Rethinking Money: A Survey on Economic Theories of Money

by Annetta Y. Li

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Professor James Hartley

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Abstract

Money is a tool people deal with on a daily basis. It is also an important instrument for governments to manage their functions. But despite the familiarity, probably few people could tell exactly what money is, or how it works. With the development of new forms of currency, for instance Bitcoin, the conventional view of money has been challenged. The paper is a theoretical survey and an analytical study on the historical thoughts of the nature of money. It also attempts to provide analytical critiques on the three main theories of money, i.e., commodity, credit and state theories. This research constitutes a close reading of the main proponents, and a summarization of the proposed ideas. Through in-depth examination of the works of those important economic theorists, such as Aristotle, Richard Cantillon, John Locke, Karl Marx, Henry Dunning Macleod, Georg Simmel, Alfred Mitchell-Innes and Georg Friedrich Knapp, it is hoped to unfold the great contributions these thinkers have made to the concept of money, the evolution of the theory on monetary economics, the challenges or the weaknesses they might face. Author aims to uncover the merits of existing alternative theories while attempting to search for a general theory on money that can encompass the multitude of aspects that money possesses. This paper provides answers to questions along the lines of: Is there one particular characteristics of money? How did money emerge in the society? And most importantly, what is money?

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CHAPTER 1

INTRODUCTION

From purchasing a box of strawberries at a grocery shop, to buying airplane tickets from an online agency, people pay with money for the amount that's shown denoted in a national currency. On a personal level, individuals work for money, and use money for survival. On a macroeconomic level, countries manage their money reserves, exchange rates, government spending as a means to govern. Money apparently has become a necessary tool for human activities and human society. Yet, what is money? What is the nature of money? And what makes money so powerful and sustainable? These questions are not trivial ones. With the drastic financial crisis in recent years, the emergence of new money, such as the mysterious Bitcoin, the challenges faced by Euro system under the unpredictable future of European Union, the question of money is haunting many professionals, monetary theorists as well politicians. The answer to these questions does not come by easily. Historically, with the evolution of economic activities and development of human societies, money has become the subject of heated discussions and debates for centuries.

1.1 The Conventional View

Adam Smith, often referred to as the father of economics, lays the contextual framework for the current conventional theory on money. Smith sees the circulation of coinage as money, and proposes a monetary theory which carefully explains this economic phenomenon. As an orthodox economist, Smith in his *The Wealth of Nations* (2003/1776) locates the origins of money in the barter system, in which money is considered as a cure to the problems arose from barter exchanges. For him, it is in human nature to exchange and barter in order to supply wants and needs. However, there exist inefficiencies in a pure barter system. In certain occasions, two men who want to engage in an exchange may have unequal amounts of some certain type of commodities. In another case, one man may not have the commodity which the other man wants to acquire. Thus, if one party has “nothing that the former stands in need of, no exchange can be made between them” (Smith, 2003/1776, p. 33). To Smith, this mismatch between the two parties is the biggest weakness of the barter system. Thus, money becomes essentially a generally accepted commodity which agents use as a mediator of exchanges. It smoothens exchanges by allowing agents to easily trade whatever surplus amount of commodity they possess for money, and later on exchange money for the commodities they want.

In order to overcome this inefficiency of the barter system, agents naturally search for a tool. Smith explains:

> In order to avoid the inconveniency of such situations, every prudent man in every period of society, after the first establishment of the division of labor, must naturally have endeavored to manage his affairs in such a manner, as to have at all times by him, besides the peculiar produce of his own industry, a certain quantity of some one commodity or other, such as he imagined few people would be likely to refuse in exchange for the produce of their industry (p. 34).

In other words, Smith locates the origins of money in the barter system. Money is considered as a cure to the problem which arose from barter exchanges. Money is essentially a generally accepted commodity which agents uses as a mediator of exchanges. It smoothens exchanges by allowing agents to easily trade whatever surplus amount of commodity they possess for money, and later on exchange money for the commodities they want.

For Smith, the use of commodities as money can be traced back to cattle during the "rude ages of society" (Smith, 2003/1776, p. 33). Although cattle "must have been a most inconvenient" money, they were considered to be the "common instrument of commerce", and "things were frequently valued according to the number of cattle which had been given in exchange for them" (Smith, 2003/1776, p. 34). Other commodities that have been used as money include the armor of Diomede, shells, dried cod, tobacco and sugar. However, Smith observes that men seem to prefer metals above other commodities, for "irresistible reasons" (Smith, 2003/1776, p. 35). It is the unique qualities of metals—they "can not only be kept with as little loss as any other commodity", but also they can "be divided into any number of parts" —that establishes metals as the most suitable to be employed as money

(Smith, 2003/1776, p. 35). In other words, metals are less perishable, divisible, and able to be reunited again easily. To Smith, these are the prime qualities that render metals fit to be money.

Nonetheless, the use of precious metals is not the equivalent as the use of coinage. Merely using metal pieces as money faces the problem of weighing, and measuring of money's value. Smith states that, in the case of precious metals, "a small difference in the quantity makes a great difference in the value", thus the weights of the metal contents must be determined with proper exactness, using accurate apparatus (Smith, 2003/1776, p. 36). He describes that before the implementation of coinage, agents had to either spend tedious amounts of effort in weighing the pieces, or accept the risk of encountering frauds and impositions. Thus, in order to "prevent such abuse, to facilitate exchanges" and thereby to encourage commerce, public offices fix "a public stamp upon certain quantities of such particular metals" (Smith, 2003/1776, p. 37). As a result, coined money emerged in the society, with the weights of precious metals shown by the stamp on the face of the coins. While Smith recognizes the power of the state or princes in the creation and the management of coins, he does not suggest that money as a concept is a creature of authority. Rather, money arises from collective wisdom or general consent.

It should be pointed out that Smith's theory on money is formulated based on the assumption that the "division of labor" has been thoroughly established (Smith, 2003/1776, p. 15). In his opinion, the emergence of the concept of division of labor is the “necessary, though very slow and gradual, consequence” of the propensity in human nature to “truck, barter, and exchange one thing for another” (Smith, 2003/1776, p. 22). Division of labor refers to the dividing up of tasks in the production of goods, where men with various specific skills could focus on their share of tasks. This in turn increases productivity and efficiency in the production line. people with different skill sets could therefore focus on producing the goods most suited to their skills, and exchange the surplus into other necessities or wants.

Through his description of the best money, Smith highlights two main functions of money. Firstly, money is a medium of exchange. The majority of his analysis on money emphasizes money’s primary function as a tool to facilitate smooth exchanges. Due to the fact that the use of money allows exchanges to happen even under scenarios where there exists a mismatch between the commodities in possession by the two agents, money becomes an established phenomenon. He reiterates that “money has become in all civilized nations the universal instrument of commerce, by the intervention of which goods of all kinds are bought and sold, or exchanged for one another” (Smith, 2003/1776, p. 41). Secondly, money is a unit of account, or a measure of value. The fact that the value of objects was either represented in terms of the number of cattle, or the weight of precious metals, shows that money measures and tells the value of the commodities in exchanges. The use of money allows different commodities to be commeasured with respect to each other. Thus, Smith states that money represents the "relative or exchangeable value of goods" (Smith, 2003/1776, p. 41).

Smith suggests that the term "value" possesses two different meanings: one refers to the "value in use", and the other "value in exchange" (Smith, 2003/1776, p. 41). The use value of some object expresses the utility of it, while the exchange value expresses the object's "power of purchasing other goods" (Smith, 2003/1776, p. 41). These two types of value may differ drastically for the same good. For instance, a necessary resource like water would have a very high use value, yet not so much of an exchange value. Water, as one of the most basic human necessities, can barely be exchanged for other objects. To Smith, money reflects the exchange value of the objects. Money price of goods shows the quantity of other goods one particular object can purchase or be exchanged for. Nonetheless, he suggests that the value of any commodity "is equal to the quantity of labor" input in its production (Smith, 2003/1776, p. 43). Labor is thus considered to be the real measure of the exchangeable value of all goods (Smith, 2003/1776). Smith argues that although the exchange value of commodities is more frequently estimated by the quantity of money, the underlying foundation is the quantity of labor input.

Smith believes in a labor theory of value when considering the value of money. To him, the value of money is determined by the labor input into the mining of precious metals and the minting of coins. He emphasizes that commodity money, namely gold and silver, are just like any other commodity, with variations in their values. He states that the variations are due to "the quantity of labor which any particular quantity of them can purchase or command" always depends upon "the fertility or barrenness of the mines" (Smith, 2003/1776, p. 46). For instance, an increase in the discovery of mines will drive down the prices, as it costs less labor to bring the metals to the market. Since the value of metals is constantly fluctuating, Smith argues that money as a "commodity which itself continually varying in its own value, can never be an accurate measure of the value of other commodities" (Smith, 2003/1776, p. 47). Thus, labor with a fixed value, "is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared" (Smith, 2003/1776, p. 47). Money is only capable of conveying the nominal price of commodities. Thus, Smith sees money, and money prices, as a mere veil covering the exchange value which is really measured in labor input.

To conclude, the conventional view on money, which stems from Smith's theory on money, considers money as merely a special commodity. Smith locates the origins of money in the problem which occurred in the barter system, including the mismatch of commodities in exchanges and the double coincidence of wants. He considers money as natural byproduct of the development of market, after the establishment of division of labor. He then states that many commodities can act as money, as long as the particular commodity is considered to be the common instrument of commerce, and a representation of the value of other commodities. Nonetheless, metals were employed as money by most civilizations because of the unique qualities—easily divisible, able to rejoin, and easy to transport—they possess. Money's value is determined by the quantity of labor in mining and minting the coined money. While money is an important tool, money is not the real measurement of commodity value. To Smith, the only accurate measurement of value of commodities is that of the quantity of labor, as it is not continuously varying. Thus, money is considered to be the veil covering the relationship between goods in terms of labor.

1.2 Existing Main Monetary Theories and the Bitcoin Phenomenon

Since the publication of *The Wealth of Nations* (2003/1776), money and its role in society have often been the topic of discussions. Although the mainstream thought represented by conventional view of money has been in dominant for over four centuries, it is not an exaggeration that it has often been under the challenge of new economic activities and in difficulties to explain some new monetary phenomenon. The emergence of a sophisticated banking system, the issuance of paper money and paper bills backed by credit or authority etc., all have demanded for explanations and answers. To theorists, the essential nature of money is vital to the understanding of the new economy.

And any theory that examines the use of money can only be formulated after theorists grasp the fundamental nature of money. Theorists began to exam money from different perspectives, and explain the nature of money utilizing different theoretical frameworks. Thus resulted in three sets of unique definitions on money, and formed three main theories which aim to describe the nature of money: the commodity theory, the credit theory, and the state theory.

The commodity theory of money is the first established school of thought on money. While Adam Smith ratified this theory, the main ideas of this school can be traced first in Aristotle's writings on money. Many other influential economists as well as philosophers —including David Hume (1875/1752), John Locke (1823/1691), David Ricardo (1951) and Arthur Cecil Pigou (1949)—support this school of thought. As stressed in the conventional view of money, this theory argues that money is in nature a universally-accepted special commodity, and acts as the veil covering the relationship between goods in terms of labor.

The credit theory of money has been established since the seventeenth century, but flourished in early twentieth century. Geoffrey Ingham describes the credit theory as the result of the economists' efforts to understand the emergence of "dematerialized bank credit" (Ingham, 2004, p. 38). Theorists challenge the theoretical frameworks established by Aristotle and Adam Smith, and aims to explain aspects of money that are ignored or disregarded.

This led to a departure from the commodity theory ideals, which results in the belief that all money is credit.

The state theory of money is considered as another strand of the credit theory on money. It was developed primarily by the German Historical School of Economics throughout the nineteenth and twentieth century (Ingham, 2004). Some of its proponents include Georg Friedrich Knapp, Abba Lerner, and Larry Randall Wray. Later on, Keynes incorporated aspects of the state theory in his *A Treatise on Money* (1976/1930). The state theory does not believe commodity or credit as money, it emphasizes the role of authority in the creation and validation of money. It is believed that one of the necessary conditions for a functioning money is the backing of authority. State theorists focus on the interactions between the state and its constituents, through the imposition of tax obligations, which is enabled by the creation of money.

Although theorists have spent much effort in explaining the nature of money, the emergence of Bitcoin as a new money challenges the definition outlined by all these theories. Motivated by the catastrophic 2008 economic crisis, the unidentified inventor Satoshi Nakamoto developed an electronic monetary system that is neither backed by authority, nor mediated by third party institutions. A Bitcoin can be mined using encrypted techniques run by computer software. A Bitcoin appears after a certain number of computer hour input and the result of some mathematical algorithms. Satoshi Nakamoto states in his paper *Bitcoin: A Peer-to-Peer Electronic Cash System* (2008):

> The root problem with conventional currency is all the trust that's required to make it work. The central bank must be trusted not to debase the currency, but the history of fiat currencies is full of breaches of that trust. Banks must be trusted to hold our money and transfer it electronically, but they lend it out in waves of credit bubbles with barely a fraction in reserve (p. 1).

To a certain extent, Bitcoins possess properties from all three theories. Bitcoin can be use as a medium of exchange, to better facilitate e-commerce in modern day society. The value of the bitcoin is determined by the computer hours input in mining it. This implies that Bitcoin follows a labor theory of value, where the labor input is represented by the number of hours spent. Bitcoin is also an abstract concept, as outlined by credit theorists, which is used to cancel the incurred debt. Nevertheless, the nature of Bitcoins also challenges certain aspects of all theories on money. It is an abstract coin which only exists in cyberspace. It is not tangible, or fungible by nature.

After the ban of Bitcoin use issued by the Chinese government, the value of Bitcoin dropped dramatically. Bitcoin as a tool has been diminishing in its usage, and is becoming less popular amongst users. Money as a social and political construct has developed to inherently involve the entanglement of political and social institutions. As Geoffrey Ingham argues in *The Nature of Money*,

> No money can simply take on a 'life of its own', or have a 'rootless' existence in cyberspace. To think that this is possible is the result of a preoccupation with the *form of money* and economic transactions, rather than the *social and political relations* between the issuers and the users. Money is essentially rooted in the money of account and the final means of settlement that is, of necessity, established by an authority (p. 181).

Bitcoin lacks the support from an authority. Nakamoto explicitly states that despite there is an inventor of Bitcoin, there exists no authority which exerts control or pressure upon money. Thus, Bitcoin ignores the social and political components of money, and in turn focuses on establishing a pure economic tool embodied by computer intelligence. The obstacles faced by Bitcoin illustrates the social and political ties that are embedded in money. It also shows that money is indeed a creature of the state.

The value of Bitcoins greatly fluctuates on a daily basis. Thus, it does not seem to be a good measure, or representation of value of other commodities as commodity theorists hold. There exists no authority, which challenges the basis of the state theory of money. Satoshi Nakamoto acknowledges that the current monetary system operates on the existence of trust in society, especially from people to the social and political institutions. For Nakamoto, the current trust-based system is the problem with money. Therefore, it could be argued that the existence of Bitcoin as money blurred the definition of money, as it embodies various debatable qualities that challenges the existing definition money. It appears that the emergence of Bitcoin calls for a new theorization on money.

1.3 Significance of the Research

This paper intends to provide a theoretical review of the historical thought of money, and an analytical study on the nature of money. This research attempts to search for a general theory of money. Why it is important to study the nature of money? Indeed, in a world where there exist theories like the Quantity Theory of Money which can examine the flow of money and provide policy suggestions, a correct understanding of the nature of money then seems unnecessary. However, any theory that examines the use of money can only be formulated after theorists understand the fundamental nature of money. Just as how studying the history of one nation is significant in shedding light into the means of governing in modern day societies, studying the historical origins and the essential nature of money is vital to the field of monetary economics. In order to provide correct policy suggestions with a sound theoretical framework, a correct definition of money should be formulated.

Moreover, money as an integral part of people's lives impacts the economy in various ways. In a market-oriented capitalistic society where most of the economic decisions are based on money, money is thus an important tool. Orthodox economic theorists consider human beings as utility-maximizing individuals who are focused on economic tradeoffs and the scarcity of resources. Money, as a measure of value, represents the scarceness of goods and the tradeoffs people face. In a society where banking institutions are some of the larger corporations, creating money by the mechanisms of fractional reserves, the nature and usage of credit money is also vital to maintain a healthy economy. Thus, understanding the nature of money is vital to maintaining economic stability, as well as achieving economic growth across the globe.

1.4 Plan of the Paper

To fully understand the nature of money, a survey on the three existing theories on money is necessary. As the main ideas and characteristics of Adam Smith's conventional view on money has been presented in the introduction, this paper will put efforts in survey of other important proponents of the three theoretical schools on money. It attempts to provide a close reading on the economic theories of money, with a focus on the nature of money. It consists of three reviewing sections in examining the respective theories. Within each school of thought, monetary theories of a number of notable proponents will be studied in order to fully illustrate the strengths and weaknesses of each theory. The discussions will consist of analytical critiques and implications of the three theories. In the concluding section, author aims to uncover the merits of existing alternative theories while attempting to search for a general theory on money that can encompass the multitude of aspects that money possesses.

CHAPTER 2

THE COMMODITY THEORY OF MONEY: MONEY AS A NAEUTRAL VEIL

As discussed in the introduction, conventional theorists define “money proper” as either precious metals or convertible paper bills (Ingham, 2004, p. 15). It is proposed that money has three main functions. First and foremost, money is a tool which facilitates trade. Secondly, money can act as a unit of account. Lastly, money is a store of value. Most commodity theorists believe in a labor theory of value, which states that the labor input correlates with the value of goods. Hence, although money is considered to be an economic tool which reflects the value relationship between two objects, it is referred to as the veil covering the real labor input.

The underlying concepts of the commodity theory can be traced back to Aristotle’s writings. Nevertheless, despite the institutional changes in the monetary system, as well as in the forms of money circulating in society through the centuries, the commodity theory is still supported by most thinkers in the early 1900s. Consequently, it establishes its place as the mainstream theory on money.

In brief, it could be summarized that there are three characteristics that differentiates the commodity theory of money from other schools of thought.

Firstly, as the name of the theory suggests, this theory operates entirely on the assumption that money takes the form of one or multiple commodities. Geoffrey Ingham, an opponent of the commodity theory, summarizes that money was considered to be either a precious metal or “its convertible paper symbol” (Ingham, 2004, p. 15). Although money had already appeared in a multitude of forms—metals, shells, cattle, etc.—economists of this view argue that money by nature has to be material and tangible. Regarding the emergence of paper currency during the 17th century, commodity theorists reinforce this definition of money by stating that paper money is merely a direct representation of valuable commodities.

Secondly, the commodity theory states that the “value of money depends on the value of material of which money is made”, whether it is based on the labor theory of value or “simply the exchange value of the money material” (Schumpeter, 1917/1956, p. 589). It was widely believed that the reason why money possesses value is due to its nature as an intrinsically valuable commodity. Gold coins, like other commodities, were produced by processes of mining and minting, which allows some economists to determine the price of money with respect to the production costs of minting. In his article *Of Money* in 1752, David Hume noted that economists “had known for centuries that the value of such coins was…determined by production costs and that their quantity was endogenously determined by demand and supply” (Hume, 1752/1875, p. 291). The fact that metal coins happened to be produced with certain composite of valuable metal may have misled economists to form their understandings of money's value based on evaluating the weight of metal contents, and the production costs of minting.

Lastly, it was believed that money entered the economic system to avoid inefficiencies in the barter exchange system. According to the commodity theory, the primary function of money is acting as the medium of exchange. Other functions can be considered as incidental products of the primary functions. As Joseph Schumpeter describes in his book, *A History of Economic Analysis*, money is considered to be taking the "modest role of a technical device", and was adopted "in order to facilitate transactions" (Schumpeter, 1954/1994, p. 277). Therefore, money is considered to be neutral, and merely a "veil" covering the underlying social relationship of exchange (Schumpeter, 1954/1994, p. 277). Karl Marx's argument in *Capital* agrees with this view, he suggests that the process of passing money from hand to hand only "needs to lead a symbolic existence" (Marx, 1848/1976, p. 225). Thus, metallists believe that the fluctuations in the stock of money should not have any significant meaning in the real economic system, "so long as it functions normally" (Schumpeter, 1954/1994, p. 277).

2.1 Main Proponents of the Commodity Theory

Most thinkers who have written on money have covered a multitude of aspects of money: from the nature of money, the forms of money, the functions of money, to the circulation of money. Unique to the case of the commodity theory, most proponents also provide their explanations for the case of paper notes circulating in a society, and the limitations on paper notes. Aristotle, Richard Cantillon, John Locke, and Karl Marx are just a few examples of the various thinkers who have provided theoretical explanations of the economic system based on the premise that money is a tangible commodity, with its value dependent on some form of internal value of the material. Nevertheless, their theories may differ when considered in detail. Therefore, the following part will summarize the proponents of the commodity theory, from their definitions to their analytical models of the circulation of money.

2.1.1 Aristotle (384-322BC)

One of the earliest assessments of money is provided by Aristotle, in *Politics* and *Nicomachean Ethics*. Schumpeter considers Aristotle's treatment of money to be "the basis of the bulk of all analytical work in the field of money" (Schumpeter, 1954/1994, p. 62). Scott Meikle summarizes Aristotle's analysis of money to be "ethical as well as economic", while the tension between these two aspects leads Aristotle to conclude that money is ultimately a “means of exchange” (Meikle, 1994, p. 1). Aristotle’s theory of money stems from his view that everything can have two uses, one for personal consumption and the other for exchange. He was the first to draw this conclusion, and this idea has become the foundation of economic thought on money.

The majority of Aristotle’s arguments for commodity money stems from the social and political concept of justice. Aristotle introduces money as a development of exchange, which evolved through four forms. The first is barter, or exchange of commodities in the absence of money. Barter is inconvenient because “the acts of sale and purchase are fused into a single act” (Meikle, 1994, p. 1). In other words, in a barter system, since a commodity is directly exchanged for another commodity, it becomes a C-C process, in which the two parts of the exchange cannot be distinguished from each other. Therefore, the existence of money is to smooth barter exchanges, by allowing the separation of C-C into the components of sales (C-M) and the purchases (M-C). He insists that “money was invented to be used in exchange” (Aristotle, 1985, p. 129). This reiterates the core belief of commodity money theorists, where the primary function of money is to eliminate the frictions that had occurred in a barter exchanges.

The second form of exchange, natural *Chrematistic,* can be represented by C-M-C. Aristotle argues that as the size of societies grew larger and more populous, the need to exchange between households, a type of “wealth-getting art", also grows stronger in order to satisfy "men's natural wants". Consequently, a "more complex form of exchange" rose where people traded in one thing's excess for another thing, of which they have a low quantity (Aristotle, 1905/1963, p. 38). In Aristotle's theory, money is conceptualized as a thing which acts as a medium of exchange to better facilitate the increasingly large volume of trade, as the "necessaries of life are not easily carried about" in this more complicated system of exchanges (Aristotle, 1905/1963, p. 40). This development from barter shows that money's emergence was thought of as a technical tool.

Once people have grown accustomed to the second form, unnatural *Chrematistic* arises as another form of exchange. Aristotle states that this form is in which people can come to market, not with surplus goods or other products they'd produced to exchange for things they need, instead with money. Their aim is to acquire money by buying goods and selling them for a greater sum, which can be represented by M-C-M. However, this form of exchange is discredited, due to the fact that it involves people taking things from one another, which is unjust (Aristotle, 1905/1963). The distinction between C-M-C and M-C-M lies in his analysis of wealth. He considers "true wealth" to be things that are "useful in the community of the household or the polis" (Aristotle, 1905/1963, p. 43). In other words, true wealth consists only of things with use-values. To him, the act of using, rather than hoarding property, demonstrates wealth: "Wealth as a whole consists in using things rather than owning them; it is really the activity - that is, the use - of the property that constitutes wealth” (Aristotle, 1905/1963, p. 43). C-M-C aims at getting useful things or 'true wealth', but M-C-M does not, because its aim is to hoard a large quantity of money, which Aristotle considers as the “wealth of the spurious kind” (Aristotle, 1905/1963, p. 43).

The fourth form of exchange is usury, or the lending of money at interest, which Aristotle considers as the “breeding of money from money” (Aristotle, 1905/1963, p. 46). He considers this form to be the most hated sort, due to its nature of acquiring wealth in an unjust approach. He argues that “the life of money-making is one undertaken under compulsion” (Aristotle, 1905/1963, p. 46). The end goal of an individual or a household should not be to merely acquire money, rather it should be to collect true wealth or commodities that have use value to the household, through the use of money. Money is a tool to facilitate a better management of household.

In *Nicomachean Ethics,* Aristotle points out that “in associations for exchange, however, this way of being just, reciprocity that is proportionate rather than equal, holds people together.” (Aristotle, 1985, p. 128). This suggests that the reciprocal give and take of exchange is what constitutes society, and gives rise to men's communication. However, this can only work as a social bond if they are exchanged in just and equal proportions. Aristotle argues that since justice must be achieved in society, a means of equating the value of goods and services that were not exchanged must exist. He states that "all goods must therefore be measured by some one thing" (Aristotle, 1985, p. 130). Money as a means to standardize, measure, and equate commodities is necessary. This analysis establishes money as a unit of account which allows other things to be measured and compared with respect to each other. Thus money is essential to equate the value of goods and services, and in turn to maintain justice in the social system.

Aristotle then describes several qualities that money must possess. Firstly, it is a unit, as he argues that "for coin is the unit of exchange and the measure or limit of it" (Aristotle, 1905/1963, p. 42). It is necessary to be able to measure money, and use it as a ruler to measure commodities. Money should be "intrinsically useful and easily applicable to the purposes of life" and "agreed" by men to be used during transactions (Medema, 2013, p. 8). This shows that Aristotelian money can act as a medium of exchange because it possesses intrinsic value, which encourages agents to give consent to its usage. Aristotle's description of money as a tangible object with intrinsic value stems from one of the first forms in which money appeared, coinage. Intrinsically valuable commodities are naturally employed as money because the general public would be more willing to trust in its valuableness. Moreover, the sole reason why intrinsically valuable materials, for instance metals, are better as money also lies in his theory of money as a type of commodity.

Nevertheless, Aristotle's analysis of money as a commodity, but not a form of true wealth is ambiguous. He fundamentally argues that money is of no use value to households, which seems problematic. He holds the argument that money is in nature "an instrument or means for the circulation of use values", where the usefulness of money lies in helping to get use values when needed (Meikle, 1995, p. 35). Therefore, money is not considered to have use value, but it is the means in which commodities with use values can be acquired. His statement that money is not true wealth, but money takes the form of a commodity and can acquire true wealth, confuses the readers of what value money possesses. The ambiguity was not resolved in his writings.

To conclude, although the bulk of Aristotle's analysis follow a more ethical rather than economic framework. He establishes and emphasizes the core concepts of commodity money theory: money is a commodity, which is used by agents in the society to remove the friction in a direct barter exchange, and its primary function is as a means of circulation. Aristotle's account of money was one of the earliest records of thoughts on money, it was considered as the starting point for the analysis on money. Succeeding economists are heavily influenced by Aristotle's thoughts on money. Consequently, the commodity view was accepted as the foundation of development of theories on money. The classical school barely progressed from the theories put forward by Aristotle. One could argue that, despite their efforts to prove and to reestablish the theory on money multiple times, orthodox economists fail to explain the distinctive nature of money with the commodity theory. Rather, they shifted their focus to other money-related mechanisms and applications, for instance monetary policies.

2.1.2 John Locke (1632-1704)

John Locke, an English philosopher and physician, is widely regarded as one of the most influential Enlightenment thinkers and commonly known as the "Father of Liberalism". Locke's theory on money is developed in relation to his theory of property, and in turn the accumulation of private wealth, which differs from that of Aristotle. The foundation of his analysis consists of a labor theory of property. Locke argues that "these rights of acquisition would be severely limited if not for the introduction of money" (Weymack, 1980, p. 1). For Locke, the "invention of money, and the tacit agreement of Men to put a value on it, introduced (by Consent) larger Possessions, and a right to" acquire properties (Locke, 1689/1960, sec. 36). While Locke sees private property as legitimate, he proposes that within the state of nature, there are limits on its accumulation. This implies Locke's idea that more property holdings can be found in a monetary economy than in a barter system. Locke's ideals of money functions on the assumptions that money is a "non-exploitative institution" that is utilized by people within the social system, under the rules "established to govern morally correct behavior" (Bell, Henry &Wray, 2004, p. 1). Thus, his analysis rests on similar grounds to that of Aristotle. Both of these theorists analyze money in order to provide suggestions to the governing of a state.

Locke considers the development of money as a pivotal step in the development of early European societies. As aforementioned, he locates the emergence of money in the limitations of property accumulation. In Locke's state of nature, men are ruled by the law of nature, the law of reason. However, because men cannot always be expected to follow the law of nature and respect each other's property, they enter into a social contract. "The great and chief end therefore, of Men's uniting into Commonwealths, and putting themselves under Government, is the Preservation of their Property'' (Locke, 1689/1960, sec. 24). Locke argues that if labor has been performed on some common land, the land becomes the workman's property. In other words, by applying one's labor to the commons, one obtains a right to property: While God "has given us all things richly," "it cannot be supposed he meant it should always remain common;" rather, he intended that each man take as "much as he may by his labor fix a property in" (Locke, 1689/1960, sec. 32). According to Locke, money lifted the natural limit that was placed on the right to accumulate properties. More specifically, it allowed men to exchange something durable, money, for the material that would otherwise go to waste. This released men from the strict system which discouraged their work, and in turn motivated them to invest in their lands with capital and labor, therefore enlarging their possessions and wealth.

Consequently, Locke states, “thus came in the use of money, some lasting thing that men might keep without spoiling, and that by mutual consent men would take in exchange for the truly useful, but perishable supports of life” (Locke, 1689/1960, sec. 47). Money therefore distinguishes civilized environs of Europe from the “wild landscape of the New World” (Desan, 2013, p. 2). Locke outlines several desired qualities of money, durable, generally accepted, and useful. He further argues that money is something that is “both lasting and scarce, and so valuable to be hoarded up”, which reinforces the orthodox ideal of money possessing intrinsic value (Locke, 1689/1960, sec. 48). He suggests that with such a tool like money which people collectively agree to use, “society has tacitly sanctioned inequality” (Bell, Henry &Wray, 2004, p. 4). Moreover, this inequality is now “fair” and just because it was said to arise from men’s “differ(ing) degrees of industry” (Locke, 1689/1960, sec. 50). In other words, men can now perform labor in order to gain and hoard up metal coins that will not spoil or decay for the accumulation of wealth. As Bell, Henry and Wray summarizes, Locke argues that “the (collective) decision to use gold and silver enables the industrious to escape this constraint by selling the excess for money” (Bell, Henry & Wray, 2004, p. 4). It is easy to see that Locke’s view on money is developed on the basis of an exchange-based community. This is similar to the conventional creation story of money, where money was invented to avoid the inconveniences of barter exchanges. Whereas in Locke’s analysis, the inconvenience of a barter system refers not to the double coincidence of want, but to the limitations on the right to property.

To reiterate, Locke sees money as a durable commodity, which possesses the qualities of being intrinsically valuable, tangible, and fungible. Just like how the use of money was collectively consented to by the public, the materials that embodied money was also chosen by general convention. He clearly states that money consists of gold and silver. Money is said to be a piece of metal, “that a man might accept in trade because he was ‘pleased with its color’” (Desan, 2013, p. 3). He suggests that “since gold and silver, being little useful to the life of man in proportion to food, raiment, and carriage, has its value only from the consent of men”, the use of money would not be troublesome for the living of men, yet it would be valuable enough to be hoarded up (Locke, 1689/1960, sec. 50). Lastly, this durable asset would serve as both a medium of exchange and a store of value. Thus, the determining functions of money has been reestablished by Locke. Nevertheless, as Desan states, “money arrives so quietly in Locke’s chapter on property that readers need not to think about what it is or how it works” (Desan, 2013, p. 2). Indeed, Locke’s account of money lacks depth into the discussion on the nature of money, or its circulation in the society. All aspects of money—including origins, properties, and value—appear as a given truth in Locke’s analysis. Locke’s *Two Treatises on Government* merely introduces money as a mechanism which enables men to acquire property beyond the natural limit that was imposed by the natural law.

Nonetheless, Locke's pamphlet published in 1691, *Some Considerations of the consequences of the lowering of Interest, and raising the value of Money,* focuses primarily on the application of money and its relationship with the interest rate. The pamphlet targets those who wanted to reduce the interest to 4 percent using the legal forces of the parliament. Locke argues that firstly, "the Price of the Hire of Money" cannot "be regulated by Law" (Locke, 1691/1823, p. 1). It is impossible to "hinder Men" "to purchase Money to be Lent them at what Rate so ever their Occasions shall make it necessary for them to have it" (Locke, 1691/1823, p. 1). In other words, he argues that it is impossible to make laws to restrict men from giving out money to whom they please, and it is impossible to regulate the rate at which men perform such acts. Since no man borrows money or pays interest out of "mere pleasure" or enjoyment, these rates are driven by "the want of Money" by men (Locke, 1691/1823, p. 1). This implies that Locke believes money, just like other commodities, has a price. This price is determined by supply-and-demand of money in society. He further states, "For Money being a universal Commodity, and as necessary to Trade, as Food is to Life, everybody must have it, at what Rate they can get it; and unavoidably pay dear when it is scarce, and Debts, no less than Trade, have made Borrowing in Fashion" (Locke, 1691/1823, p. 2). For Locke, money is like any other commodity, only more durable and intrinsically valuable, with its price determined by the scarcity and the need of money.

As seen beforehand, even though Locke's account on money centers around its role in governing the state, he does not believe that money can be controlled or managed simply by the enactment of a law. Locke follows the argument of other orthodox theorists in arguing that the price of money can be calculated by supply and demand. The supply of money is determined by the production of the mines. He states that the labor which goes into the manufacture of money, "The digging and refining of these Metals" constitutes the supply of money (Locke, 1691/1823, p. 4). He argues that a nation's wealth is its possession of money, that is embodied by precious metals. Therefore, Locke proposes to keep gold within England as the best plan for maintaining the country's economic status. He argues that "money is the measure of commerce and of the rate of everything, and therefore ought to be kept (as all other measures) as steady and invariable as may be" (Locke, 1691/1823, p. 51). In a country not furnished with mines, he suggests that "there are but two ways of growing Rich, either Conquest, or Commerce" (Locke, 1691/1823, p. 5). Thus, Locke establishes money as a store of value, and a tool to maintain a country's power in an international platform. Many orthodox theorists believe that in order to keep wealth within the country, a negative trade balance can help the country to save the precious metals. Nevertheless, this theory has been proven wrong by modern economy.

To conclude, Locke's view on money stems from his considerations for political governance and a state of nature where people interact in the social system. His account of money lacks depth, yet touches on points that are important to the orthodox school of thought. Firstly, he traces the origins of money to the barter system. Contrary to the belief of most orthodox theorists, Locke argues that money was invented to overcome the limitations of natural law on the accumulation of properties. He suggests that the use of money was agreed by general consent, and the value attributed to money was by "fancy or agreement" (Desan, 2013, p. 3). Later on, Richard Cantillon agrees to this notion, states that gold and silver are not necessities to the life of man, "it must not be concluded that they have but an imaginary value" (Cantillon, 1755/1959, p. 20). Thus, money's value is determined by its use as well as the consent given by men. Another important idea suggested by Locke is the construction of interest rate on money. He argues that since it was already difficult to "set a price upon wine, or silks, or other unnecessary commodities", it is impossible to control the rate at which men borrow money by law (Locke, 1691/1823, p. 2). Following the fundamentals of the commodity theory, for Locke, money is merely a universal commodity, or a special commodity. Lastly, Locke reiterates the functions possessed by money: namely a medium of exchange, a means of payment and a unit of account. Although Locke's analysis of money seems interesting, it is primarily a new expression of long-formed views. It could be said that Locke makes a common mistake, “one that ellipses the making of money and declares rather than explicating the way that medium works” (Desan, 2013, p. 3). As his view of money is instrumental to his political theories, his account lacks clear explanation of money’s nature, money’s history, and money’s usage. Locke sees the political and social significance of money, yet fails to theorize itself base on those foundations.

2.1.3 Richard Cantillon (1680s-1734)

Richard Cantillon, an Irish merchant, banker and adventurer, referred to as an economist who had been forgotten by the modern world. After the discovery of his works decades after their published dates, it was found that Cantillon wrote the first treatise on economics, *Essai sur la Nature du Commerce in Général (Essay on the Nature of Trade in General)*, more than four decades before the publication of the *Wealth of Nations*. Thus, many scholars argue that he is the actual father of modern economics. Although mainly regarded as a pre-classical economist, Cantillon have written on various economic phenomena in a manner that is similar to many classical economists, for instance Adam Smith and David Ricardo. Moreover, he was one of the first economists to have understood the concept of money particularly well and had provided detailed accounts on commodity money.

The foundation of Cantillon’s economics lies in his theory of value. He states that “the Price or intrinsic value of a thing is the measure of the quantity of Land and of Labor entering into its production", where the two groups could include further components like raw materials and capital goods, etc. (Cantillon, 1755/1959, p. 14). More specifically, he considers the value of a commodity to be proportionate to the quantity of land used and the quantity of labor that had gone into the production process. He distinguishes relative prices from money prices. He believes that relative prices, or intrinsic values, are determined by the labor and land required in the production, in the long run. Market prices, determined by demand and supply conditions, may deviate continuously from their fixed values. In other words, he argues that the intrinsic value of any commodity never varies, rather the market prices of these commodities may fluctuate daily due to the "impossibility of proportioning" production and consumption (Cantillon, 1755/1959, p. 14). Despite the fact that both Cantillon and Smith utilize the labor theory of value to support their explanations, Cantillon's idea contradicts with Smith's view that the money cannot be used as a standardized rule for commodities due to its varying value.

Similar to other economists who support the commodity theory of money, Cantillon believes that the primary function which gave rise to the use of money resides in its ability to represent the relationship of commodities in an exchange. He states that money "finds the proportion of values in exchange", and it is also "the most certain measure for judging the Par between Land and Labor" (Cantillon, 1755/1959, p. 15). In other words, this corresponds to Aristotle's idea of commensurability between goods and the concept of a just price, where money can eliminate the frictions in exchanges, and thus allows the agents to perform exchanges more easily. Jevons also supports Cantillon's theory, and he argues that the use of money can eliminate the potential problem of "double coincidence of wants" in exchanges, where both agents want the same commodity that has use value to them (Jevons, 1875, p. 4). By stating that money is the representation of the par value, Cantillon highlights that another function of money, which developed from its primary function of facilitating exchanges, is as a unit of account. This simply means that money is the unit in which prices and values are expressed.

Although Cantillon acknowledges the use of wood, stone, and other commodities as money, he concludes that precious metals like that of gold or silver were the most suitable to be used as a currency. Gold and silver emerged as money commodities as a result of the evolution of natural market forces. He describes that since gold and silver were "of small volume, equal goodness, easily transported, divisible without loss, convenient to keep, and durable almost to eternity", it was then decided that they would act as the perfect form in which the par value would be represented (Cantillon, 1755/1959, p. 21). Proponents of the commodity theory often disagree on the reason why gold and silver were employed as money in society. Their arguments can be divided into two camps: conventionalists and theoretical chartalists. On the one hand, conventionalists propose that it was the likable qualities of precious metals that allowed them to be favored by the public as money and it was a decision out of general agreement. On the other hand, theoretical chartalists argue that it was the state which proclaimed precious metals as money, which was then forced upon the public. Following Aristotle's argument that precious metals became money because of general convention, Cantillon states that it was "utility and need" that had decided the use of precious metal as money (Cantillon, 1755/1959, p. 21). He emphasizes that the reason behind using gold or silver as form of money resides ultimately in their qualities, which no other commodity possesses to that capacity.

Cantillon then exemplifies that money must correspond to the value it possesses, in terms of land and labor, and also to the articles exchanged for it. He states:

> If for example a Prince or a Republic gave currency in the State to something which had not such a real and intrinsic value, not only would the other States refuse to accept it on that footing but the Inhabitants themselves would reject it when they perceived its lack of real value. (p. 21)

He considers money as the proper representation of the land and labor input into the production of commodities. He believes that once money stops reflecting the true value embodied by commodities, agents in society will lose faith in this tool and reject the use of money. Consequently, it can be argued that Cantillon views money as a veil covering the true exchange relation of real commodities, and it is simply the unit in which the par is expressed. Therefore, money, as a veil or a unit, should not have any real effect on other economic indicators. The argument that money is a veil is supported by many other proponents of the commodity theory. David Hume argues in agreement, in a clear metaphor as he writes money is “none of the wheels of trade: It is the oil which renders the motion of the wheels smooth and easy” (Hume, 1752/1875, p. 33). This is also summarized by Schumpeter, he states that as money “enters the picture only in the modest role of a technical device that has been adopted in order to facilitate transactions”, the concept of neutral money implies that money “does not affect the economic process, which behaves in the same way as it would in a barter economy” (Schumpeter, 1924/1954, p. 277).

Cantillon’s monetary economics is viewed by many modern economists as a version of pre-Keynesian quantity theory while emphasizing the fundamental cores of the commodity theory of money. He believes that there is an inverse relationship between the quantity of money and its purchasing power, or the amount of goods it can be exchanged for. Similar to other proponents of the commodity theory, Cantillon argues that the value of money is, in the long run, determined by the cost of production, with short run variations induced by changes in demand. In order to study the “rapidity of circulation” of money, he models the exchanges in which money facilitated, thus observing the rapidity of the circulation of money in a society (Holthrop, 1929, p. 508). He describes the model with respect to his “three rent” concept. He argues that there are three types of rent any citizen need to pay: firstly, the rent collected by the land owners, secondly the expenses spent on maintaining the labor and livestock, and lastly the portion he earns and keeps as profits after the production he undergoes.

Through his theory of the three rents, Cantillon shows other functions of money, namely means of payment and means of circulation. He states that "Cash is therefore necessary, not only for the Rent of the Landlord" but also to circulate the goods in society:

> As however the Farmers have to make large payments to the Landlords at least every quarter and the Taxes which the Prince or the State collects upon consumption are accumulated by the Collectors to make large payments to the Receivers-General, there must be enough ready cash in circulation to make these large payments without difficulty, without hindering the circulation of currency for the Food and Clothing of the people. (p. 24)

He states that "ready money" is needed for the first two rents, for paying the price and the land owners, as well as for acquiring raw materials in the likes of "the Iron, Tin, Copper, Salt, Sugar, Cloth and generally all the merchandise of the City consumed" (Cantillon, 1755/1959, p. 22). After the second rent is received, the landlords can spend them in the city which supports both the commercial and manufacturing sectors. Their expenditures on agricultural produce also guarantee the circular flow of income.

Under the assumption that the farmers will spend rather than save the third rent, Cantillon discusses the effects of monetary changes in society. He first supposes that the increase in money is caused by the raise in the quantity of silver mined. As summarized by Jevons, Cantillon argues that the immediate beneficiaries—”the proprietors, undertakers and employees of the mines”—first profit by this excess and increase their expenses, which “increases the demand for the produce of artisans and other work people”, in turn raises the wage of these workers (Jevons, 1881, p. 1). These latter soon acquire increased rates of wages, and the influence of this new money gradually spreads from trade to trade, and from country to country. Cantillon states that “money, whether lent or spent, will enter into circulation and will not fail to raise the price of products and merchandise in all the channels of circulation which it enters” (Cantillon, 1755/1959, p. 27). He argues that an increase in supply of money has real effects to economic indicators. This was a view contradictory to that of most proponents of the commodity theory, those—including David Hume and John Law—who believes in the long run neutrality of money.

Cantillon’s theory does not contain the concept of an overall price level, nor does he attempt to create a price index. Instead, he focuses on individual commodity money prices in his discussion. His theory states that the new money will affect different commodity prices depending on three aspects. Firstly, the recipient of the new money. Secondly, on what the new money is being spent, for instance, the tastes of the recipients of this money as well as the income elasticity of the goods purchased. Thirdly, the elasticity of supply of the products affected, where he uses the example of bread and meat, with different foreign imported raw materials. Other than the direct effects on the influx of money, there are also indirect effects on sectors of the economy that were not directly affected by the increased expenditures. He states that the direct effect of the increase of expenses on these sectors "diminishes of necessity the share of the other inhabitants of the state who do not participate at first in the wealth of the mines in question" (Cantillon, 1755/1959, p. 27). In turn, these people may diminish their expenditure, and a large proportion of them may be forced to emigrate. Consequently, the unexpected inflation leads to a redistribution of income, which will affect real economic variables, for instance, the level of employment and real output.

Lastly, Cantillon comments on the emergence of paper notes in the society. The first paper money which appeared in Europe dates back to the 1670s. As a banker, Cantillon would have seen various occasions where paper notes were used during his lifetime. Before the 1840s, the main function of paper notes remained as a direct reflection of the stock of precious gold or silver stored at a specific bank. Nevertheless, they were generally accepted as a medium of exchange, a means of payment, and a unit of account. Cantillon explains that the only way a paper notes could be considered as money is if they are fully backed by precious metals. He states that if for example, "a Prince or a Republic gave currency in the State to something which had not such a real and intrinsic value", the public would "reject it when they perceived its lack of real value" (Cantillon, 1755/1959, p. 27). For Cantillon, "silver alone is the true sinews of circulation", in other words, money consists entirely of gold and silver coins (Cantillon, 1755/1959, p. 38). While paper money, whether produced by national banks or issued by commercial banks, is a mere substitute of money acting to "accelerate the circulation of money" (Cantillon, 1755/1959, p. 37). His analysis of paper money reiterates his emphasis on commodity money, and the importance of the commodity theory in his economic thought.

To conclude, Cantillon contributes greatly to the development of the commodity theory of money. His theory reinforces the concept of money as a tangible commodity, and provides an analysis for the circulation of money in society through the framework of "three rents" (Cantillon, 1755/1959, p. 24). Following the argument of Aristotle and John Locke, Cantillon agrees that money takes the form of gold and silver due to general convention based on the unique qualities of precious metals. He explains the value of money based on the supply and demand of precious metals in society. His analysis of banks and bank created notes as a money substitute serves as a foundation of the argument against the credit theory of money and other theories by proponents of the commodity theory. Moreover, he is one of the first theorists to explicitly lay out the three main functions of money, which is to facilitate trade, to account for value, and to pay expenses. His greatest contributions include putting forward the monetary disequilibrium theory, where he argues that an increase in supply will cause a rise in price level, which can lead to a monetary disequilibrium. He is a rare case in arguing against the neutrality of money in the long run. However, it could be argued that Cantillon made little improvement on the theory, other than polishing the details, and providing a more comprehensive analysis founded on the same core concepts through a similar theoretical approach.

2.1.4 Karl Marx (1818-1883)

Karl Marx contributed greatly to the field of political economics. His work, *Capital,* provides insights to the labor theory of value as well as the exploitive nature of a capitalistic markets. His analysis of surplus value, and the exploitation of labor has attracted much attention, which in turn overpowers other arguments in his theory. It could be argued that his contributions to the development of the commodity theory of money has been overlooked by many theorists.

In order to understand Marx's theory on money, one must first study his theories on commodities. Marx defines any commodity as an external object which satisfies human needs of whatever kind. In order to compare commodities, he considers the value of each commodity in two aspects: use-value and exchange-value. Use-value refers to the usefulness of a commodity, and it is only "realized in use or in consumption" (Marx, 1848/1976, p. 127). He then defines exchange-value to be "the quantitative relation…, in which use-values of one kind exchange for use-values of another kind" (Marx, 1848/1976, p. 127). Each commodity possesses two forms: natural form and value form, because the commodity is “at the same time objects of utility and bearers of value” (Marx, 1848/1976, p. 138). The “money-form” expresses the social relation between multiple commodities, which he defines as the common “value-form” of commodities “which contrasts in the most striking manner with the motley natural forms of their use-values” (Marx, 1848/1976, p. 139).

Marx proposes a labor theory of value, where value is a measure of the labor time spent on the commodity. Value is “nothing but that fragment of the total labor potential existing in a given society in a certain period which is used for the output of a given commodity” at the average social productivity of labor (Mandel, 1990, p. iv). The labor theory of value enables the exchange ratios between commodities to be causally determined in terms of a quantitatively measurable substance. Value is therefore considered to be a social and objective concept. It is social because it is determined by the overall result of the fluctuating efforts of each individual producer. It is objective because it is exogenous. Once the production of a given commodity is finished, it is independent from personal valuations of buyers in the market. As soon as an abstract concept of value is established, Marx moves towards presenting a universal standard in which the value of commodities can be expressed.

Rather than inventing a new concept named money and defining it, Marx refers to this quality that could be fulfilled by any commodity the “money-form”. The fact that Marx introduces his theory on money presupposing that all money is commodity money solidifies his beliefs in the commodity theory. Marx attempts to locate the logical origins of the money-form by modelling exchanges, an approach adopted by Aristotle. He forms simple case studies utilizing methods that involves isolating exchanges from circulation. Firstly, he describes the value-relation between one commodity and another commodity, “the equivalent form”, as it would occur in any barter (Marx, 1848/1976, p. 139). This is similar to Aristotle’s first form of exchange, in which a commodity is directly exchanged for another, the relationship noted C-C. When there is a ratio expressing the relation between the two commodities, for instance 4 apples for 1 pie, the apple expresses its value in the pie, while the pie serves as the material in which that value is expressed, where “the value of the first commodity is represented as relative value”, and the second commodity act as an equivalent, a standard (Marx, 1848/1976, p. 139).

Secondly, in “the relative form of value”, a common denominator is introduced in order to compare the two types of commodities in quantitative terms (Marx, 1848/1976, p. 141). Now, the value relation shows the abstract concept of value where the pie becomes a “thing in which value is manifested”, or a material and tangible representation of the abstract value of apples. Marx distinguishes the value form from its natural form, and argues that in this form of exchange, the commodity simply undergoes a transformation of forms. He believes that with this level of value-relation, the agents would be able to formulate immediately the value of apples in terms of pies, where pie "becomes a mirror for the value of [apple]" (Marx, 1848/1976, p. 139). Once the value of one commodity can be expressed in terms of innumerable other commodities, this commodity can thus be directly exchangeable with all other commodities" (Marx, 1848/1976, p. 159). He argues that the "social relative form of value", which expresses the value of one commodity in regards to its social exchangeability with other commodities, establishes the commodity as a universal equivalent (Marx, 1848/1976, p. 145).

The value of any commodity is only realized during an exchange, where one can find out if the labor put into the production process is of use-value to another. This links back to his theory that value, in terms of labor, is a social concept. Therefore, it is clear that Marx considers the emergence of money a result of a need to express the social relative form of value. He states that money "crystallizes out of the process of exchange", which is also the belief held by Aristotle (Marx, 1848/1976, p. 181). According to Marx's theory of money, prices are nothing but the expression of the value of commodities in the value of the money commodity chosen as a monetary standard. Nevertheless, this universal standard can take the form of any commodity, as long as it is decided by general convention: "the social action of all other commodities, therefore, sets apart the particular commodity in which they all represent the values" (Marx, 1848/1976, p. 180).

Marx believes that gold became the first form of money as a result of general agreement. Marx holds the belief that "although gold and silver are not by nature money, money is by nature gold and silver" (Marx, 1848/1976, p. 183). He argues that gold and silver have certain natural qualities that are appropriate to perform the function of money. These qualities are similar to Cantillon's description: "same uniform quality", "divisible at will", but also "possible to assemble it again from its component parts" (Marx, 1848/1976, p. 184). It is a pure coincidence that gold fulfilled all the necessary features of money, while it also possessed a high intrinsic value. Coins appeared in the economic system as money since it made sense to have gold coins with determined weights in which a certain value in price-form is expressed.

Marx considers the most important and basic function of money to be as a medium of circulation. In any exchange, the commodity is held by the seller while the money, as the means of purchase is held by the buyer. Thus, during an exchange, money "serves as a means of purchase by realizing the price of the commodity", in other words, money expresses the price of commodity in a trade. Marx states that as this C-M-C process happens continuously, it results in the "continued removal" of money "further and further away from its starting-point" (Marx, 1848/1976, p. 210). As a means of circulation, money transfers commodities "from hands in which they are non-use-values into hands in which they are use-values", therefore Marx pointes out that money seems to be moving in the economy, however it is merely the expression of the circulation of commodities. Nevertheless, since Marx defines money as merely a form of a commodity, he argues that the movement of money is actually the "movement undergone by commodities while changing their form", whether it is C-M or M-C (Marx, 1848/1976, p. 200). In each of these two situations, a commodity is being transformed into or from its 'money-form'.

Referring back to the process of C-M-C in which money acts as the circulating medium, Marx argues that since money is being passed from hand to hand, it only needs to lead a symbolic existence. In other words, money acts as the 'veil' that covers the exchange, as it is a "transiently objectified reflection of the prices of the commodities" (Marx, 1848/1976, p. 226). This argument is a recurring theme in the school of the commodity theory: since money's primary function is to facilitate trade, its effect on the real economy is seemingly nonexistent, as it is circulating in the economy with a fixed supply. Nevertheless, this view of his also reiterates what previous commodity theorists have argued for centuries, where the fluctuations in amounts or movements of money will not affect real economic variables.

As for the case of paper money, Marx distinguishes fully-backed paper notes from inconvertible paper notes. He argues that since the government usually determines the value of these tokens, the function as coins is now "in practice entirely independent of their weight" (Marx, 1848/1976, p. 222). Therefore, when in the form of coins, gold is separated from the "substance of its value". Consequently, this allows further emergence of "relatively valueless objects", for instance paper, as money (Marx, 1848/1976, p. 223). He does not discredit the circulation of this type of fully-backed paper money, since that are a mere symbolic tool which embodies gold. Instead, he criticizes the issuance of inconvertible paper notes by the state. He describes that these "pieces of paper on which money-names are printed, such as £1, £5, etc., are thrown into the circulation process from outside by the state", and as long as the amount of the paper notes correspond to the amount of gold, their movement is simply a reflection of "the law of monetary circulation" (Marx, 1848/1976, p. 224). However, in the event that the amount of paper notes exceeds the amount of gold circulating, they would be universally discredited. Therefore, he argues that there exists a limit on the amount of paper notes that can circulate in the economy, which is the amount of gold, since paper notes are only supposed to be a representation of gold. His argument perfectly aligns with Cantillon's view on paper notes, which also states that only tangible precious metals are the actual substance of the monetary circulation process, paper notes are only utilized to increase the velocity of circulation.

To conclude, it is easily seen that Marx is fundamentally a commodity money theorist. His analysis of money is entirely based on his assumption that money takes the form of a tangible commodity. His framework of labor theory of value and the emergence of money-form from the evolution of exchanges is well laid out. He explains the logical origins of money through an approach similar to that of Aristotle's, and follows the core arguments of Cantillon's. More specifically, his account of paper notes and its limitations perfectly aligns with that of Cantillon's. Although his theories are logically expressed, one could argue that due to the fact that his conceptual understandings were incorrect, his theory on money is flawed. It could also be seen that comparing with Aristotle's writings, the basis of the commodity theory has practically remained the same, regardless of the drastically different economic contexts. This could be considered a strength, but simultaneously a weakness of this theory.

CHAPTER 3

THE CREDIT THEORY OF MONEY: DUAL NATURE OF MONEY

The rise of banking facilities and the creation of credit in late 17th century transformed the way economists view money. The emergence and the circulation of credit in society were too important to be overlooked. Therefore, as the use of credit became more common, economists developed a theory which sees all money as credit, namely the credit theory of money that came into light in the 19th century. As Ingham states, the "first systematic challenges to commodity-exchange theories of money" were produced by "intellectual efforts to understand the emergence and spread of new forms of credit-money" (Ingham, 2004, p. 39). In contrast to the commodity theory of money, the credit theory views the money itself not a commodity. Rather, the material embodiment could be a certain commodity, while the concept of money is abstract. To credit theorists, money possesses the dual nature of being valuable yet valueless. The basic determining functions of money remain as a medium of exchange, a unit of account, and a store of value. However, the credit theory is formed on the basis that money as a unit of account, rather than a medium of exchange, is the defining function that makes the moneyness.

The credit theory has three main arguments. Firstly, the theorists agree that the ideal currency would be uniform in shape, easy to transport, and easily divisible into smaller units. In other words, credit theorists don't oppose to the notion that precious metals are ideal media of money. However, credit theorists argue that it is not the substance that is of importance when forming theories of money, rather that money is a form of credit. Money is considered to be the embodiment of some abstract concept, which allows agents to measure value and exchange goods more smoothly. Regarding the use of precious metals as money, the credit theory proponents are split into two camps. On the one hand, some proponents of this theory, including Carl Menger and George Simmel, agree that the logical origin of money may be traced back to money as a medium of exchange, which explains the wide usage of commodity money. On the other hand, other proponents, including Henry Dunning Macleod, believe that currency predates precious metals. He argues that currency, mainly written paper bills, created inconveniences, which resulted in the search for other substances to act as currency in society.

Secondly, the main functional role of money resides in money as a unit of account, or a measure of value. As Alfred Mitchell-Innes summarizes, "a sale and purchase is the exchange of a commodity for a credit", thus money is the measurement of the amount of credit/debt in an exchange (Innes, 1914, p. 2). Consequently, money is not necessarily a commodity. On the contrary, money cannot be a commodity as it is the abstract unit in which value of other commodities is measured and expressed. As Innes suggests, money “is a measure of the value of all commodities, but is not itself a commodity, nor can it be embodied in any commodity” (Innes, 1914, p. 5). The earliest accounts of describing money as an abstract value were produced by the Greenbackers. They pose the question that if the material of a yardstick is irrelevant to its ability to measure length, why is the material of money related to its function as a unit of account? This view was later developed into the statement that money was “essentially only the claims to goods of the same value” (Ingham, 2004, p. 44). Thus, certain commodities, for instance gold, can be seen as a carrier of money while money itself is intangible, immaterial, abstract (Innes, 1914, p. 5).

Thirdly, the “valuableness” of money roots in the fact that money is accepted as a clearing of debt, especially the payment of taxes to authority (Simmel, 1907/1978). This establishes the nature of money as a product of power, which presupposes the existence of an authority. Since money is abstract, the argument that it is created and established by an institution that is outside of the market forms the only logical explanation to its power. This can also explain the usage of coinage. Coins were established and issued by an authority as a monetary material. The value of coins is backed by the “name or distinguishing mark of the issuer” on each coin, which was essentially a “promise to pay or satisfy a debt” (Innes, 1914, p. 4). Therefore, the value of money is not at all determined by the production costs of the coins. The value can be considered as a representation of the strength of the promises made by authority as well as the general acceptance of this money in transactions of credit and debt.

As Schumpeter points out in *History of Economic Analysis,* even later theorists of the 18th century have the tendency to attempt to explain credit and its functions based on existing theories on coins and material money (Schumpeter, 1954/1994, p. 717). Schumpeter argues instead of considering credit instruments as an embodiment of money, money should be considered as merely one type of credit instrument. It is vital to distinguish the credit theory of money from the monetary theory of credit (Schumpeter, 1954/1994). While the former considers money as a type credit and analyzes money based on that foundation; the latter attempts to analyze credit using the established framework of orthodox theory on money. Seeing the nature of money as credit challenges the theoretical frameworks laid out by commodity theorists. This evolutional change in analytical mindset contributes greatly to the development of monetary science.

3.1 Main Proponents of the Credit Theory

Aristotle proposes that money serves as a medium of exchange in society, and the value of money is determined by the material it takes form in. During the similar time period, other Greek philosophers have also attempted to analyze money and the economy in their writings on political philosophy.

Plato can be considered as the earliest proponent of the credit theory of money. Even though he does not explicitly write about credit or that money is a form of credit, he argues that the intrinsic value of money is not determined by the substance. Schumpeter points out that, Plato "remarks in passing that money is a 'symbol' devised for the purpose of facilitating exchange" (Schumpeter, 1954/1994, p. 54). Although this statement alone is insufficient in justifying Plato's contributions to the development of theory on the nature of money, his monetary policies—for instance, his oppositions towards the use of gold and silver—proposes a theory where the value of money is, independent from its material.

These following theories can be considered as the theorists' revisits to the idea of money as an abstract concept, or a separate entity from its embodiment. The following three authors, whom have been significant in the development of the credit theory, will be studied in detail. All three theories argue that money is credit, an important economic phenomenon that affects the real economy. These theories also argue that it is erroneous to consider the value of the "stuff it is made of" to be the intrinsic value of money (Schumpeter, 1954/1994, p. 54). Nevertheless, the theories differ in many aspects: firstly, the way the theorists lay out their analyses; secondly, theorists' attitude towards orthodox theory on money; thirdly, theorists' explanations for the use of coins and other commodity money; and lastly, theorists' arguments on the actual intrinsic value of money.

3.1.1 Henry Dunning Macleod (1821-1902)

Henry Dunning Macleod, a Scottish banker and economist, is considered to be the first economist to have systematically explained the nature of money starting from a theory of credit. He influenced many credit theory proponents, including Alfred Mitchell Innes and Randall Wray. Although many Victorian economists at the time—including Henry Thornton and John Stuart Mill—have incorporated credit into their theories on money, their theories were essentially money theories of credit rather than credit theories of money. Macleod strongly opposes of the mainstream labor theory of value and argued for the gold standard and free banking. Even though his writings on banking and money have been regarded highly by some British economists, his comments on value received negative perceptions in the orthodoxy-centered society. Schumpeter summarizes, "Henry Dunning Macleod [...] was an economist of many merits who somehow failed to achieve recognition, or even to be taken quite seriously, owing to his inability to put his many good ideas in a professionally acceptable form" (Schumpeter, 1954/1994, p. 1115). Macleod's analysis on the nature of money and his clear definitions of this economic phenomenon lays a solid foundation for 20th century monetary economists.

Macleod's analysis on the origins of money is founded on his unique analysis on exchange and the development of the market. On the one hand, his theory differs from Innes and other credit theorists who believe that exchange by barter and exchange by money are structurally different, he traces the origin of market system back to barter exchanges. On the other hand, unlike metallists who argue that indirect exchange is the natural progression of barter due to double coincidences of wants, Macleod proposes that exchange by money is a result of unbalanced exchanges. He states that, as long as the products engaged in the exchange is of equal value, there would be no need to introduce money. However, it often happens that one subject wants less, or even none, from the other subject in the exchange. In these unequal exchanges, there exists "debt", which is "a right, a property" on the subject who had received the lesser amount of products or services ((Macleod, 1891, p. 73). Consequently, the subject "who had received the greater amount of service, or product, gave a quantity of this universally exchangeable merchandize" to make up for the difference, which acts as promise to the other subject to supply the rest in the future (Macleod, 1891, p. 74). Money is this universally exchangeable merchandize which acts as a place holder in the unbalanced exchanges. Therefore, Macleod locates the origins of money in barter systems, and argues that money is a solution to the inefficiencies of barter which facilitates unbalanced exchanges.

In contrast with Adam Smith and other 18th century economists, Macleod considers the study of exchanges of a higher importance than the study of wealth. This also led him to develop his theory of value with respect to exchanges. First of all, Macleod defines value as a man's "desire to possess some external object" (Macleod, 1891, p. 71). Contrary to Adam Smith who believes that the value of products depends on the capital and labor input, he believes that "value does not spring from the labor of the producer, but from the desire of the consumer" (Macleod, 1855, p. 25). Rather, he sees value as a ratio or an equation, one that can be established only with two or multiple objects. In a direct exchange, the value of A is represented by the quantity of B, and vice versa. Value can be used to show "the sign of quality between two economic quantities" in any exchange (Macleod, 1891, p. 11). In other words, the objects will only be considered valuable if it can be exchanged for other objects, thus "if it can be exchanged for nothing, it has no value" (Macleod, 1891, p. 12). To him, value "like distance or an equation, requires two objects" (Macleod, 1891, p. 12). Macleod defines value as a distance, a ratio that shows the relationship between two goods in any exchange. Although he bases his analysis on the barter exchange system, this concept can be understood in cases of more complex markets.

Macleod states that the notion that objects can possess "intrinsic value" is fundamentally erroneous (Macleod, 1891, p. 40). He argues that this widely used expression is the source of confusion in economics, and has "especially obscured the theory of credit" (Macleod, 1891, p. 41). According to his definition of value, it is incorrect to consider the concept of value with respect to one single object. Since value shows the equality or the ratio between two goods, "a single object cannot be distant, or be equal" (Macleod, 1891, p. 12). He agrees with Nicholas Barbon in arguing that the concept of value should be distinguished from “intrinsic virtue” (Macleod, 1891, p. 43). Intrinsic virtue, the internal quality of an object, is the inherent characteristic or usefulness of an object, and is not variable when perceived by different subjects in the community. Therefore, it is possible to have objects that have great intrinsic virtue, but are of small value, for example, water. The value of objects is only determined by scarcity and desire, supply and demand, and the exchangeability with other objects.

It is now apparent that Macleod believes in the nature of money as “simply a right, or title, to demand some product from someone else” (Macleod, 1891, p. 75). In other words, money is credit, a claim on someone to deliver certain things in a previously determined amount at a point in the future. Money was developed because of the debts incurred during unequal exchanges. Money is then a representation of the underlying concept of credit, which clears the debt. In nature, money is not a commodity, because men neither consume it nor wear it, it also does not provide the subject with any economic satisfaction. Unlike metallists who refers to paper money as “fiat money”, Macleod terms gold and silver money “metallic credit” (Macleod, 1891, p. 80). Money is therefore a written obligation, to record the amount of inequality in an exchange. It began as a private obligation, but it can be transferred, which eventually results in it becoming a public claim on society. In fact, Macleod considers metallic credit as the progression of abstract credit.

Written obligations may become inconvenient for the recipients who would like to "spend only a portion of his currency" (Macleod, 1855, p. 27). Therefore, he argues that it is natural for people to use metals as an embodiment of money, because metals are uniform in texture and easily divisible.

Since there exists no such concept as intrinsic value, money also cannot possess internal value. The orthodox theory suggests that money-stuff—for instance gold and silver— has intrinsic value, and paper money is merely a representation of the intrinsically valuable money. However, Macleod poses the question that since money can be exchanged with multiple objects, which exchange shows the real intrinsic value of money? Thus, money clearly does not possess intrinsic value, rather it possesses "general value, because it is generally exchangeable throughout the country" (Macleod, 1878, p. 43). He acknowledges that over time, Countries have gravitated towards fixing upon some material substance which is agreed by the general public. Even though money is material and tangible, the value of money should be separated from the material embodiment. Rather, the value of money derives wholly from the trust, or the perceived ability of the issuer to perform the promised services in future. He argues the value of money lies in the fact that the recipient "believes or has confidence that he can exchange it away again for something he does want whatever he pleases" (Macleod, 1893, p. 44). Thus, it could be considered that the value of money is based on trust in the social institutions. The material embodiment is then thought of not as a commodity, but a mere realization of an abstract concept.

Regarding the functions of money, Macleod acknowledges that money acts as a medium of exchange. A sale or a purchase only constitutes half of any exchange. In this sense, his understanding of medium of exchange differs from that of the orthodox theorists. Money can represent the amount of debt incurred in the unbalanced exchanges, therefore it is a medium to facilitate the completion of the exchange. Nevertheless, Macleod argues that the primary role of money is not as a medium of exchange, but as a measure of value. He states that money represents a claim against the services of the society, thus "its first quality is, to measure and record the services done by the person who earns it" (Macleod, 1856, p. lxxi). He uses ancient Greek Oxen to exemplify that it is most important for money to measure and record the incurred debt. He also emphasizes that the primary use of money and credit is to "set industry in motion", or to to be circulated in society (Macleod, 1891, p. 98). He states that the effect of money will be lost if it is "lying locked up in a box" or remains unused, since the act of holding money does not provide any economic satisfaction (Macleod, 1891, p. 98). Thus, unlike most orthodox theorists, Macleod does not consider money, more specifically metallic credit, wealth. Money's power can only be demonstrated when it is being exchanged for desired products or services.

As a conclusion, Macleod considers money as credit. He is considered to be the first economist to attempt to explain the nature of money using a theory of credit. His theory stands on the ground that barter exchanges has inconveniences when comes to unbalanced exchanges, which in turn called for a tool to show the debt incurred. Unlike other theorists at the time, he does not try to use metallic money to explain the emergence and usage of the rather new concept of credit. He considers money to be the “generalized right, or power, to demand whichever” products or services required at a future point in time (Macleod, 1891, p. 40). Therefore, by nature, money is a promise made by the society. Interestingly, Macleod argues that many commodity theorists, for instance Aristotle and Adam Smith, have seen the true nature of money as a general right or promise. He quotes Aristotle’s analysis on money: when regarding a future exchange, money is the guarantee, “for it is necessary that who brings it, should be able to get what he wants” (Aristotle, 1985, p. 130); and Henry Thornton on money, “money of every kind is an order for goods” (Thornton, 1802, p. 80). He emphasizes that the nature of money is merely credit. Money cannot possess intrinsic value since the concept is fundamentally incorrect. It may seem surprising that what he considers as a well-understood opinion was considered to be the outcast in the field of economics. According to Macleod, the primary role served by money is that of measure of value. It could be argued that, rather than bluntly confronting the established orthodoxy, Macleod incorporates ideas of the metallists in order to development his theory on money.

3.1.2 George Simmel (1858-1918)

Georg Simmel is considered as one of the great pioneers of sociology. His most significant work, *Philosophy of Money* (1907), is a study on the nature of money and its role as a psychological phenomenon. Nevertheless, his work seems to be almost unknown to modern economists. Simmel approaches this topic in a manner that differs from that of conventional economists. He provides a substantial amount of historical episodes, as well as sociological materials to support his argument. Rather than merely considering their effects on the real economy, he sees basic economic phenomena—for example, value, exchange, money—in terms of their social and political importance. Even though, in principle, he is not considered as an economist, his writings on the nature of money lay out a solid foundation for an alternative theory on money.

Simmel considers the concept of value as a purely psychological idea. He argues that value is created because of the unsatisfied desires of humans, and a result of the agents' demand for some sort of goods or services. In other words, value is a product of subjects' judgments, thus not inherent in objects. Exchange is conceived as equitable means for humans to overcome the distance created between them and their desired objects, also the unequal situation of people who might have undesired objects and seek the desired ones. This definition is similar to that of the orthodox theorists, where exchange happens when agents exchange some object for the use value, or the enjoyment, of desired objects. Simmel also utilizes vocabularies such as “use value” to describe the enjoyment, or utility gained, when a subject consumes some sort of goods or services (Simmel, 1907/1978, p. 101). Nevertheless, his explanation of exchange value is closely tied to the scarcity of the objects, and the sacrifice of value of the subject. Unlike orthodox economists, Simmel understands the fundamental difference in the structures of exchange by money and exchange by barter. He argues that an exchange by money is “constituted by the social relation of credit” (Ingham, 2004, p. 64).

Regarding the general nature of money, Simmel views money as purely a symbol. He rejects any economic theory that “locates money’s value in the specific substance or content of the money-stuff” (Ingham, 2004, p. 63). He states that previous economists have been erroneously theorizing money, due to their inability to conceptually distinguish the “essence and significance of money” from “the qualities of those values that money evolved by enhancing one of these qualities” (Simmel, 1907/1978, p. 119). Money should be considered first without reference to the substance that represents it. As Simmel delicately expresses, money is “the value of things without things themselves” which shows the simultaneous valuable and valueless characteristics of money (Simmel, 1907/1978, p. 121). A large portion of *The*

Philosophy of Money focuses on his analysis on the value of money. The value of money is not a reflection of the costs of production, its supply and demand, or labor and capital input. Instead, money is "the representative of abstract value", and inherently "a conceptual existence bound to a visible symbol" (Simmel, 1907/1978, p. 120). Simmel argues that, unlike all other measurements or rulers that possess the quality of the objects they measure, money does not need to possess intrinsic value to be a measurement of value. Rather than a direct comparison between the quantities of objects, money is able to "establish a proportion between two quantities" by "the fact that each of them relates" to money, and thus determine equal or unequal (Simmel, 1907/1978, p. 146). Therefore, the intrinsically valueless money can still act a means of measuring value of other objects.

As the reviewers David Laidler and Nicholas Rowe suggest, Simmel's book concerns not just the textbook definitions and functions of money, but also money's position as an integral part of the market economy, "and the relationship between the institutions of that market economy and such matters as justice, liberty, and the nature of man as a social being" (Laidler & Rowe, 1980, p. 98). Simmel's examination of the "social features" of money shines light into areas that are not discussed by many mainstream economists. He argues that the development of money as a social institution is not the conscious creation of any political entity, rather it is the unintended product of social revolution. He proposes that the value of money is decided not so much by the physical properties of the substance, but by an "implicit guarantee given by the community as to the acceptability of money for useful commodities in a stable ratio of exchange" (Laidler & Rowe, 1980, p. 99). More specifically, the value of money roots in the agents' confidence in the "socio-political organization and order" (Simmel, 1907/1978, p. 179). Money is valuable because of its exchangeability, which is a reflection of the trust of the public. Therefore, money can be seen as a claim on society, which corresponds to his idea that money is merely a credit instrument.

Simmel considers that money is in its ideal form when it can effectively function "merely as an idea which is embodied in a representative symbol" (Simmel, 1907/1978, p. 148). In essence, money is merely credit. Nevertheless, rather than completely discrediting the orthodox theory of money, Simmel considers the commodity money as merely an episode in history. He argues that the different forms of money, material or paper, can only co-exist in periods of transition. He analyzes money's development in an ahistorical manner. He states that regardless of the historical origins of money, "money did not suddenly appear in the economy as a finished element corresponding to its pure concept" (Simmel, 1907/1978, p. 119). Instead, money must have been developed out of a specific characteristic "which forms part of every exchangeable object", and the function of money resides primarily in that characteristic (Simmel, 1907/1978, p. 119). Consequently, he proposes that all material forms of money can be seen as intermediary phases during the evolution of money.

Simmel does not attempt to trace the historical origins of money, rather he focuses on the logical origins in his theory. He discovers that although money itself does not need to possess value, “the most needed and the most valuable object is apt to become money”. It seems to him that the “money-character” is originally attached to those objects that are traded the most frequently, or considered as an “experienced necessity” (Simmel, 1907/1978, p. 142). Therefore, in primitive societies, money could not have been used as a medium of exchange or as a unit of account unless the substance had been considered as immediately valuable. No one in society aims to hold money because of the material. Even for the case of gold and silver coins, no one “regards a coin as valuable because it can be changed into a piece of jewelry” (Simmel, 1907/1978, p. 143). However, since he understands that an exchange by money is structurally different from an exchange by barter, he rejects the notion that money as a medium of exchange is the logical origin of money. Simmel clearly points out that although money can be still embodied by visible objects, it does not mean that money’s value is linked to the intrinsic value of the substance.

Simmel focuses more on the social aspects of money and does not clearly outline what he considers as the primary function of money. Nevertheless, he drops a few hints that money as a medium of exchange is only a trait exhibited by primitive money. Money as a unit of account, or a measure of value, is the defining function of money. He spends numerous pages attempting to explain money's position in society as a symbolization of social relations. To Simmel, money cannot be simplified to be merely a special commodity that agents utilize to trade for desired goods, but it is a reflection of the subjects' perceptions of society and the multitude of relations and sacrifices that is undergone in the market. He acknowledges that "money is only a claim upon society", which agrees with Innes's view that one of the more dominant functions of money is as credit, that can be readily accepted to pay debt or to purchase valuable goods (Simmel, 1907/1978, p. 177). He believes that money is a "pure instrument", and the unique characteristics of this money reside in "social organization" and "supra-subjective norms" (Simmel, 1907/1978, p. 210). Therefore, money is considered to be more of a unit of account, or a symbol of the public's trust and confidence in such social organization.

During the time of his writings, there were heated debates surrounding the Gold Standard. It may seem contradictory for Simmel to advocate for the Gold Standard. Essentially, the credit theory argues that since money is merely a token, it does not need any sort of backing by metals to secure its value. In other words, why use gold to back the paper bills when people already have trust in the paper bills as money? There are two explanations for Simmel's position. Firstly, it can be argued that when Simmel advocates for the Gold

Standard, he is not conceptualizing gold and silver as metals in the traditional sense, as materials they can also hold for non-monetary functions. He is not arguing that with the backing of gold, people will be more likely to accept paper bills because they can use gold to create jewelry (Simmel, 1907/1978). Instead, he proposes that with the backing of gold, the promise may be stronger because the stability in money, as a unit of account, can be maintained. Once money is seen not as precious metal, Simmel's position becomes less confusing. Secondly, Simmel acknowledges that money "performs its services" best when it is not merely a representation of "the value of things in pure abstraction" (Simmel, 1907/1978, p. 165). It was understood that it is not "technically feasible" to transform money into pure tokens, and to completely detach money from every aspect that limits the quantity of it, "even though the actual development of money suggests that this will be the final outcome" (Simmel, 1907/1978, p. 165). This also emphasizes Simmel's argument money as a pure abstract representation is only achieved in its most ideal form.

As a conclusion, Simmel explains money's duality of nature in terms of sociology and social relations. His fundamental argument states that money, in its ideal form, is merely an abstract value or credit. For money to function, there exists two presuppositions: firstly, the public confidence in the issuing government, and secondly, confidence in the community to ensure that the value given will be replaced without a loss (Simmel, 1907/1978, p. 178). It is easy to see money as an abstract unit of account, which in turn implies money's lack of value. However, this seemingly valueless money can be used to exchange for valuable goods, which is a result of the social and political construction of money as a store of value. In other words, money has the dual property of being valuable in exchanges, yet valueless when held by agents. Simmel emphasizes that money is a realization of social institutions and "quite meaningless if restricted to one individual" (Simmel, 1907/1978, p. 162). He challenges the frameworks utilized by orthodox theorists, where money is being considered as "simply another durable good available to be held by the utility maximizing individual or profit maximizing firm, examined from an individual perspective (Laidler &Rowe, 1980, p. 101). Nevertheless, Simmel fails to answer to question of what the primary function of money is, and what the empirical model of money in modern society looks like. His contributions to the credit theory of money primarily resides in his analysis of the nature of money which brings monetary sociology into light.

3.1.3 Alfred Mitchell-Innes (1864-1950)

Alfred Mitchell Innes, a British diplomat and economist, while serving as Counselor at the British Embassy in Washington D.C, wrote two articles on money and credit for The Banking Law Journal. The first, "What is Money?" (1913), received an approving review from John Maynard Keynes, which led to the publication of the second, "Credit Theory of Money" (1914). However, his efforts to introduce a new theory of money was overpowered by the status-quo that had been established by orthodox theorists, and were forgotten. The articles and his merits were rediscovered by late 20th century economists, including Randall Wray, and have been praised as "the best pair of articles on the nature of money written in the twentieth century" (Wray, 2004, p. 223). Innes uses a vast amount of historical context to support his credit theory of money. Nevertheless, Innes's analysis on money lacks theoretical framework. His theory heavily focuses on the nature of money, and ignores the application of money in society. As Keynes states in his review of the 1913 article, Innes's strength "is on the historical, not on the theoretical, side" (Keynes, 1914, p. 419).

Unlike other economists, Innes starts his analysis of money without any sort of discussion or definition on value. He is merely interested in challenging the erroneous analyses provided by Adam Smith and other commodity theorists. Orthodox theorists argue that money emerged in society primarily as a medium of exchange, but it also functions as a unit of account and a store of value. It was believed that, although many commodities have acted as money, eventually it was determined by general convention that precious metals best serve this role, due to several of their inherent qualities. Another characteristic of orthodox theorists is their belief that credit is "a substitute for gold" (Innes, 1913, p. 1). Innes argues that orthodox analyses have become so universal that "they have grown to be considered almost as axioms which hardly require proof" (Innes, 1913, p. 1). Therefore, he wishes to use historical evidence that was not available to earlier theorists to suggest that "none of these theories rest on a solid basis of historical proof" (Innes, 1913, p. 1).

It has been established, by Adam Smith, that before the formation of market, men lived under a barter exchange system. The foundation of the orthodox theory of money also suggests that the inefficiencies of barter gave rise to money: due to the development of division of labor and double coincidence of wants, which in turn called for a medium of exchange to better facilitate indirect exchanges. Innes summarizes, "as life becomes more complex barter no longer suffices as a method of exchanging commodities" (Innes, 1913, p. 1). As a reply to Adam Smith's explanation of the development of commerce, Innes argues that when there exists a credit system, there is no need for the development of a medium of exchange. Since each purchase or sale is the act of acquiring an obligation, the exchanges are not necessarily facilitated by the gold or silver but the object that serves as a reminder of the obligation of the buyer. He states that credit and debt expresses "a legal relationship between two parties", therefore the community would recognize the obligation of the buyer and the seller "to redeem these acknowledgements" in whatever objects they agree upon (Innes, 1913, p. 8). He argues the mechanism of commerce is merely the "constant creation of credits and debts, and their extinction by being cancelled against one another"

(Innes, 1913, p. 9). Innes proposes that the underlying principles for an exchange by barter and an exchange by credit, or money, are different. In other words, Innes sees the transition from a barter system to a market system from a unique perspective. To him, all transactions are made in terms of debt and credit.

Secondly, Innes challenges the existing definition of money. To reiterate, it has been established that money identifies with the precious metals. It has no effect on the real economy, and is merely the "wheel which circulates wealth", and facilitates the market exchanges (Smith, 1776/1904, p. 289). Money was defined to be tangible, divisible, intrinsically valuable, and easy to transport. Nonetheless, to Innes, money is something that can not be touched or seen. There was never a fixed relationship between the monetary unit with any metal. The money that agents lay hands on everyday is merely "a promise to pay or satisfy a debt due for an amount" (Innes, 1914, p. 4). Therefore, money is credit. Credit and debt are abstract ideas that cannot be measured by the standard of tangible objects. Innes uses examples of the commercial document from ancient Babylon and coins from ancient China to exemplify that "commerce was carried on" by the "transfer of credit from hand to hand and from place to place" (Innes, 1913, p. 10). He argues that although commodities, or tangible objects, were used in these transactions, they were acknowledgements of indebtedness given to the seller by the payer.

Therefore, they were simply acting as a record, and not a medium of exchange that agents want to hold for their own enjoyments.

It is then clear to see Innes's definition on the nature of money. Firstly, money is, in essence, credit. Innes uses the words "credit" and "money" interchangeably, emphasizing that they are the same entity in his theory (Innes, 1913, p. 3). He considers it to be fundamentally problematic to associate the nature of money to its material substance. He acknowledges the difficulty of persuading the public to accept the credit theory because of the tendency in human nature to trust their senses. Therefore, credit, something that cannot be touched or seen, may be difficult to explain and to introduce as an economic phenomenon that is so embedded in the human life. Nevertheless, the fact that money is credit should not be ignored simply because of the difficulties of persuading the public. Secondly, credit is valuable, and is the "most valuable kind of property" (Innes, 1913, p. 8). He challenges Adam Smith's argument that metallic money "formed the only real wealth" and states that the "capital" that can be created from money is fundamentally credit (Innes, 1914, p. 1). Since credit is intangible, can be transferred instantly "by a simple order", and can be "immediately used to supply any material want", it is one of the most permanent properties (Innes, 1913, p .8). It is due to these properties of the abstract idea of credit that makes credit one of the most important forms of wealth. Thirdly, Innes considers market as a "clearing house of commerce", not as a place where material exchanges happen (Innes, 1914, p. 2). Credit is the most vital part of the market, where the creations of cancellations of debt is the sole function of the market.

Since the concept of credit should be separated from its substantial embodiment, the value of credit should also be distinguished from the value of the metal. This is to argue that the value of credit differs from the intrinsic value of gold or silver. Innes argues that the value of credit resides in the "right which the creditor acquires to 'payment'", and conversely on the right "of the debtor to release himself from his debt" (Innes, 1914, p. 2). In other words, the value of credit depends on the social interaction, or social agreement, between the debtors and creditors. Credit reflects a type of social relations. He emphasizes that the value of credit depends on the "solvency" of the debtor (Innes, 1913, p. 9). Therefore, the value of credit is determined based on the creditor's trust in the debtor to be able to offset the credit at a determined time in the future. This is similar to Simmel's argument that the value of money is dependent on trust. Nevertheless, Simmel's trust is one that public entrusts in the social institutions and the government, while Innes's trust is a private concept.

Regarding the functions of money, Innes argues that the primary function of money is as a unit of account. Money as a unit of account has never been challenged throughout history. He argues, since the fluctuations in the alloys of the coins never affected the prices, and coinage "never played a considerable part in commerce", it can be concluded that money's function as a unit of account roots not in the precious metals, but in the credit component (Innes, 1913, p. 7). It is a means to keep records of the acquisition and the cancellation of debts, or a reminder of the transactions made. Money is also a measurement in terms of credit and debt. It is a measure of value, or a standard or measurement, but not standardized to the intrinsic value of metals. He analyzes that money was never uniform in size or weight, until the French monarchs started minting coins (Innes, 1913, p. 7). Even then, the components of the coins varied, with different alloys and percentages of real gold, thus coinage was never meant to serve as a standard of value. Nevertheless, this is not to say that money is not a standard of value. He is merely suggesting that precious metals cannot act as a standard of value, whereas credit, as an abstract measurement, can. Innes also argues that under normal circumstances where the value of money depreciates rapidly, money "appears to have the power of maintaining its accuracy as a measure over long periods", however abnormal circumstances have also existed in history (Innes, 1914, p. 5). Therefore, he implies that money is not fundamentally a medium of exchange, nor a great tool at storing value or acting as a measure of value, whereas the function of money as a unit of account has never diminished.

Innes's analysis of the relationship between government credit and private credit seems interesting. He argues that "all forms of money are identical in nature" (Innes, 1914, p. 3). Thus, a private credit is just as "good" as a government issued credit, and the only difference is that government credit are surely accepted by the state offices, thus it circulates better in society. He acknowledges that since only government issued money is considered money in modern day society, it may be difficult to picture a world where privately issued credits—for example personal debt or IOUs—could also circulate and be utilized as a purchasing power to a third party. Innes uses examples of England and France in the 14th century to exemplify that there were private metal tokens commonly in use, against the currencies issued by the government. In other words, he opposes to the idea that money can only be considered as money when it is a legal tender. He considers the backing by authority as only part of the reason why money circulates smoothly. The public has grown to have more confidence in government credit, not because "it represents gold", but because government credits are utilized in the discharge of taxes and other governmental obligations (Innes, 1914, p. 3). He argues that as long as credit can be redeemed at a proper time, it can be considered as a good credit.

To conclude, Innes has provided a great discussion on the nature of money, condensed into 30 pages. He argues that an exchange system by money is fundamentally different from an exchange by barter. Orthodox theorists have analyzed money wrongly due to their false understanding of exchange. He sees the market as a clearing house, where all exchanges are merely acquisitions or cancellations of credit. Money is a measurement in terms of credit and debt, which are abstract concepts, and cannot be measured by standards used for tangible goods. Money is therefore intangible. All tangible money is an object embodying the abstract concept, and should be considered separately from the concept when theorizing. Money's primary function is as a unit of account, where it records the transfers of credit. His main contribution to the development of the credit theory of money includes providing an extensive amount of historical resources that challenges the existing theory on money. His analyses successfully show that intrinsically valuable money is not the ideal and primitive form of money, and that there lacks a sound foundation for orthodox theories. Innes solidifies the credit nature of money by clearly outlining the features of money that can be explained by considering money as credit.

CHAPTER 4

THE STATE THEORY OF MONEY: POLITICAL IDENTITY OF MONEY

By the end of the 20th century, debate on the nature of money resurfaced in the field of economics. One the one hand, the commodity theorists follow the steps of Aristotle and Adam Smith in arguing that money is merely a special commodity which naturally became the universally accepted commodity due to general convention. On the other hand, credit theorists believe that money is essentially a type of credit instrument, which clears debt, and its primary function is to serve as a unit of account. The fundamental difference between the credit theory and the commodity theory lies in their emphasis on the role of social and political institution. The state theory proposes that money as a mere veil on exchange ratios cannot be maintained at a stable level if the market is the only determining force. Ingham supports this view, and states that “the market alone cannot make and sustain a viable money” (Ingham, 2004, p.57). Money primarily represents the relationship between agent to agent, not object to object. Therefore, money is a social interaction rather than a merely a tool that facilitates trade in markets. Credit theorists were able to challenge the convention of the time, which laid a solid foundation for the development of alternative theories on money, for instance the state theory. As Nigel Dodd points out in his book, *The Social Life of Money,* “there is no common view of what *counts* as money in a general sense”, and that “definitional debates about what to *call* money run on” (Dodd, 2014, p. 5).

The state theory of money, or the chartalist approach, is by and large the work of the German Historical School. It can be considered as a development of the credit theory as it was built on the basis laid by credit theorists, emphasizing the debt relationship between subjects and the role of social institutions, as well as the political governing bodies. The credit theory and the state theory agree on three fundamental areas. First, according to the state theory, the concept of money predates the existence of markets. This notion supports the credit theory, and strongly opposes the commodity theory argument that money emerged to avoid inefficiencies in the barter system. Secondly, it is agreed by most chartalists that by nature, money is credit. Money is a token, or a record of the debt and credit relationship between agents. The value of money resides in some kind of trust or confidence, not the intrinsic value of the material substance. Thirdly, the primary function of money is as a unit of account. Following the steps of credit theorists, proponents of the state theory believe that the function of money as a medium of exchange is only “incidental to and contingent on” its functions as a unit of account and a means of payment (Tcherneva, 2007, p. 70). As Pavlina Tcherneva perfectly conveys in her essay, chartalists believe that “whatever 'thing' serves as a medium of exchange is only the empirical manifestation of what is essentially a state-administered unit of account" (Tcherneva, 2007, p. 70).

Nevertheless, the state theory differs from the credit theory in two main aspects. Firstly, the state theory proponents argue that the government body of a community has the power to declare the material embodiment and the value of money. Knapp, the establisher of this theory, considers "any attempt to understand money without the idea of the state" is erroneous (Ingham, 2004, p.47). Thus, unlike credit theorists who believe that money substance was determined by the general public, state theorists propose that a proclamation by the state can fix the money-stuff circulating in the society. This proclamation is not necessarily a legal tender, a simple statement of state's "acceptation" is decisive enough in the backing of validity of money (Knapp, 1905/1924, p. 25). Secondly, while the credit theory of money emphasizes the relationship between banks and individuals, the state theory focuses on the interaction between the individuals and the state. Innes, a credit theory proponent, considers the underlying debt relationship "consists of a triadic relationship among lenders, borrowers and banks" (Dodd, 2014, p. 105). Many credit theorists argue that banking institutions are the "mechanism by which debts are centralized and cleared", thus constitutes a major integral of the money economy (Dodd, 2014, p. 105). In contrast, state theorists propose that the state has the monopolized power of "coordinating and underwriting the monetary system as a whole" (Dodd, 2014, p. 105). State theorists also categorize the types of money according to a hierarchical structural, where state money is "high-powered money". Therefore, state theorists argue that banking institutions are only tools utilized by the state to perform certain duties, and not the most important piece to the puzzle.

Comparing with the credit theory, state theory proponents provide much more of a cohesive analysis. Credit theorists have explained the nature of money from a multitude of angles, be it historical, social or purely economical. On the contrary, the state theory arguments have more or less centered upon the notion that money possesses a political identity, from the perspective of political economists. As aforementioned, Knapp argues that it is absurd to consider money separately from the political realm. Inevitably, the state theory proponents have been heavily concerned with economic and fiscal policies. They work to turn theories on money to a more applied matter rather than pure theoretical ideals. It could be argued that the state theory emphasizes the rudimentary ideals of money as political tool and a political economic phenomenon.

4.1 Main Proponents of the State Theory

The state theory of money, developed in the late 19th century, focuses on the relationship between authority and its constituents in analyzing the nature of money. Adam Muller, one of the first proponents of this theory, argues that the nature of paper money is merely a sign of value in his *Essays on a New Theory of Money* (1816). Muller insists that money is backed by a legal tender. Thus money is not "constituted by any concrete value, not by the worth of precious metals from which it is made", rather the value is determined by law (quoted in Ingham, 2004, p. 50). He shows that the value of money is a representation of "communal trust and national will" (Schumpeter, 1954/1994, p. 421). Even though this view is much too political to view as an economic advancement, it can be seen as the starting point for the state theory.

4.1.1 Georg Friedrich Knapp (1842-1926)

Georg Friedrich Knapp, a German economist, founded the chartalist school of monetary theory. His book, *The State Theory of Money*, published in 1905, can be considered as the first comprehensive analysis on money which focuses on its political nature. He sees the history of money as a part of legal history, and looks at money through the lens of law. Nevertheless, he does not consider legal-tender laws a necessity in the process of creating money. The link between the circulation of token money and state taxation is central to Knapp's ideas. It was concluded by modern economists that the depth of Knapp's work has not yet been surpassed by any state theory proponents. Knapp has created some vocabulary to specifically fit his framework, which may be difficult to clearly define with modern day language. Most of the works done by his successors have been reiterating the same thoughts with the occasional development of policy suggestions. His work paves the way for modern monetary theorists and the rise of the chartalist school.

Any analysis of money starts with an ontological study of its origin. Unlike the commodity theory which proposes that money arose from the market, Knapp agrees with the view of credit theorists who state that in the first emergences of money, it was used merely as a representational tool. Although they were tangible objects, the material embodiments were considered separately from their representational, or money, functions. Thus, money was an abstract ideal that was embodied by some form of commodity. Money originally did not emerge from the market, but was created by a monetary authority. As Stephanie Bell summarizes, while the orthodox theory "disempowered the state, relegating it to the power of the market", Knapp proposes that "the state is the central force in the development of a monetary system" (Bell, 2001, p. 155). In other words, the origin of money can be traced back to any time period where there existed an established authority which had proclaimed what it chose to act as money and had named that object as money. Nevertheless, the proclamation itself will not be sufficient in creating a functioning monetary system. The acceptability of money is established when the state accepts money as a means of settling governmental liabilities. Therefore, Knapp argues that money is not a creation of the market, rather it is a creation of authority, which in turn establishes the market.

Knapp suggests that the existence of money perhaps predates that of market. He considers money as “a chartal means of payment”, and that the metallic contents of money were “irrelevant for its validity” (Knapp, 1905/1924, p. 31-8). As suggested by multiple reviewers of Knapp’s work, the word “chartal” derives from the Latin word “charta”, and bears the sense of a “token”, a “ticket”, some object of a “chartal” form (Bell, 2001, p. 156). This is central to Knapp who considers the nature of money as a token or ticket which became the chartal money through proclamation. He uses the example of the storage of coats in cloak rooms to illustrate the nature of chartal money. He claims that the “tin disc of a given size bearing a sign, perhaps a number” received by the owner of the coat “has a legal significance”, and nothing more; “it is a proof” of the owner’s entitlement “to demand the return” of the coat (Knapp, 1905/1924, p. 31). Similarly, money, whether coinage or paper-money, are merely pay-tokens used as means of payment (Knapp, 1905/1924, p. 32). However, as chartal money, they are accepted as a means of payment to fees, taxes and other governmental obligations. Since the material embodiments are subject to change, the material form of the bearer of abstraction, is “of secondary importance because it is moveable” (Knapp, 1905/1924, p. 25). To summarize, Knapp sees money as a creature of the state, a chartal means of payment, and from which the bearer of this abstraction should be distinguished.

Since Knapp considers money as a creation of state, it is important to explain how the state creates such an economic tool. Knapp states that "money is a creature of law", however he does not suggest that money is a creature of legal tender law (Knapp, 1905/1924, p. 1). In fact, he specifically rejects the notion that money's validity is strictly backed by legal tender law, and claims that laws "merely express a pious hope" (Knapp, 1905/1924, p. 111). Instead, it is the "acceptation" of the state "which is decisive" (Knapp, 1905/1924, p. 95). Knapp's argument does not explicitly limit the power of issuing money to the state. Rather, the state creates money by "declaring what it will accept for the discharge of tax debt", which in turn validates money (Ingham, 2004, p. 47). Even though most of the medieval coins were minted by the prince, the stamp on them is merely an act to validate money, and to avoid fraud. Bank issued credit instruments can become "valuta money" when they are accepted by the state as payments of tax (Knapp, 1905/1924, p. 51). Valuta money is a word Knapp uses to describe the "money to which the state gives a preference in making its own payments", while "accessory money" represents the contrary (Hawtrey, 1925, p. 253). Therefore, the state creates money by establishing a standard unit of account, then begin to accept the bearers of this unit, lastly determining the materials that will be accepted as tax payments. The completion of this series of events will naturally motivate the public to acquire and to use money in their daily lives, thus encouraging agents to participate in market exchanges denominated in this chartal money.

Knapp notes that the state establishes the validity of money through accepting money as payment for taxes. The state also establishes a "nominal unit of account", and "fixes the conversion rates" if in a metallic monetary system (Ingham, 2004, p. 47). Knapp further specifies that money possesses the quality of "valuableness" which differs from its value, or purchasing power (Knapp, 1905/1924, p. 54). The valuableness of money is established when the state fixes the conversion rates. By separating these qualities, he insists that money is "the measure and not the thing measured", which suggests that money holds only abstract value (Ingham, 2004, p. 48). Knapp's work does not provide any insights into the concept of value. James Bonar concludes in his review of *The State Theory of Money*, Knapp perhaps "stands alone in presenting a theory of money without a theory of value" (Bonar, 1922, p. 44). For Knapp, since money-stuff is a mere embodiment of abstract value, a discussion on value is not necessary when theorizing the nature and use of money. Thus, he rejects the notion that money itself is intrinsically valuable to agents in a society, and believes that money is a nominal unit of account which has valuableness when it becomes valuta money. Commodity theorists have long agued that the use of intrinsically valuable metals as money encourages people to have confidence in the value of money. In contrast, credit theorists, including the aforementioned Henry Macleod, argue that since value is a quality external to objects, the concept of intrinsic value is fundamentally erroneous. It could be argued that Knapp follows the steps of credit theorists, and argues that the agents gravitated towards money because of its valuableness, or its ability to be accepted by the state to offset tax obligations.

Knapp's definition of money resides in the basic function of money as a means of payment. Knapp states that the defining function of money as "a means of accounting for and settling of debt", especially as a payment of taxation debt (Knapp, 1905/1924, p. vii). In Knapp's analysis, the functioning role of money is as a unit of account. He states that the actual materials in which the payment is made acts as the "bearer of units of value", and money is the unit in which the amount of transaction is expressed, (Knapp, 1905/1924, pp. 7-8). He also concludes that the unit is an abstraction, and the bearer of this abstraction is irrelevant, similar to the arguments established in the credit theory. He regards money's function as a medium of exchange contingent to the primary functions of money, namely unit of account and means of payment. As Tcherneva analyzes, when the only means to offset governmental taxation is to pay with money, it is natural for economic agents to thrive to acquire money even through private exchanges or loans, thus it becomes clear that money would act as a medium of exchange when it is considered to be a chartal means of payment. This reiterates Knapp's proposition that money dominates market. Interestingly, Knapp emphasizes that money is "always a nominal phenomenon" (Knapp, 1905/1924, p. 38). The state is able to determine the value of each piece of paper in terms of the nominal value of taxation. Thus, the state may proclaim that one piece of paper is one dollar, due to its ability to offset one dollar of tax obligations. In other words, in a metallic monetary system, when the state fixes the conversion rates, it is not linking the metal content or the weight of the constituents with the value of money. He argues that the value of money is not determined by its value reflected in private exchanges, instead it "originates with the state" (Bell, 2001, p. 156). Therefore, the function of money as a medium of exchange is of minimal importance compared with money's functions as a unit of nominal abstract value and as a chartal means of payment.

Many modern economists suggest that Knapp's theory heavily influenced Keynes and his theory on money. In Keynes's *A Treatise on Money (1930/1967),* he opens his discussion on money with the statement that "today all civilized money…is chartalist" (1930/1967, p. 4). He praises Knapp's theory, and agrees that the state determines money since "it claims the right to re-edit the dictionary" (1930/1967, p. 4). In other words, to Keynes, Knapp correctly explains that "the state assumes the right to both *name* money and to declare what *thing* must correspond to the name" (Dodd, 2014, p. 104). For both Keynes and Knapp, money is "anything which the State undertakes to accept at its pay-offices, whether or not it is declared legal-tender between citizens" (Keynes, 1930/1967, pp. 6-7). As Dodd summarizes, Keynes argues that chartalism starts when the state proclaims which object they want to correspond to the unit of account. Heavily under Knapp's influence, Keynes argue that money is the "thing" that would "answer" to debts denominated in the unit of account, which was determined by the state (Keynes, 1930/1967, p. 4). Keynes also agrees with Knapp that a strict legal tender law is necessary in the making of money. The purpose of tender laws is to validate money "in the eyes of the court", but not to validate money between citizens (Tcherneva, 2007, p. 77).

In *The Nature of* Money, Geoffrey Ingham questions the ability of the market to "produce and sustain" the money, and if a "purely market money" is "economically efficient" (Ingham, 2004, p. 49). As a potential answer to this query, he states that Knapp's state theory implies that an authority is "a necessary or *logical* condition for money's existence" (Ingham, 2004, p. 49). By placing the responsibility of managing and validating money upon the state, the market is no longer the only institution determining money. In fact, market does not determine money, rather money dominates market. Ingham agrees with Knapp that the "moneyness" cannot be accomplished by "the free interplay of economic interests in the market", and that it must be introduced by an authority (Ingham, 2004, p. 49). Knapp's state theory focuses on money's primary function as a chartal means of payment to explain the valuableness of money, the nature of money, as well as other incidental functions of money. The basis of the state theory resides in money as a state created economic tool, and the belief that money cannot be studied without considering the political context. Knapp's theory challenges conventional theory on the origins, the nature, as well as the functions of money. Although this theory may seem similar to the credit theory regarding some aspects, the fundamental differences stem from Knapp's mindset as a political economist. Rather than seeing money as an economic tool, he focuses on explaining money's role in the politically integrated society.

4.1.2 Abba Lerner (1903-1982)

Abba Lerner, a Russian-born British Economist, is another state theory proponent who has written much on the subject of money, as well as the economics of control. Nearly three decades after the publication of Knapp's *The State Theory of Money*, Abba Lerner further advanced the theory on the basis of the nature and definition of money established by Knapp. Especially in his article "Money as a Creature of the State", Lerner clearly outlines the main arguments of the state theory. He defines money, in its simplest form, as "what we use to pay for things" (Lerner, 1947, p. 313). He realizes that a basic condition in order to achieve its "effectiveness" is that "it should be generally acceptable" (Lerner, 1947, p. 313). The most rudimentary quality of money is its acceptability as a means of payment. Regarding the process of achieving such general acceptability, he argues that the power ultimately resides in the hands of the state, or the governing body. Lerner opposes the orthodox view, states that these stories of intrinsically valuable money "are nothing but historical accounts of how acceptability came to be established in certain cases" (Lerner, 1947, p. 313). He argues that these were possibly the only means to establish acceptability before the nation-states were fully-developed. In other words, he suggests that even though gold-backing has been a means of achieving the condition of acceptability, it is neither the only way, nor the general way that money's acceptability can be established.

Consequently, Lerner reiterates Knapp's definition on the nature of money: "the modern state can make anything it chooses generally acceptable as money" (Lerner, 1947, p. 313). Nevertheless, a simple declaration from the state of "such and such is money" is insufficient, the state's willingness to accept such money as a payment for tax obligations is necessary (Lerner, 1947, p. 313). This is in complete agreement with Knapp's analysis on how the state creates money. Once the state is willing to accept money as a payment, "everyone who has obligations to the state will be willing to accept" this money, which in turn will begin circulating within the society (Lerner, 1947, p. 313). Lerner admits that he utilizes an ahistorical approach. Thus, "money is a creature of the state" in modern societies, regardless of the historic relationship between money and gold (Lerner, 1947, p. 313). After identifying the state as the "responsible creator" of money, Lerner proposes that it is also within the state's responsibility to ensure the economy's survival against threats, for instance inflations and depressions (Lerner, 1947, p. 314).

Lerner focuses on the application of the theory rather than merely perfecting existing theoretical ideals. The majority of Lerner's writings revolve around providing monetary and fiscal policy suggestions. As aforementioned, Lerner believes that the state is responsible in monitoring and maintaining a healthy economy. His work in the 1940s advocates for functional finance, which stresses the need for the governing body to take an active financial role in supporting real economic performances. Lerner considers the purposes of of taxation and government borrowing is not to fund the government. Rather, the goal of taxation is its "effect on the *public* of influencing their economic behavior", as well as creating a demand for government money (Lerner, 1951, p. 131). This is similar to Knapp's theory of how money circulates. Moreover, Lerner argues that the government manages the money supply by taxation and borrowing. Specifically, borrowing is not a funding operation, instead it is a tool to manage the reserve, thus controlling the interest rate. Similarly, taxation is a means of taking "money away from people" (Lerner, 1947, p. 314). These notions signify the role of taxation in the creation of money.

In conclusion, since Lerner mostly directs his attention to policy related areas, his state theory can be seen as a repetition of Knapp's fundamental ideas. His focus on explaining the role of taxation in the monetary system shines light upon the concept of tax-driven money. He explicitly states that money is a creature of the state, which emphasizes money's political identity. He raises many monetary policy questions, and provides preliminary answers. This motivates young theorists to work through these problems to perfect the policies. He contributes to the school of the state theory by advancing into the realm of monetary and fiscal policy suggestion. He sets an example for modern neo-chartalists, who have been active in debates on monetary economics.

4.2 Neo-chartalism

Neo-chartalism can be considered as a revisit to the theoretical frameworks developed by Knapp in the early 19th century. Neo-chartalists often combine the ideas of the credit theory and those of the state theory. Chartalists and neo-chartalists use their theory on the nature of money as a cornerstone of their policy suggestions. After the 2008 economic crisis rendered banking institutions helpless, discussions regarding the nature of money, and the role of fiscal policies in maintaining the stability of the economy have resurfaced. Authors including Christine Desan (2013), Randall Wray (1998), Stephanie Bell (2001), and Pavlina Tcherneva (2007) endeavor to re-establish the state theory of money as the main theory of money.

It could be argued that there are two main strands of neo-chartalism. On the one hand, economists including Randall Wray have been advocating for a theory which combines Innes's credit theory ideas with Knapp's state theory implications. This theory is usually referred to as the Modern Money

Theory (MMT). One the other hand, non-conventional economists, including Christine Desan, have been attempting to prove and to revive Knapp's state theory through their revisit of historical records. Another general characteristic of the theorists of this school of thought is their tendency to focus on monetary crises. They focus on money's effects on macroeconomic phenomena, including the unemployment rate and interest rates. They have been able to utilize their definitions of money and the framework of the state theory to analyze economic disturbances and crises. They emphasize the role of taxation in reaching macroeconomic goals, and attempt to provide insights in to maintaining stable money value, and thus stabilizing the economy.

4.2.1 Christine Desan

Christine Desan, currently a Professor at Harvard Law school, provides a historical analysis on the origins and functions of money. She utilizes historical evidence to explain and reiterate Knapp's state theory. She emphasizes that money is a creation of the state, or some sort of central body. In her recent paper, "Money as a Legal Institution", she argues that the main reason why money "persists over time" is because it is "institutionalized" (Desan, 2013, p. 20). In other words, money has to be created, and regulated by some institution in order to survive through changes in society. Regarding money's origins, she describes that money is a result of the rise of stakeholders who attempts to control and move resources within the community. Furthermore, this social relationship of credit and debt is a matter of governance, a matter of law (Desan, 2013). Firstly, she suggests that a law "defines the contributions that individuals make to maintain their stake in a community" (Desan, 2013, p. 20). The group of stakeholders is the only creditor common to everyone, thus "holds a pivotal position" (Desan, 2013, p. 20). In other words, the stakeholder has the right to demand fees, fines, tributes or taxes from every member of the community. Law is the tool utilized to enforce this obligation, as well as to determine the distributions of obligations. Secondly, Desan states that a functioning money is a "piece of legal engineering" from top to bottom (Desan, 2013, p. 20). Thus, a new money is created when the stakeholder recognizes it as a holders' claim of service. Therefore, money is a creation of the state, and the material substance of money can change while its abstract unit of account is fixed according to the proclamation.

Knapp argues that money dominates and predates the market. Since money is created by the state, the existence of the market is not a necessary preexisting condition for the emergence of money. Money is an abstract unit of nominal value, which makes up prices during commerce, which in turn creates market. In her book *Making Money* (2014), Christine Desan has written a clear, cohesive and mesmerizing description of the relationship between money and the market according to the orthodox theory. In the "conventional creation story", individuals specialize their labor and produce and utilize “truck and barter” to improve their own economic circumstances (Desan, 2014, p. 25). Money is therefore “the instrumentality of the market”. Money “irrigates exchange by providing a fungible medium”, one that all agents are willing to exchange for (Desan, 2014, p. 25). She concludes that “market is the end and money is the means” (Desan, 2014, p. 33). Continuously trading using money will eventually cause agents to accept and to rely on money in exchanges, thus, money is considered to be a “natural product of human economy” in the conventional story (Desan, 2014, p. 28). In other words, money’s emergence assumes the existence of the market, a physical place where agents come to engage in exchanges, and that money occurred “out of decentralized activity of bargaining agents” (Desan, 2014, p. 32). Many economists support this convergence theory and argue that people naturally converge upon a random commodity as a medium of exchange, and later on fiat money.

Nevertheless, this theory is only true if multiple assumptions were to be true, “the area of ‘assuming’ required to make convergence story work is enormous” (Desan, 2014, p. 38). Desan argues that the creation story of money should “go beyond money’s initial appearance”, and aim to make sense of “money’s continued operation” (Desan, 2014, p. 38). Alternatively, money can be considered as a process which “organizes a group and redirects individuals” to create a means to “assess and to transfer value” (Desan, 2014, p. 38). To Desan, money is a tool to regulate and to distribute the resources available in a community. Therefore, money in fact enables trade, and facilitates the establishment of market, rather than have emerged from trade. Desan explains that money is created when a stakeholder collects contributions from members of the community, and gives out tokens as uniformed receipts in return. The stakeholder, or the governing agent, is the “only creditor common to everyone”, thus holds “pivotal position” in the community (Desan, 2013, p. 20). The stakeholder’s ability and right to collect tributes, fees, or any other types of obligations reinforces his position within the community. Consequently, the tokens issued “covert goods and services that were not previously interchangeable or fungible” into “matters counted in a standard unit”, which standardizes the way of assessing and recognizing value (Desan, 2014, p. 43). The last step necessary for this money to be fully operational is for the stakeholders to recognize the tokens, and “takes it from anyone’s hand” as an item of making contributions (Desan, 2014, p. 43). Money is therefore a creation of central power.

As seen beforehand, the most eminent characteristic of money is its ability to standardize the agents’ perceptions of value. It possesses fixed value and enables members of a community to mobilize resources utilizing an “agreed-upon way” (Desan, 2014, p. 43). Desan argues that the first moneys were tokens which had “a material referent”, and they represent the amount of goods or labor contributed (Desan, 2014, p. 43). Money can thus be seen as a unit of account, a means of record. An important aspect of money is the fact that it "carries or fixes" material value (Desan, 2014, p. 44). Regardless of its shape or weight, as long as the real value of each token is fixed, money acts as a unit of account. This quality of money is defined by Desan as the "fiscal value" of money (Desan, 2014, p. 44). Separate from its fiscal value, money possesses value because it can be accepted as a means of final payments. Once the authority accepts these tokens as a means of taxes, members of the society will all accept this token. Thus, money's identity as a token with real value is "not limited to the person paid", but instead generally accepted (Desan, 2014, p. 46). Desan argues that money's engineering thus informs "its activity as a medium" (Desan, 2014, p. 60). Backed by the commitment and promise of the stakeholder to accept tokens back from the community, money is now a generally accepted means of payment and unit of account. Naturally, money becomes a desired tool. Agents start to trade in order to acquire money, and then participate in exchanges using money. Hence, money circulates with the backing of the governing agent, and makes the market.

To conclude, Desan proposes to understand money as a legal institution. Instead of "a neutral or constant medium", money is "a process that has distinctively affected the communities that make it in ways" that vary over time (Desan, 2013, p. 23). Therefore, she argues that money creates real changes in societies and cannot be considered as a mere neutral veil covering market exchanges. For Desan, money is beyond any pure economic phenomena, it is an issue of legal and political importance. Desan's deep understanding of the orthodoxy's errors motivates her to provide a more coherent argument for the alternative views of the creation of money. Her writings on the money-market dichotomy clearly illustrate the erroneousness of presupposing the existence of market in the creation of money. She demonstrates that money is not a product of the market, rather money enables market. It could be argued that even though she rarely introduces new theoretical ideas, she contributes greatly to the chartalist school by providing alternative approaches and explanations of the state theory which further clarifies the ideas laid out by Knapp.

4.2.2 Larry Randall Wray

Larry Randall Wray can be considered as a leader of the school of Neo-chartalism. He combines the Innes's credit theory with Knapp's state theory, as well as parts of Keynes's theory on money. Due to the emphasis Wray places on Keynes's monetary theory, he is often considered as a post-Keynesian economist. He advocates for a Modern Money Theory, which is not entirely based on either Knapp's or Innes's theories of money. He praises Innes's credit theory to be the first analysis of money that clearly outlines the credit nature of money. Nonetheless, he agrees with Knapp and Keynes that money itself is a creature of political institution. The majority of Wray's work covers current economic issues, including that of full employment, price stability and financial stability. He uses the pre-established theories to provide fiscal policy and monetary policy suggestions. He argues that money is a politically created tool and an essential part of the social process, and opposes the idea of money as a neutral concept.

One of Wray's most significant contributions to neo-chartalism is his documentation of historical episodes that demonstrate the chartal nature of money. He argues that the notion stating barter is the primitive form of market lacks supporting evidence. He finds no evidence suggesting that many different commodities "have exchanged hands as media of exchange", which implies that precious metals could not have risen out of competition with other commodities as medium of exchange merely due to general convention (Wray, 1998, p. 40). Wray's analysis follows Keynes's proposition that "Chartal or modern money is at least 4000 years old" (Wray, 1998, p. 40). Money's origins can be traced back to "the rise of the early palace community", where obligations were enforced by the authority upon its subjects (Wray, 1998, p. 40). The first forms of money were neither coins nor private tokens, but tallies, as exemplified by early European nation-states. According to Innes, there existed wooden tallies, and later on copper pieces. These tallies circulated as "transferable, negotiable instruments", representing the debt one owed another (Innes, 1913, p. 396). Thus, in its simplest and most primitive form, money acted as a unit of account and a means of payment to offset the incurred debt. Thus, the cornerstones of orthodox theory are false. Orthodox theorists erroneously locate the origins of money in the barter system, which results in their argument that fungible and intrinsically valuable money is primarily a medium of exchange.

Wray provides a detailed account on the development of coinage. Wray proposes that the aforementioned tally debts predate the emergence of coins, and are “at least 2000 years older that the oldest known coins” (Wray, 1998, p. 42). He acknowledges that modern textbooks write precious metals became money in order to reduce the transaction costs of barter exchanges. Nevertheless, consumers were faced with “a tremendous number of coins of varying weights, denomination, alloy and fineness” (Wray, 1998, p. 43). Contrary to the initial purpose, using precious metal pieces “whose non-money use is supposed to govern its value as money would have” high costs when conducting transactions (Wray, 2003, p. 9). Thus, the textbook version of the development of money seem flawed. He states that coins were initially used as a recognized token to pay fines to the Crown, and it bear mere representational meaning. It was invented to provide a “simple means of paying taxes”, and “to make a large number of uniform payments” (Wray, 2003, p. 9). It wasn't until relatively recently that a coin’s metal contents began to directly correlate to its value. This implies that a theory of money developed on the basis of coins is fundamentally incorrect, as it ignores a large part of the history of primitive money.

Regarding the nature of money, Wray’s definition closely relates to that outlined by Knapp. As Ingham summarizes, Wray believes that “money is peculiarly a creation of the state, which declares the abstract money of account and the means of payment that is authorized to represent it", and the validity of money is "secured by its acceptance by the state as payment of taxes" (Ingham, 2004, p. 55). On the one hand, Wray agrees with Innes that the essential quality of money resides in its role of representing the social relationship of credit and debt. Relating back to Wray's view on the origins of money, he argues that "virtually all 'commerce' from the very earliest times was conducted on the basis of credits and debits" (Wray, 1998, p. 40). On the other hand, Wray argues that money is a creation of the state. The governing body is the monopoly in creating money. Wray places heavy emphasis on the role of taxation in facilitating the circulation of money. He argues that "the public demands the government's money" because it is the only means of payment accepted by the state. The state utilizes taxes as a means to induce the population "to supply goods and services to the state", and supplies the community with money in return" (Wray, 1998, p. 37). Therefore, money is a credit instrument created and monopolized by the state to govern and manage the members of its community.

By combining the key features of Innes's credit theory of money with the fundamental ideals of Knapp's state theory of money, Wray develops a unique theory which perfectly describes the role of money in modern economy. Wray's theory incorporates the role of banks into the money system. He argues that in modern day society, banking institutions monitor and record all private transactions, for instance purchases and sales of private goods. This is reflected in the central bank's reserves held by each individual bank, which implies that this has barely any effect on the real money supply, unless bank money is accepted by the state as a means of payment. In the end, the state and the central bank hold monopoly power in creating money, through printing money and proclaiming the nominal value of bills. This simple model clearly links economic disturbance with monetary as well fiscal policies. This proves that money has significant effects on the real economy, and is not neutral in the long run.

In conclusion, Wray formulates a modern money theory, or a neo-chartalist approach, by combining the credit nature with the political identity of money. He clearly outlines that markets virtually always consist of credit and debt relationships, rather than the alleged barter exchanges. Thus, the emphasis on money as a medium of exchange is false. Money's primary functions are as a unit of account and a means of payment, especially to tax obligations. He believes that tallies were the first forms of money and they predate the emergence of coins by 2000 years. He quotes Leslie Kurke and states that "the minting of coin would represent the state's assertion of its ultimate authority to constitute and regulate value in all the spheres" which includes "economic, social, political and religious" (Kurke, 1999, p. 12). Money was invented by princes to manage the constituents and to collect fees of any sort. In modern societies, the state uses taxation as a mechanism to move resources to the state. Money facilitates this process by becoming the tool in which tax obligations are met. The circulation of money thus controls and motivates the circulation of goods and services. It could be argued that the emergence of money predates that of the market, and money facilitates the transactions that make up the market.

The evolution of monetary theories can be seen as a series of constant renewals and improvements to the conventional theory. Since the establishment of the commodity theory of money, most revisits and oppositions were sparked by the mismatch between the definition of the nature of money and reality. With the emergence of new forms and new functions of money, economists were forced to either expand the existing theory or to form a new framework in order to correctly analyze the nature of money. After the publication of Knapp's state theory, the emphasis shifts from merely describing money to providing monetary policy suggestions. This trait continues to characterize the neo-chartalist approach. Wray's analysis is especially important because of the adaptability of his theory to the current economy, and the applicability of his theory for solving modern money problems.

CHAPTER 5

DISCUSSION

As of today, money is still commonly defined as "something generally accepted as a medium of exchange, a measure of value, or a means of payment" (Money, n.d.). It serves as the general convention that money is defined by its three-part functions. Nonetheless, the theoretical survey provided above demonstrates that the nature of money is still a debatable topic. Is there one characteristic which determines the 'moneyness' of money? Although the economic theories studied beforehand all, in one way or another, aim to answer this key question, their explanations differ across theories. Some argue that money is a commodity, while others argue that money is a mere embodiment of some abstract concept. It could be argued that the definition of money is not agreed upon unanimously, and the study of money has been an ongoing effort since the 1600s.To a certain extent, the textbook definition of money seems to be more influenced by conventional theory of money. It defines money entirely based on of the commodity theory of money. Despite the development in monetary theory, for instance the establishment of the credit theory and the state theory, the conventional definition on money remains as the mainstream of the theory on money. This, by and large, has restricted the public's perception on money. While the definition emphasizes the medium of exchange function of money, it ignores the social and political aspects of money that were proposed by alternative theorists. The erroneousness of this conventional norm resides in the trend that new theories are often rejected before they reach the public. The orthodoxy-centered society rarely accepts or allows the emergence of innovative ideas that differs drastically from the status-quo. The public has been adhering to this conventional belief, because this is what is being taught and presented in their daily lives. This narrow-mindedness hinders the progress of academic advancement in the field of economics, as well as other social sciences. Thus, it is important to uncover the truth about the nature of money, and to unveil the existing alternative views that challenge the orthodoxy.

Money has been the subject of interest for economists for nearly five centuries. As seen from the earlier chapters, there currently exists three main theories that study the nature of money. A wide spectrum of theorists has endeavored to formulate theories that can correctly illustrate the nature of this economic tool which agents deal with. From studying the history and origins of money to theorizing the constituents of the value of money, research has been conducted on a multitude of aspects regarding money. Nonetheless, even with the extensive amount of research and analyses in existence, there are many questions concerning the nature of money that remain unanswered. As stated in the introduction, this paper seeks to provide some thoughts to these questions through analytical critiques: Firstly, what does the "moneyness" refer to (Ingham, 2004, p. 15). Secondly, what exactly determines the moneyness of money? Thirdly, should there be a general theory on money or can multiple theories coexist in order to better understand money in different economic styles and historical episodes? Lastly, if one general theory should exist, is there one?

5.1 General Theory of Money

Economic theories of money have drastically changed with time. From the alleged commodity characteristics of money, to the credit nature of money, and later on the political identity embedded in the nature of money, theorists have different perceptions on money. In his article *Money and Currency*, Schumpeter poses the question of whether there exists one general theory on money that could adequately explain "all historical epochs or 'economic styles'", or should a "special theory be constructed" for each historical episode of money (Schumpeter, 1991, p. 520). It could be argued that a general theory of money is difficult to construct, due to the differences in the political and social context during each of the historical epochs. Imagine a scenario where communities are just beginning to form, before the creation of social contracts. Undoubtedly, the money that circulated in these type of societies will consist primarily of commodities. The credit nature of money assumes the existence of a functioning social system. In a setting where there lacks mutual trust, social interactions, political structure or other types of authorities, as well as communication tools, the credit nature and political identity of money has no significance to the people who were handling money. It is absurd to think that in these societies, worthless pieces of paper will be accepted as something valuable. Thus, it may be difficult and illogical to force the current definition of money onto the money used in primitive societies.

Nevertheless, a general theory on money is necessary. Schumpeter states that if separate theories must be created to explain money in different economic styles, the theories would not contribute much to the field of "monetary science" (Schumpeter, 1991, p. 520). By definition, a theory should be able to explain something under a general context. Rather than being restricted by the historical context, it should aim to formulate a theory that could describe all emergences during various historical epochs. In the case of monetary theory, the generally accepted theory—namely the commodity theory—seems to be incapable of explaining the true nature of money. While the existence of multiple special theories may be able to describe money more suitable in different historical periods, it is not helpful to society. Rather than attempting to explain the nature of money that is only seen in certain economies, theories should attempt to introduce new aspects of money that may have been inadequately explained or ignored by existing theories, and in turn shape the conventional opinions. If the goal of the theories is to provide insights into money in modern day societies, a general theory would be more useful and trustworthy. It could be argued that none of the three existing theories is capable of acting as the general theory on money. Thus, a general theory on money is necessary. Whether it is by incorporating the correct aspects from each of the three theories, or by completely formulating a new theory based on recent discoveries, a correct general theory on money should be constructed.

5.2 Analytical Critique of the Commodity Theory of Money

The commodity theory became the central thought of money in the early 17th century, and was seldom challenged by scholars thereafter. As aforementioned, the underlying ideals of the commodity theory has not departed from the framework laid out by Adam Smith. The defining functions of money remain to be as a medium of exchange, a unit of account and a store of value. Arguments of the theory seem convoluted and contradictory due to the stretch of time period. Although this theory has been developed and improved over generations, the arguments are illogical and lack strong evidence in many cases. The orthodoxy does not strive to gain a deep understanding of money; instead it merely acknowledges the role of money in facilitating exchanges and the functioning of society. As Desan argued, commodity theorists have a tendency to formulate a theory “that ellipses the making of money and declares rather than explicating the way that medium works" (Desan, 2013, p. 3). Although it is still considered the mainstream theory on money, the commodity theory possesses fundamental errors.

It could be argued that, if money is merely a neutral veil, and is unimportant in the analysis of the real economy, the role of money can be easily replaced by other technical tools. After the development of utilitarian models, especially the Walrasian concept of an arbitrarily assigned symbol to represent value of a basket of commodities, the value can be expressed in terms or numeraire instead of money, which renders money redundant in the realm of economic analysis. Another hole in the analysis of the commodity theory is its incapability of explaining certain banking phenomena that are present in the capitalistic society. Many economists and bankers realize that credits were created through the creation of deposits, since "depositors and borrowers have simultaneous use of the 'same' money". Yet, storing a coat cannot produce two copies of the same coat that can be worn by two agents (Ingham, 2004, p. 27). The incapability of the commodity theory to explain real world situations motivates economists to reconsider the nature of money.

The emergence and boom of using credit money challenges the core definition of money as a special commodity which is generally accepted as a medium of exchange. Commodity theorists believe money is essentially a special commodity. Since gold and silver were "of small volume, equal goodness, easily transported, divisible without loss, convenient to keep, and durable almost to eternity", it was then decided that they would act as the perfect money (Cantillon, 1755/1959, p. 21). Modern money almost never takes the form of a commodity. The use of fiat money shows, that the valuable purchasing power of money is often embodied by some worthless material. Reducing money to merely a commodity ignores the underlying nature of money as an abstract value. Credit theorists see this false observation of money and aim to revise the definition on the nature of money. Alternative theorists have gone on to argue that the material embodiment of money should be considered separately from its nature. The material embodiment of money should not restrict people's view on money. Money was clearly not a neutral concept which had no effect on the real economy. The market economy is not possible with a currency that is purely a commodity. The untimely scarcity of money would be so catastrophic that a token money becomes absolutely necessary.

Commodity theorists almost always begin their analyses on money with their analyses on value. Views on money's value range from a labor theory of value to a material value of money. Nonetheless, almost all commodity theorists hold the belief that money possesses intrinsic value. Cantillon and Marx support one version or another of the labor theory of value where "the Price or intrinsic value of a thing is the measure of the quantity of Land and of Labor entering into its production" (Cantillon, 1755/1959, p. 14). In other words, the value of money is determined by the land and labor input into the mining of gold. The value of money does not correlate with the weight of precious metals it consists of, nor does it depend on the scarcity of such materials. Modern economists have argued that precious metals and coinage in early societies were never uniform in shape, or consisted of similar weights of metal components. This implies that coins' weights were not correlated to the value of coins, until it was regulated by Princes in European societies. In order to be a long-lasting economic tool, the value of money must have been determined and maintained by an authority, to survive through various changes in social context.

The historical origins outlined by commodity theorists have been fundamentally erroneous. As Melitz states in his article "The Polanyi School of Anthropology on Money: An Economist's View" (1970), "the major barrier to plying monetary analysis, or any modern theoretical tools of economics, in treating primitive money is the idea that modern money is intrinsically economically superior to the primitive variety" (Melitz, 1970, p. 1025). In other words, commodity theorists have been illustrating the emergence of money as a solution to the inefficacies in primitive barter exchange systems. This in turn places market exchanges at a superior level above barter exchanges. Many economists, including Innes (1913) and Knapp (1905/1924), have argued that locating the origins of money in the inefficiencies of the barter system is misleading. An exchange by barter is structurally different from an exchange by money. The presence of money in exchanges involves third party institutions into the network of trade. Thus, an exchange by money is no longer describing an object-to-object relationship. Rather, it describes the social relationship between the subjects in the exchange.

It has been pointed out that the primary function of money in fact does not reside in its ability to facilitate exchanges. Designating the determining function of money as a medium of exchange is erroneously locating the moneyness of money. As shown by many examples of generally accepted goods as media of exchanges, for instance cigarettes in the World War II POW Camps, the moneyness is not established if the commodity is merely a medium which facilitates trade. Ingham argued that cigarettes were only circulating in a closed economy, where there exist no components of international trade. This enabled money to be maintained at a constant level at all times. The use of cigarettes as a generally accepted good to engage in spot trades only shows that cigarettes were the most demanded good, or the most convenient medium of exchange. Nevertheless, only one special episode in the history of money cannot act as proof that moneyness can be established by acting as a medium of exchange.

Regardless of these opposing arguments, the commodity theory has its merits. It was the first systematic analysis on money, which allowed the public to understand money as an important economic tool. During a time of chaos, money as credit will not be able to survive and maintain its value. In other words, money which gains its power by the backing of trust or faith will lose its hold when a society is disordered or lacks institutions. Thus, in certain cases in history, a commodity money would have worked the best. Nonetheless, the usage of commodity money does not imply the correctness of the commodity theory. The value and nature of money should still be considered separately from its embodiment. To conclude, the commodity theory of money can only be seen as a starting point which induces changes and developments on the discourse of the nature of money. It should not be considered as a sufficient theory which correctly defines and covers the multitude of aspects regarding money.

5.3 Analytical Critique of the Credit Theory of Money

The credit theory can be considered as an attempt to understand money given the newly emerged fiat money. New forms of money challenge the definition of money as a tangible, fungible and intrinsically valuable commodity. The nature of money is credit, with its valuableness backed by trust. Credit theorists reiterate that, as the carrier of abstract value, money is an integral part of the social relationship between the creditor and the debtor. Macleod (1855) illustrates that in unequal exchanges, there exists debt, which is "a right, a property" on the subject who had received the lesser amount of products or services. Money is therefore the instrument that can pay back the incurred debt. Regarding the value of money, credit theorists argue that it is backed by promise, or the ability of the agent in debt to pay back at a future time in the amount asked. This highlights the social nature of money, as well as the underlying concept of trust within any society.

The credit theory also challenges the primary function of money as a medium of exchange as outlined in the orthodoxy. The credit theory of money emphasizes that the primary function of money is as a unit of account. Theorists use the example of hazel wood sticks or other token money to highlight money's primary function as a reminder of the debt, and not a medium to facilitate exchanges. This newly established regime received barely any attention until a century later. This delay in acceptance is a result of the oppositions from the orthodox theorists, as well as the public's adherence to conventional knowledge. During the same time when Henry Dunning Macleod first formulated a credit theory of money, James Mill Stuart (1848/1909) came up with a monetary theory of credit, to attempt to expand the commodity theory in order to explain credit money. Nonetheless, as theorists would realize, the nature of credit cannot be explained by the nature of money. Rather, the nature of money resides in money's nature as a credit instrument.

Credit theorists argue that exchanges by barter are structurally different than exchanges by money, where an exchange by money is "constituted by the social relation of credit" (Ingham, 2004, p. 64). Exchanges by money presupposes people's trust in money as a valuable tool. Yet, as money is embodied by some worthless material, money seems valueless. This is defined as the dual nature of money, where money is valueless when hoarding, but valuable when trading. Money cannot arise merely out of general convention, without any sort of central institution which fixes its nominal values or manage its usage. Most credit theorists trace the origins of money back to the rise of social control. In most cases, money was used to collect fees or fines in primitive societies, which is a means of the authority to exert control upon its constituents. Money completes the social network between social institutions and the general public. The differences between the state theory and the credit theory of money is minimal. The credit theory emphasizes the role of social relationships, whereas the state theory focuses on the role of the governing body. In both cases, there exists social and political institutions in the creation of money.

Credit theorists are more concerned with the logical origins, instead of the historical origins of money. In order to explain the emergence and usage of commodity money, credit theorists illustrate the evolution of money from an ahistorical perspective. It has been argued that primitive metal money was never uniform in size or content. Coinage was not the favored form of money until the periods of Medieval Princes in European nation-states. The emergence of coins shows the importance of authority in making money. Metal pieces were weighed and stamped to reflect their values and contents, which standardized and validated money. It was due to this validation which encouraged people to use and believe in its power to purchase. Coinage was only one particular form of money which perfectly exhibits the ideas of the commodity theory. Nonetheless, money as credit is a broader definition that is able to encompass the variety of forms of money that have been in existence.

The credit theory of money stresses the importance of social establishment in the creation of money. As seen from analyses by John Locke and Aristotle, money is a significant aspect of the social contract. Although neither Locke nor Aristotle noted the social aspects of money, it was assumed. Thus, the existence of a sound society is a necessary condition for the emergence of functioning money. Credit theorists believe that money is a claim on society. Money as a trust-based abstract value can circulate only when people have trust in the society. Therefore, by defining money as an important part of the social process, credit theorists highlight the role of society in nurturing the development of this economic phenomenon. Since money measures the value of goods, and expresses the price ratios between two objects, it presupposes the existence of two elements. Simmel argues that money is a representation of the social interactions involved in exchanges, not the mere object-object transactions. He states that money is a tool used to "establish a proportion between two quantities" by "the fact that each of them relates" to money, and thus being determined equal or unequal (Simmel, 1978[1907], p. 146). Money is inherently social.

Although the credit theory of money rightly sees the nature of money as essentially a credit which offsets one's debt, and correctly proposes that the primary function of money is not based on money's ability as a medium of exchange, there are yet still problematic aspects with this theory. Simmel argues that the development of money as a social institution is not the conscious creation of any political entity, rather it is the unintended product of social revolution. This idea disregards the role of political authority in the creation and supply of money in a society. Credit theorists' analysis on the value of money seems unsound. Money as a creation of general convention or social revolution is too unstable to be able to sustain itself through the changes and developments of societies. The nominal value of money is not entirely dependent on the trustworthiness of the social institutions, the ability of one to pay back, or the intrinsic value of some precious metal. Instead, the value is a direct representation of what the state will accept it to be. The credit theory is weak without the presupposition of social institutions. As aforementioned, a trust-based system would collapse during a time of chaos.

5.4 Analytical Critique of the State Theory of Money

The state theory, first proposed by Muller, improves the definition of money provided by credit theorists. Simply put, the state creates money by "declaring what it will accept for the discharge of tax debt", and determining the nominal value of money corresponding to the amount of tax obligations one piece of money can offset (Ingham, 2004a, p. 47). State theorists have a sound analysis in stating that the nominal value of money is proclaimed by the state. The state validates money by accepting it as a means of payment to tax obligations at its offices. It could be argued that the state theory of money is the closest amongst the three to being a general theory on money. As the newest theory of the three, the state theory is capable of covering a greater spectrum of issues regarding money. It continues to work on the definitions and theories formulated by commodity and credit theorists by incorporating new evidences and new angles of thoughts.

First, the state theory perfectly combines the credit nature of money and the political identity of money into one single theory. It illustrates the complete social and political relationship that is represented by money. As presented later, money is a social and political construct. Even though it is primarily an economic tool which agents use to engage in economic activities, money's ability to affect social and political factors should not be neglected. The state theory of money emphasizes the role of authority in the establishment of currencies while agreeing with credit theories that money is also an integral part of society. Secondly, it is able to provide explanations to money during all historical epochs. It attempts to explain the emergence and usage of commodity money in European societies by highlighting the true nature of money which is hidden behind its material embodiment. Money is valuable not because of the materials, instead, it is because money is backed by authority. Thus, the embodiment can be considered as a mere coincidence, or a way to ensure scarcity and a means of restricting the creation of counterfeit money.

Even though the state theory can be considered as the most sound amongst the three monetary theories, it has fatal weaknesses. The state theory faces obstacles when explaining the recent development of online currencies, for instance Bitcoin. Such a concept entirely discredits the role of governing body and taxation in the creation and circulation of money. This challenges the core foundations of money which built up the state theory. Moreover, while acknowledging that money is a creature of the state, it is also too restrictive to consider that the value of money is simply determined by the authority. To a certain extent, the value of money is related to the publics' trust and confidence in the economy. During the period of gold standards, the value of money is backed by the amount of gold reserve held by the government as well as the promise that a piece of currency can exchange for a set amount of gold. Until the collapse of the Bretton Woods system in 1973, the gold reserve played an important role in maintaining the value of currencies and monetary stability, as well as mediating international monetary system. The long history of backing by valuable commodities misleads the general public into believing that money has always been a mere embodiment of valuable money-stuff. This perception of money motivates individuals to have faith in the value of money.

Nevertheless, the differences between the state theory and the credit theory of money are minimal. It could be argued that the state theory can be considered as a branch of the credit theory, which strongly focuses on the role of political authority in monetary science. The state theory is founded on the same theoretical framework as the credit theory, arguing that money is an abstract concept embodied by some material. State theorists follow the arguments of the credit theory in stating that money is essentially credit, and that it offsets debt. Rather, debt refers to people's tax obligations in this case. Regarding the primary function of money, state theorists argue that money is first and foremost a means of payment. This quality of money is embodied by the concept of unit of account. As an accounting tool, money shows the purchases and sales it facilitates, which is also known as transactions. The primary function outlined by state theorists and credit theorists is essentially the same concept. The credit theory of money encompasses the ideas proposed in the state theory of money. The state theory is thus a mere branch of the credit theory of money.

5.5 Moneyness: Money as a Unit of Account

As seen from the analysis on the three existing theories, each theory proposes a different quality of money as the moneyness. The conventional view on money states that all three functions of money—namely medium of exchange, unit of account, and store of value—are equally important for money to be fully functional. The commodity theory thinks that moneyness is achieved when the commodity is used as a medium to facilitate smooth exchanges. The credit theory considers money as a unit of account as the moneyness of money. The state theory argue that money is money only when it is used as a means of final payment.

It has been argued that merely a medium of exchange is insufficient in distinguishing money from other demanded commodities. Merely acting as a generally accepted commodity, money cannot prevent other more technically advanced tools to overtake its position as a facilitator of exchanges. As shown beforehand, many commodities have acted as media of exchange, yet were not considered as good money. Money's manifold of roles in society cannot be reduced to its ability to smooth trade. Especially when the material embodiment is not a desired commodity, in the case of paper money, moneyness cannot be explained by money as a medium of exchange.

Therefore, moneyness can only be explained by money as a unit of account. As a unit of account, money can be utilized as an accounting tool to shown the credit and debt of each person, which reflects the value of commodities. When the function as a unit of account is established, other functions of money are incidental and natural products. On the one hand, as soon as economic agents are willing to use money as a way to offset their incurred debts, money becomes the the medium in which exchanges are made. On the other hand, money as a unit of account shows the value of goods, just as other media of exchanges do. It can illustrate the underlying relationship of credit and debt in each exchange, thus acts as a standardized ruler measuring the value of commodities. Money as a unit account highlights the social nature of money, as well as its basic economic functions. Thus moneyness can be achieved as long as money is established as a unit of account, as credit theorists have argued.

5.6 Money as a Social and Political Construct

Since the state theory of money can be considered as a branch of the credit theory, there currently exist two main theories on the nature of money. One can argue that orthodox economists reached a different ontological result due to the different epistemological approach they took: the commodity theory was a result of thinking of money as primarily a medium of exchange, whereas the credit theory was developed based on money as a unit of account. The credit theory fundamentally differs from the commodity theory where it is much more focused on analyzing the nature of money from social and political implications rather than taking the nature as given and analyzing the economic applications of money in an economy.

The evolution of monetary theory is an example illustrating the embeddedness of economics. Embeddedness, a concept formulated by economic historian Karl Polanyi, refers to the extent to which economic activity is constrained by non-economic institutions. Polanyi states that money is an institution in the sense that it is constituted by the rules which fix the issuing, evaluation, circulation and releasing of debts. Thus, there is no exchange, but rather payment, as a social constraint which aims at releasing debts. Polanyi confirms that: "in primitive societies, credit, through which debt is formalized, is provided originally by the reciprocity practiced within clan and neighborhood" (Polanyi, 1977, p. 141). Thus, money, in one way or another, is embedded in the social institutions of the community. He also states that money is directly linked to political authority. He does not see money as merely a measure of scarcity of supply, or a measure of labor value of objects, rather it is something symbolizing submission of citizens and social class structures.

Polanyi argues that economic theory imposes habits of thought that are detrimental to examining societies that, unlike modern day society, are not market-oriented and highly market-integrated (Polanyi, 1957, pp. 243-70). In other words, to utilize present day economic theories, which rest on the assumptions that humans are utility maximizing individuals in a market oriented capitalistic society, in any attempts to theorize or analyze economic conditions in primitive societies could lead to false conclusions. To put everything into context, he is not arguing that a general theory is not suitable. Instead, he opposes the commodity theory of money, and the application of the commodity theory onto primitive societies. Contrary to the commodity theorists, Polanyi refuses to consider money as a commodity. To him, modern money institutions expresses the impossible "enclosure" of the economy. Despite the role of private institutions in the creation of modern money, he observes the importance of money's "validation by the state" (Polanyi, 1957, d, p. 196). Thus, he agrees in a form of the state theory where the role of authority in the creation and management of money is emphasized.

Nearly everyone would agree that the institutions and habits of the world must not completely dominate how agents think about other social orders. This stricture is the basis of a current challenge to economic theory in the study of nearly every recorded society. Money is inherently an interdisciplinary creation. Analyses on money shows that money cannot be studied without considering its relations in a sociological and political framework. The first theories on money, including those of Aristotle and Locke, acknowledge the political importance of such an economic tool. Neither Aristotle nor Locke were economists, instead they were philosophers who were concerned with the effect of money within the established social contract. To them, analyzing the nature and use of money can be beneficial to the formulation of a theory on governing, as well as the formation of societies. Thus, the first accounts of money were not attempts to understand money as an economic tool. They were intended to add clarity to the explanation of the state of nature of early communities. The study on money could then be considered as a subfield which was created as a by-product of analyzing the society in early philosophical studies. Therefore, it is natural for early commodity theorists to describe money without explaining the nature of it in their theories. Even in modern day society, accounts of money still constitute of primarily the shallow observed features and functions of money and lacks depth.

As seen beforehand, it is often the sociologists, and political scientists, rather than traditional economists, who can introduce new perspectives to the theories on the nature of money. Therefore, one could argue that the nature of money lies across disciplines and beyond the boundaries of any one subject. Hence, to believe in only one of the aforementioned theories is narrow minded and incorrect. Since certain qualities of the commodity theory are still being printed in textbooks as the generally accepted theory of money, the commodity theory must possess merits which are still appreciated by economists. The transition from the commodity theory to the credit theory of money is marked by the shift in the general convention on the primary function of money, from medium of exchange to unit of account. Despite changes in forms of monetary media, the nature of money should be studied in order to formulate a comprehensive analysis on money and its role in the economy. It could be argued that the tendency to evaluate ancient concepts in the settings of modern society may be a source of error.

Even though considerations of money developed as a result of political and philosophical studies, money is not restricted by political and social frameworks. Money is not bounded by social or political factors, instead, money seems to lead and determine social and political discourses. More than often, economic activities denoted in money overpowers other activities. Political policies and social classes have become a response or an indicator of one's wealth. Money has become the primary goal of any person's life. Gaining wealth through earning money has become the purpose of living and the means of survival. The development of money challenges the notion the economic activities are limited by non-economic principles.

There are two main implications that arise out of these three economic theories on money. Firstly, as shown beforehand, a general theory on money is necessary, yet it does not exist. Secondly, money is in nature a social and political construct, instead of a pure economic tool. As Maucourant (1985) summarizes, Polanyi notices that in non-modern societies, the differentiation of money is associated with social status. For instance, in the Mali empire at around 1352, there exists a "poor man's money" (a fine thread of copper) and a "rich man's money" (a thick thread of copper). While the poor could only buy goods of rudimentary consumption, the rich could buy naturally the elite goods, such as slaves and horses (Maucourant, 1985, p. 5). This demonstrates the social ties and status that is demonstrated by money. Which implies the importance of money as social instrument, but not simply an economic tool.

Thus, in a society where the commodity theory is considered the mainstream theory on money, this conventional belief should be challenged and altered. A vital problem of the commodity theory is the way of thinking of money as purely economic instrument, which ignores the social and political aspects of money which exists inherently in its nature. Whether it is a ratio illustrating co-measurability or a representation of social interactions, money rests on the presupposition of two or more elements. Thus, money should not be theorized based on the model of utility maximizing individuals, or profit maximizing firms. Polanyi never ceases to believe that money and market institutions hold an important place in society. The danger lies in the desire to reduce money to a pure commodity and thinking that markets could be self adjusting (Mercourant, 2011, p. 19). Thus, Polanyi points out the problematic foundation of the commodity theory. Orthodox theorists believe that money is merely a neutral veil masking over the exchange ratios. Money is a tool that represents the object-to-object relationship. This completely ignores the social nature of money, as well as its political identity. Thus, the commodity theory essentially simplifies money as simply a commodity which masks over exchange ratios. To conclude, money is not solely an economic tool, instead it is a political instrument which promotes social integration.

The quest for a correct general theory of money is a challenging one. As shown by the summarization of theories provided in this research, theorists have tried and failed to define the nature of money. Nonetheless, their efforts are not wasted. Milton Friedman argues in *Money Mischief* (1992), that money is mysterious. People's interest in money stems from the unknown reason which explains the purchasing power of money. Friedman states that:

> The short answer—and the right answer—is that private persons accept these pieces of paper because they are confident that others will. The pieces of green paper have value because everybody thinks they have value. Everybody thinks they have value because in everybody's experience they have had value (p. 10).

Thus, there are two approaches to understand money. First, one can evade the question of what is money and take the definition of money as a given. In doing so, the complicated ideas embedded in this economic phenomenon can be ignored, while the use and applications of money can be studied with respect to its effects on society. Secondly, one can spend hours researching about the theories in an attempt to understand the nature of money through the evolution of the historical thought on money. Although one may not reach a definite answer despite one's efforts, this discussion is still necessary.

BIBLIOGRAPHY

Aristotle, & Jowett, B. (1963). *Aristotle's Politics* Oxford: Clarendon Press. (Original work published in 1905)

Aristotle, & Irwin, T. (1985). *Nicomachean Ethics* Indianapolis, Ind.: Hackett Pub. Co., c1985. Bell, S. (2001). "The role of the state and the hierarchy of money". *Cambridge Journal of Economics* 25(2), pp. 149–163. Oxford University Press.

Bonar, J. (1922). Knapp's Theory of Money. *The Economic Journal*, 32(125), pp. 39–47. Retrieved from http://doi.org/10.2307/2223107

Bordo, M. D. (1983). Some aspects of the monetary economics of Richard Cantillon, *Journal of Monetary Economics,* Volume 12, Issue 2, 1983, pp. 235-258. Retrieved from: http://dx.doi.org/10.1016/0304-3932(83)90002-8

Cantillon, R. (1959). *Essai sur la Nature du Commerce in Général (Essay on the Nature of Trade in General).* Henry Higgs, ed. and trans. (Original work published 1755) Retrieved from: http://www.econlib.org/library/NPDBooks/Cantillon/cntNT2.html

Desan, C. A. (2013). Money as a Legal Institution in D. Fox and W. Ernst (eds.) *Moneyin the Western Legal Tradition: Middle Ages to Bretton Woods*. Oxford University Press. Retrieved from http://ssrn.com/abstract=2321313

----------------- (2014). *Making Money: Coin, Currency, and the Coming of Capitalism* Oxford, United Kingdom: Oxford University Press; First Edition.

Dodd, N. (2014). *The Social Life of Money*. New Jersey: Princeton University Press.

Friedman, M. (1992). *Money Mischief: Episodes in Monetary History* New York: Harcourt Brace Jovanovich, c1992; 1st ed.

Goodhart, C. A. E. (1997). 'One Government, One Money', Prospect, March: 1-3. Retrieved from http://www.prospect-magazine.co.uk/highlights/one_gov_one/index.html

----------------------- (1998). "The Two Concepts of Money: Implications for the Analysis of Optimal Currency Areas," *European Journal of Political Economy*, Vol. 14, pp. 407-432. Retrieved from http://www.sciencedirect.com/science/article/pii/S0176268098000159

Hawtrey, R. G. (1925). "Review of The State Theory of Money." *The Economic Journal*, 35(138), pp. 251–5. Retrieved from http://doi.org/10.2307/2222686

Holtrop, M. W. (1929). "Theories of the Velocity of Circulation of Money in Earlier Economic Literature", *Economic Journal Supplement: Economic History 4*, pp. 503-524.

Hume, D. (1875). *Essays, Literary, Moral, and Political*. London: Ward, Lock and Tyler. (Original work published 1752)

Ingham, G. (2000). "'Babylonian Madness': On the Historical and Sociological Origins of Money." In J. Smithin, (ed.) *What is Money?* London, UK and New York, NY: Routledge, pp. 16–41.

-------------- (2004). *The Nature of Money*, Cambridge: Polity.

--------------. (2007). The Specificity of Money in *European Journal of Sociology / Archives Européennes De Sociologie / Europäisches Archiv Für Soziologie,* 48(2), 265–272. Retrieved from http://www.jstor.org/stable/23999059

---------------. (2013). The Ontology of Money in *TWILL Magazine.* Retrieved from http://www.twill.info/the-ontology-of-money/

Innes, A. (1913). What is money? *Banking Law Journal 30.5:* pp.377–408.

----------- (1914). The Credit Theory of Money, *Banking Law Journal* 31.2: pp.151–68.

IMF. (2015). Gold in the IMF. Retrieved from https://www.imf.org/external/np/exr/facts/gold.htm

Jevons, W. S. (1875). *Money and the Mechanism of Exchange*, Chapter 1. London: Macmillan.

--------------------. (1881). “Richard Cantillon and the Nationality of Political Economy”, *Contemporary Review*, January 1881, pp. 333-360.

Keynes, J. M. (1914). “What is money?”, *Economic Journal*, v. 24 (September 1914), pp.419-21

------------------- (1976). *A Treatise on Money*. New York: AMS Press. (Original work published in 1930)

Knapp, G. F. (1924). *The State Theory of Money*, New York: Augustus M. Kelley. (Original work published in 1905)

Kurke, L. (1999). *Coins, Bodies, Games, and Gold: The Politics of Meaning in Archaic Greece*. Princeton (N.J.): Princeton University Press

Laidler, D., & Rowe, N. (1980). “George Simmel's Philosophy of Money: A Review Article for Economists”, Review of *The Philosophy of Money*. *Journal of Economic Literature, 18(1)*, 97–105. Retrieved from http://www.jstor.org/stable/2723894

Lerner, A. P. (1936). “Mr Keynes’ ‘General Theory of Employment, Interest and Money’”, *International Labour Review*, Vol. 34 (1936), No. 4 (Oct.), pp. 435–54. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1564-913X.2013.00159.x/epdf

------------------ (1947). “Money as a Creature of the State,” *American Economic Review*, vol. 37, no. 2, pp. 312-7. Retrieved from http://www.jstor.org/stable/1821139

------------------- (1951). *The Economics of Employment,* New York: McGraw-Hill

-------------------- (1960). Economics and the Control of Man. *The American Scholar*, 29(3), 377–385. Retrieved from http://www.jstor.org/stable/41208655

Locke, J. (1823). “Some Considerations of the Consequences of the Lowering of Interest and Raising the Value of Money”. In *The Works of John Locke, vol. 5*. London: Printed for Thomas Tegg. (Original work published 1691)

------------(1954). *Essays on the Law of Nature*. W. von Leyden, (ed.), Oxford: Clarendon Press.

---------------- (1960). *Two Treatises of Government*. by Peter Laslett (ed.), Cambridge: Cambridge University Press. (Original work published 1689)

Mandel, E. (1990). "Karl Marx". Originally published in J. Eatwell, M. Milgate, & P. K. Newman (eds.). *Marxian Economics: The New Palgrave*, pp. 1-38. New York: Norton

Macleod, H. D. (1855). *The Theory and Practice of Banking: With the Elementary Principles of Currency; Credit; and Exchanges, Vol. 1*. London: Longman, Brown, Green and Co.

-------------------- (1856). *The Theory and Practice of Banking; With the Elementary Principles of Currency; Credit; and Exchanges, Vol. 2.* London: Longman, Brown, Green and Co.

-------------------- (1891). *Elements of Banking*. London: Longman, Brown, Green and Co. Retrieved from: http://catalog.hathitrust.org/Record/100491836

-------------------- (1893). *Theory of Credit*, 2nd ed., London: Longman, Brown, Green and Co. Retrieved from: http://catalog.hathitrust.org/Record/008902274

-------------------- (1902). *Theory and Practice of Banking* (6th edition), London: Longman, Brown, Green and Co.

Marx, K. (1976). *Capital,* vol. 1. Harmondsworth: Penguin.

Maucourant, J. (1985). The substantive economy of money: Karl Polanyi in the tradition of "old institutionalism". *Working Paper du Centre Walras*, N177. Retrieved from https://halshs.archives-ouvertes.fr/halshs-00569422/document

Medema, S. & Samuels, W. (Eds.). (2013). *The History of Economic Thought: A Reader*. London: Routledge.

Meikle, S. (1994). Aristotle on Money. *Phronesis*, 39(1), pp. 26–44. Retrieved from http://www.jstor.org/stable/4182455

------------- (1995). *Aristotle's Economic Thought*. New York: Oxford University Press.

Melitz, J. (1970). The Polanyi School of Anthropology on Money: An Economist's View. *American Anthropologist, 72(5),* pp. 1020–1040. Retrieved from http://www.jstor.org/stable/671415

Money. (n.d.). In *Merriam-Webster's collegiate dictionary*. Retrieved from http://www.merriam-webster.com/dictionary/money

Nelson, A. (2005). Marx's objections to credit theories of money. In F. Moseley (ed.) *Marx's Theory of Money: Modern Appraisals*, pp. 65–77. Retrieved from: https://www.mtholyoke.edu/courses/fmoseley/conference/nelson1.pdf

Niehans, J. (1990). *A History of Economic Theory.* London and Baltimore: The Johns Hopkins University Press.

Polanyi, K. (1957). *The Great transformation*, Boston: Beacon press.

-------------- (1977). *The livelihood of man*, New-York-San Francisco-London: Academic Press.

Schumpeter, J. (1956). Money and the social product. *International Economic Papers*, no.6, London: The Macmillan Company. (Original work published 1917)

------------------ (1991). Money and Currency. *Social Research,* 58(3), pp. 499–543. Retrieved from http://www.jstor.org/stable/40970658

------------------ (1994). *A History of Economic Analysis*, London: Routledge. (Original work published 1954)

Simmel, G. (1978). *The Philosophy of Money*, London: Routledge. (Original work published 1907)

Skaggs, N. T. (1997). "Henry Dunning Macleod and the Credit Theory of Money" in *Money, Financial Institutions and Macroeconomics,* Cohen, A. Hageman, H. and Smithin, J. (eds.). Boston: Kluwer Academic Publishers, pp. 109–23.

----------------- (1998). Debt as the Basis of Currency: The Monetary Economics of Trust. *The American Journal of Economics and Sociology*, 57(4), pp. 453–67. Retrieved from http://www.jstor.org/stable/3487117

Smith, A. (1904). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Edwin Cannan (ed.). London: Methuen & Co., Ltd. (Original work published 1776) Retrieved from http://www.econlib.org/library/Smith/smWN.html

Tcherneva, P. R. (2007). Chartalism and the Tax-Driven Approach to Money, in *A Handbook of Alternative Monetary Economics,* Edward Elgar Publishing. Retrieved from http://EconPapers.repec.org/RePEc:elg:eechap:3506_5

Weeks, J. (1982). Theory of Money. *Capital and Exploitation*, pp. 95-122. Princeton, N.J: Princeton University Press.

Weymark, J. (1980). Money and Locke's Theory of Property, *History of Political Economy, 12, issue 2*, pp. 282-90.

White, M. V. (2004). Sympathy for the Devil: H. D. Macleod and W.S. Jevons's Theory of Political Economy. *Journal of the History of Economic Thought*, 26, pp 311-29.

Wray, L. R. (1990). *Money and Credit in Capitalist Economies: The endogenous money approach* UK: Aldershot, Hants; Brookfield, Vt., USA: E. Elgar, c1990.

-------------- (1992). "Alternative Approaches to Money and Interest," *Journal of Economic Issues*, 26 (December 1992), pp. 1145-78.

-------------- (1998). *Understanding Modern Money*, Cheltenham, U. K.: Edward Elgar.

-------------- (2002). State Money. *International Journal of Political Economy,* 32(3), pp. 23–40. Retrieved from http://www.jstor.org/stable/40470809

-------------- (2003). 'The Neo-Chartalist Approach to Money', in S. Bell and E. Nell (eds.), *The State, the Market and the Euro*, Cheltenham, UK: Edward Elgar, pp. 89-110.

Wray, L. R. & Innes, A. (2004). *Credit and State theories of Money: the contributions of A. Mitchell Innes*. Cheltenham, UK; Northampton, MA, USA: Edward Elgar.