

CONSIDERING BITCOIN AS A SOCIAL MOVEMENT: INVOLVEMENT, KNOWLEDGE,  
AND INVESTMENT AS MOTIVATIONS

By

JESSE LANE

Master of Science in Applied Sociology

Valdosta State University

Valdosta, Georgia

2016

Submitted to the Faculty of the  
Graduate College of the  
Oklahoma State University  
in partial fulfillment of  
the requirements for  
the Degree of  
MASTER OF SCIENCE  
December, 2019

CONSIDERING BITCOIN AS A SOCIAL MOVEMENT: INVOLVEMENT, KNOWLEDGE,  
AND INVESTMENT AS MOTIVATIONS

Thesis Approved:

Dr. Duane Gill

---

Thesis Adviser

Dr. Tamara Mix

---

Dr. Monica Whitham

---

Name: JESSE LANE

Date of Degree: DECEMBER, 2019

Title of Study: CONSIDERING BITCOIN AS A SOCIAL MOVEMENT: INVOLVEMENT, KNOWLEDGE, AND INVESTMENT AS MOTIVATIONS

Major Field: SOCIOLOGY

Abstract:

There is a general perception among members of the Bitcoin community that they are a part of a solution to some of the world's macro economic problems. This thesis seeks to better understand the social movement aspects of this situation by analyzing empirical data on Bitcoin users and their motivations for engaging in this activity. Specifically, this research focused on how long a Bitcoin user had been involved, how knowledgeable they were about Bitcoin, how motivated they were by monetary value, and their level of using popular framing techniques within the community. A link to an online survey was posted on some of the major online communities dealing with this topic (r/bitcoin, r/bitcoinmarkets, and r/cryptocurrency on the website Reddit; and Bitcointalk.org) in February and March 2019 with a total of 333 respondents. Results indicate social movement characteristics and framing can be found throughout this community. Knowledge about Bitcoin and how long a respondent has been actively involved with Bitcoin were among the most significant predictors of whether or not a respondent would continue to use Bitcoin if the United States banned it and how much a respondent valued other social movement characteristics. There is also a major driving force towards the social movement aspects of Bitcoin from how much users are motivated by the monetary value of Bitcoin, serving as a catalyst for this movement at every level, in what could be seen as a paradoxical twist on a bait-and-switch, or maybe more appropriately a reverse-bait-and-switch; fueling greater security and adoption.

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
II. REVIEW OF LITERATURE.....	7
THEORETICAL PERSPECTIVES ON MONEY IN SOCIOLOGY.....	10
PREVIOUS EMPIRICAL BITCOIN RESEARCH FROM SOCIOLOGY.....	15
SOCIAL MOVEMENTS/FRAMING.....	19
HYPOTHESES.....	23
III. METHODOLOGY.....	26
INTRODUCTION.....	26
KEY CONCEPTS AND OPERATIONALIZATION.....	27
SAMPLING STRATEGY.....	27
DATA COLLECTION.....	29
DATA ANALYSIS STRATEGY.....	29
DATA MANAGEMENT STRATEGY.....	32
SUMMARY.....	32
IV. FINDINGS.....	33
DESCRIPTIVE STATISTICS.....	34
REGRESSION ANALYSIS.....	38
HYPOTHESES 1 AND 2.....	41
HYPOTHESES 3 AND 4.....	42
HYPOTHESES 5 AND 6.....	43
V. CONCLUSIONS.....	45
REFERENCES.....	50
APPENDICES.....	57

## LIST OF TABLES

Table	Page
3.1: Social Movement Instrumental Scale.....	32
4.1: Sociodemographic Characteristics of Bitcoin Community – Part One.....	34
4.2 : Sociodemographic Characteristics of Bitcoin Community – Part Two.....	37
4.3 : Bivariate Pearson Correlations (r) for Variables in the Analysis.....	40
4.4 : OLS Regression on Bitcoin users’ characteristics by the price per Bitcoin.....	42
4.5 : OLS Regression on Bitcoin users’ characteristics by how willing they would be to continue using it if the United States declared it illegal .....	43
4.6: OLS Regression on Bitcoin users’ characteristics by how much they value instrumental social movement themes for Bitcoin .....	44

# **Chapter I: Introduction**

The world of technology is expanding at an ever-increasing rate, especially the internet. Through the internet several unexpected upheavals have occurred in the last decade giving it a trial by fire into realizing its power as a crossroads for every aspect of social life. Originally the internet was a sideshow for some and a useful tool for others, but it has become evident that it is actually the main stage and the headlining act, metaphorically speaking. For some people, Bitcoin has the same transformational potential as the internet itself, despite its short-sighted reputation as a scam or Ponzi scheme from many respected economists (e.g. Egan 2019; Rooney 2019). Bitcoin is a grass roots community centered on a technology with a decentralized and programmable nature that shares similar properties to the internet. Being intertwined with a profit motivation tremendously increases the potential of Bitcoin to create upheaval in the global monetary system. This thesis seeks to better understand the people who are involved in Bitcoin by building off of past empirical Bitcoin research and showing how this group frames their motivations as a protest against the world's national currencies and financial institutions (Bohr and Bashir 2014). Given the goals of Bitcoin and its users, social movements is an appropriate theoretical foundation since it uses subversive means to achieve success rather than simply lobbying or starting a political party.

Bitcoin was originally created as an immutable spreadsheet that is nearly impossible to counterfeit for the transfer of value between addresses which are encrypted "wallets" that only

the owner has access to, although on the user end sending Bitcoin or money between “wallets” is very similar to sending an email or using Paypal. In other words these addresses are a long string of letters and numbers; so long in fact that it is technically impossible to guess them with random guesses from the entire world’s computing power combined. This was done in response to bank bailouts all over the world in 2009 where many people lost their jobs, homes, and other essentials for modern life. In fact, the creator of Bitcoin, “Satoshi Nakamoto<sup>1</sup>”, felt the need to put a newspaper headline describing Britain’s bank bailouts embedded into the very first transaction “The Times 03/Jan/2009 Chancellor on brink of second bank bailout for banks.”<sup>2</sup> From its very beginnings Bitcoin was designed to be a social movement, with participants creating change through direct action by participating in an alternative economy. In the years following the bank bailouts in many parts throughout the world, few individuals or entities have been held responsible for disrupting the world economy and few laws have been changed to amend the situation and prevent this from happening again. Furthermore, most all of the corporations responsible for the recession in 2009 ended up giving bonuses to their top managers, while at the same time devaluing citizens’ savings accounts through the large new supply of money introduced into the global economy. This was done to prevent the next great depression (Irwin 2018) so it seemed like the only option to take at the time. It is significant, however, that no basic legal changes have occurred regarding credit default swaps, subprime mortgages, credit default swaps, etc., since then. Bitcoin was created in a direct response to this quagmire, as a social protest to a monopoly on money itself.

Bitcoin provides more transparency about its monetary “policies” when compared to central banks. Any upcoming changes to its protocol are decided in a more open fashion than

---

<sup>1</sup> A Pseudonym since the creator is anonymous

<sup>2</sup> <https://www.thetimes03jan2009.com/>

institutions such as The Federal Reserve. Bitcoin is open source, and all transactions are made publicly available. In addition there are only twenty-one million Bitcoins that will ever be created so that value is not slipping out of people's bank accounts through monetary inflation. While it can be argued that some inflation is good in keeping the economy growing, it can also be said that the wealthy will find other places to store value; while the working class, who do not have such a thorough education in finance, will be the ones losing the value of their savings.

These elements show a slightly different picture of Bitcoin in comparison with how many in the mainstream media and prominent economists frame it; one that has many similar characteristics with a social movement. A good example of this negative portrayal comes from Jamie Dimon, the CEO of JP Morgan Chase banking, who has made controversial accusations about Bitcoin, calling it a "fraud" and that "governments would crush it" (Egan 2019). JP Morgan Chase recently introduced their own competing "cryptocurrency," although many argue that it lacks the fundamental characteristics that encompass a cryptocurrency. Another good example is Warren Buffet, who said "it is a delusion", "it attracts charlatans", "it has no unique value", and "it is rat poison squared" (Rooney 2019). With such schoolyard tactics attacking Bitcoin, rather than more concretely laying out arguments for why they do not accept it, some view these reactions as a defense of an economic system on which they thrive. After all, Jamie Dimon and Warren Buffet are among those who benefit the most from the current world economics or in turn who would be hurt by its uprooting.

There is a growing lack of trust in a political system's ability to deal with this undemocratic runaway inflationary currency problem, or similar problems when powerful, global economic entities are involved. This distrust can be exemplified in the United States with the recent blocking of Bernie Sanders from the Democratic Party and prior blocking of Ron Paul



from the Republican Party. These candidates, though vastly opposite in terms of ideology, both were extremely critical of those responsible for the recession in 2008 and 2009. Thus, it is not hard to imagine why they might have received resistance from within their own political parties. When people are impeded from a candidate that actually represents them, democracy faces a difficult challenge. Bitcoin, in contrast, needs no bureaucratic permission to exist or for people to invent software applications to run on top of it. For example, one thing invented using the Bitcoin network as its foundation is censorship-resistant contracts for assets and real estate through the Omni Layer project.<sup>3</sup> This dynamic is very similar to the makeshift internet put together by hackers in Egypt during the Arab Spring, who achieved internet connection and distribution of key information despite the governmental shutdown of the internet. Bitcoin facilitates the fixing of a problem in spite of powerful political and economic interests who may oppose it because it is heavily resistant to censorship. It is for this reason that Bitcoin is more than a way to make money. Just as with Microsoft or Apple, Bitcoin investors may end up making money, but as a side effect of the successful product these companies/communities created.

The Bitcoin community is an amorphous, evolving landscape with plenty of activity on different online message boards. In essence, communication about Bitcoin has primarily been enabled through message boards, starting with [bitcointalk.org](http://bitcointalk.org) where the original idea was introduced. From these origins the community moved on to Twitter and Reddit, which have a greater focus on text rather than pictures. The main difference between the two is that Reddit is more community based around a central topic, whereas Twitter relies more on individual networks. With Twitter you have to find particular individuals who seem to have a good

---

<sup>3</sup> <https://www.omnilayer.org/>

understanding of Bitcoin. “As soon as the distinction between real life and online emerged, when the Net became familiar to larger numbers of people in the 1980s and 1990s, the boundaries between real and virtual became oddly blurred” (Hornsby 2011:69). So for a digital currency, secured by cryptography, and founded entirely online by an anonymous creator; what better place to look for this community than online?

An example of Bitcoin’s resilience can be seen with its ongoing saga of the question of legality in China. Within the Bitcoin community it has become a running joke as “the boy who cried wolf,” since Bitcoin has been banned or rumored to be banned in China on multiple occasions. Specifically, financial companies were banned from allowing Bitcoin transactions in China in 2013 (Regulation of Cryptocurrency Around the World 2018; China Bans Financial Companies From Bitcoin Transactions 2013). The People’s Bank of China ordered cryptocurrency customer accounts shutdown in April 2014 (Deng and Wei 2014). In 2018, 173 cryptocurrency exchanges and platforms were shut down (Regulation of Cryptocurrency: China 2018). These are the official stances China has taken to date, but it does not include multiple rumors regarding governmental employees’ views of Bitcoin. In spite of all of this, China is still in the top five countries with active Bitcoin network nodes (Tuwine 2019), which verify transactions, and allows more Bitcoin mining, which are computers that “mint” new Bitcoins and keep the network secure from hacking, than any other country (Beeham 2019).

Outside of the volatile prices and attention grabbing headlines is an interesting new technology and an enthusiastic group of users who frame their motivations in similar ways as many other social movements. This empirical work seeks to quantify Bitcoin users’ motivations, both as a social movement and an investment. In order to do this, this thesis will move from this introduction section into a literature review regarding money and Bitcoin itself through the

sociological lens, as well as the many similarities Bitcoin shares with social movements. From there, hypotheses will be discussed and then the methods used to collect data for testing these hypotheses. Finally, the results and conclusions sections will analyze the data and discuss its implications.

“Bitcoin is a tool for freeing humanity from oligarchs and tyrants, dressed up as a get-rich-quick scheme” (@Naval<sup>4</sup>)

---

<sup>4</sup> @Naval. 2018. Retrieved November 11, 2018. (<https://twitter.com/naval/status/955998687670411264>)

## **Chapter II: Literature Review**

Throughout this chapter several topics will be discussed, particularly revolving around the main themes of: ideal forms of money, theoretical perspectives on money in sociology, previous empirical research on Bitcoin from social scientists, and social movements. This transition moves from a general understanding of money throughout history to more concise understandings in the present, finishing up with Bitcoin and its open participatory nature which gives it many characteristics similar to a social movement.

The best place to start with any reviewing of the topic of Bitcoin would be from *The White Paper* in which “Satoshi Nakamoto” outlined their original vision of Bitcoin. Without getting too technical, Bitcoin is,

A purely peer-to-peer version of electronic cash (that) would allow payments to be sent directly from one party to another without going through a financial institution. Digital signature provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof of work (2008:1).

Basically Bitcoin is a shared spreadsheet for transferring value from one entity to another while the entire network is constantly verifying the transactions many times over.

Bitcoin was born out of several different modes of thought, including Cyberpunk/Cypherpunk, Libertarianism, and a general questioning of current economic systems/

monetary systems. One of the oldest theories discussed within Bitcoin circles is Gresham's law, which states that "bad money will drive out good money." This was in reference to people clipping off pieces of coins so as to later recombine them with metals of a lesser value. The coins would look the same and therefore be traded the same when, in fact, the clipped ones would be worth slightly less. From this it is concluded that anyone who knows the difference will spend the "bad money," or that of less value for those in the know, and hold on to "good money." This is the comparison made between the current fiat currencies from many national governments who at times seemingly have the ability to create as much money as they would like through quantitative easing, which is literally just the creation of more money in a short time span. In contrast, Bitcoin has a set limit of 21 million ever to be released into existence (although with a decimal place it can be divided into much smaller portions for transactional purposes without changing the total amount that will come into existence). In John Forbes Nash Jr.'s paper *Ideal Money*, he calls this situation with fiat the "Central Banks as 'Pardoners' and as Printers of Money" (Nash 2002:6).

Following this trajectory of seeking better forms of money, we return to *Ideal Money*, where Forbes seeks "a possible nonpolitical basis for a value standard" (Nash 2002:5). It must be noted that Forbes' "Ideal Money" would not rely on the free market as Bitcoin does, but would be based upon a "basket" assortment of other highly traded assets. This also echoes the "Triffin Dilemma," where there is a "conflict of economic interests that arises between short-term domestic and long-term international objectives for countries whose currencies serve as reserve currencies" (Mueller 2018) upon which this idea of Ideal Money was created. There have been other attempts to address this dilemma on an international level, not in the sense that individuals would be able to actively participate, but in a way that would allow an easing of tensions

between nations. Ultimately, none of these have gained enough ground to dethrone the US dollar.

Although a lot of the background regarding the history of money is focused on currency itself, ultimately all of these shortcomings are related to human manipulation and greed. Debt still has a certain negative connotation left over from medieval times or earlier as can be seen with modern uses of the phrase debt of gratitude. “Indeed, credit and debt pre-date money. They took the form of favors among friends and neighbors, which created moral obligations. Later, the creation of money provided a unit of account for keeping track of debts” (Dyson 2015). The shackles of this conception of debt were severely eroded by “a new belief in the scientific management of public finances,” but this situation eventually led to “ever-more exotic credit instruments... (where these) science based models induced the illusion that credit risks were better controlled” (Dyson 2015). It is upon this blind trust of these authorities on economic and financial matters that we are currently witnessing a backlash in many different ways.

States had to restore their credibility by increases in taxation, reductions in public-sector employment and wages, and benefit cuts. They had to align themselves with the technocratic nostrums of unelected bodies: central banks, international financial institutions, and financial market lobbies. However, credibility in this narrow sense is only part of a much bigger and more complex political story about how states best sustain their reputation and power. The politics of sovereign creditworthiness is about the capacity to distinguish the legal contract governing creditor-debtor relations from a wider social contract on which governance is supposed to rest (Dyson 2015).

In other words, a state’s credibility not only rests with economic institutions’ judgments, but also with the population over which they govern.

This seems to be the main background upon which most people will be motivated to use Bitcoin; but there are, of course, many other factors that come into play. “Bitcoin provides an

alternative to currencies and payment systems that are seen to threaten users' privacy, limit personal liberty, and undermine the value of money through state and corporate oversight. Bitcoin's promise lies in its apparent capacity to resolve these concerns not through regulatory institutions or interpersonal trust, but through cryptographic protocols" (Maurer, Nelms, and Swartz 2013:261). This quote has a lot in common with the Dyson discussion above, although, in addition, throughout this piece there are several mentions of how this seemingly "takes the decision making power out of the hands of potentially corruptible, inept, or self-interested policy-makers" (Maurer et al. 2013:270). The points made regarding threatening users' privacy and limiting their personal liberty bring up interesting use cases such as not wanting to give your credit card information to every single merchant, getting around payment embargos (such as the one Wikileaks experienced by major credit card companies (Huang 2019)), and getting around capital controls in China.

### **Theoretical Perspectives on Money in Sociology**

There are a few sociologists who speak directly about money, with probably the most predominant being Simmel (1909) and his "Philosophy of Money." According to Simmel, money allows for a universal expressible unit between goods and services (Dodd 2012). This inevitably puts a price tag on everything and dulls reality into pure quantitative analysis.

Money's remarkable achievement is to make possible the most adequate realization and effectiveness of every individual complication through the equalization of the greatest diversity – as if all specific forms must first be returned to the common primary element in order to secure complete freedom for individual reorganization (Simmel, 1900: 319).

The totality of this work is very similar to Marx's critique of capitalism but places the blame on the growth of the "objectivity philosophy" itself rather than the alienating power of capitalism. "Money places the actions and relations of men quite outside of men as human subjects, just as intellectual life... moves from personal subjectivity into the sphere of objectivity which it only reflects" (Adams and Sydie 2002:208). The objectivity of money, while tied in this current form to capitalism, allows for a more unique expression of career endeavors. For example, the funding of Wikileaks was not possible with a more "subjective" form of money when the banking system blockaded them in 2011, forcing them to adopt a very young Bitcoin for donations (Huang 2019).

Simmel had a much more open interpretation about the effects of money on society and did not purely see it as negative compared to Marx. To Simmel the good and bad aspects were merely inevitable. Money provides a greater sense of freedom to be deployed towards any possible goal, without having to completely justify them. In other words, its homogenizing nature allows greater liberty and equality than that of earlier systems and adds an extra emphasis to the intellectual over the emotional (Becker 1959). Perfect money for Simmel, though impossible, strikes a balance between liberty and fairness, drawing many similarities between his thinking on money and his thinking on capitalism vs. socialism (Dodd 2012).

As hinted at in the previous paragraphs, Marx can be seen as another major sociological figure with insights into money. For Marx, "money is considered in connection to capital-labor relations, and the focus is more exclusively on wages and the formation of capital rather than on money as such" (Deflem 2003:75). In this sense Marx was writing less on money in particular, such as a medium of exchange, but more specifically on how the accumulation of money, or value, is what facilitates the capitalist machine.



The simplest form of the circulation of commodities is C-M-C, the transformation of commodities into money, and the change of the money back again into commodities; or selling in order to buy. But alongside of this form we find another specifically different form: M-C-M, the transformation of money into commodities, and the change of commodities back again into money; or buying in order to sell. Money that circulates in the latter manner is thereby transformed into, becomes capital, and is already potentially capital... Such reflux is not dependent on the commodity being sold for more than was paid for it. This circumstance influences only the amount of the money that comes back. The reflux itself takes place, so soon as the purchased commodity is resold, in other words, so soon as the circuit M-C-M is completed. We have here, therefore, a palpable difference between the circulation of money as capital, and its circulation as mere money (Marx 1867:104-105).

Foregoing a full-blown discussion on capitalism versus socialism, Marx's emphasis on labor as having the only true value could be seen as a form of protest against the ruling class. Marx was mainly emphasizing that workers' wages were unfair and that the owners of the means of production could set the prices however they like. Many people today would agree that there should definitely be a balancing force against monopoly-like institutions but that there should also be incentive motivations built into an economic system, as well as freedom to create better products and services than the current establishment.

In connection with his work on rationalization, Weber writes about money directly. He sees in money "the most abstract and "impersonal" element that exists in human life" (1958a:331). This mentality is very similar to the way that Simmel sees money at certain points, except Simmel typically takes a less critical stance. Weber's take on money is also part of the foundational elements for his theory regarding *The Protestant Work Ethic*, a very early example of an economic social movement. For Weber, *The Protestant Work Ethic* in its most basic form could be summarized as "the earning of more and more money, combined with the strict avoidance of all spontaneous enjoyment of life" (1976:53). This ideology suggests that hard

work and accumulation of wealth are signs that an individual is doing God's will, effectively giving early capitalism a jump start spiritual catalyst from which contemporary secular structures still benefit.

Weber also focuses on the central role that money plays in connection to power, bureaucracy (1958b), and the state. "The public treasury does not make its payments simply by deciding to apply the rules of the monetary system which somehow seems to it ideal, but its acts are determined by its own financial interests and those of important economic groups" (1978:172). In this regard Weber might not consider money as necessarily a positive thing in itself, but he might be interested in the power dynamics between Bitcoin and 21<sup>st</sup> century socio-economic politics.

As for a more recent sociologist speaking on this topic, we look to George Ritzer. Although not directly addressing money, he brings forth some very contemporary outlooks on the present economy, specifically with regards to credit cards and credit in general. Just as with Simmel before him, he presents the positive and negative aspects. However, Ritzer is clearly concerned with issues such as: "...rampant consumerism, escalating indebtedness, pervasive fraud and crime, invasions of privacy, dehumanization of our daily lives, and increasing homogenization of the world's cultures" (Ritzer 1995:2). Between Nixon taking the United States off the gold standard in 1971 and The Patriot Act in 2001, the economy of today is vastly different than that of 50 years ago. In particular, the Patriot Act further exacerbates Ritzer's concern with privacy due to a legitimization of financial surveillance in the name of money laundering for terrorism.

Bitcoin actually addresses some of Ritzer's main concerns directly, especially those regarding debt and surveillance. Bitcoin does not tie financial transactions to your identity, and its scarcity remains a store of value in opposition to a world infected with debt. In a near fractal-like pattern, the average United States citizen and their government both became major consumers of debt around roughly the same period, although this dynamic is much more complicated on a governmental level. While on the individual level keeping the economy growing often involves people living beyond their means at this point, which can be catastrophic for a system that is unpredictable. This latest exploitation by the capitalist class has pushed America in a previously unthought-of mentality when it comes to personal finances. Where prudence and savings once characterized the average American, it is now replaced by the norm of being in debt for the vast majority of them. The same could also be said for the government as a whole. Through bailouts and quantitative easing, the economy at present is far less about "free market natural laws" and more like a "Wizard-of-Oz-behind-the-curtain magic show;" one that unfortunately will always punish the less financially literate.

There have been many different kinds of local alternative economies springing up over the past couple of decades, and in many ways Bitcoin could easily be comparable to many of them. With Bitcoin, the purpose is to circumvent central banks and government monopolies on currency. In fact, this is actually the exact goals of Local Money Systems, as well as sharing some similar motivations as Community Exchange Schemes and Bartering Communities. "So it might be said that local money systems challenge the legitimacy of 'monopoly capitalism' while supporting legitimacy of 'local competitive capitalism'" (Martin 2002:24). The two major differences are the difficulty in shutting down a decentralized international currency and the amount of monetary value currently tied up with Bitcoin.

## **Previous Empirical Bitcoin Research from Sociology**

There are few academic papers from sociology published on the topic of Bitcoin. The earliest is Lui Smyth's (2014) "The Politics of Bitcoin," which explores some of the political ideologies within the Bitcoin community. Smyth used a survey of people on Bitcointalk.org, Reddit, Twitter, and Google+ between February 12<sup>th</sup>, 2013 and April 4<sup>th</sup>, 2013, resulting in 1,193 responses. Unfortunately, the only paper from this study relies on preliminary results, when only 300 responses had been obtained. From those early respondents, approximately one quarter indicated that they were Libertarian despite the popular opinion that the vast majority of Bitcoin users at that time held these political beliefs. Further, the results indicated that this group was comprised of another "quarter liberal, and a quarter more left-wing" (Smyth 2014). This flies in the face of what not only popular opinion from outsiders may have, but also what many insiders believe even to this day.

Some of the most in-depth sociological work on this topic comes from Bohr and Bashir (2014) and Bashir, Bohr, and Strickland (2016). These researchers have conducted two separate studies on Bitcoin users, one in 2014 and the other in 2016, with the former based directly off of the work of the previous study. Bohr and Bashir (2014) structured their analysis in two ways. The first part of this paper uses the amount of self-reported Bitcoin a respondent has, the near-term expectation of what the price of one Bitcoin will be, and the long-term expectation of what the price of one Bitcoin will be as dependent variables. The independent variables of this section include: age, gender, if a respondent lives in the United States, when they first downloaded the Bitcoin client (software that connects to the Bitcoin network), whether or not they ever mined Bitcoin, whether or not they ever obtained Bitcoin by stealing it or mining on someone else's computer via malware, whether or not they used Bitcoin for illicit goods, whether or not they

ever used Bitcoin-specific message boards, whether or not they describe themselves as investors, and how important profit or community was in motivating them for their initial involvement with Bitcoin.

Bohr and Bashir (2014) concluded that the average age of a respondent was thirty-three and males represented ninety-five percent of respondents. As for accumulation of Bitcoin, the most prominent group was the miners, who accounted for twice as many Bitcoin as any other group, but other useful predictors include using Bitcoin for illicit goods and using Bitcoin message boards. Self-identified Bitcoin investors also had four times as much Bitcoin as those who did not identify as investors. The near-term and long-term value predictions were a little more difficult, only explaining seven percent of the variance. Some of the significant results here include: whether or not a user considered community a motivating factor, age, whether or not they were a Bitcoin miner, whether or not they used Bitcoin message boards, and whether or not they identified as an investor.

The second part of the analysis was an open-ended question about respondents' favorite aspect of Bitcoin (Bohr and Bashir 2014). There was also a section dedicated to political orientation, which in contrast to Smyth's earlier findings showed that almost half of the sample identified as Libertarians. Also, other prominent political identities included Progressives, Socialists, Centrists, and Greens. The second part of this analysis found eight percent of the sample referencing anonymity, sixteen percent referencing freedom, and ten percent referencing the banking system. The most significant finding from this section is a possible ideological divergence, with Libertarians favoring "an alternative currency that can free the individual from state power structures" (Bohr and Bashir 2014:101) and left-of-center users favoring "a

decentralized payment system that challenges power structures within the realm of finance” (Bohr and Bashir 2014:101).

Unfortunately, the original researcher was unable to follow through after the original preliminary piece. Regardless, the research was thorough and provided a foundation for those unfamiliar with Bitcoin to understand more about the people who are involved. The main problem with this piece is that the majority of the paper focused on how much Bitcoin some users have and their view of the price. It could be argued that the second part regarding motivation was more interesting. Then again their findings from the open-ended question provided the foundation for expansion on this characteristic, which has become the central theme of this thesis.

The second paper (Bashir, Bohr, and Strickland 2016) takes a closer look at what motivates people to use Bitcoin. However, they conduct this with a survey of a random sample from a “Midwestern University.” Some of the main findings echoed previous research: women are only fifteen percent as likely as men to have owned Bitcoin, and Libertarians were two and a half times as likely to own Bitcoin when compared against those with centrist or left ideologies. Having a friend who owns Bitcoin was a huge factor in whether or not a respondent also owned Bitcoin. Among the motivational factors, only novelty turned out to be a statistically significant factor in predicting Bitcoin ownership.

This second survey was an attempt at obtaining a random sample from a more common population. Albeit, as they state, it is one that would be more prone to knowing of new technology since they were college students. The more average character of these respondents was glimpsed through the fact that “novelty” was one of the main motivational findings. This

technology is still very new to the general population and many potential future users are still grappling with exactly what it is. It is for this reason that more active members of message boards dedicated to Bitcoin seem like they would be a better source to understand the underlying motivation behind their use outside of pure profit seeking.

Specifically for this research there is a common trend from much of this background literature which has continued into the popular discussions within the Bitcoin community. In the most general sense, almost every other sociologist's work on this topic has mentioned Bitcoin usage as a way of circumventing the nearly monopolistic controls of the banking industries and governmental currencies (Bashir, Strickland, and Bohr 2016; Bohr and Bashir 2014; Maddox et al. 2016; Smyth 2014). With all of these papers their specific focus does not seem to be as honed in on this quality as is being aimed at in this thesis. The need for it, however, is glaring and they all seem more than aware of how relevant these traits may be for this community.

To further inform these topics as they relate to Bitcoin and its communities, it is useful to understand just how much Bitcoin users' thinking is in line with some of these ideas about money from previous research. For this purpose looking at user motivation through the lens of social movements' literature provides a compelling direction given the characteristics of the technology itself, as well as the community that has developed around it. Some of the deeper implications surrounding money may be a bit of a stretch for the average user, so instead the focus will be more along the lines of questioning the current iteration money and the form it has taken or what that means in the context of being involved with Bitcoin. This train of thought also shares some of the same concerns as many "gold bugs" and, more specifically, users being motivated by concerns about the current form of money rather than one-dimensionally trying to

make a profit with Bitcoin, as well as perceived shortcomings of other empirical work studying Bitcoin users' motivations.

### **Social Movements/Framing**

Social movements can be defined as “collective challenges, based on common purposes and social solidarities, in sustained interactions with elites, opponents, and authorities” (Tarrow 2011:9). It is indeed an odd scenario for something to exist as both an investment and a social movement at the same time, but the unique characteristics of Bitcoin, in particular its decentralization and scarcity, create this dynamic. This can be seen in a saying from many in the Bitcoin community, that these characteristics create a positive feedback loop, both generating a more thoroughly decentralized platform and more value, simultaneously. It could be argued that similar dynamics with profit and social movements have been characteristics of some groups in the past with regards to other open source software, like Linux (Holtgrewe and Werle 2001), and certain environmental activism websites in China (Fedorenko and Sun 2016), but rarely is it as explicit as it is with Bitcoin.

Social movement research has gone through many different waves, including resource mobilization theory, political process theory, framing theories, and finally new social movements with an emphasis on social, cultural, and emotional motivations rather than purely economic or political motivations (Tarrow 2011). The purpose of this thesis is not to identify which type of social movement Bitcoin would be classified as, or whether or not some motivations may overlap with others, but rather to compare the instrumental social movement motivations with a purely profit-driven motivation for Bitcoin participation.



Traditionally, social psychologists focused on three main reasons for participation in social movements: instrumental, identity, and group-based anger; with a later addition of a fourth category ideology (van Stekelenburg, Klandermans, and Dijk 2007). The “instrumental motivation” was the most used of these categories early on amongst social movement researchers, while resource mobilization theory and political process theory were prominent, and attempted to acknowledge the social psychological dimension within social movements. The problem with using a purely instrumental approach is that it ignored other motivations from sources that may not be as goal-seeking in such a straight forward manner (van Stekelenburg and Klandermans 2007; Stürmer and Simon 2004). As previously stated, new social movements are often less concerned about political or economic opportunities and more about personal attitudes; thus coinciding with this trend is the addition of identity, group-based anger, and ideological motivations. As Schragger (1985:859) states, “collective action is more than the sum of economic calculations: social and ideological factors figure powerfully in people’s willingness to act.”

Identity-based motives are centered on the assumption that one’s sense of duty and desire to further group goals can be a major motivating force for collective political action (Huddy, 2003; Simon, 2004; Stryker, Owens, & White, 2000). This is one of the main encompassing dynamics categorizing “new social movements.” Identity and emotion-based motivations typically do not simply replace instrumentalism in studies on social movements but are seen as a second “horizontally” located motivating factor. As can be glimpsed with van Zomeren et al.’s (2004) study on group-based anger motives, these more “emotional motivations” can serve as catalysts for instrumental actions and vice versa. Finally, ideology can be a strong motivating factor, not only in combination with instrumental motives, but in and of itself. “They participate

in a social movement not necessarily to enforce political change, but to gain dignity and moral integrity in their lives through struggle and moral expression” (van Stekelenburg and Klandermans 2007:53).

In order to better understand Bitcoin users, a contrast will be made between how they frame their involvement, especially those who are veterans of the movement, versus how certain popular news companies and prominent economists frame it. “By frame alignment, we refer to the linkage of individual and SMO interpretive orientations, such that some set of individual interests, values, and beliefs and SMO activities, goals, and ideology are congruent and complementary” (Snow, Rochford, Worden, and Benford 1986:464). Typically when sociologists talk about framing and frame alignment they refer to the leaders’ decision to push forward certain narratives that help put priorities in place that often run in opposition to competing groups’ narratives. This topic can be slightly “off-center” for Bitcoin since there are no official leaders but through communication, consensus seems to be reached on this narrative and it is still a useful concept for helping make sense of this group. “The term “frame” (and frame-work) is borrowed from Goffman (1974:21) to denote “schemata of interpretation” that enable individuals “to locate, perceive, identify, and label” occurrences within their life space and the world at large” (Snow et al. 1986:464). With this quote it is easier to see how framing plays a part in a decentralized organization, agreement about framing topics will just take longer to reach the minimal levels of consensus. The prognostic frame (Snow and Benford 1988), or narrative, that Bitcoin users pronounce is that, in a general sense, national currencies are riddled with many problems and Bitcoin is a powerful tool to help address these concerns.

This process of back-and-forth between Bitcoin users and critics is an ongoing situation that is constantly evolving, even though some of the main points are reiterated. “An overarching

theme found in the interplay between movement framing and the broader context is that to be politically effective, a movement must respond and interact with its environment as it frames its arguments” (McCammon, Muse, Newman, and Terrell 2007:746). Throughout Bitcoin’s history is has been “socially attacked,” or framed as illegitimate, from just about every economic, political, and social angle. In response, users have had to respond to these criticisms in a way that evolves with the conversation. For example, there was a large disagreement over the amount of transactions allowed during any given period which is still somewhat ongoing. What started as possibly a minor technical disagreement blossomed into a full blown war with propaganda, accusations of movement co-optation by elites from both sides, and the creation of an entirely different cryptocurrency by many prominent figures involved with Bitcoin. The crux of that issue was turned into the narrative of Bitcoin being a peer-to-peer cash system with low transaction fees or a more decentralized base layer laying the foundation for cheaper transaction layers.

Movements function as carriers and transmitters of mobilizing beliefs and ideas, to be sure; but they are also actively engaged in the production of meaning for participants, antagonists, and observers. This productive work may involve the shaping and structuring of existing meanings. Movements can thus be construed as functioning in part as signifying agents and, as such, are deeply embroiled, along with the media and the state, in what Stuart Hall (1982) has referred to as “politics of signification.”

We use the verb framing to conceptualize this signifying work precisely because that is one of the things social movements do. They frame, or assign meaning to, and interpret, relevant events and conditions in ways that are intended to mobilize potential adherents and constituents, to garner bystander support, and to demobilize antagonists (Snow and Benford 1988:198).

There seems to be a sharp divide between how many in the media frame Bitcoin when compared with insiders. For example, <https://99bitcoins.com/bitcoin-obituaries> is a website that

shows all 350-plus times an article declares that “Bitcoin is dead” since 2010. This distinction is centered on Bitcoin being a mechanism to make money seemingly without any valuable internal attributes, thus a Ponzi scheme at worst or at best simply another investment. On the other hand, Bitcoin can also be framed as a world-changing technology and social movement. Within this context, a major dynamic to be empirically explored are users’ framing of their motivations with Bitcoin. It is likely that many Bitcoin users were originally motivated by return on investment opportunities rather than as a form of social movement. Over time, however, their motivations for continued involvement in Bitcoin may come to reflect social movement goals and ideology, which is what is found in other social movement research regarding “Novices, Returners, Repeaters, and Stalwarts” (Sanders, Grasso, Olcese, Rainsford, and Rootes 2012). This is in contrast to those users who have been involved for shorter amounts of time, who may place more value on their return on investment.

## **Hypotheses**

Social movement participants who are in the early stages of a blossoming new movement are very involved with the goals of that movement. As the literature shows, the ones who remain involved over longer periods of time become even more involved as time goes on, as long as the social movement continues to expand (Sanders et al. 2012). It is following these characteristics of social movement participation that the following hypotheses were developed. These hypotheses all specifically revolve around group members who value social movement ideas especially with regards to those who have been involved longer or those who have obtained more knowledge on the subject. These same ideas about social movement dedication over time

have also been popularized within the Bitcoin community itself so these hypotheses are also based off of responses to open-ended questions from previous sociological Bitcoin research (Bohr and Bashir 2014). So to summarize, Bitcoin “Stalwarts,” as Sanders et al. (2012) would describe them, should be more likely to continue using Bitcoin in the face of adversity from the United States banning it, should be more motivated by the revolutionary goals of Bitcoin critiquing the world monetary systems, and should be less motivated by profit than their novice counterparts. Providing empirical data on these relationships could be beneficial for not just academia and the Bitcoin community but the world as a whole with many onlookers trying to better understand this technology and its community.

1. The longer a Bitcoin user has been actively involved, the less interest they will have in its monetary value.
2. The more knowledge a user has about Bitcoin, the less interest they will have in its monetary value.
3. The longer a Bitcoin user has been actively involved, the more likely they will indicate the intention to continue being involved with it even if the United States government decided to ban it.
4. The more knowledge a user has about Bitcoin, the more likely they will indicate their intention to continue being involved with it even if the United States government decided to ban it.

5. The longer a Bitcoin user has been actively involved, the more they will be motivated by instrumental social movement motivations.
  
6. The more knowledge a user has about Bitcoin, the more they will be motivated by instrumental social movement motivations.

## **Chapter III: Methods**

### **Introduction**

There have been two methodological approaches to understanding the Bitcoin community: ethnographies (Maddox et al. 2016) and surveys (Bashir et al. 2016; Bohr and Bashir 2014) and there have been several different populations and samples within these methods. Given the goals of this thesis, a survey of the r/Bitcoin, r/cryptocurrency, and r/Bitcoinmarkets subreddits and the website Bitcointalk.org was used. These are international communities and are actually involved with this new technology on a regular basis.

Bitcointalk.org is the original forum for communications on Bitcoin and is essentially a message board where people can post messages and communicate with each other using their user names. The previously-mentioned subreddits are sections of a popular message board called Reddit. Reddit is unique from most message boards because it incorporates a roughly twenty-four-hour voting system where top voted posts on the website make the top of the “front page” for each subreddit, as well as for Reddit as a whole. Each of these posts can be a simple message, a link to an article, or any media piece that is uploaded with a subsequent comments section affiliated with each post. The reason this population was chosen is because the general public does not have enough understanding on this topic; therefore, they are inadequate for gaining the type of information being sought after in this research. Bitcointalk allows for the input from some of the more knowledgeable individuals from this community, while the subreddits will bring in the average Bitcoin user.

## **Key Concepts and Operationalization**

The data collection instrument for this research was an online survey (see Appendix A). Some of the key concepts involved in this survey are: length of active involvement with Bitcoin; knowledge related to Bitcoin; the potential for the monetary value of Bitcoin to continue rising; experience with investments other than Bitcoin; Bitcoin as an investment versus other types of investments; and Bitcoin use in the face of the United States government banning it. In addition, the survey asked respondents to rate the following ideas on a scale of one to five according to what makes them support Bitcoin: supporting an alternative economic ecosystem, economic privacy, security from not giving out credit card info or other personal details, anti-censorship support, ability to overcome restrictive governmental policies, ease of use, cool new tech, hobby, and novelty. For most of these questions, operationalization was simply done by asking the respondent about the key concept specifically. As for motivation-related questions, a statement regarding the separate motivations for using Bitcoin was provided and respondents were asked to rate how much they agree with that statement using a 1 to 5 Likert-type scale.

## **Sampling Strategy**

In order to better understand Bitcoin motivation dynamics, a survey was administered by using non-probabilistic cross-sectional convenience sampling and submitted to r/Bitcoin, r/cryptocurrency, and r/Bitcoinmarkets subreddits on the website Reddit.com as well as to Bitcointalk.org. The main reason for this is that, again, one could not expect the average person to understand this topic beyond the sensationalized headlines unless they were actually involved in some way. Therefore, “advertising” the surveys on several very popular subreddits on



Reddit.com and Bitcointalk.org is a better approach to capture the opinions of actual users. Similar studies were conducted in the past (Bashir et al. 2016; Bohr and Bashir 2014; Smyth 2014) but the largest shortcoming seemed to be with regards to social movement motivations. With that being said there was a large portion of responses to an open-ended question in one of the previous empirical studies where the most common answers were talking about an alternative monetary system or alternative, open source payments system (Bohr and Bashir 2014).

When attempting to garner responses in the current research, either a comment or a post was made along the lines of:

I am continuing my master's thesis regarding Bitcoin user's motivation and would highly, highly appreciate your help by filling out my 5 min survey!

As some of you have seen before, I am collecting Bitcoin users' motivation when using Bitcoin, and while discussing Bitcoin on message boards such as this one. I am a sociologist who has been very interested in Bitcoin for a while now and would love to share the results with everyone once I get enough data to be considered representative. Things are coming along rather well so far but I really need to keep the ball rolling, so if you have not filled my survey out already I would highly, highly appreciate it if you would!

This was done just about every other day, rotating from one message board or group to another in order to not exhaust user responses. However, respondent fatigue did take place more quickly than anticipated, with dozens of participants per day at first and only a handful near the end of the survey period. Once response rates had dropped off substantially, the survey was closed but with a substantial response rate.

## **Data Collection**

Survey implementation began on February 15<sup>th</sup>, 2018 and ended on March 16, 2019 as new respondents began to only trickle in due to exhaustion of community members that would participate. A total of 333 responses were collected, although in two cases the respondent did not answer a question, in which case those responses were not used in the analysis. This is a little short of the number of responses Lui Smyth received from a similar survey conducted in 2013 (totaling 1,193), but a more realistic number for comparison would be 311 which came from a Reddit user by the name of Tricky\_Troll<sup>5</sup> when they conducted another similar survey near the end of 2017. It is hard to know the exact number of Bitcoin users; but even estimating with an upper range measurement, the number of active wallets or Bitcoin transaction addresses, a population of roughly 30 million would still put 333 respondents at a margin of error around 5.5% with a 95% confidence interval. With many people using multiple wallets the actual population size is in all likelihood a little smaller.

## **Data Analysis Strategy**

Data was collected in SurveyMonkey and exported using an Excel format. An individual-level analysis was then conducted by importing the data into Stata. Some regression analysis was conducted using variables suggested by previous Bitcoin research, popular opinion within the Bitcoin community, and social movements research. All of the hypotheses were centered on the

---

5

[https://www.reddit.com/r/BitcoinMarkets/comments/848yar/the\\_noobening\\_did\\_the\\_cryptocurrency\\_community/](https://www.reddit.com/r/BitcoinMarkets/comments/848yar/the_noobening_did_the_cryptocurrency_community/)

concept of Bitcoin users' motivations and understanding its perceived revolutionary power, framed in a fashion similar to a social movement.

The first two hypotheses both used a respondent's level of interest in monetary value as the dependent variable. For the first hypothesis, "the longer a Bitcoin user has been actively involved, the less interest they will have in its monetary value," is compared in relation to how long a respondent has been actively involved with Bitcoin. This is done with the expectation that those who have been involved longer will be less interested in monetary value. For the second hypothesis, "The more knowledge a user has about Bitcoin, the less interest they will have in its monetary value," monetary value was again compared but this time with how much knowledge a respondent has about Bitcoin. There is a similar expectation that interest in monetary value will become less important when a respondent has more knowledge about it.

Hypotheses three and four both used a respondent's level of intention to continue being involved with Bitcoin if the United States government decided to ban it as the dependent variable. In the third hypothesis, "the longer a Bitcoin user has been actively involved, the more likely they will indicate the intention to continue being involved with it even if the United States government decided to ban it," was compared with how long a respondent has been actively involved with Bitcoin. This was done with the expectation that those involved longer would be more likely to continue using Bitcoin in this scenario. For the fourth hypothesis, "the more knowledge a user has about Bitcoin, the more likely they will indicate their intention to continue being involved with it even if the United States government decided to ban it," a respondent's level of intention to continue being involved with Bitcoin if the United States banned it was again compared but this time with how much knowledge a respondent has about it. It is then expected that a respondent's willingness to continue being involved with Bitcoin despite the

United States government banning it will be greater when a respondent has more knowledge about it.

Finally, the last two hypotheses, “the longer a Bitcoin user has been actively involved, the more they will be motivated by instrumental social movement motivations” and “the more knowledge a user has about Bitcoin, the more they will be motivated by instrumental social movement motivations,” used a scale of instrumental social movement motivation indicators as the dependent variable. To create this scale, relevant variables were added together and divided by the total number of variables to get the mean score of their combination. Also, alpha levels between the variables were used to insure that they were properly correlated. The ratings questions used for the instrumental social movement motivations scale were: “Bitcoin supports an alternative economic system,” “Bitcoin supports economic privacy,” “Bitcoin supports anti-censorship,” “Bitcoin supports the ability to overcome negative governmental economic intervention (inflation, bailouts, seizures, restricted bank assets during crisis, etc.),” and “I don’t think humans are capable of fair economic policy” (see Table 3.1). Analysis revealed an alpha level of 0.73 for this scale. The primary independent variables here will be how long a user had been actively involved with Bitcoin and how knowledgeable a user is about Bitcoin. For all of these hypotheses other control variables were included as well, such as the profit motive, sociodemographic characteristics, education, and experience with other investments.

Table 3.1: Social Movement Instrumental Scale (n=333)

	Mean	SD	Range
Alt Econ <sup>a</sup>	4.29	1.06	1-5
Econ Priv <sup>b</sup>	3.48	1.33	1-5
Anti-censor <sup>c</sup>	3.90	1.28	1-5
Government <sup>d</sup>	4.20	1.12	1-5
Human <sup>e</sup>	3.13	1.34	1-5
5 Items			Alpha = 0.73
<sup>a</sup> Bitcoin supports an alternative economic system <sup>b</sup> Bitcoin supports economic privacy <sup>c</sup> Bitcoin supports anti-censorship <sup>d</sup> Bitcoin supports the ability to overcome negative governmental economic intervention (inflation, bailouts, seizures, restricted bank assets during crisis, etc.) <sup>e</sup> I don't think humans are capable of fair economic policy			

### **Data Management Strategy**

All of this data was obtained anonymously as to eliminate the threat of compromising any identifying information. All of the data collected for this research was put on a USB drive and put in a lock box of the author's handling and then backed up once a week on a second USB drive.

### **Summary**

To summarize, I developed an online survey designed specifically for Bitcoin community members in order to test my hypotheses from Chapter two. These members were solicited for participation in the research by using posts on Reddit and Bitcointalk.org. Data was collected between February and March 2019 with a total of 333 responses. This provides the data for the analysis in the next chapter.

## **Chapter IV: Results**

After garnering enough responses to have a representative sample of the Bitcoin community, the data was imported into Stata. This data was very clean with few missing cases. There were only two instances of someone not answering a question. Beginning this data analysis and results section will be the descriptive statistics of the sample with accompanying tables. The descriptive statistics in Tables 4.1 and 4.2 provide a compelling story of how Bitcoin users' frame their motivations. From there the analysis moves into specific hypothesis testing and analyses based on the findings.

## Descriptive Statistics

Table 4.1: Sociodemographic Characteristics of Bitcoin Community – Part One (n=333)

	n	%
Age		
18-30	166	50%
31-40	120	36%
40+	45	14%
Sex		
Female	13	4%
Male	310	93%
Non-binary	2	0%
Prefer Not To Answer	8	2%
Highest Level Education		
Less Than High School	4	1%
High School	18	5%
Some College	52	16%
College	125	38%
Graduate Degree	132	40%
Class		
Lower Class	5	2%
Working Class	31	10%
Lower Middle Class	116	36%
Upper Middle Class	155	48%
Upper Class	16	5%
Years Involved W/ Bitcoin		
1	44	13%
2	120	36%
3	41	12%
4	31	9%
5	22	7%
6	32	10%
7	16	5%
8	22	7%
9	4	1%
Country		
USA	138	42%
European Union	118	36%
Other	75	23%

A major part of this research is adding to the foundational understandings about the Bitcoin community. It seems that 18-30-year-olds only made up about 50% of respondents. The vast majority of this sample was male, at 93%. There are the societal norms of men being more interested in math and computers which probably come into play here, but even then it does seem interesting that these numbers are so extreme. With this being the case, using sex as a dummy variable has been excluded because of such a low number of other respondents.

The Bitcoin community is highly educated. For comparison, roughly 10% of the United States population has a graduate degree of some sort (United State Census Bureau 2019), whereas in this sample nearly 40% have a graduate degree. Furthermore, roughly 25% of the United States has a college degree (United State Census Bureau 2019), whereas 38% of this sample has a degree. With these results, it would be useful to know what disciplines are prominent amongst respondents in future studies. For example, do the vast majority of users hold a degree in computer science related fields or possibly business related fields? Every subtlety in different disciplines or academic focus could mean many different things, but one thing seems certain: the Bitcoin community is a more educated group than some would frame it.

The Bitcoin community is an international community with many countries represented in the sample. The vast majority of respondents can be broken into three categories: The United States, The European Union, and Other Countries. The United States makes up around 40% with 138 respondents, The European Union makes up roughly another 35% with 118 respondents, and then the rest come from a multitude of other countries. What is interesting about these results is that there are two major players within Bitcoin who are absent; China and Russia. Particularly, China has more Bitcoin mining, double-checking and relaying information on the Bitcoin blockchain than any other country. This is most likely due to a difference in social media use for



these countries since they typically do not use Reddit.com typically. Also, bitcointalk.org was blocked in China in 2014. This is a shortcoming in this research; but given a lack of knowledge about the landscape of social media in China and Russia, plus a possible need for the use of a translator, this was somewhat inevitable.

Regarding class and income, there is a skew towards the upper middle class and middle class, which is in turn reflected on the income demographics (see Table 4.2). These numbers seem to indicate just about a normal bell curve distribution, but there does seem to be a trend towards needing some discretionary income, with a mean of 6 out of 10 on the self-rated scale for income, that would allow for finances beyond living paycheck to paycheck. There also seems to be a lack of people at the very top of these spectrums, possibly due to the nature of Bitcoin challenging the status quo when it comes to finance.

Regarding the amount of time respondents have been actively involved with Bitcoin, there appears to be an increase in new users per year over time. This is an expected dynamic in the early stages of a social movement cycle. One can also observe cutoffs for the different timings of the bubble cycles for Bitcoin price, which gains a lot of new attention from both potential users and the media when the price is going up. As for how knowledgeable a respondent is about Bitcoin, it is apparent that this group has a solid understanding with a mean score of 3.53 out of 5.

Table 4.2: Sociodemographic Characteristics of Bitcoin Community – Part Two (n=333)

	Mean	SD	Range
Income	6.04	2.10	1-10
Knowledge <sup>a</sup>	3.53	0.85	1-5
MVMot <sup>b</sup>	4.20	1.09	1-5
EXPOI <sup>c</sup>	2.88	1.25	1-5
BITVOI <sup>d</sup>	3.87	1.24	1-5
USIllegal <sup>e</sup>	3.98	1.35	1-5
SMIdent <sup>f</sup>	2.69	1.24	1-5
SMInstru <sup>g</sup>	3.80	0.85	1-5
ActiveInv <sup>h</sup>	3.48	0.12	1-9
<sup>a</sup> Self-rated knowledge a respondent has about Bitcoin <sup>b</sup> Self-rated motivation to use Bitcoin because of its monetary value <sup>c</sup> Experience with other investments <sup>d</sup> How likely a respondent would be to use Bitcoin even if they could get the same amount of profit from another investment <sup>e</sup> How likely a respondent would be to use Bitcoin if the US made it illegal <sup>f</sup> Self-rated motivation to use Bitcoin because of Social Movement identity related questions <sup>g</sup> Self-rated motivation to use Bitcoin because of Social Movement instrumental related questions <sup>h</sup> Number of years a respondent has been actively involved with Bitcoin			

When it comes to being motivated by Bitcoin’s monetary value, it seems that this is pretty much a given across the sample with a mean of 4.2 out of 5. This will come into play in later parts of this analysis, but for now it seems that Bitcoin’s monetary value plays a very important role for involvement with this technology. The monetary value of an asset is often seemingly used as a measure of success in the United States.

The mean of respondents’ experience with other investments is 2.88 out of 5 (see Table 4.2). For the next two variables respondents are dealing with hypothetical scenarios. When looking at whether or not respondents would invest in Bitcoin rather than other investment alternatives even if they could obtain the same profit, as well as the likelihood of a respondent continuing to use Bitcoin even if the United States banned it, we start to see some interesting trends. The mean of the variable measuring likelihood to invest in Bitcoin despite other similarly profitable options is 3.87 out of 5, and the mean of respondents’ willingness to continue use if

the United States banned it is 3.98 out of 5. In both cases there is a very strong trend towards being involved with Bitcoin no matter what. This provides a good example of how these users frame Bitcoin. There are probably not that many investments that people would remain with even if the United States banned it.

The mean of the variable representing identity-based social movement motivations is 2.69 out of 5 (see Table 4.2). This relatively low number is possibly due to the purpose-driven or goal-oriented nature of this community and technology, or the individualistic nature of money. We do begin to see some substantial numbers when it comes to the more instrumental social movement motivations. With instrumental social movement motivations the mean is 3.8 out of 5, so it seems that, for many of these respondents, Bitcoin is framed in a way that seems like more than an investment.

### **Correlation and Regression Analysis**

To begin this section, a correlation matrix between each of the variables is presented (see Table 4.3). One of the more interesting correlations is the moderate positive relationship between the monetary value motivation and instrumental social movement motivation, with a correlation coefficient of 0.27 and significance at the 0.05 level. It seems there is a strong relationship between how much a respondent values profit and instrumental social movement motivations, this will become more apparent throughout this section. Another interesting observation is the moderate positive relationship between knowledge and how long a respondent has been actively involved with Bitcoin, with a correlation coefficient of 0.30 and significance at the 0.05 level. The knowledge and time actively involved relationship is obvious, but the monetary value

motivation and instrumental social movement motivation relationship was unsuspected. In addition, these two relationships were amongst the most significant.

Table 4.3: Bivariate Pearson Correlations (r) for Variables in the Analysis

	SMIN	SMID	MON	KNO W	AGE	EDU	CLASS	INCO	TIME	EXPOI	BITVOI	USILL
SMIN	1.00											
SMID	0.40*	1.00										
MON	0.27*	0.17*	1.00									
KNOW	0.17*	0.14*	0.02	1.00								
AGE	-0.04	-0.02	-0.09	0.06	1.00							
EDU	-0.05	0.02	0.04	0.07	0.19*	1.00						
CLASS	-0.01	0.02	-0.06	0.20*	0.09	0.14*	1.00					
INCO	0.06	0.01	0.03	0.20*	0.23*	0.27*	0.41*	1.00				
TIME	0.11*	0.06	-0.05	0.30*	0.31*	0.03	0.15*	0.14*	1.0			
EXPOI	-0.03	-0.03	-0.13*	0.33*	0.19*	0.18*	0.28*	0.29*	0.15*	1.0		
BITVOI	0.29*	0.24*	0.12*	0.03	-0.06	-0.01	-0.05	0.02	0.07	-0.01	1.0	
USILL	0.41*	0.28*	0.13*	0.15*	-0.08	-0.05	-0.03	-0.16	0.13*	-0.11*	0.31*	1.0

\*Statistically significant at the 0.05 level

## **Hypotheses 1 and 2**

The first two hypotheses focus on involvement and knowledge and their relation to a focus on monetary value as a motivation for Bitcoin use. As shown in Table 4.4, one of the strongest predictors of a Bitcoin user valuing profit more is those with more education, although this variable falls slightly out of statistically significant range. A stronger predictor of a Bitcoin user valuing profit is those who have more experience with other investments, who are statistically significant, and place less value on profit when they have more experience with other investments. Finally, the strongest predictors for valuing profit are respondents that are also motivated by the social movement instrumental motivations of Bitcoin, which is significant and has a high degree of slope for its regression. However, the data analysis did not support the first two hypotheses regarding the variables related to the amount of time a respondent has been actively involved with Bitcoin and a respondent's knowledge about Bitcoin. There was no significant relationship between these variables and interest in the monetary value of Bitcoin

This reveals a unique relationship between Bitcoin and social movements that was not anticipated in that at every level of analysis, monetary value appears to be a major motivation. Upon first inspection this may detract from the idea that Bitcoin is a social movement. Further reflection, however, may indicate that rather than the profit motive disappearing over time it could be creating a feedback loop, actually creating incentive to participate in addition to the social movement motivations.

Table 4.4: OLS Regression on Bitcoin users' characteristics by the price per Bitcoin (N=315)

	B	SE	P> t
Knowledge	0.07	0.08	0.38
Age	-0.11	0.09	0.24
Class	-0.04	0.08	0.66
Education	0.11	0.07	0.10
Income	0.02	0.03	0.49
Time Actively Involved	-0.04	0.03	0.22
Exp. W/ Other Invest.	-0.12	0.05	0.03*
SM Identity	0.07	0.05	0.14
SM Instrumental	0.30	0.08	0.00**
F			0.00
R <sup>2</sup>			0.12
Adjusted R <sup>2</sup>			0.10
*0.05 **0.01			

### **Hypotheses 3 and 4**

The next two hypotheses focused the same independent variables, but this time in relation to how a Bitcoin user would be likely to respond to a hypothetical ban on Bitcoin by the United States government. As shown in Table 4.5, the amount of time a respondent has been actively involved with Bitcoin and their knowledge about Bitcoin are both significant predictors in the hypothesized direction of whether they would continue to use it if the United States banned it. In addition, greater knowledge is also one of the most significant predictors, with an even steeper regression slope. The data supported the two hypotheses. We also see a continuation of the pattern found from hypotheses one and two, where the profit motive remains important. Both the respondent's income and their experience with other investments variables are significant predictors as well. With both being in the negative direction, meaning that those with more income and more experience with other investments are less likely to continue to use Bitcoin even if the United States banned it.

Table 4.5: OLS Regression on Bitcoin users' characteristics by how willing they would be to continue using it if the United States declared it illegal (N=315)

	B	SE	P> t
<b>Knowledge</b>	<b>0.26</b>	<b>0.10</b>	<b>0.01**</b>
Age	-0.07	0.11	0.52
Class	0.05	0.10	0.63
Education	-0.01	0.08	0.89
Income	-0.11	0.04	0.01**
<b>Time Actively Involved</b>	<b>0.09</b>	<b>0.04</b>	<b>0.02*</b>
Exp. W/ Other Invest.	-0.14	0.07	0.03*
Monetary Value	0.18	0.07	0.01**
F			0.00
R <sup>2</sup>			0.11
Adjusted R <sup>2</sup>			0.08
*0.05 **0.01			

### **Hypotheses 5 and 6**

The final two hypotheses again use the same two independent variables, but this time in relation to social movement motivations, as seen in Table 4.6. Starting with hypothesis 5, the analysis reveals that how long a respondent has been involved with Bitcoin falls just outside of the statistically significant level, although it is in the hypothesized direction. With this being said, comparing it to just about all of the other variables still tells the same story seeing as it is far more significant than many of the variables. It is for this reason that the data does seem to provide minor support for this hypothesis.

The next variable being investigated is the one presented in hypothesis six, regarding how much knowledge a respondent has about Bitcoin. Here it is seen that knowledge about Bitcoin is a very significant predictor of a user valuing instrumental social movement characteristics, as well as having a steep slope in the hypothesized direction. Thus the data does support hypothesis six. As for the final significant predictor here, the profit motivation is the best indicator of valuing instrumental social movement characteristics. This finding throughout all of the models



is very indicative of the overarching theory that Bitcoin is a social movement wrapped in a get-rich-quick scheme. In other words, a good way to get people interested in this social movement is to align more “self-interested” profit motives with those of the larger group, a “reverse bait-and-switch.”

Table 4.6: OLS Regression on Bitcoin users’ characteristics by how much they value instrumental social movement themes for Bitcoin (N=315)

	B	SE	P> t
Knowledge	0.14	0.06	0.03*
Age	-0.06	0.07	0.43
Class	-0.05	0.07	0.43
Education	-0.07	0.05	0.17
Income	0.03	0.03	0.27
Time Actively Involved	0.04	0.02	0.07
Exp. W/ Other Invest.	-0.03	0.04	0.50
Monetary Value	0.22	0.04	0.00**
F			0.00
R <sup>2</sup>			0.12
Adjusted R <sup>2</sup>			0.10
*0.05 **0.01			

## **Chapter V: Conclusions**

From sea shells to digital ones and zeros money has come a long way with Bitcoin being the first grass roots iteration in a very long time. There are many indicators as to exactly what aspects about Bitcoin or its community determines that it is framed as a social movement. Even its general characteristic of being open source and decentralized hint at this aspect since it requires voluntary participation in what could be seen as subversive politics. Any other currency created with any amount of success would be shut down immediately. This is what is so unique about Bitcoin; there is no single destination containing an off switch. Bitcoin was built to be subversive and may have established an entirely new model of how to accomplish blocked agendas in combination with financial success.

Starting with some of the descriptive statistics and correlations, Bitcoin's story as a social movement begins to unfold. First, respondents to this survey tend to be very well educated. While this alone does not necessarily point to a social movement, it does begin to call into question why many powerful economists frame Bitcoin as some sort of failure of an experiment. A glance at the descriptive statistics concerning how likely a respondent would invest in Bitcoin, even when they could obtain the same amount of profit from other investments, and how likely a respondent would be to continue to use Bitcoin if the United States banned it shows a high level of enthusiasm among Bitcoin users. News headlines talking about exponential profits from Bitcoin can lead many users to being initially focused on its monetary value; and although this

motivation seems to remain, users become more involved with the more social movement aspects of Bitcoin as they conduct more research. Finally, as mentioned earlier, the majority of respondents scored between a 4 and 5 on the instrumental social movement motivation scale, setting early tones for how this group frames their involvement.

Regarding the specific hypotheses addressed in this research, Hypothesis 1, “the longer a Bitcoin user has been actively involved, the less interest they will have in its monetary value,” was not supported by the data. Hypothesis 2, “the more knowledge a user has about Bitcoin, the less interest they will have in its monetary value,” was also not supported. Instead of involvement and knowledge, valuing instrumental social movement motivations was found to be a strong predictor of a respondent being motivated more by the monetary price of Bitcoin. The failure to reject the null hypotheses here and the social movement motivation variables in this regression model reveal a similar story. In a typical social movement one might expect those who have been involved longer, those with more knowledge about the movement, and those that are more dedicated to the movement would be focused on altruistic concerns. This is specifically what makes Bitcoin so unique, because these more “self-interested motivations,” direct profit, never seem to go away. As a scarce investment, Bitcoin bootstraps the social movement into expanding far beyond those who would originally have its goals in mind. The investment aspect of Bitcoin is so tightly wound up with what Bitcoin is that it never separates from its more societal purpose.

Considering hypothesis 3, “The longer a Bitcoin user has been actively involved, the more likely they will indicate the intention to continue being involved with it even if the United States government decided to ban it,” the relationship was supported by the data. This contributes to viewing Bitcoin as a social movement. This relationship is more pronounced than

with the actual instrumental social movement scale. Hypothesis 4, “the more knowledge a user has about Bitcoin, the more likely they will indicate their intention to continue being involved with it even if the United States government decided to ban it,” was also supported. Although this is a hypothetical example, this idea is also backed by the current situation with Bitcoin in China where even though it is banned in certain ways (Regulation of Cryptocurrency Around the World 2018; China Bans Financial Companies From Bitcoin Transactions 2013; Deng and Wei 2014; Regulation of Cryptocurrency: China 2018) it still thrives (Tuwine 2019; Beeham 2019).

Hypothesis 5, “The longer a Bitcoin user has been actively involved, the greater they will be motivated by instrumental social movement motivations,” fell just outside the range of being statistically significant, but it was in the correct direction. So there were some minor findings for this hypothesis according to the data. With that being said, though, when you look at all of the other variables, it is clear there is some correlation here, although it is definitely less so than in the previous hypotheses. Hypothesis 6, “The more knowledge a user has about Bitcoin, the more they will be motivated by instrumental social movement motivations,” was found to be statistically significant and in the predicted direction. Thus the data supports this hypothesis as well. From these findings, it seems the length of active involvement with Bitcoin leading to instrumental social movement values is probably true only as long as a user is actively learning about Bitcoin during this time rather than the user seeing it as a passive investment. The findings for these hypotheses are all in line with previous sociological Bitcoin research (Bohr and Bashir 2014), upon which I added a more quantitative understanding to previous open-ended answers about Bitcoin motivation related to alternative economic systems. This is also in line with research on social movement motivations where users become more enthusiastic over time (Sanders et al. 2012).

There are a few limitations to the methods used in this research. First, the timing of all of the survey responses was at a certain point during a bubble cycle of Bitcoin price. This variable is troubling for Bitcoin research, with a potential shifting of opinions based on market conditions. In particular, data for this thesis were based on turned out to be the bottom of a bear market, where the price went down for an extended period of time. Due to this it is possible that the respondents were already predisposed to the social movement motivations simply because they had stuck with Bitcoin even after it had lost upwards of 80% of its market cap. Then again, the strongest predictor of valuing instrumental social movement characteristics was the monetary value of Bitcoin, so maybe the opposite could be true as well. For comparison specifically with this aspect of survey timing, it would be interesting to see how respondents might differ while in the middle of a bull market, where the price goes up for an extended period of time.

Another drawback of the methods used in this research involves the social media platforms used to garner survey respondents. This was mentioned earlier in the descriptive statistics section, where it is obvious that there is a lack of respondents from both Russia and China. Getting correct data from these countries may prove to be difficult, especially with China taking a much more defiant stance against Bitcoin and other cryptocurrencies over the years when compared with the United States. Future research could possibly benefit from those with knowledge about popular social media in these countries and garnering responses from them.

Between the descriptive statistics, correlations, and regression there is evidence of a social movement framing by Bitcoin users, which runs counter to proclamations by economists and the media (Egan 2019; Rooney 2019; <https://99bitcoins.com/bitcoin-obituaries/>). At every step of this analysis respondents frame Bitcoin as more than an investment. Bitcoin seems to break many boundaries, making society question what actually is money, or whether or not an

investment can be a protest. This is the nature of any major paradigm shift in society. Just like an artist, what makes for a massive change in society takes some thinking outside of the box.

Many social movements or other groups have been plagued with the problem of how to keep themselves spreading to a wider audience as well as keeping current participants actively engaged. In many respects Bitcoin seems to transcend this need with a basic and powerful catalyst, combining self-interest and immutable subversive political platforms. In a sense Bitcoin incentivizes participation. Can other social movement groups do the same thing?

With so much corruption in the world, it was destined that something comes along that no matter how powerful a group is they cannot manipulate the information. The Bitcoin blockchain is by all standards immune to hacking, and this is the first step needed to create a fair world. A decentralized economy opens up the possibility of a decentralized government. For some this is the ultimate goal of democracy. The technology for the latter statement is not there yet. Moreover, the sociological ramifications of such a system have never really been dealt with on such a massive level, outside of theorizing. Bailing out the banks in 2009 might have seemed like the best option to keep the world in a healthy financial state (Irwin 2018), but without changing the problems inherent in such a system, we are vulnerable to falling into the same catastrophe again. One thing seems certain amongst all of this: Bitcoin gives people a choice for which currency they use, despite any government that wants to stop it. The social movement behind Bitcoin is destined to continue.

## Works Cited

- 1886-1959, Ogburn William Fielding. 2013. *Social Change with Respect to Culture and Original Nature*. Place of publication not identified: Hardpress Ltd.
- Adams, Bert N. and R. A. Sydie. 2002. *Classical Sociological Theory*. Thousand Oaks: Fine Forge Press.
- Bashir, Masooda, Beth Strickland, and Jeremiah Bohr. 2016. "What Motivates People to Use Bitcoin?" *Lecture Notes in Computer Science Social Informatics* 347–67.
- Becker, Howard. 1959. "On Simmel's Philosophy Of Money." Pp. 216-236 in *Essays on Sociology, Philosophy, and Aesthetics*, edited by K. Wolff. New York: Harper Torchbooks.
- Beeham, Mathew. 2019. "3 countries host over 50% of the world's Bitcoin nodes." Retrieved November 12 2019. (<https://thenextweb.com/hardfork/2019/02/27/3-countries-50-percent-bitcoin-network/>).
- "Bitcoin Obituaries." Retrieved June 17, 2019. (<https://99bitcoins.com/bitcoin-obituaries/>)
- Bohr, Jeremiah and Masooda Bashir. 2014. "Who Uses Bitcoin? An Exploration of the Bitcoin Community." *2014 Twelfth Annual International Conference on Privacy, Security and Trust*.

- "China Bans Financial Companies From Bitcoin Transactions." 2013. *Bloomberg*.
- Deng, Cho and Lingling Wei. 2014. "China Cracks Down on Bitcoin". *WSJ.com*. Dow Jones & Company. Retrieved November 12 2019. (<https://www.wsj.com/articles/china-cracks-down-on-bitcoin-1396361492?tesla=y>).
- Dodd, Nigel. 2012. "Simmel's Perfect Money: Fiction, Socialism and Utopia in *The Philosophy of Money*." *Theory, Culture, and Society*. Vol. 29(7/8):146-176.
- Deflem, Mathieu. 2003. "The Sociology of the Sociology of Money." *Journal of Classical Sociology*. Vol. 3(1):67-96.
- Dyson, Kenneth. 2015. "The Morality of Debt: A History of Financial Saints and Sinners." Retrieved July 30, 2018 (<https://www.foreignaffairs.com/articles/2015-05-03/morality-debt>).
- Egan, Matt. 2019. "Jamie Dimon hated bitcoin. Now JPMorgan is getting ahead of the crypto revolution." Retrieved April 3, 2019 (<https://www.cnn.com/2019/02/15/investing/jpmorgan-bitcoin-crypto-jamie-dimon/index.html>)
- F. Nash Jr., John. 2002. "Ideal Money." *Southern Economic Journal*. Vol. 69(1):4-11.
- Fedorenko, Irina and Yixian Sun. 2016. "Microblogging-Based Civic Participation on Environment in China: A Case Study of the PM 2.5 Campaign." *Voluntas* Vol. 27(5): 2077-2105.
- Goffman, Erving. 1974. *Frame Analysis*. Cambridge: Harvard University Press.



- Holtgrewe, Ursula and Raymund Werle. 2001. "De-Commodifying Software? Open Source Software between Business Strategy and Social Movement." *Science Studies* Vol. 14(2):43-65.
- Hornsby, Anne. 2011. "Surfing the Net for Community." Pp. 67-110 in *Illuminating Social Life: Classical and Contemporary Theory Revisited*, edited by P. Kivisto. Los Angeles: Sage.
- Huang, Roger. 2019. "How Bitcoin and Wikileaks saved each other." Retrieved June 17, 2019. (<https://www.forbes.com/sites/rogerhuang/2019/04/26/how-bitcoin-and-wikileaks-saved-each-other/#2b25e24974a5>)
- Huddy, L. 2003. Group Identity and Political Cohesion. In D. O. Sears, L. Huddy & R. Jervis (Eds.), *Oxford handbook of Political psychology*. Oxford: University Press.
- Irwin, Neil. 2018. "The Policymakers Saved the Financial System. And America Never Forgave Them." Retrieved May 22, 2019 (<https://www.nytimes.com/2018/09/12/upshot/financial-crisis-recession-recovery.html>)
- Maddox, Alexia, Supriya Singh, Heather A. Horst, and Greg Adamson. 2016. "An Ethnography of Bitcoin: Towards a Future Research Agenda." *Australian Journal of Telecommunications and the Digital Economy* Vol. 4(1):65-78.
- Martin, Brian. 2002. "Economic Alternatives as Strategies." *Philosophy and Social Action* Vol. 28(1): 21-28.
- Marx, Karl. 1867. *Capital, Volume One: A Critique of Political Economy*. Moscow, USSR: Progress Publishers.
- <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKE>

wjs-

4GOMcDIAhUBMawKHaNIBaoQFjAAegQIBBAC&url=https%3A%2F%2Fwww.marxists.org%2Farchive%2Fmarx%2Fworks%2Fdownload%2Fpdf%2FCapital-Volume-I.pdf&usg=AOvVaw1aAHaNGMrpKdaZxw8pktpn.

Maurer, Bill, Taylor C. Nelms, and Lana Swartz. 2013. "When Perhaps the Real Problem is Money Itself?": The Practical Materiality of Bitcoin." *Social Semiotics*. Vol. 23(2):261-277.

McCammon, Holly, Courtney Muse, Harmony Newman, and Teresa Terrell. 2007. "Movement Framing and Discursive Opportunity Structures: The Political Successes of the U.S. Women's Jury Movements." *American Sociological Review* 72(5):725-749.

Mueller, John. 2018. *Wall Street Journal*, October 8, p. A19.

Nakamoto, Satoshi. 2008. "Bitcoin: A Peer-to-peer Electronic Cash System." Retrieved September 12, 2017 (<https://Bitcoin.org/Bitcoin.pdf>).

"Regulation of Cryptocurrency Around the World." 2018. *Library of Congress*. The Law Library of Congress, Global Legal Research Center. June

"Regulation of Cryptocurrency: China". 2018. *Library of Congress*. Retrieved November 12 2019. (<https://www.loc.gov/law/help/cryptocurrency/china.php>).

Ritzer, George. 1995. *Expressing America: a Critique of the Global Credit Card Society*. Thousand Oaks: Pine Forge Press.

Ritzer, George. 2011. *Sociological Theory*. New York: McGraw-Hill.

Rooney, Kate. 2019. "Warren Buffett says bitcoin is a 'delusion' and 'attracts charlatans.'"

Retrieved April 3, 2019. (<https://www.cnbc.com/2019/02/25/warren-buffett-says-bitcoin-is-a-delusion.html>).

Sanders, Clare, Maria Grasso, Christiana Olcese, Emily Rainsford, and Christopher Rootes.

2012. "Explaining Differential Protest Participation: Novices, Returners, Repeaters, and Stalwarts." *Mobilization: An International Journal* 17(3):263-280.

Schrager, L. S. 1985. Private Attitudes and Collective Action. *American Sociological Review*

Vol. 50:858-859.

Simmel, G. 2004. *The Philosophy of Money*. London: Routledge.

Simon, B. 2004. *Identity in Modern Society. A Social Psychological Perspective*. Oxford:

Blackwell Publishers Ltd.

Smyth, Lui. 2014. "The Politics of Bitcoin." Retrieved October 21, 2018

(<http://magicnumbers.io/2014/03/07/the-politics-of-Bitcoin/>).

Snow, David and Robert Benford. 1988. "Ideology, frame resonance, and participant

mobilization." *International Social Movement Research* 1(1):197-217.

Snow, David, Burke Rochford Jr., Steven Worden, and Robert Benford. 1986. "Frame

Alignment Processes, Micromobilization, and Movement Participation." *American Sociological Review* 464-481.

Stryker, S., Owens, T. J., & White, R. W. (Eds.). 2000. *Self, identity, and Social Movements*

(Vol. 13). Minneapolis: Minnesota Press.

Stürmer, S., & Simon, B. 2004. "The Role of Collective Identification in Social Movement Participation: A Panel Study in the Context of the German Gay Movement." *Personality and Social Psychological Bulletin*, Vol. 30(3):263-277.

Tarrow, Sidney. 2011. *Power in Movement: Social Movements, Collective Action and Politics*. 3rd ed. Cambridge: Cambridge Univ. Press.

"The Triffin Dilemma." Retrieved September 12, 2017  
([https://en.wikipedia.org/wiki/Triffin\\_dilemma](https://en.wikipedia.org/wiki/Triffin_dilemma)).

Tuwine, Jordan. 2019. "Bitcoin Mining in China." Retrieved November 12 2019.  
(<https://www.buybitcoinworldwide.com/mining/china/>).

United States Census Bureau. 2019. "Number of People With Master's and Doctorate Degree Doubles since 2000." Retrieved June 26, 2019  
(<https://www.census.gov/library/stories/2019/02/number-of-people-with-masters-and-phd-degrees-double-since-2000.html>).

van Stekelenburg, Jacquelin and Bert Klandermans. 2007. "Individuals in Movements: A Social Psychology of Contention." P.157-204 in *The Handbook of Social Movements Across Disciplines*. New York: Springer.

van Stekelenburg, Jacquelin and Bert Klandermans. 2007. "Why people participate in social movements." Retrieved December 27, 2018  
([https://research.vu.nl/files/3061733/handbook\\_final.doc](https://research.vu.nl/files/3061733/handbook_final.doc)).

- van Stekelenburg, Jacquélien, Bert Klandermans, and W. Dijk. 2007. "Demonstrating for Imperiled Interests or Violated Values." *Journal of Social Issues*. Manuscript submitted for publication.
- van Zomeren, M., Spears, R., Fischer, A. H., & Leach, C. W. 2004. "Put Your Money Where Your Mouth Is! Explaining Collective Action Tendencies Through Group-Based Anger and Group Efficacy." *Journal of Personality and Social Psychology* Vol. 87(5):649-664.
- Weber, Max. 1958a. "Religious Rejections of the World and Their Directions." P. 323–59 in H.H. Gerth and C.W. Mills (eds) *From Max Weber: Essays in Sociology*. New York: Oxford University Press.
- Weber, Max. 1958b. "Bureaucracy; Religious Rejections of the World and Their Directions." P. 196–244 in H.H. Gerth and C.W. Mills (eds) *From Max Weber: Essays in Sociology*. New York: Oxford University Press.
- Weber, Max. 1976. *The Protestant Ethic and the Spirit of Capitalism*. New York: Macmillan.
- Weber, Max. 1978. *Economy and society: An outline of interpretive sociology*. Vol. 1. Univ of California Press.

# **Appendix**

## **Survey**

### Why do people use Bitcoin?

My name is Jesse Lane and I am a Master's student in the Sociology Department at Oklahoma State University. I am conducting this survey as part of my Thesis to try and gain a better understanding of Bitcoin users' motivations in using it. This is a rather short and painless survey which will probably take between 5-10 minutes to complete. This survey will be kept confidential and is voluntary, so a participant may also refuse to answer questions at any time.

If you have any questions about the research or your rights as a participant please feel free to contact Jesse Lane at 401 Murray Hall, Stillwater, OK 74078, (405) 744-7368 or [jesse.lane@okstate.edu](mailto:jesse.lane@okstate.edu); Dr. Duane Gill at 464 Murray Hall, Stillwater, OK 74078, (405) 744-9534 or [duane.gill@okstate.edu](mailto:duane.gill@okstate.edu); and IRB Office at 223 Scott Hall, Stillwater, OK 74078, 405-744-3377 or [irb@okstate.edu](mailto:irb@okstate.edu).

By clicking next I consent to participate in this survey and am at least 18 years old.

1. How old are you?

- a. 18-30
  - b. 31-40
  - c. 41+
2. What is your sex?
- a. Male
  - b. Female
  - c. Non-binary
  - d. Prefer not to answer
3. What is your highest level of education?
- a. Less than high school degree
  - b. High school degree
  - c. Some college
  - d. College degree
  - e. Graduate degree or higher
4. What country do you live in?
- a. (Blank) Drop down box
5. Which class would most accurately describe you?
- a. Upper class
  - b. Upper middle class
  - c. Lower middle class
  - d. Working class
  - e. Lower class

6. On a scale of 1 to 10, 1 indicating the lowest and 10 indicating the highest, how would you rate your income in comparison to other people in your country?
7. Do you identify yourself with any political groups?
- a. (Blank)
8. In political matters, people talk of "the left" and "the right." How would you place your views on this scale, generally speaking?
- |                |   |   |                      |   |
|----------------|---|---|----------------------|---|
| Liberal (Left) |   |   | Conservative (Right) |   |
| 1              | 2 | 3 | 4                    | 5 |
9. How many years have you known about Bitcoin?
10. How many years have you been involved with Bitcoin?
11. How often do you visit Bitcoin related subreddits or other message boards?
- a. Multiple times a day
- b. Once a day
- c. Once a week
- d. Once a month or more
12. How knowledgeable would you consider yourself about Bitcoin on a scale of 1 to 5, with 5 being the most knowledgeable?
13. Please rate the following factors that FIRST got you involved with Bitcoin.
- (5=strongly agree; 1=strongly disagree)
- a. The monetary value of Bitcoin will continue to increase
- b. Bitcoin supports an alternative economic system
- c. Bitcoin supports economic privacy
- d. Bitcoin supports anti-censorship



- e. Bitcoin supports the ability to overcome negative governmental economic intervention (inflation, bailouts, seizures, restricted bank assets during crisis, etc.)
- f. Being involved with Bitcoin makes me feel like I'm helping the world
- g. Being involved with Bitcoin gives me a purpose in life
- h. Being involved with Bitcoin makes me feel like I'm a part of a community
- i. I don't think humans are capable of fair economic policy
- j. Bitcoin supports user security in not having to give out credit card info or other personal details
- k. Bitcoin is easier to use than other payment systems
- l. Bitcoin is an interesting new technology
- m. Bitcoin could potentially be a hobby of mine
- n. Bitcoin is a novelty or a curiosity
- o. (\*Blank Space) Specify any other reason not listed and rate on a scale of 1 to 5

14. Please rate your CURRENT views on why you continue to use Bitcoin

(5=strongly agree; 1=strongly disagree)

- a. The monetary value of Bitcoin will continue to increase
- b. Bitcoin supports an alternative economic system
- c. Bitcoin supports economic privacy
- d. Bitcoin supports anti-censorship
- e. Bitcoin supports the ability to overcome negative governmental economic intervention (inflation, bailouts, seizures, restricted bank assets during crisis, etc.)

- f. Bitcoin supports user security in not having to give out credit card info or other personal details
  - g. Being involved with Bitcoin makes me feel like I'm helping the world
  - h. Being involved with Bitcoin gives me a purpose in life
  - i. Being involved with Bitcoin makes me feel like I'm a part of a community
  - j. I don't think humans are capable of fair economic policy
  - k. Bitcoin is easier to use than other payment systems
  - l. Bitcoin is an interesting new technology
  - m. Bitcoin is a hobby of mine
  - n. Bitcoin is a novelty or a curiosity
  - o. (\*Blank Space) Specify any other reason not listed and rate on a scale of 1 to 5
15. On a scale of 1 to 5 (with 5 being the most), how much experience do you have with investments other than Bitcoin?
16. On a scale of 1 to 5 (with 5 being the most) how likely would you be to invest in Bitcoin if you could expect the same return in profits from a similar investment vehicle (for example Apple stock or gold)?
17. On a scale of 1 to 5, (with 5 being the most) how likely would you still be involved with Bitcoin if the U.S. declared it illegal?
18. Are there any other alternative cryptocurrencies you are interested in? (List up to 3)

## IRB Approval Page



### Oklahoma State University Institutional Review Board

Date: 02/14/2019  
Application Number: AS-19-24  
Proposal Title: To What Extent is Bitcoin a Social Movement?  
  
Principal Investigator: Jesse Lane  
Co-Investigator(s):  
Faculty Adviser: Duane Gill  
Project Coordinator:  
Research Assistant(s):  
  
Processed as: Exempt  
Exempt Category:

#### Status Recommended by Reviewer(s): Approved

---

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in 45CFR46.

This study meets criteria in the Revised Common Rule, as well as, one or more of the circumstances for which continuing review is not required. As Principal Investigator of this research, you will be required to submit a status report to the IRB triennially.

The final versions of any recruitment, consent and assent documents bearing the IRB approval stamp are available for download from IRBManager. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be approved by the IRB. Protocol modifications requiring approval may include changes to the title, PI, adviser, other research personnel, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any unanticipated and/or adverse events to the IRB Office promptly.
4. Notify the IRB office when your research project is complete or when you are no longer affiliated with Oklahoma State University.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB Office at 405-744-3377 or [irb@okstate.edu](mailto:irb@okstate.edu).

Sincerely,  
Oklahoma State University IRB

Vita

Jesse Lane

Candidate for the degree of

Master's of Science

Thesis: CONSIDERING BITCOIN AS A SOCIAL MOVEMENT: INVOLVEMENT,  
KNOWLEDGE, AND INVESTMENT AS MOTIVATIONS

Major Field: Sociology

Biographical:

Education:

Completed the requirements for the Master of Science in Sociology at Oklahoma State University, Stillwater, Oklahoma in December, 2019

Completed the requirements for the Bachelor of Science in Applied Sociology at Valdosta State University, Georgia in 2019.

Experience:

August 2017 – Present, Oklahoma State University Graduate Teaching Assistant with the Sociology Department

January 2015 – April 2016, Valdosta State University Graduate Assistant with the Social Work Department

August 2014 – December 2014, Valdosta State University Graduate Assistant with the Political Science Department

Professional Memberships:

2016 – Present. Member: AKD (Alpha Kappa Delta International Sociology Honor Society)

2016. Member: Southern Sociological Society

2011-2012. Vice-president of CSU Sociology Club and one of the main contributors to its reinstatement

2012. Teaching Practicum co-leading the class teaching Intro to Sociology