation. (Weber 90).

Their position, as highlighted in this excerpt, is that because of the vast diversity in the Internet community, a social contract is needed to allow as many “netizens” as possible to participate in decision-making on the Internet. They further stated that “Through the establishment of a civil society, each individual is protected by the whole of the community…each individual should be granted with the same rights and obligations in the sense of the same chance to development for everyone, in particular with respect to the use of freedom by having the social contract which secures the self-determination of all individuals” (Weber 90). To clarify further, Weber and Weber envision Internet governance as happening through a forum where every citizen has representation. Each citizen’s voice contributes to the general will on the Internet, and Internet governance decisions are made based on this general will. As Weber and Weber stated:

All aspects of the Internet may have an impact on its daily use by civil society. Without any doubts, civil society is the most active user of the Internet and therefore the most concerned player…The inclusion of civil society calls for a bottom-up process…This bottom-up approach may be implemented in practice by establishing a hierarchical framework, in which representatives from all regions are elected by the population. These representatives may have to, in a second phase, elect individuals amongst themselves who then are legitimate representatives of the whole population and have the power to govern the Internet. (Weber 94).

While I agree with Weber and Weber that the structure of the Internet lends itself to social contract theory, I do not agree with their application. There are several points that I feel they have not addressed, and I feel they are important points that affect their argument. I will address these points now.
Weber and Weber have established a theory for Internet governance that is very idealistic in the sense that it calls for a framework where the vast majority of “netizens” participate in the decision-making on how the Internet is managed. But, the first point I feel they have not completely addressed is the physical nature of the Internet. They do partially address the physical Internet in the following: “This theoretical concept [Weber and Weber’s proposal], of course, implies that the possibility to access the Internet in all geographical areas is equal; since this is actually not the case for the time being, access needs to be increased. This may require developed countries to provide technical assistance and financing to less well-situated regions…” (Weber 103). In this statement, Weber and Weber at least acknowledge the physical structure of the Internet in that they recognize that some geographical regions may not have the same access to the Internet as others. For example in my first investigation, it was shown that there were several redundant areas so that I was able to access my destination from several locations around El Paso. Less-developed geographical regions may not have such redundancies and may only have limited physical access points into the Internet. But what Weber and Weber fail to emphasize is that since there is a physical infrastructure, there is not as much diversity as Weber and Weber note. Let me clarify what I mean by this statement. There are thousands of people in El Paso that access the Internet, but there are considerably fewer actual physical relays to the Internet. Additionally, there are pockets of physical structures that are controlled by fewer entities than the people that use them. For example a business may have hundreds of users, but the physical structure of computers, routers, etc. is controlled and managed by the business owners and their appointed representatives. So while Weber and Weber correctly recognize that there is vast diversity among Internet users, they fail to highlight that physical access can
be controlled by relatively fewer entities which makes the physical structure less diverse than the virtual structure. They fail to note that entities control various sizes of physical infrastructure depending on their financial capability. For example a business may own hundreds of computers and enough routers to support them, while I as a private citizen have two computers and two routers over which I have control. So there are not as many entities that control the physical infrastructure of the Internet, and it is not certain if they have the same diversity as the users of the virtual Internet which contains any individual that accesses the Internet. Weber and Weber at least acknowledge this condition when they stated that “[a]t this time, only a minority of active netizens control the functioning of the Internet and take [sic] decisions relating to Internet governance” (Weber 94). Weber and Weber propose that Rousseau’s social contract theory can be used to implement Internet governance, but they do not emphasize that there is already Internet governance because entities control various parts of the physical infrastructure; and, these entities can impose their own rules on the physical infrastructure as I detailed earlier in my first study with the West and East El Paso businesses. The next point that I feel Weber and Weber do not realize is that social contract relationships already exist on the Internet. Weber and Weber propose that Rousseauean social contract theory is needed to govern the Internet. However as I have demonstrated, Hobbesian, Lockean, and Rousseauean theories are already in place on the Internet due in part to how the physical infrastructure has developed to allow the virtual Internet to exist, but also in the relationships emerging in this virtual Internet. Weber and Weber do not recognize that 1) social contract theory is already apparent in the Internet and 2) that Hobbesian and Lockean theories are present as well, not just Rousseauean social contract theory.
Weber and Weber’s claim that Internet governance can be fruitfully addressed through classical social contract theory is a general claim with which I agree, but their investigation doesn’t go far enough. First, they did not place as much importance on the physical structure of the Internet as they did on the virtual structure of the Internet. As I have demonstrated, the Internet, both its virtual and physical aspects, can be explored and understood through classical social contract theory. The multiple facets of the Internet allow for multiple levels of relationships among Internet entities so that individual entities can have Hobbesian relationships with the community of entities as a whole, but still have Lockean relationships with a smaller community of trusted entities. Companies can have Lockean relationships with their employees and other companies, while at the same time employing Hobbesian absolute control over their physical and virtual infrastructure. And, there are trends in Internet searching that indicate in some degree the direction that Internet users are exploring the Internet. Could this trending also be indicative of Rousseau’s general will, since majority will sometimes aligns with the general will? Weber and Weber do not acknowledge these multiple levels of relationships even though they stated that “[a]s technical progress is enormous, new possibilities for participation may be discovered…” (Weber 96). Like Weber and Weber, I have investigated social contract theory as a way of understanding Internet governance. However, I employed the theories of three philosophers because I recognized that Internet governance is already taking place in the Internet on various levels; and, I place as much importance on the physical aspect of the Internet as the virtual aspect. The complexities of the Internet require such multiple viewpoints; but, the investigation and field studies I performed did raise additional questions and concerns that I address in my final chapter.
Chapter 4-Conclusion

As I stated in my introduction when I began this odyssey, I wanted to investigate how ethical issues can be explored on the Internet. Although the decentralization and redundancies of the Internet allow for a network that is highly adaptive and functional, it has created problems in understanding the various interactions and relationships that exist on the Internet. It also has created issues with responsibility and trust as the Internet is beyond all political borders, and it is possible to interact with Internet users without knowing their true identities. These issues create problems when attempting to understand ethics on the Internet. For example, if we consider Utilitarianism, how do we measure what decisions support the greatest happiness if the Internet community is formed of individuals, companies, and governments around the world that have very different perspectives? Because of these and other issues, I realized that before even attempting to understand the ethical issues on the Internet, I needed to first understand the interactions and relationships on the Internet beyond the technical aspects with which I am familiar. Instead, I needed to understand the Internet in a different way that would allow me to explore how the Internet community as a whole functions and can support an ethical framework. In this task, I decided to explore the Internet through the lens of classical social contract theory as a first step to understanding the ethics of the Internet. And as I have demonstrated, aspects of Hobbesian, Lockean, and Rousseauean principles emerge in how the Internet is structured and in the various relationships that can develop in the virtual Internet.

There are several challenges in viewing the Internet through social contract theory. First, you must recognize that a key difference between Hobbes and Locke was in how they each viewed basic human nature. Hobbes viewed humans as brutal; whereas, Locke
recognized humans could reason and cooperate. Knowing this key difference, you will realize that if Hobbesians and Lockeans appear on the Internet, they will interact with the Internet very differently from each other. Hobbesians will not immediately trust other Internet users as Lockeans might. Second, in order to apply Lockean principles to the Internet, we must understand how the concept of property transfers to the Internet environment. As noted earlier, this examination becomes problematic because there is both physical and virtual property on the Internet. A case in point: Internet users could find that they have virtual property that resides on some other Internet entity’s physical property. For example I consider my e-mail inbox virtual property, but it resides on physical structures that are owned by Google™. While this relationship allows me to access my e-mail inbox from across the United States, I must trust Google™ to protect my virtual property. Third, if we attempt to understand the general will of Rousseau in terms of Internet trends, we run into issues of how to understand the different trend trackers, such as Yahoo!® and Google™, and how the results of the various trend trackers can be understood together. The trend trackers do have inaccuracies; and there is the issue of how the trend trackers can influence the very trends they are tracking, like Rousseau’s sovereign influences and is influenced by the general will. But, the trends do provide some indication about the direction that Internet users are moving in terms of Internet use. If the trends could be tracked accurately from multiple aspects, including the different regions around the world, aspects of the general will can be ascertained. For example, the majority of Internet users may be using the Internet for social networking instead of business. Or, more Internet users may be interested in entertainment than politics. This trend examination would be complicated, but it is not merely because of the difficulty of understanding the physical and virtual aspects of the
Internet and how the many individual entities are using the Internet. It is also complicated because Rousseau provided an obscure definition of the general will in a community of individuals.

Despite these difficulties, examining the Internet with the help of classical social contract theory as I’ve interpreted it provides a foundation for exploring critical ethical issues on the Internet, such as competing business interactions, banking concerns, privacy issues, intellectual property issues, social networking, hacking, Internet stalking, identity theft, software piracy, and trust issues. But these and other ethical issues can now be addressed through Hobbesian or Lockean structures, for example, which provide a clearer way to understand how ethics should be applied. Hobbesians will be less trusting of the Internet and other users, so Hobbesians may want to act from an ethical model rooted in survival and protection. Lockeans will establish trust relationships while having some protection against outsiders. As such, Lockeans will act from an ethical model that allows trust and cooperation. And, Hobbesians and Lockeans can take action in both the physical and virtual worlds of the Internet to employ these models. And, Internet users can be Hobbesian in some relationships while employing Lockean principles in other relationships. Until the general will is understood, it would be difficult to show how the Internet as a whole, as the collective of individuals, would act. But once the general will is understood, it may be possible to create ethical models that conform to and guide the general will of the Internet as Rousseau’s sovereign would guide a political community. Through understanding Hobbes, Locke, and Rousseau in the context of the Internet, it becomes possible to understand Internet governance in the physical and virtual aspects of the Internet so that ethical issues can be practically addressed using these already existing relationships. The previous work by
Weber and Weber in exploring Rousseau’s social contract theory as a solution for Internet governance began this examination; but, their work did not go far enough because they did not acknowledge that there were already implicit relationships on the Internet that conform to Hobbesian and Lockean principles. And, they did not fully address the physical structure of the Internet and the complications it introduces in understanding the Internet through social contract theory.

Before I end my thesis, I will address why I approached understanding the Internet through classical social contract theory instead of other models. From my technical understanding of the Internet, I understand the Internet as comprised of various individuals, whether they are single users, companies, states, countries, etc. as I described throughout my thesis. As such, I wanted to explore how individuals form themselves into functional communities with rules. Social contract theory appeared ideal for this effort; and, as social contract theory has been around since the 1600s, there is a wealth of information available for understanding social contract theory, including oppositional material. There are also established real-world examples of classical social contract theory; for example, the governing structure of the United States of America is partly based on Lockean social contract theory. After my research and examination, I’m certain that other models can also be applied to the Internet; but I’m also certain that exploring ethical issues on the Internet must first begin by understanding the Internet not as the technical tool it started as, but as the vast community it has become with its various individuals at different levels interacting in a variety of ways. As classical social contract theory has been used to explore how individuals form political communities in the real-world, it is then possible to explore how Internet

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48 Some examples of models I did not explore are game theory and modern social contract theory.
communities form through classical social contract theory. Understanding the Internet through the theories of Hobbes, Locke, and Rousseau provides practical structures to investigate ethical issues in the Internet. And, the relationships on the Internet can then be compared to real-world equivalents for even better understanding of the ethical implications that result from the relationships and interactions on the Internet. The Internet is complicated, and any models that apply to the Internet will necessarily be complicated as well. Classical social contract theory provides a way to navigate this complexity in a more practical way, which allows for practically exploring Internet ethics. My final point is that while the Internet is complicated, it is functional; and, we cannot ignore the practical relationships that have developed on the Internet when developing a model for how the Internet functions or how ethics can work in the Internet community.
References


The sources listed in the Bibliography are sources that I mention in my thesis or used during research, but from which I do not cite quotations or any direct material.
Appendix-Concurrent Access of Yahoo!'s Trending Now List and Google™ Trends

Figure 26: Yahoo!'s Trending Now List and Google™ Trends at 5:00 P.M., 13 Nov.\(^{50}\)

\(^{50}\) (GT6) (YH11)
Figure 27: Yahoo!® Trending Now List and Google™ Trends at 5:15 P.M., 13 Nov.51

Figure 28: Yahoo!® Trending Now List and Google™ Trends at 5:30 P.M., 13 Nov.52

51 (GT7) (YH12)
52 (GT8) (YH13)
Figure 29: Yahoo!® Trending Now List and Google™ Trends at 5:46 P.M., 13 Nov.\textsuperscript{53}

Figure 30: Yahoo!® Trending Now List and Google™ Trends at 6:00 P.M., 13 Nov.\textsuperscript{54}

\textsuperscript{53} (GT9) (YH14)

\textsuperscript{54} (GT10) (YH15)
Figure 31: Yahoo!® Trending Now List and Google™ Trends at 12:45 A.M., 15 Nov.\textsuperscript{55}

Figure 32: Yahoo!® Trending Now List and Google™ Trends at 1:00 A.M., 15 Nov.\textsuperscript{56}

\textsuperscript{55} (GT11) (YH16)

\textsuperscript{56} (GT12) (YH17)
Figure 33: Yahoo!® Trending Now List and Google™ Trends at 1:16 A.M., 15 Nov. 57

Figure 34: Yahoo!® Trending Now List and Google™ Trends at 1:30 A.M., 15 Nov. 58

57 (GT13) (YH18)
58 (GT14) (YH19)
Figure 35: Yahoo!® Trending Now List and Google™ Trends at 1:45 A.M., 15 Nov.

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59 (GT15) (YH20)
Curriculum Vitae

Kenneth Wayne Sayles III was born on September 14, 1978 in Wuerzburg, Germany, and moved around frequently before settling in Texas. He graduated from the University of Texas at El Paso (UTEP) Cum Laude in May of 2002 with a Bachelor of Science in Computer Science. Following the hiring freeze after September 11th, he continued his education in Computer Science. He completed a Master of Science in May of 2004. His research studied the effects of computer personalities on the success of users and earned him a publication with the Association of Computing Machinery (ACM) along with his thesis advisor, Dr. David G. Novick. Not long after graduation, Kenneth entered industry and also taught undergraduate Computer Science at Park University. He returned to UTEP in Fall of 2005 to begin work on a Master of Arts in Philosophy. He also entered a career in computer security and earned the following certifications: Certified Information Systems Security Professional (CISSP); Certified Ethical Hacker (C|EH); Certified Expert Penetration Tester (CEPT); Certified Information Systems Auditor (CISA); and Certified Information Security Manager (CISM). He eventually left teaching to concentrate on his student career and Philosophy research. Following his graduation in December 2010, Kenneth intends to contribute to journals and write about how ethics can be successfully used to ensure technology and progress are achieved with responsibility and awareness of the general social welfare.

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