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THE CONTRIBUTIONS OF KNAPP AND INNES TO THE CHARTALIST THEORY OF MONEY¹

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ABSTRACT

The relationship between money and credit is analyzed differently between schools of economic thought. Orthodoxy, in general, analyzes it using the commodity money approach; heterodoxy, in large part, adopts the Chartist approach. The crucial difference between them lies in the fact, as put by Schumpeter, that orthodoxy postulates a monetary theory of credit; the heterodox, a credit theory of money. For the latter, money is, by nature, credit, and it can take different forms, tangible or not. The State uses its sovereignty to delimit the monetary system by defining what will (or will not) be accepted as money in the payments of transactions due to itself. Thus, Knapp's contribution in structuring a theory of state money meets Innes's credit theory of money and, together, these contributions offer a solid theoretical and historical framework for the formulation of an alternative theory of money, the Chartist theory.

Keywords: Money; Chartalism; Credit; Knapp; Innes.

JEL: E12, E42, E51

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1. INTRODUCTION

Money is a creature of law. The famous phrase that opens the book *The State Theory of Money*² by Georg Friedrich Knapp, originally published in 1905, is one of the foundations of the Chartalist theory of money, an alternative to the theory of commodity money. Chartalism emphasizes the political nature of money, as stressed by Keynes (1930a), for the state defines a money-of-account that corresponds to the description or title, while “money is the *thing* which answers to the description.” (p. 4). The definition of the thing that serves as money, in Knapp (1924), is based on the acceptance by the State of a certain means of payment used in the settlement of transactions in its pay-offices. Another important element of this money, according to other authors frequently associated with the Chartalist tradition, such as Innes (1913; 1914), Schumpeter (1949; 1956; 2006[1954]), Commons (2017[1934]), and Minsky (1972; 1990; 2008 [1986]), is related to its credit nature and contractual character, based on credit-debit relationships between agents involved in a transaction.

The relationship between money and credit is analyzed quite differently in the various schools of economic thought. In general, the orthodox schools analyze this relation from the approach of commodity money; the heterodox schools, in large part, from the chartalist one. In a synthetic way, the difference between the two approaches lies in the origin and nature of money. For the orthodoxy, money is a commodity that has been chosen among others, due to its general acceptance, to operate as a means of payment (SMITH, 1996[1776]; MENGER (1892). Authors of this tradition start from the idea of a barter economy that evolved until the adoption of metallic money, followed by paper money – credit would have emerged afterwards, as a final step of this evolutionary process. Money would be neutral, for this conception, and its supply is related to the quantity (scarcity) of the commodity to which it is associated. On the other hand, for a significant share of heterodox economics, money is a historical, legal creation, based on contractual relationships, and imbued with a political character. Within this approach, money is, in its essence, credit, and the State has a fundamental role in defining the instrument that will function as money, as well as in delimiting the monetary system. Therefore, the main distinction lies, as described by Schumpeter (2006 [1954]), in the fact that some heterodox strands postulates a credit theory of money, while the orthodox ones, a monetary theory of credit.

In the pantheon of chartalist authors, the pioneering contributions of Knapp and Innes are acknowledged and, alongside them, are famous economists and thinkers, such as Keynes, Lerner, Schumpeter, Commons, and Minsky, among others.

If one considers that money is a creation of law and that the State is to define what it accepts (or not) as a means of payment – thus delimiting the monetary system itself –, the *core* of the chartalist approach to money is reached: money, then, operates as a means of settling debts, that is, contracts signed between creditor and debtor economic agents.

Based on this alternative approach to money, this article aims to revisit the contributions of Knapp and Innes to the structuring of the Chartalist theory of money, an approach that simultaneously articulates the political element and the credit essence of money. The paper is structured as such: this introduction serves as an opening session; the second topic seeks to synthesize Knapp’s analysis of state money; the following

² In the original *Staatliche Theorie des Geldes*. The book had three editions in German until, in 1924, the fourth German edition was translated into English and circulated among Anglo-Saxon-speaking countries. According to Wray and Bell (2004), Keynes discovered Knapp’s book and was one of those responsible for getting the work finally translated into English, in 1924. There are even mentions of Knapp’s work in Keynes’s *Treatise on Money*.

session brings a synthesis of Innes's articles on credit money; and, in the last section, some brief final considerations are presented.

2. KNAPP'S THEORY OF STATE MONEY

A pioneer of the Chartalist theory of money, Knapp has structured a theory about state money. His critique to the commodity money theory is based on the negligence of economic thinkers aligned with this view in addressing the role of the State in determining the monetary system. Knapp's thought diverges from the mainstream theory regarding the nature of money and proposes that money is not defined by legal tender laws, but by the State's acceptance of a means of payment in its pay-offices.

By highlighting that money is a creature of law, Knapp (1924, p. 1-4) considers that an adequate theory of money must deal with its legal aspects, since its essence is not connected to the material from which it is made, but to the legal system that regulates its use. Thus, metallic money is just one of various forms that means of payment have taken in a myriad of historical moments.

However, means of payment are often associated with the idea of exchange-commodity. A socially recognized exchange-commodity, *i.e.*, a general exchange-commodity, might be classified as a means of payment, but a means of payment does not necessarily have to be a general exchange-commodity. Metals, for example, can be used for various purposes, including as a socially acceptable means of payment. They are, therefore, a commodity and a means of payment. In contrast, paper money is a means of payment, but not an exchange-commodity which is socially recognized.

When the general exchange-commodity consists of a metal, the payment system will be classified by Knapp as *autometallistic*. According to this first classification of Knapp's payment system, metal is taken only as the material in which units are measured and created, without any legal character. A physically measurable material used as an exchange-commodity is classified as *authylic*, and *autometallism* is the main example of *authylism*; this, in turn, corresponds to one of the three forms that make up the general system of payments.

Due to the widespread use of metals, one could risk associating means of payment with a unit of value. Knapp points out that the unit of value corresponds only to that unit in which the value of the payment is measured, and that each country has its own unit, with its own identification (Knapp, 1924, p. 7-8)³.

From the perspective of *autometallism*, a means of payment is always an exchange-commodity, and the value of all other commodities will be given by comparing these commodities with the general exchange-commodity. By comparison, the *lytric* value of the commodity is found, and is associated, with a certain metal. In this simpler organization of the payment system, the use of *lytric* value excludes the possibility of the existence of other means of payment, such as paper money.

Although commodities of various types may have been used as money throughout history, the concept of a means of payment has no intrinsic relationship with any specific material. A means of payment may or may not maintain some material link. The unit of value is defined by law and debts expressed in such units must be settled with the current means of payment, regardless of which it is. The nominality of the debts is determined based on the definition by law and/or common use (Dequech, 2013) of the material used as a means of payment (Knapp, 1924, 11-15).

³ Knapp called unit of value what is known currently as unit of account (or money-of-account).

The material content of the means of payment deserves to be highlighted because payment transactions are usually carried out with objects that have a certain shape, regardless of the material they are made of, and these objects bear specific signs. These objects have legal value, since the law defines their characteristics, inscriptions and acceptance. Knapp classifies means of payment of this nature as *morphic*; these are not always money even though all money is *morphic*.

Morphism gives the possibility of recognizing the means of payment without the necessity, which previously existed, of naming any given substance, for the legal ordinances describe the permissible pieces explicitly. When legal ordinances give the name to the unit of value (as mark, franc or rouble) and define it by reference to the earlier unit, there is nothing to prevent us from giving to the morphic means of payment a validity dependent not on weight but on fiat. A proclamation is made that a piece of such and such a description shall be valid as so many units of value. ... This means the final abolition of the scales for the act of payment. Moreover, the wearing down of the pieces is of no importance so long as they are still recognizable (Knapp, 1924, p. 29-30).

Validity by proclamation implies a major rupture with the traditional view of money.

When we give up our coats in the cloak-room of a theatre, we receive a tin disc of a given size bearing a sign, perhaps a number. There is nothing more on it, but this ticket or mark has legal significance; it is a proof that I am entitled to demand the return of my coat.

When we send letters, we affix a stamp or a ticket which proves that we have by payment of postage obtained the right to get the latter carried.

The "ticket" is then a good expression, which has long been naturalized, for a movable, shaped object bearing signs, to which legal ordinance gives a use independent of its material.

Our means of payment, then, whether coins or warrants, possess the above-named qualities: they are pay-tokens, or tickets used as means of payment. (Knapp, 1924, p. 31-32).

Payment transactions are made using these tokens and, given the need to name these instruments, Knapp postulates that "the Latin word 'Charta' can bear the sense of ticket or token, and we can form a new but intelligible adjective – "Chartal". Our means of payment have this token, or Chartal, form" (Knapp, 1924, p. 32).⁴

Based on the chartalist approach, Knapp proposes a genetic classification of money based on two main properties of means of payment: (i) *authylic*: means of payment associated with metals will be called *hylogenic*; (ii) *chartalist*: means of payment which have its validity decreed, regardless of its material content, will be classified as *autogenic*.

⁴ It is from this association made by Knapp with the Latin word *Chartal* that the term chartalist emerged, in reference to a theory of money based on the role of the State and the credit function of money as an alternative to the traditional theory of commodity money. The coining of the term, however, cannot be attributed to Knapp with certainty, nor can the debate about the nature and origin of money as a creature of the State. In the preface of his book, Knapp mentions having had contact with this approach through his teachers. Wray (2003) states that it is possible to find Chartalist elements in Adam Smith's *The Wealth of Nations*. Schumpeter (1954) attributes to Plato a pioneering role in proposing an alternative theory of money, in which it assumes a symbolic character of tokens. Innes (1913) and Graeber (2011) describe the Babylonian monetary system as a credit-based system, and by using historical evidence and examples, they postulate that money's essence is to be found in credit. Lavoie (2006, p. 54) reinforces the importance of the contribution of classic authors from the 19th century associated with the Banking School, such as Thomas Tooke and John Fullarton, to the concept of endogenous money.

For Chartalism, a means of payment can be made of the noblest or the poorest metal, and following Knapp's genetic classification, a Chartalist means of payment can be either *hylogenic* or *autogenic*. Money itself, however, only would come into existence with the institution of chartalist practices.

Under its *authylic* or *chartalist* nature, the means of payment can be classified as: (i) *pensatory* or *proclamatory*; (ii) *morphic* or *amorphic*; and (iii) *hylogenic* or *autogenic*. *Pensatory* means of payment are those whose validity is given by weighing the material at the time of payment. These are not money; meanwhile Chartalist means of payment, by operation of law, always are. Knapp's genetic classification of the means of payment with their respective nomenclatures and definitions can be summarized as follows:

Table 1: Knapp's genetic classification of means of payment

| Nature | Type | Definition | Subtypes | Definition |
|--|--|---|------------------|---|
| <i>Authylic</i> (<i>metallic</i>) | <i>Pensatory</i> (<i>always</i> <i>hylogenic</i>) | Means of payment whose validity is established by weighing. | <i>Amorphic</i> | Means of payment without technical specifications defined by law. |
| | | | <i>Morphic</i> | Means of payment with technical specifications defined by law. |
| <i>Chartalist</i> | <i>Proclamatory</i> (<i>always</i> <i>morphic</i>) | Means of payment defined by law. | <i>Hulogenic</i> | Means of payment associated with a precious metal. |
| | | | <i>Autogenic</i> | Means of payment with no metallic association. |

Source: Adapted from Knapp (1924).

Knapp points out that, once the use of metals for monetary purposes has been supplanted, the true chartalist character of money is revealed (Knapp, 1924, p. 93-4). Even though there may be found examples in which money, at some point in history, was not issued by the State, this is not what happens in modern societies. As monetary systems became more complex, and the means of payment more diversified, there was an urge to regulate these systems, and the State took on this important role.

The coexistence of different types of money with the one issued by the state leads to a new classification that deals with functional aspects of money and its variations in type, depending on the sort of payment in which it is used for. Knapp then expands the concept of money and advocates that the criterion for defining it

cannot be that the money is issued by the State, for that would exclude kinds of money which are of the highest importance; I refer to bank-notes: they are not issued by the State, but they form a part of its monetary system. Nor can legal tender be taken as the test, for in monetary systems there are very frequently kinds of money which are not legal tender.... (Knapp, 1924, p. 95).

The ideal approach is, therefore, the one that sees money as what is accepted by the State as payment of debts to it in its pay-offices (also Wray, 1998). It is not the issuance, but the *acceptance* from the State of a certain thing as payment due to it that constrains the monetary system (Knapp, 1924, p. 95-96; 135). The functional classification, therefore, is set based on whether the State participates or not in payments.

Thus, the functional classification proposed by Knapp follows the structure described below:

Table 2: Knapp's functional classification of means of payment

| Type | Definition | Subtype | Definition |
|--------------------|--|-------------------|-----------------------------|
| <i>Centric</i> | Payments in which the State is the payee or payer. | <i>Epicentric</i> | Payments due to the State |
| | | <i>Apocentric</i> | Payments made by the State. |
| <i>Paracentric</i> | Payments between private agents. | - | - |

Source: Adapted from Knapp (1924).

Another type of functional classification is based on the convertibility of monies accepted by the State. This classification postulates the existence of two types of money: one *definitive*, and another *provisional*, which will be converted afterwards. Monetary transactions involve three agents: one who makes the payment, one who receives it, and a third, who issues the money used to settle the transaction. Money will be *definitive* when the payment fully settles the contract for the three agents. If, on the contrary, the payment is made in convertible money, *i.e.*, *provisional* money – for example, checks –, the agent making the payment settles its commitment with the recipient, but the latter still has a credit with the money issuer. This credit can be redeemed in *definitive* money or the *provisional* money can be transferred to another agent who might redeem it or pass it along (Knapp, 1924, p. 101-103).

A third functional subdivision of money arises from payments made by the State (*apocentric*) with the use of *definitive* money. Should there be more than one *definitive* money, the State adopts the one it prefers to make its payments. *Definitive* money used in State payments is called *valuta* money; all others are *accessory* monies. The acceptance of *accessory* monies is optional; of *valuta*, on the contrary, mandatory. It is *valuta* money that is recognized as the standard everywhere. The genetic classification of money proposed by Knapp has no relevance from the perspective of functional classification (Knapp, 1924, p. 106-110).

The decision of what will be accepted as *valuta* is made on political basis and then the law will follow that definition, applying it to the entire economy. Thus,

in a legal dispute the means of payment which the creditor is compelled to accept is always that which the State has put in the position of *valuta*. The judicial decision is final. Apart from friendly agreement, all payments eventually have to be made in *valuta* money. ...An obligation expressed in marks, francs or roubles signifies an obligation to be performed in the then existing *valuta* money of the countries concerned (Knapp, 1924, p. 110-1).

The definition of the *valuta* means of payment establishes, then, the monetary standard of a country. This does not correspond only to currency with the public, but to money in a broader sense, including all sorts of money.

The definition of money as what the State accepts in payment at its pay-offices might mislead one to the idea that money is issued by the State itself. This task, however, is shared with banks that, alongside with the State, create and put money into circulation.

Disregarding their political relationship with the State, banks are generally private for-profit companies of great relevance to the public and to the State itself. Its activities

basically consist of loan transactions, credit transfer, purchase/sell of government bonds and other assets, among others. Banks receive interest on loans from their clients, fees on various transactions and services, and earn income on asset transactions (Knapp, 1924, p. 128-130).

These institutions need to keep as reserve a certain amount of State money for their operations, but are allowed to issue notes and offer them as payment to their customers in lieu of State money. The note is a document with legal validity that acknowledges the bank's *intention*⁵ to pay the amount in state money as soon as it is presented by the customer for redemption.

The fundamental property of a bank-note is, therefore, by no means the promise to pay. A bank-note is a chartal document, which specifies a sum of valuta money; and the bank issuing it is pledged by law to accept it for a payment of that amount. But that is nothing else but a chartal means of payment issued privately... The customers of the bank can use it for payments between themselves, as they are sure it will be taken at the bank. These customers and the bank form, so to speak, a private pay community; the public pay community is the State (Knapp, 1924, p. 134).

In addition to the widespread use of banknotes, another practice widely used by the bank is credit transfers⁶. When opening an account with a particular bank and depositing a sum of State money, the customer establishes a credit with the bank. The latter, in turn, becomes a debtor for this deposit. If the customer makes a payment to another customer within the same institution, he asks the bank to debit a certain amount from his balance and credit the same amount to the account of another customer. With the institution and dissemination of this credit transfer system, it appears that

there is such a thing as payment without an actual delivery of a thing, so that we must conceive payment in a new way. If the notion of payment is to include both the payment with pieces of money and also the Giro payment, the delivery of "things" cannot be an essential attribute of payment (Knapp, 1924, p. 151-2).

This leads to the adoption a broader definition of means of payment, in which the delivery of a physical object is not essential, once it is possible to make a payment through

⁵ Knapp (Knapp, 1924, p. 131-5) describes that, contrary to the traditional definition of banknotes as a *promise* to pay, they are not a *promise* but an *intention* to pay on a specific date. This point is highlighted by him as a result of the possibility that the State releases the banks from such obligation, as it happened with the Bank of England notes between 1797 and 1821, when the inconvertibility of the banknotes was decreed by the State, and also on other occasions, as in Austria. Inconvertibility, in England, for example, did not change the circulation of banknotes and they continued to be used as a means of payment. The issue of convertibility is also one of the ways in which the State guarantees its position in defining and regulating the monetary system.

⁶ The practice of *giro payment* emerged in Hamburg, Germany, in 1619, with the establishment of *Giro bank*. The exclusively depository bank operated mutual payment arrangements between its customers by using its own unit of account, the *mark banco*, which was defined on the basis of a conversion rate with silver. Customers deposited silver ingots that were converted into *mark banco*, and transactions were carried out through payment orders between participants. The bank debited the amount in question from the payer's balance and credited it to the payee. The transfer was made on the bank's balance sheets and the payee was notified as the transaction was completed. There was no physical medium involved in the payments, and the *mark banco* held no relation to the official Hamburg monetary system. (KNAPP, 1924; WICKSELL, 1962; 2010[1935]). The credit transfer system of the *Giro bank* is, as Innes (1913) postulates, similar to the Babylonian cashless settlement system.

credit-debit transfers carried out by a clearing institution, *i.e.*, a bank. This transfer system, despite its great advantage, also has its limitations and

is inconvenient for small payments; Giro payment implies a notice to the managing office, that is, a written order, while payment in pieces of money is a transfer made on the spot where the obligation arises, as in a purchase at the market or booking a railway ticket. Similarly the question may be raised whether, at any rate in theory, the whole business of payment might not be conceived as a State Giro business, so that payment in pieces would be completely abolished. Certainly money would be abolished, but paying would remain. The structure of our economy, which we like to designate a money economy, does not depend on money; it only appears to depend on it because we almost always make our payments by the transfer of money. But that is only a special case. The essential feature is obligations measured in units of value. These would not be abolished with the abolition of money, but retained and managed in the Giro method (Knapp, 1924, p. 156).

With the introduction of transfer payments, the material content of money disappears, and its credit character becomes evident. However, thanks to the approval of the State and its acceptance in payments due to itself, credit transfers become a legal method of payment and part of the payment system of a country.

3. INNES'S THEORY OF CREDIT MONEY

Despite the importance of Alfred Mitchell Innes's contribution to the Chartalist theory of money, his work in the area of monetary economics was restricted to two articles published in the *Banking Law Journal*: "What is money?", in 1913, and "The Credit Theory of Money", in 1914. Using rich historical details, these articles highlight the credit nature of money. Innes's theory drew Keynes's attention, who even revised the 1913 article for *The Economic Journal* in the following year. According to Wray (2004), the rediscovery of Innes's theoretical contribution took place in the mid-1990s by post-Keynesian theorists.

Innes starts with a description of the traditional view of the evolution of money and then, followed by a deconstruction of it in order to propose a new theory of money. Classical economists postulate, in general, that barter was supplanted by the use of a widely accepted commodity, chosen to serve as a medium of exchange. These commodities, subsequently, were replaced by metals and, then, the state assumed the role of money issuer, inscribing symbols on the metallic coins, in order to prevent fraud. Credit would only appear at the end of this evolutionary process, as a way of dealing with irregularities in the monetary standard. This view is taken almost as an axiom within orthodox economic literature. However, archeology and numismatics have offered historical evidence that refutes this evolutionary approach, for it lacks historical support. The nature of money would have always been credit, and, therefore, Innes reverses the direction of the evolution of money, placing credit as the starting point for the emergence of other forms of money. The use of money, moreover, have never demanded the existence of a metallic pattern, and it was not until the modern era that the association between metal and money emerged.

Innes (1914) acknowledges the importance and *avant garde* contribution of Henry Dunning Macleod –one of the pioneer economists to outline a credit theory of money – on the relationship between money and credit. In addition, Innes highlighted the scientific criteria and the use of historical evidence by Macleod – even though they were scarce at that time – to show that credit records are older than metallic coins. Innes also

acknowledged James Steuart's contributions to the recognition that money and coinage are separate things. Regarding the distinction between the tangible and intangible dimensions of money, Innes states that

The frequent use of the expressions 'money of account' and 'ideal money' in older writings shows that the idea was familiar to many. As the middle ages wore on, and the increase of government expenditure brought about a great increase in the quantity of coins, money became, naturally enough, identified with the coinage, which circulated in abundance when trade was good, and which disappeared in times of distress when there was little to buy or sell. Hence arose the popular delusion that abundance of coins meant prosperity and the want of them was the cause of poverty (Innes, 1914, p. 158-9).

The examples provided by Innes (1913) on the development of coinage since ancient history seek to demonstrate that the concept of a metallic value standard never truly existed. Money has always had a symbolic character. Innes's initial historical investigation leads to an important question:

Now if it is true that coins had no stable value, that for centuries at a time there was no gold or silver coinage, but only coins of base metal of various alloys, that changes in the coinage did not affect prices, that the coinage never played any considerable part in commerce, that the monetary unit was distinct from the coinage and that the price of gold and silver fluctuated constantly in terms of that unit (and these propositions are so abundantly proved by historical evidence that there is no doubt of their truth), then it is clear that the precious metals could not have been a standard of value nor could they have been the medium of exchange. That is to say that the theory that a sale is the exchange of a commodity for a definite weight of a universally acceptable metal will not bear investigation, and we must seek for another explanation of the nature of a sale and purchase and of the nature of money, which undoubtedly is the thing for which the commodities are exchanged (Innes, 1913, p. 390).

Critical of Adam Smith in several respects, Innes (1913) uses one of Smith's own examples to show how misleading the relation between the conventional theory of money and commerce is. Smith (1776) presents the example of the baker and brewer who seek to obtain meat from the butcher, and having no means to do so, the exchange does not take place. However, as contradicted by Innes (1913), if it is assumed that the baker and the brewer are honest men, the butcher could receive from them an acknowledgment of debt for the value of the meat sold and, in the future, could receive his payment in bread and beer. Therefore, the sale ceases to be an exchange of a commodity for another of general acceptance and becomes the exchange of a commodity for credit.

Innes's theory is based on the old law of debt. There are historical evidence of this law dating back at least two thousand years BC – such as the Babylonian law codes – that point towards a credit theory of money (Graeber, 2011). Furthermore, the nature and economic significance of credit and debt transactions are common to nearly all people throughout the world.

Credit has numerous advantages. It is an intangible instrument, weightless, does not demand room for storage, is easily transferable, and cannot be stolen. A reputable, well-rated, and credit-bearing individual owns a valuable asset.

Credit and debt are abstract ideas, and we could not, if we would, measure them by the standard of any tangible thing. We divide, as it were, infinite credit and debt into arbitrary parts called a dollar or a pound, and long habit makes us think of these measures as something fixed and accurate; whereas, as a matter of fact, they are peculiarly liable to fluctuation (Innes, 1914, p. 155).

The abstract and intangible character of credit helps corroborate the failure that conventional theory incurs in linking money and metal for the creation of a monetary and value standard. The physical instruments we use to settle transactions are nothing more than credits, whose value has no relation to the metal used for making the money.

All people are creditors and debtors simultaneously. In a purchase and sale transaction, even spot, the buyer becomes a debtor while the seller becomes a creditor – in a spot transaction, nonetheless, these credit and debt are cancelled in a short time after the transaction is made, in order to complete it.

Thus, all transactions are settled with the delivery of the purchased goods and payment. In other words, as well known, a credit cancels a debt. This is Innes's primitive law of commerce. The constant creation of credits and debts, and the canceling of one against the other, is what forms the mechanism of commerce. The law uses its sovereignty to define which instrument will be used to liquidate debts. The value of credit lies in the debtor's solvency, that is, in its ability to honor its debts at maturity, using legal means.

With the help of the primitive law of commerce, Innes clarifies one of the great misunderstandings of orthodox theory: that credit appears as the last stage in the evolution of money. In fact, credit anticipates the existence of coins, and, in ancient commerce, coins played a much smaller role than they do today in commercial transactions. Actually, many times other instruments were preferred to coins.

An example of this is the *tally*⁷, a wooden stick used for centuries in place of coins or tokens, as a trade accounting instrument. Modern archeology has helped expand the knowledge of extremely old instruments, such as the Babylonian *shubati*⁸ plates, which proves that commerce was developed based on credit, and not coins, in different parts of the world. Chinese evidences as old as the Babylonian ones show the existence of banks and credit instruments long before coins. Hence, there seems to be no doubt that credit preceded metallic coins.

The primitive law of commerce applies to both private agents and the State, since the latter also adopts the same principle of credit for public finances, either issuing acknowledgments of debts, such as Treasury bonds, or turning citizens into debtors to the State, through taxation. The Treasury, therefore, serves as a clearinghouse for credits and debts from/to the government, while banks operate as agents of the government in collecting fees and taxes, and making payments.

Banks play a very important role in the creation and destruction of credit through two specific operations: loans and discounting notes. Despite its different mechanism, the logic of every transaction, whether commercial or financial, is the same: it is a transfer or creation of credit payable in the future:

[...] in theory we create a debt every time we buy and acquire a credit every time we sell, but in practice this theory is also modified, at least in advanced

⁷ Graeber (2011), Martin (2013) and Innes (1913) describe that the *tally* consisted of a piece of wood where records of debt and credit transactions were registered and kept between the parties involved. The names and values of the transactions were engraved on the wood in double entries and then the *tally* was divided into halves: one part was delivered to the creditor agent and the other, to the debtor. The part given to the creditor was called "stock", and that of the debtor, "stub" or "counter-stock".

⁸ Innes (1913) explains that one of several discoveries about Babylon were commercial documents called contract plates, or *shubati* plates. It is estimated that such plates were created around three thousand years BC, and information about transactions were engraved on them, such as the names of the payer and payee, date, sum of money, quantity of grain and the seal of the king or competent authority. Transactions were recorded using a unit of account, *she*, which is believed to be some sort of grain. These *shubati* plates were kept in temples that worked as banks and, by their nature, are believed to have been similar to medieval *tallies* or modern bills of exchange.

commercial communities. When we are successful in business, we accumulate credits on a banker and we can then buy without creating new debts, by merely transferring to our sellers a part of our accumulated credits. Or again, if we have no accumulated credits at the moment we wish to make a purchase, we can, instead of becoming the debtors of the person from whom we buy, arrange with our banker to 'borrow' a credit on his books, and can transfer this borrowed credit to our seller, on undertaking to hand over to the banker the same amount of credit (and something over) which we acquire when we, in our turn, become sellers. Then again, the government, the greatest buyer of commodities and services in the land, issues in payment of its purchases vast quantities of small tokens which are called coins or notes, and which are redeemable by the mechanism of taxation, and these credits on the government we can use in the payment of small purchases in preference to giving credits on ourselves or transferring those on our bankers. (INNES, 1914, p. 152).

Innes anticipated an important point made by Keynes, that money in circulation is predominantly "bank money", and resumed a point made by Knapp (1924), that State money is predominantly used for small transactions:

With the apparent exception of England, ... a similar situation was general throughout Europe; in countries in which there was a dominant bank, ... the higher standard being known as 'bank money,' and the lower standard as 'current money.' Out of this situation rose another interesting and important phenomenon:— while the wholesale trade ... followed the bank standard, the retail trade which dealt largely through the medium of the government coins, naturally followed more or less closely the government standard and prices rose as the standard fell in value. (INNES, 1914, p. 153).

Despite the distinction between bank and State money, the reasons why banks and the government create money are quite different: banks seek ways to increase profits; the State, to foment economic activity and taxation or even liquidity ("credits" to the State), since every time the government creates money, an obligation is imposed against it. By creating a public credit with the Treasury, a public debt appears as a counterpart, and taxation serves as a way to settle this debt or to diminish the quantity of credits to the State beget *ex nihilo* (Wray, 1998). This is one of the most important tenets of Innes's credit theory:

Whenever a tax is imposed, each taxpayer becomes responsible for the redemption of a small part of the debt which the government has contracted by its issues of money, whether coins, certificates, notes, drafts on the treasury.... He has to acquire his portion of the debt from some holder of ... government money, and present it to the Treasury in liquidation of his legal debt.... As a matter of fact most of the government money finds its way to the banks, and we pay our tax by a cheque on our banker, who hands over to the treasury the coins or notes or certificates in exchange for the cheque and debits our account. (INNES, 1914, pp. 161).

In his two articles, thus, Innes departs from the conventional theory of money by proposing that credit, and only credit, is money. Metal coins, as well as bills of exchange or bank notes – widely used at that time – are mere instruments of credit or acknowledgment of debt. Credit is counterbalanced by debt, both of which are measured in abstract units. The cancellation of a debt with a credit consists of what Innes calls the primitive law of commerce: a purchase creates a debt; a sale, a credit.

Banks act as clearinghouses for commerce and finance, centralizing debts, discounting bills, carrying out loan operations, and sharing with the State the function of

money issuers. The centralization of debts and credits in an institution is of great importance, once debts due on a certain date can only be settled with credits available on the same date.

State money is settled through the principle of taxation and chiefly the government's seal, through the symbols inscribed on the metallic coins, is what changes the character of the precious metal to a symbolic character, similar to a token or an acknowledgment of debt, or, as Knapp would say, a chartalist means of payment.

4. CONCLUSION

The contributions of Knapp and Innes are often indicated as milestones for the formulation of what many called an alternative theory of money, opposed to the commodity money approach. Although the ideas of State money and credit money were known prior to Knapp's and Innes's writings, the originality of their contributions lies, mainly, in the articulation they made between these two concepts of money.

Knapp emphasizes the political character of money and the prerogative exercised by the State in delimitating the monetary system and in defining what will be accepted as money: the main issue is not on legal tender laws, but on the *acceptance* of the State of certain means of payment in its pay-offices, which determine what is and what is not money (Wray, 1998). Despite the sovereignty of the State in issuing definitive money, or *valuta*, generally the State accepts not only the money issued by itself, but also *accessory* money issued by its main agent, the banks.

Knapp and Innes endeavored to dissociate money from the idea of a metallic standard of value in order to reveal money's true nature: money is credit in its essence and the objects commonly mistaken as money represent nothing but tokens, tickets, or simply acknowledgment of debts. Innes builds his argument based on the law of debts: the counterpart of a debt is a credit; therefore, the debt of one corresponds to the credit for another. This premise is expanded by Innes in one of the most interesting aspects of his work: the primitive law of commerce. In opposition to the traditional, mainstream theory, Innes postulates that commerce corresponds to the exchange of a commodity for credit and, following what had been proposed by Knapp, the means of payment that settles a transaction can be either State or bank money.

The role of banks as clearing houses is of great importance in Innes, since his emphasis on credit as a means of immediate and deferred payment introduces the problem of non-simultaneity between receipts and payments – explored *a posteriori* more thoroughly by Keynes (1930a) and Minsky (2006) – and he highlights the importance of banks in this regard, settling transactions of both commerce and the financial system, and, moreover, the State.

To conclude, the purpose of this article was to revise and synthesize some of the main ideas expressed in Knapp's theory of state money and Innes's theory of credit money, highlighting the relevance of their theoretical contributions to the structuring of the Chartalist theory of money, a theory based on historical, social, and political principles which ratifies the position that money is, and has always been, by nature, credit.

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