The Origin of Money and Bitcoin’s Connection

Luke Eldridge

Dr. Herbener

22 November 2021

1.1 Introduction

A father will give a child a five-dollar bill at the grocery store, allowing his son to pick from the various kinds of candies in the shelves. The boy looks up and down at the myriad of options, drooling with his excitement of the sweet and savory flavors about to fill his mouth. The boy gives the cashier the five-dollar bill, knowing after he lets go, that he will be able to begin to enjoy his candy. In this example, the boy learns vital pieces of information about how two people relate to each other. The boy knows that he desires a piece of candy, but it would be wrong for him to take the candy without paying. Holding both the candy and the dollar bill in his hands, he eagerly gives the bill to the cashier demonstrating that he prefers his candy to whatever else the money could buy him. The boy also learns that this piece of paper in his hand holds some value to the cashier, as he would not be able to give the employee anything for a piece of candy. This green piece of paper is valued more by the employee and owner of the grocery store than the piece of candy is. The boy knows that when he hands the proper amount of money over the counter, there is a fair and mutually beneficial exchange occurring. While the boy may not realize this (as he is infatuated with chocolate), the businessman and him are benefitting with his simple exchange.

Money, or the general medium of exchange, has an ethereal mystery behind it. Any boy would wonder why a piece of paper commands such a large desire. While an innocent boy buying a chocolate bar at the grocery store demonstrates simple praxeological principles, beginning with this broad example demonstrates how the general medium of exchange is one of the most important and perplexing economic goods. Looking at economics specifically, money plays a significant role in almost all subjects within the discipline. Whether it is analyzing the impact of the Federal Reserve’s 35.7% increase to M2 with Covid-19 looming in the background or looking at the allocation of resources through a price system versus “first come-first serve,” money is one of the main elements that connects macro and microeconomics together (Reynolds 2021). There is no doubt that money invades all areas of life even if “the love of [it] is the root of all evil” (1 Tim 6:10). The objective of this paper is to discuss, with similar enthusiasm of a child buying candy, the different theories of the origin of the general medium of exchange. Examining the origin of money allows for the nature of the general medium of exchange to be brought into the limelight. After discussing the theories of the origin of money, I will utilize these conclusions for an application of Bitcoin. The commodity theory of money, stemming from the Carl Menger and the Austrian School of Economics, proves to be the best theory of the origin of money; and this theory has much to say about Bitcoin and its relation to the general medium of exchange, auxiliary mediums, and other investments.

1.2 Theories of the Origin of Money

Looking at the four different theories of the origin of money is crucial in analyzing the presuppositions of the function of money in any given society. Friedrich Knapp published his “State Theory of Money” in 1905, where he coined the term *chartalism*; where the state creates money and through taxes constitutes demand for its currency. Knapp’s theory of the origin of money still is in conversation today, with Stephanie Kelton and other proponents of Modern Monetary Theory adopting this view. Avner Offer wrote “Between the Gift and the Market: the Economy of Regard,” where he discusses the role of gifts in an economy. While Offer was not the originator of the Gift theory of money, he discusses this theory pulling from historical cases of reciprocity from the Trobriand Isles. Henry Macleod argued that money stemmed from debt even before Carl Menger created his own theory. This theory of money originating from debt has also been adopted by modern economists and proves to be a legitimate theory of the origin of money. Lasty, Carl Menger began the commodity theory of the origin of money where a highly demanded commodity overcame the several issues of bartering. The Austrian School of Economics, following Menger, has adopted this theory and argue for it fervently. With all four theories on the table, it is essential to consider the defense and history of each theory, and it is critical to be scrupulous with any problems plaguing the theory.

1.2A Chartalism

Beginning with Chartalism, there are two main works which shed light into this theory of the origin of money. Randall Wray describes the origins of this theory in his paper "From the State Theory of Money to Modern Money Theory: An Alternative to Economic Orthodoxy." Wray (2014) discusses in the introduction of his paper how the state theory of money (Chartalism) began with George Fredrich Knapp in his *The State Theory of Money*, where Knapp offers a summary of this unorthodox view of the history of money. Wray continues to summarize Knapp's theory, describing the fundamental presuppositions of this theory. While Wray does a great job at outlining the aspects of the state theory of money, Stephanie Kelton in her *The Deficit Myth*, offers the best explanation of what this theory actually argues. Kelton wrote this book in 2020, which reflects honestly the state of several currencies around the world. In the first several chapters of her work, Kelton has several goals with regards to the state theory of money. She defines what "monetary sovereignty" is, she dismisses the orthodox view of the origin of money, and she introduces the state theory of money with a descriptive anecdote. Kelton relies on her term "monetary sovereignty" to begin rehearsing Chartalism. When Kelton (2020) refers to "monetary sovereignty," she is simply discussing countries who have complete control over their money supply. The United States for example, has "monetary sovereignty" because the Federal Reserve is capable of manipulating the stock of money at will (Kelton 2020). This is the corner stone of the state theory of money, and Kelton's anecdote assists in explaining why. Kelton then dismisses the orthodox theory of the origin of money, instead suggesting that there is no anthropological evidence for this. Kelton's claim here will be discussed more in detail later in the paper. After dismissing the commonly held position, Kelton inserts her own theory on the subject.

As the name of the theory suggests, the state theory of money suggests that the origin of money stems from the state. Kelton constructs an example with a family household. She creates a thought experiment where a father wants his children to complete their chores throughout the house. The father is having a difficult time convincing his children to work, so he decides to pay them with his business cards. Of course the children place no value on the business cards because to them they are not worth anything. This is where Kelton (2020) describes Chartalism:

> The kids hadn't done any chores because they didn't *need* his cards. So, he told the kids he wasn't requiring them to do any work at all. All he wanted was a payment of thirty business cards, each month. Failure to pay would result in a loss of privileges…Now the cards were worth something.

This example does a great job of succinctly and accurately describing what Chartalism is. Assuming that a state has "monetary sovereignty," then they are able to print money and tax it, supposedly creating demand for it. As the father, in her example, requires thirty business cards at the end of the month for privileges around the house, the federal government requires a certain amount of dollars in taxation. The consequence of tax evasion in the United States is more intense than a loss of privileges around the house. While Kelton's example is fantastic at summarizing what Knapp's theory of Chartalism is, the state theory of money falls short with lack of any real-world examples.

In order for the state theory of money to hold true, countries who have sovereignty over their money supply today would need to have their money originate in a similar fashion to Kelton's example with the father and kids. Robert Murphy wrote a review of Kelton's book where he addresses this very question. Did the dollar, the Euro, the Yen, the Pound, stem from an "autocratic ruler [who] out of the blue imposed taxes on a subject population" (Murphy 2020). Murphy (2020) refutes Kelton's claim by simply admitting that none of the world's major currencies, which are easily manipulated, stemmed from her example. Murphy (2020) notes that out of all of the states that have monetary sovereignty, none of them began the way that Kelton depicts. In fact, all of these currencies "have built their economic strength and goodwill with investors relying on a history of *hard money*" (Murphy 2020). Murphy quickly dismantles Knapp, Wray, and Kelton's state theory of money. While the thought experiment may seem plausible within the confines of a family, no example in the modern world points to the origin of money stemming from the state.

1.2B Gift

One of the most unorthodox and interesting theories of the origin of money stems from the "economy of regard" or gifts. While this theory may land on the more outlandish side, when compared to the other three theories, it is still worthwhile analyzing to add insight into the conversation at large. Avner Offer wrote "Between the Gift and the Market: the Economy of Regard," where he discusses in great detail the role of gifts in a market economy. While he does not focus on the theory of money originating from gifts, he raises important questions and ideas. Offer (1997) writes that "From the ethnographic record, the following pattern emerges. Exchange begins with transfer, for which reciprocity is expected. Reciprocity is usually delayed." The expectation of giving a gift is to ultimately receive a gift yourself. Offer continues to explain the most important principle of this theory, *regard*. Offer (1997) says that regard is "a grant of attention, and attention is a scarce resource." Offer claims that people exchange gifts, and desire to receive gifts, because of the longing for regard or attention. These two fundamental ideas of reciprocity (knowing that your gift giving will be reciprocated) and regard (attention seeking) are highlighted by a study done by Bronislaw Malinowski.

Malinowski spent time in the Trobriand Isles, studying some of the annual events of the indigenous people. He discovered that the indigenous people of these islands would participate in an exchange cycle twice a year (Encyclopedia.com 2021). Malinowski reported that islanders would gather many goods and travel to this "Kula Ring," where bartering would take place (Encyclopedia.com 2021). The highlight of this bi-annual retreat is not the bartering, but the desire to be gifted one of the red or white necklaces made of kula seashells (Encyclopedia.com 2021). These seashells were given to people not based on bartering but given as a gift, and the expectation was for people who came upon these shells to ultimately pass it forward (Encyclopedia.com 2021). This is where the gift theory of money comes in. It arises from interpreting this piece of historical data. People would gift items hoping to receive this highly demanded shell. While these shells were not bartered for, they were highly demanded, and people would do anything to obtain them. These shells facilitated an economy of regard, harking back to Offer's paper. The path from kula shells to money is not quite clear from Offer's paper nor Malinowski's work; however, it is clear that people who refuse to reciprocate gift giving would be ostracized from the community. For the kula shells, these rare items would lead to those in possession being gifted items of all sorts. The hope is that someone who gifts coffee to an owner of a kula shell would be in a more probable state to be gifted the shells themselves. So in some sense the kula shells were bartered for indirectly. Gifting more items to an owner of the shell would place a person in higher likelihood of being gifted this desired item.

Again the theory of money stemming from gift giving, specifically looking at the Kula Ring example, does not draw immediate connection to a monetary system. Even with the system of regard, reciprocity, and ostracism, an economy based off of gifts instead of money would not lead to the prosperity we have today. There are several issues that arise from the kula ring gift economy. The idea that expanding the gift system would lead to a complex division of labor and large production structure is preposterous. In a gift economy, there is no single unit of account. Entrepreneurs would not be able to calculate profit from successful business ventures nor could they determine if they have been failing and making a loss. In the same way a capitalist would have a horrible time trying to make a return from lending something out, as his return of investment has no determined date. No capitalist would desire to loan a good out to someone and wait unknowingly patient for a reciprocated gift in return; there would be no way to calculate interest payments. Two of the most important roles in society, the entrepreneur and capitalist, would play little role in the economy of regard because of the lack of a single unit leading to no business calculation or no determined interest. While the gift theory of the origin of money seems preposterous from the beginning, it is interesting looking at the anthropological development of economies of regard *in small villages*.

1.2C Debt

The theory of money stemming from debt began several years before Carl Menger constructed the commodity theory of money. Neil Skaggs in his paper, “Debt as the Basis of Currency: The Monetary Economics of Trust,” outlines the main arguments that Macleod had and continues to develop the argument that money originated from debt and credit. Skaggs

(1998) says that “According to Macleod, money arose only after credit became widely used. In fact, money arose as the social analog to previously existing private credit…Thus Macleod’s story more or less turns Menger’s story upside down.” This is the very beginning of the theory of the origin of money stemming from debt. Both Skaggs and Macleod realized that from anthropological evidence that the general medium of exchange developed after the use of credit. Where many economists would argue that money predates the use of credit, these two authors flipped the idea on its head. Within the same section, Skaggs (1998) concludes that “the primary function of money…is that of a measure of value.” This theory of the origin of money is similar with the commodity theory of money, in the fact that they share a similar diagnosis of the issues with bartering. What are the actual claims of Skaggs and Macleod’s theory? How do they argue that the basis of money is found in debt?

Both Skaggs (1998) and Macleod argue that in a barter economy, where one good is directly traded for another, the inherent issue is found with attempting to trade goods of highly different value. Another way of putting this issue is that Skaggs and Macleod saw in a barter economy a difficult time of dividing highly valued goods. For example, trading a newly built house for coffee would be nonsensical. Unless one trading partner was carrying enough coffee for the lifetime of several generations, the partner trading the house would not be able to divide the value of the house into a part that would more realistically reflect a trade for coffee. The man selling the house could not slice the house into a small part to trade for the coffee, and the man selling the coffee is not looking for a sliver of a house but the actual function of the house – living in it. This is where Macleod and Skaggs say that debt serves a function as money. In this scenario the man selling the house could write a debt claim that required the man selling coffee to fulfill services in the future. Assuming that this debt note was written on a piece of paper, Skaggs argues that “another avenue for reducing transaction costs would emerge. In many instances it might be convenient for the debtor to provide a good or service to a third-party, to whom the creditor in the initial transaction is in debt” (Skaggs 1998). Skaggs argues that this note, which requires a service payment to the initial creditor, may be passed along to a third party. This note would continue to circulate throughout their supposed economy, reducing transaction costs. It is here that Macleod says the origin of money should be traced to. Macleod says that whenever there is a written obligation transferred in payment as debt, this is exactly what currency is (Skaggs 1998). The note that ensures future payment for the initial house could be passed throughout the entire economy functioning as the general medium of exchange. As this society progresses, it would be beneficial to have a debt note that would not be required to transfer all at once. There would need to be an invention within the currency that would allow for further divisibility. The currency needed to be able to be split apart into uniform texture and material. As there is much history of metallic currencies, Macleod argues that their prevalence is found in this invention (Skaggs 1998). Metallic currencies are able to be divided into uniform pieces and are not subject to decay. With all of these factors in mind, Macleod has provided a convincing theory of the origin of money; however, there are still large issues with this theory of the origin of money from debt.

One of the major issues with the theory of the origin of money from debt is the issue of accounting. This main issue of accounting is not intended to discredit the idea that debt or credit predated the general medium of exchange, but this critique is intended to show that debt itself is not money. Assuming that the notes of debt were created as Macleod and Skaggs would argue, this would not be capable of scaling all the way up to an economy of a vast division of labor and complex production structure. Having several thousand IOU’s floating around would not allow for entrepreneurs to calculate profit and loss. There would not exist a uniform unit of account. Several people would be trading notes that show person A owing person B 100 bags of coffee for golf clubs and person C owing person D two bushels of wheat for five gallons of milk. The notes which keep track of the previously made deal would not be uniform. An entrepreneur receiving a note worth 100 bags of coffee would not reflect the same thing as a note worth two bushels of wheat. The entrepreneur would not be able to determine if his business is making a profit or loss based off of the lack of a uniform currency. While evidence does point to credit predating money, this does not mean that credit developed into the medium of exchange. Many economists who hold to this theory of the history of money claim that debt and credit originating before money determines that debt has to be the basis for money. Does it follow that the fact that debt predates money means that debt is the basis for the general medium of exchange? In his article, "Did Debt Exist Before Money? It Doesn't matter," Michael Watson (2016) argues that "all credit before the existence of a common medium of exchange is inter-temporal barter." While many are quick to suppose that barter is only a spot transaction at a current place and time, this does not reflect factual history. The situations described above with coffee and wheat being traded demonstrate what inter-temporal barter is. There is still one good being traded for another over the course of time. The introduction of money in a system with goods being traded for each other inter-temporally would only allow for the further reduction of transaction costs. Again, debt may have preceded a general medium of exchange; however, this idea of debt should be thought of as inter-temporal barter. The issue of no uniform unit of account would lead to issues of profit and loss, which demonstrates why the theory of money originating from debt falls short.

1.2D Highly Demanded Commodity

The last theory of the origin of money stems from the Austrian School of Economics with Carl Menger pioneering this hypothesis. This theory suggests that money originated from overcoming the myriad of issues with bartering. While there are several issues with a barter economy, the main issue deals with a person trading a highly specific good for another specific good. Murry Rothbard (1983) in his *The Mystery of Banking* writes, “If an egg dealer wanted to buy a pair of shoes, he had to find a shoe-maker who wanted, at that very moment, to buy eggs.” This simple anecdote gets to the heart of the issue of bartering. Without a general medium of exchange a person carrying an obscure commodity needs to find someone desiring that obscure good. In this economy, the search costs are incredulously high. In the scenario of an egg dealer wanting to buy a pair of shoes, the egg dealer could attempt trading eggs for a highly demanded good like tobacco. The egg dealer could then take the newly acquired tobacco to exchange with the cobbler. The tobacco in this example is a medium of exchange. As people in a community continue to demonstrate their preferences, showing that they have a high demand for tobacco, more and more people may utilize tobacco as an intermediary good for exchange. As this scenario continues to unwind, it is here that the Austrians, beginning with Menger, claim that money found its origin. The highly demanded intermediary good that facilitated exchanges, which would not occur in a barter economy, has become the general medium of exchange or money. While the theory of the origin of money stemming from highly demanded commodities is succinct and suffers from no logical issues, this does not mean that this theory is without critiques.

The main critique of the commodity theory of money stems from the lack of anthropological evidence. Caroline Humphrey is quick to question the historical backing of Menger’s theory in her paper, “Barter and Economic Disintegration.” Humphrey (1985) notes in her paper that “No example of a barter economy, pure and simple, has ever been described, let alone the emergence from it of money; all available ethnography suggests that there never has been such a thing.” Humphrey, the anthropologist out of Cambridge, argues that there is no historical evidence of what the Austrian School of Economics holds as the origin of money. If Humphrey is correct with her claim that there is no evidence for a barter economy and thus no money, then the Austrian position is another thought experiment that does not reflect reality. While the several thought experiments, constructed by Austrians, are helpful in demonstrating the principle behind Menger’s theory, the commodity theory of the origin of money is in need of a historical basis.

Looking to Germany and prisoner of war camps demonstrates how Humphrey is wrong with the depiction that there are no historical evidences of commodity money overcoming issues of bartering. With the evidence of United States prisoner of war camps utilizing cigarettes as the general medium of exchange, the commodity theory of the origin of money surpasses the other three as the best explanation for the origin of money. Peter Senn in his paper “Cigarettes as Currency,” discusses the prevalence of cigarettes in both Germany and United States prisoner of war camps. While looking at how cigarettes acted as the general medium of exchange in Germany may be interesting, looking at how the cigarettes came to be money in the prisoner of war camps is more closely related to the commodity theory of the origin of money. With allied troops receiving care packages from the states, how would they receive the goods that they desire from the care package? Senn (1951) notes that the allied forces opened barter stores, where in these stores there were quoted prices in barter units. If allies received goods from the care package that they did not desire, then they would be able to go to the barter store to attempt to trade for something more preferred. So, within these stores, there would be a way of communicating to the soldiers the barter exchange rates (Senn 1951). The demonstration of the allies in prisoner of war camps bartering goods that they received from care packages begins to demonstrate why Humphrey is incorrect in her analysis that there is no record of a barter economy. To further disprove Humphrey's claim, the prisoners began to utilize cigarettes as a general medium of exchange. The shops that originally had barter prices listed, switched to displaying goods with prices in cigarette units. While cigarettes played a role as money within the camps, it also acted as a general medium of exchange between Germans and allied troops. Senn (1951) mentions that during 1946, after Britain and America attempted to prohibit black market trading with Germans, "cigarettes would play a monetary role until the currency reform, eighteen months later." With allied troops beginning to barter with goods received from the care packages and seeing cigarettes become a general medium of exchange, it is apparent that Humphrey's claim is false; there is anthropological evidence showing that money has come from overcoming the issues of bartering. The original issue for the commodity theory of the origin of money is solved in this historical case of allied troops utilizing cigarettes as money.

With the commodity theory of the origin of money being grounded in solid theory and historical evidence, this hypothesis surpasses the other three as the best explanation of the history of the general medium of exchange. Chartalism falls short as no government with monetary sovereignty had their currency arise from the state. Money stemming from gifts suffers from many theoretical issues with a gift not practically functioning as the general medium of exchange leading to issues with economic calculation. The historical evidence that demonstrates how credit and debt existed before money does not clearly show how debt succinctly becomes the general medium of exchange, as there would be issues with multiple units of account. For all of the reasons why the other theories of the origin of money fall short, is where the commodity one succeeds. The commodity theory of money suffers from no theoretical issues, as an economy of vast divisions of labor and production structures could arise from such a system. In conjunction with the theoretical triumph, the commodity theory is grounded in legitimate history. The commodity theory of the origin of money is the dominant and most accurate theory, demonstrating how highly demanded goods came to overcome the issues of bartering.

1.3 Bitcoin and the Commodity Theory of the Origin of Money

With the history of the origin of money stemming from a highly demanded commodity overcoming the issues of barter, there is an applicable question for today's world. What is the relationship between money and cryptocurrency, specifically bitcoin? Is Bitcoin money? Is it another kind of money? Is Bitcoin a scam? These questions are justifiable as Bitcoin is something intangible and the process behind acquiring a bitcoin is complex and confusing. Can something intangible be valuable? While these questions are asked by people outside the economics profession, they are important ones to consider in the midst of analyzing Bitcoin in light of the commodity theory of the origin of money.

Briefly tracing the route of money in the United States can help to frame the questions that need to be asked with regard to the function of Bitcoin in the modern society. This depiction of the money within the United States is not intended to be comprehensive but succinct to demonstrate further the characteristics of money. Within the early colonies and United States, gold at one point was money (Merchant 1954). Gold was the medium that facilitated people's exchanges. While gold was the medium of exchange, money warehouses that stored this precious metal would distribute notes that were a depiction of what a person owned in this warehouse. These bank notes functioned identically to the precious metal because these notes were capable of being redeemed anytime and on par with the amount of gold in the money warehouse. During

Nixon’s administration in 1971, the standard that allowed people to redeem these notes for their gold was suspended. The United States Dollar was no longer capable of being redeemed for an amount of gold. The United States Dollar transitioned from mainly money substitutes to only fiat paper. The fiat paper money could depict a value of money on the note; however, the value of the bill has no connection between how much the bill costs to make. The bill was no longer tied to a certain amount of gold. For example, a one dollar and a hundred dollar bill cost the same amount to make but carry a different purchasing power. The United States Dollar has been a fiat paper currency since Nixon abolished the gold standard in ’71. This history of the dollar is crucial in setting the scene for Bitcoin, which has been called “the new money” (Crypto.com 2021).

In addition to discussing the transition from gold to a paper fiat currency within the United States, it is important to quickly rid the conversation of Bitcoin from all its “Pop definitions” stemming from advertisements and cultural phenomena. Over the past couple years, more and more companies have begun to incorporate Bitcoin into their business in some manner or another. Burger King, for example, ran an advertisement that would enter people who bought anything off the menu into a raffle with the chance to win a Bitcoin (Thrillist 2021). Venmo (2021), the popular application that allows people to transfer money to each other, now has a section specifically for cryptocurrency that allows for users to transfer their account balance to Bitcoin rather than United States Dollars. More and more companies pioneering this wave of “pop cryptocurrency” are utilizing YouTube to advertise. One company, Crypto.com (2021), has run advertisements on Google’s platform advertising Bitcoin as “a new kind of money that requires a new kind of debit card.” There is no question that Bitcoin is slowly becoming more pervasive in everyday life. While the extent to which Bitcoin plays in people’s lives is increasing, this means that the question of defining Bitcoin requires much more care and specificity. To begin, these new claims by companies running advertisements that Bitcoin is "the new kind of money" is false and should be ignored. As it stands, no cryptocurrency nor precious metal, are money. From the commodity theory of the origin of money, Rothbard (1983) defines money as the *general* medium of exchange. The only general medium of exchange within the United States is the United States Dollar. This currency is what all accounting is done in. The United States Dollar is the unit that entrepreneurs are capable of calculating profit and loss. The idea that Bitcoin is a "new money" is merely following a "pop cryptocurrency" trend. Bitcoin is not the general medium of exchange within the United States, nor any country for that matter. The fact that Bitcoin is not money should not take away from the important conversation of defining what Bitcoin actually is, but it should add guiding rails to this fast and expanding conversation.

While Bitcoin is not a general medium of exchange, this fact should encourage more questions into the realm of what Bitcoin actually is. There are two important discussions when it comes to defining Bitcoin in light of the commodity theory of the origin of money. First, it is important to understand what are the practical attributes of this ethereal item that people demand highly. What are the components that makes Bitcoin, Bitcoin? Murphy (2020) discusses what the attributes of Bitcoin are in his paper, "Bitcoin and the Theory of Money." Murphy succinctly demonstrates how Bitcoin hypothetically functions as a medium of exchange. Murphy (2020) describes Bitcoin as almost being a single number in the range of 1 to 21 million. As a person owns one of these numbers, Murphy (2020) explains how he or she is capable of trading for another good with this specific number. Murphy (2020) explains in a hypothetical community:

> Bill happens to be in possession of the numbers 3 and 12. So Bill gives the two numbers to Sally, and Sally gives Bill the car. The community recognizes two facts: first, the title

> to the car has been transferred from Sally to Bill, and second, Sally is now the owners of numbers 3 and 12.

Assuming that Bitcoin is utilized as a medium of exchange, this process described in Murphy's example is how the process would work out. While it would be important to discuss the process by which Bitcoin comes into existence, this topic would steer away from the main objective of this paper, which is to shed light into the definition of Bitcoin in light of the commodity theory of the origin of money. While the intricacies of Bitcoin are vast, dealing with the process of mining, blockchain, etc, I will not be focusing on this but rather the relationship between Bitcoin and the general medium of exchange, if there is any at all.

1.3A Bitcoin: Auxiliary Medium or Investment?

In Murphy's example with Sally and Bill utilizing Bitcoin as a medium to facilitate the exchange of Sally's car, this demonstrates one option for defining Bitcoin in the modern world. In this example Bitcoin is acting as an auxiliary medium of exchange. The difference between and auxiliary and general medium is crucial to ascertain. While the *general* medium of exchange is money, as we know it to be, an *auxiliary* medium only exists to facilitate exchanges in a fraction of the case that the general medium does. Both the general and auxiliary mediums facilitate exchanges; however, it is only the general that does it on the large scale. Another important way to tell the difference is with accounting. The general medium of exchange, or money, is the unit of account. Entrepreneurs determine profit and loss with the United States Dollar, not with another good that facilitates exchange on the side. This differentiation is crucial in the conversation of Bitcoin. Does Bitcoin act as an auxiliary medium of exchange?

One of the most interesting arguments to look at for Bitcoin as an auxiliary medium of exchange is with the increasing trend of modern companies recognizing the high demand of it.

To begin, within the United Sates several companies have begun allowing for customers to exchange Bitcoin for the goods or service of the company. Microsoft is one of the largest companies that accepts Bitcoin. When purchasing something on the Microsoft store, on a laptop for example, someone is capable of exchanging a Bitcoin or a fraction of one in order to purchase whatever they would like on the store (Tuwiner 2021). Home Depot is another large corporation within the United States that accepts Bitcoin, to some extent (Tuwiner 2021). The case with Home Depot is more ambiguous as to how customers are able to exchange Bitcoin for a 2x4. Home Depot allows a person to exchange their Bitcoin on their app for a gift card in United States Dollar (Tuwiner 2021). So, anyone with Bitcoin could download the Home Depot app and utilize Home Depot's "Flexa checkout system" to transfer your Bitcoin into a gift card which is able to be used in the store (Tuwiner 2021). While Home Depot's system may not reflect an actual spot transaction with Bitcoin and a good, this still demonstrates modern companies attempting to incorporate Bitcoin into their store. Another company that utilizes the same system as Home Depot is Starbucks (Tuwiner 2021). While there is no data on the frequency of people utilizing Bitcoin to buy a macchiato or electrical equipment, there is an interesting trend of companies accepting Bitcoin which may lead to the idea that Bitcoin is an auxiliary medium of exchange.

Another idea that attempts to categorize Bitcoin is with the idea that this cryptocurrency is not an auxiliary medium of exchange but simply a potential investment opportunity. This idea supposes that Bitcoin is not mainly used as a medium of exchange but is generally held onto for hope of future gains in United States Dollar. Utilizing newer investment apps like Robinhood, people are capable of purchasing fractions of a singular Bitcoin similarly to how someone would purchase gold. The hope for someone who buys a portion of Bitcoin would be that as they hold the Bitcoin, the price of Bitcoin rises, meaning that this person would make a profit. The goal is to reap a profit with United States Dollar. This categorization of Bitcoin argues that Bitcoin is simply another investment option, like precious metals, but is not utilized to facilitate exchanges.

The idea that Bitcoin is merely an investment and not an auxiliary medium of exchange is convincing at first glance. An interesting perspective on the conversation of Bitcoin as an investment rather than an auxiliary medium is with its comparison with gold. While at some point in time gold was money in the United States, this precious metal no longer carries significance as the general medium of exchange. Some states have attempted to recreate the world where gold was money. States including: West Virginia, Wyoming, Utah, Arizona, Kansas, Texas, Indiana, Missouri, Louisiana, Tennessee, and south Carolina have all made gold legal tender within their states (Anderson 2019). While these states decided that in conjunction with the United States Dollar, gold was also now legal tender, this does not mean that the legal tender laws would usher in gold as a competing medium of exchange. Murry Rothbard highlights this exact point that the government is not capable of creating money. Rothbard (1963) says that:

> In contrast to directly used consumers' or producers' goods, money must have pre-existing prices on which to ground a demand. But the only way this can happen is by beginning with a useful commodity under barter, and then adding demand for a medium to the previous demand for direct use (e.g., for ornaments, in the case of gold). Thus government is powerless to create money for the economy; the process of the free market can only develop it.

Rothbard highlights two important points that assist in the conversation with Bitcoin. He describes the commodity theory of the origin of money and how money must originate from people's demands, which stem from their personal preferences. The connection can be drawn then from people's demand to hold money and their subjective preferences for whatever they wish to hold. It is people's subjective preferences which creates their demand for whatever medium of exchange is exactly that, highly demanded. The second piece that sheds light into the conversation of Bitcoin is with the idea that the "government is powerless to create money for the economy" (Rothbard 1963). For the sake of the states reinstating gold as legal tender, this does not necessitate that people will begin to utilize gold as money. Even within the states that gold may be accepted, this does not mean that the companies are going to begin utilizing gold as their unit of account. Companies will still be measuring profit and loss in United States Dollar. Legal tender laws are not capable of determining what is money and what is not money.

In the same way with Bitcoin, companies who begin to accept the currency do not necessitate that people pay with Bitcoin. Just because Microsoft, Home Depot, and Starbucks are accepting Bitcoin means that people are going to begin utilizing Bitcoin as an auxiliary medium. In the same way that people's subjective preferences determine what is money, people's subjective preferences will determine if something is utilized as an auxiliary medium. As it stands now, Bitcoin is most plausibly an investment option for people to reap a profit and not an auxiliary medium of exchange. While 13% of Americans have traded Bitcoin and other cryptocurrencies, this does not mean that Americans are utilizing these cryptocurrencies to facilitate spot transactions (Iacurci 2021). To continue critiquing this point further, the fact that 13% of Americans have traded cryptocurrencies in 2021 does not mean that all of these have been Bitcoin specifically. This means that Bitcoin makes up a fraction of the 13% of all cryptocurrencies traded in 2021.

1.4 Conclusion:

Studying the history of the origin of money is a fantastic way to begin analyzing popular claims that Bitcoin is "new money." Sifting through difficult claims of faulty theories of the origin of money only allows for a more complete understanding of what the general medium of exchange actually is. With the proper origin of money depicted in Menger's commodity theory of the origin of the general medium of exchange, it is clear that money arises through people's subjective preferences. A good that is subjectively demanded by a large portion of society would lend itself to overcoming the issues of bartering like the "double coincidences of wants" issue. As Bitcoin has been demanding people's attention in the news with a single coin (one out of 21 million) demanding a price of $48,000, economists need to entertain the conversation of defining what Bitcoin is (Google Market). While there is an upward trend of Bitcoin being utilized as a auxiliary medium of exchange, the fact that companies accept Bitcoin does not necessitate its characteristics being an auxiliary medium. Similarly, to how states which have made gold a legal tender does not force gold to be used by their populous, neither can companies force consumers to utilize Bitcoin as an alternative to the general medium of exchange. While the current state of Bitcoin largely finds itself within the realms of investment, Joseph Salerno (2014) highlights the most important conclusion of all when he says that:

> Whether or not Bitcoin survives and whether gold returns to favor among investors and, eventually, to its traditional monetary role are, of course, purely empirical questions, which cannot be solved by theoretical arguments. At the moment both are valuable commodities and neither one can be considered as money…Will the general public trust and routinely accept a commodity embodied in lines of computer code or a tangible commodity that has served for millennia as the general medium of exchange? Hmmm, I wonder.

Salerno demonstrates the most important conclusion of this paper, while unsatisfactory. The conversation of if Bitcoin is even plausibly an auxiliary medium is something left to empirics and not theoretical discussion. The reality of Bitcoin being considered an auxiliary medium is left to the subjective preferences of individuals. Only time will tell if Bitcoin eventually fills the role that companies want it to. While the trend demonstrates that Bitcoin is becoming more accepted as a potential auxiliary medium, this is not reality today. Rehearsing the qualities of money found in Menger's theory assists in demonstrating that it is only subjective preferences that determine something as the general medium of exchange. Utilizing the historical account of money is vital when analyzing cryptocurrencies, specifically Bitcoin.

Bibliography

Anderson, Anthony. “States where Gold and Silver have become Legal Tender,” *Mint State Gold.* December 4, 2021, https://www.mintstategold.com/investor-education/cat/news/post/states-where-gold-and-silver-have-become-legal-tender/

Google Finance. *Bitcoin to United States Dollar, https://www.google.com/finance/quote/BTC-USD?sa=X&ved=2ahUKEwiw0uTA5Mr0AhX7oHIEHSYzBuUQ-fUHegQIChAS*

https://crypto.com/us/about

https://venmo.com/about/crypto/

Humphrey, Caroline. “Barter and Economic Disintegration.” *JSTOR* 20, no. 1 (1985): 48–72.

Iacurci, Greg. “13% of Americans Traded Crypto in the Past Year, Survey Finds,” *CNBC.* December 4, 2021. https://www.cnbc.com/2021/07/23/13percent-of-americans-traded-crypto-in-the-past-year-survey-finds.html

Kelton, Stephanie. 2020. *The Deficit Myth*. London, England: John Murray.

Kula ring. *Encyclopedia.com.* (November 24, 2021). https://www.encyclopedia.com/social-sciences/dictionaries-thesauruses-pictures-and-press-releases/kula-ring

Merchant, Frank. “Legend and Fact about Gold in Early America.” *Western Folklore* 13, no. 2/3 (1954): 170–180.

Murphy, Robert. “Bitcoin and the Theory of Money,” *Mises Wire. December 4, 2021, https://mises.org/wire/bitcoin-and-theory-money*

Murphy, Robert. “Book Review: ‘The Deficit Myth: Modern Monetary Theory and the Birth of the People’s Economy,” *The Quarterly Journal of Austrian Economics* 23 no. 2 (2020): 245-251.

Offer, Avner. “Between the Gift and the Market: the Economy of Regard,” *Economic History Review*, no. 3 (1997): 452-458.

Price, Janae. “Burger King is Giving out Cryptocurrency When you Spend $5 or More,” *Thrillist.* December 4, 2021. https://www.thrillist.com/news/nation/burger-king-robinhood-giving-customers-cryptocurrency

Reynolds, Stephanie. “Inflation, Money Supply and Spiraling Expectations,” *The Wallstreet Journal*. December 4, 2021, https://www.wsj.com/articles/inflation-money-supply-expectations-prices-m2-fed-reserve-11635893875

Rothbard, Murray. 1983. *The Mystery of Banking.* Richardson and Snyder.

Rothbard, Murray. 1963. *What Has Government Done To Our Money?* Ludwig Von Mises Institute.

Salerno, Joseph. “Bitcoin vs. Gold: Hedge Fund Adviser Weighs in,” *Mises Wire*. December 4, 2021, https://mises.org/wire/bitcoin-vs-gold-hedge-fund-adviser-weighs

Senn, Peter. “Cigarettes as Currency,” *The Journal of Finance* 6, no. 3 (1951): 329-332.

Skaggs, Neil. “The Monetary Economics of Trust,” *American Journal of Economics and Sociology* 57, no. 4 (1998): 455

Tuwiner, Jordan. “Who Accepts Bitcoin? 11 Major Companies,” *Buy Bitcoin Worldwide*. December 4, 2021, https://www.buybitcoinworldwide.com/who-accepts-bitcoin/

Watson, Michael. “Did Debt Exist Before Money? It Doesn’t Matter,” *Mises Wire*. December 4, 2021, https://mises.org/wire/did-debt-exist-money-it-doesnt-matter

Wray, Randall. “From the State Theory of Money to Modern Money Theory: An Alternative to Economic Orthodoxy,” *Levy Economics Institute*, no. 792 (2014): 1.

1 Tim 6:10