THE ORIGINS OF MONEY:

EVALUATING CHARTALIST AND METALLIST THEORIES

IN THE CONTEXT OF ANCIENT GREECE AND MESOPOTAMIA

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ABSTRACT

Tracing the origins of money in archaic Greece (roughly 900-500 BC) and ancient Mesopotamia in the fourth millennium BC, this thesis assesses the applicability of Chartalist and Metallist theories of money's origins. It is demonstrated that Metallism does not withstand a historical test given the marginality of trade, both domestic and foreign, in the period when money and, subsequently, coinage emerged.

A wide range of evidence – archeological, etymological, literary and numismatic – demonstrates that money emerged in the context of religious practice and ideology of archaic Greek societies marked by socio-economic hierarchies and inequalities. Money was first embodied in the portions of sacrificial bull's flesh distributed by religious authorities during the rituals of communal sacrificial meals. Purporting to allocate to each his 'just' and 'equal' share, the redistributive rituals created a façade of social justice and equality via the use of money. From roasted bull's flesh, money evolved into sacrificial roasting spits (obeloe), and, finally, into coinage, which initially served as a symbolic representation of roasted bull's meat.

A reciprocal relationship between the development of coinage and the establishment of the civic polis is further explored. Whether in Homeric societies or in civic poleis, the power of money and coinage was ideological and 'egalitarian'.

Distinctly non-commercial origins of money as a phenomenon of a Homeric proto-state and, subsequently, as a creature of a civic polis support the Chartalist theories. Yet, there is no evidence that Greek money and coinage emerged as a unit of account in which taxes to the state were denominated. The use of money in a fiscal context developed later in the classical period. Yet, evidence in support of the more traditional Chartalist monetization mechanism pertains to votive offerings in the form of miniature figurines produced by religious establishments as substitutes for contributions in actual goods.

Finally, in the context of centralized redistributive temple-economies of ancient Mesopotamia, the evidence of clay tokens is utilized to formulate a hypothesis according to which money was introduced by the temple as a certificate of fulfilled contributions to the temple-state. The 'certificate of contribution' hypothesis institutionalizes Chartalism within a concrete historical context.

APPROVAL PAGE

The faculty listed below, appointed by the Dean of the School of Graduate Studies, have examined a dissertation titled "The Origins of Money: Evaluating Chartalist and Metallist Theories in the Context of Ancient Greece and Mesopotamia".

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CHAPTER 1

INTRODUCTION

The question of money's origins has been an unsettled issue in economics, economic history, anthropology and other social sciences. This thesis attempts to trace the historical origins of money in archaic Greece (roughly 900-500 BC) and ancient Mesopotamia in the fourth millennium BC.

The problems I encounter stem partially from the difficulties involved in the conceptual definition of the term money. Here, the common practice has been to project modern definitions and functions of money into archaic Greek and ancient Mesopotamian societies. But these societies were characterized by fundamentally distinct modes of socio-economic integration not found in modern days. Specifically, the marginality of trade, both domestic and foreign, has to be noted. Yet, the dominant habit of thought has been to presume that money emerged as a medium of exchange facilitating trade among individuals. In fact, this is the key proposition of the dominant Metallist perspective on money's origins, prevalent not only in economics but in other social sciences as well. This evidences the cross-disciplinary hegemony of (neo-classical) economics with its axiomatic-deductive method.

The presumption that money emerged as a medium of exchange is further reinforced by the fragmentation of social sciences, with the questions of money's origins being delegated to the economics domain proper. In fact, as chapter 2 demonstrates, the other social sciences uncritically accepted the theoretical framework of (neo-classical) economics as the underlying framework for the analysis of money's origins and nature.

Yet, there are notable exceptions to this rule. The scholars of archaic and classical Greece such as Sitta von Reden (1995), Leslie Kurke (1999) and Richard Seaford (2004), to mention the most prominent names, have embarked upon a substantivist historical inquiry into the origins of money and coinage during the archaic and classical Greek periods. Their research results do not support the common-sense interpretations of money's origins in the context of commercial exchange. If we at all wish to retain the terminology of exchange, the emphasis must be shifted to its political, cultural, religious and symbolic rather than commercial meanings and connotations. Notably, research results produced by Sitta von Reden, Leslie Kurke and Richard Seaford share important common ground with the Chartalist perspective on money's origins (as will be shown in chapters 5 and 6). Yet, no doubt, some differences remain.

While the works by Sitta von Reden and Leslie Kurke are primarily concerned with the origins of coinage, we must not be blinded by the shiny metals in presuming that metal was the earliest form of money. As Grierson (1977) has cautioned, the origins of money are not to be reduced to the origins of coinage. Here, research by Richard Seaford (2004) and Bernhard Laum (1924a) must be acknowledged as the scholars trace the evolution of monetary objects which predated the use of metal and the introduction of coinage.

To clear the confusions between money and coinage, and to prevent the projection of modern institutions and habits of thought into ancient societies when inquiring into causal historical origins of money, Chapter 2 suggests an alternative working definition of the term money. Such definition is compatible with both metallic and non-metallic forms of monetary objects. This definition likewise does not rely upon projection of modern institutions and habits of thought into archaic Greek and ancient Mesopotamian societies. Indeed, the whole point is that the origins of money must be situated into concrete historical institutional contexts, and the alternative definition of money adopted in chapter 2 should allow me to achieve this goal.

Assessing the lessons of the Methodenstreit (‘the battle of methods’), Chapter 2 argues that there is no one single mechanism of money’s origins. The specific mechanisms of monetization may manifest themselves in different ways. Likewise, the earliest money may have taken the form of clay tokens (Mesopotamia) or roasted bull’s flesh (Greece). Yet, it is important to emphasize that despite the differences in their outward manifestations, the mechanisms of monetization (or the origins of money) will necessarily share a set of common underlying socio-economic conditions and relations, in particular, increasing socio-economic inequality and the transition to rank and class societies.

Finally, Chapter 2 addresses the relationship between theory and evidence – an important consideration to be taken into account when working on the questions of money’s origins. It is argued that no historical inquiry can proceed without theoretical terms. Yet, no theoretical framework should be taken as the measuring rod, as an end in itself. Thus, I do not intend to ‘prove’ either Chartalist or Metallist theories of money’s origins. My goal is rather to inquire into socio-economic relations of archaic Greek and ancient Mesopotamian societies, approaching Metallism and Chartalism as theoretical tools. My goal is to assess the applicability of Chartalist and Metallist analytical tools in the context of ancient Greek and Mesopotamian economies. My research shows that Metallism does not withstand an empirical test, while Chartalist theories provide important insights which are, in fact, applicable in the context of archaic Greek and ancient Mesopotamian societies.

Chapter 3, then, focuses specifically on Metallism and Chartalism as two competing theories of money’s origins, nature and social functions. Briefly, the key proposition of the dominant Metallist perspective is that money emerged as a medium of exchange commodity in the context of trade among free self-seeking individuals not subject to the power of a central public authority. Chartalism, on the other hand, argues that money was introduced by a central public authority as a unit of account in which taxes to the state were denoted and had to be paid. Thus, the contexts of money's origins are fundamentally distinct. Metallism presents a harmonious picture of voluntary acts of exchange among individuals, where money is viewed as a technological break-through which reduces transaction costs. Chartalism, on the other hand, depicts a society marked by socio-economic inequalities, and a state apparatus capable of indebting the underlying population via an introduction of a monetary tax.

While chapter 3 summarizes the key propositions of Chartalist and Metallist perspectives, this chapter likewise critically evaluates them. I conclude that both perspectives project modern institutions and habits of thought into ancient societies. Yet, in comparison, the Metallist perspective is purely a-historical. In fact, Metallism prides itself in the elegancy of its formal analysis devoid of empirical evidence. Chartalist scholars, on the other hand, have embarked on the substantivist task of examining actual historical evidence. Yet, a comprehensive historical account of money's origins is still lacking within the Chartalist perspective.

Chapter 4 is devoted solely to the examination of Carl Menger's thought on the origins and nature of money as it evolved from 1892 to 1923. Menger is the most prominent exponent of the Metallist theory of money's origins, and some scholars have argued that Menger revised his arguments during the later stages of his scholarly career so as to incorporate some Chartalist insights. I argue that Menger did not change his argument regarding the origins of money as a medium of exchange commodity in the context of free and voluntary exchange among individuals, devoid of any action or intervention by the state, whether in the form of taxation or legislation. My argument is that the revisionist contributions on Menger's monetary thought are erroneous, misleading and not even convincing. Further, accepting revisionist accounts blurs the line of demarcation between two distinct views of money: money as a coercive institution in the context of unequal social relations, and money as a thing mediating voluntary (and thus harmonious) acts of exchange among individuals. To argue that Menger incorporated Chartalist insights into the Metallist perspective is akin to squaring the circle.

Chapter 5 examines interdisciplinary perspectives on the origins of money. Here, the works by Sitta von Reden (1995) and Leslie Kurke (1999) point to the origins of Greek coinage in the context of political transformation from Homeric societies to the civic polis. Coinage emerges as a symbol of the civic authority of the Greek polis, signifying its ultimate power over the constitution of civic values and norms (Kurke 1999). Von Reden (1995) likewise links the origins of coinage to the political transformation of ancient Greek societies, demonstrating a reciprocal relationship between the emergence of coinage and the development of a democratic polis.

Von Reden (1995) argues that coinage emerged as a means of political recompense; as a means of administering social 'justice' by the polis. The polis as an institution in control over social 'justice' stands in sharp contrast to the previous, divine authority, intertwined with the power of the older aristocratic elites. In fact, it was the decline of faith in the reliability of the divine authority over justice – prompted by increasing socio-economic inequalities – which led to the development of the new model of 'justice'. This model was embodied in the civic authority of the polis which could administer justice directly and precisely via the redistribution of coinage. While both Kurke (1999) and von Reden (1995) emphasize the 'redistributive justice' aspects of coinage and point out that coinage was distributed among the citizens of the polis, they do not provide a specific mechanism to elucidate how exactly this distribution took place.

The scholarship advanced by von Reden (1995) and Kurke (1999) clearly represents a set of evidence in support of the Chartalist perspective, while it indisputably defeats Metallism. Both Kurke (1999) and von Reden (1995) explicitly reject the Metallist perspective as there is simply no evidence that coinage emerged in the context of market exchange. While coinage no doubt led to the rapid development of trade two or three centuries later, there is no evidence that, in the first place, commerce (whether domestic or long-distance) invented coinage.

Notably, Kurke (1999) and von Reden (1995) are not familiar with the Chartalist theories of money's origins, and thus do not refer to them whether explicitly or implicitly. Yet, their research results are clearly compatible with the Chartalist perspective in the sense that coinage was introduced by a central public authority (the polis) in a non-commercial context. Yet, contrary to the Chartalist perspective, von Reden (1995) and Kurke (1999) do not argue that coinage was introduced as a unit of account in which taxes to the polis were denominated and had to be paid. In fact, the mechanism is reversed: coinage was introduced by the polis to be redistributed to its citizens as a means of recompense, as a means of restoring 'distributive justice'. Coinage did not have to circulate back to the state. The citizens could possess coinage as a symbol of their civic identity and as a token of acceptance of the new political authority of the polis. The use of coinage in the context of taxation developed somewhat later in the classical period.

Regarding the 'token versus precious metal' debate, Kurke (1999) observes that the power of Greek coinage was both ideological and material. The material aspect is related to the exclusive reliance on silver (rather than gold) as the metal for coinage, and a resistance to pure token coinage (such as coins made of bronze). According to Kurke, the resistance to gold stems from the fact that gold was considered the metal of aristocratic elites, whose authority the polis actively tried to subvert. In asserting its own political authority over 'distributive justice', the polis acquired yet subverted the redistributive model of the old aristocracy. In the latter model, redistribution of golden metallic objects took place exclusively among the members of aristocratic elites. The polis, then, makes this model more inclusive by distributing coinage to all citizens. The polis was careful enough not to distribute silver metal in its un-coined form, for that would be a remnant of the aristocratic redistributive model. The polis chose silver (the 'middling' metal between gold and iron) and decided to coin it. The possession of coinage became a symbol of citizenship: all citizens are like coins – pure homogenous and valuable matter – no inequality or injustice can be observed (Kurke 1999; von Reden 1995). Again, as emphasized by Kurke (1999), the power of coinage is both ideological ('distributive justice') and material (silver is a valuable matter as opposed to iron or bronze).

In addition to modern interdisciplinary scholarship on the origins of money, chapter 5 examines earlier contributions which did not uncritically accept the Metallist approach based on the lack of evidence of domestic commerce, and foreign commerce mediated through a medium of exchange (thus, this is not to deny that foreign commerce existed in the form of 'barter'). In particular, I examine the thesis of Martin Price (1983) on the origins of Greek coinage in the sphere of aristocratic gift-giving. Further, fiscal theories in the tradition of Robert Cook (1958) and Colin Kraay (1964; 1976) are examined. These contributions situate the origins of Greek coinage in the context of state payments, in particular payments by the polis, and payments to the polis. Notably, Kraay (1964) advanced a very Chartalist argument, maintaining that instead of collecting taxes in the forms of goods and services, the state could stipulate payments in the form of standardized units the state itself created (Ibid., 90).

More recently, Jeremy Trevett (2001) provided a synthesis of Kraay's (1964, 1976) fiscal interpretation of coinage with von Reden's (1995) view of coinage as an instrument via which 'social justice' was administered by the polis. Trevett likewise attempted to reconcile the fiscal aspect of coinage with Kurke's (1999) emphasis on the political resistance to coinage by the traditional aristocratic elites. Trevett's thesis relates to a later period of classical Athens in the fifth-fourth centuries BC.

Finally, chapter 5 examines important contributions within the numismatics profession, from Philip Grierson (1971; 1975; 1977) to, more recently, Henry Kim (2001; 2002). Grierson long cautioned that the origins of money are not to be sought in market exchange, given the fact that in the archaic Greek period domestic trade was marginal, while foreign commerce was confined to traffic in slaves and luxuries from abroad. More recently, Grierson's approach has been revived by Henry Kim (2001; 2002) thanks to the scholarship produced by von Reden (1995) and Kurke (2003). For example, as Kim (2001) has commented on the revived state of the numismatics profession, the study of money has now been "liberated" from the primary focus on commercial relations (Ibid., 7). The "refreshing infusion" (Ibid.) of new insights and approaches has changed our conceptual understanding of money, leading us to consider religious, social, political and legal contexts in which money emerged and functioned (Ibid.).

While scholarly contributions examined in chapter 5 are primarily concerned with the emergence and spread of coinage, chapter 6 examines the forms of money which predated coinage. To put it differently, chapter 6 studies the forms of money out of which Greek coinage evolved. After all, as Grierson (1977) has warned us, "behind the specific phenomenon of coin there is the more general phenomenon of money" (Ibid., 33), the origins of which are much more difficult to trace (Ibid., 7). Here, the goal is to revive the neglected contribution by Bernhard Laum (1924a) – Heiliges Geld: Eine historische Untersuchung über den sakralen Ursprung des Geldes [Holy Money: A Historical Inquiry into the Sacred Origins of Money]. Laum's (1924a) contribution has been recently revived by Seaford (2004), Peacock (2011) and Semenova (2011).

Laum's thesis was on the religious origins of money in Homeric Greece. Examining the all-inclusive and 'egalitarian' rituals of communal sacrificial meals, Laum suggested that money emerged as a portion of roasted bull's flesh allocated to each ritual participant. Though the ritual purported to be an egalitarian procedure which allocated an equal portion to each communicant, the portions of roasted bull's meat corresponded to one's social rank, and hence were not equal in absolute quantities. In fact, the 'egalitarian principle' practiced corresponded to what came to be known as the principle of proportionate or geometrical equality, as reflected in the philosophy of Pythagoras and Plato.

In the order of social rank, the portions of roasted bull's flesh distributed to ritual participants served as a means of recompense, or a reward distributed by the religious authority to its subjects. By allocating to each his 'just' and 'equal' share, the rituals fostered the spirit of koinōnia (community), an appearance of distributive justice and harmony within a community.[1]

To conclude Laum's thesis, money emerged as a portion of roasted bull's flesh allotted during the rituals of communal sacrificial meals, and served as a means of restoring 'distributive justice' by the central public authority of a priest. In a Greek proto-state, we therefore see the

[1]For a most detailed exposition of Laum's (1924a) thesis, see Desmonde (1962).

causal role of religious practice and ideology in establishing a façade of justice and equality via the use of money.[2]

Seaford (2004) took Laum's thesis further by exploring the conflict between an all-inclusive and 'egalitarian' ritual of communal sacrificial meals and the redistribution of booty by the leader. Seaford explicated how this conflict was conducive to the transformation of the money object from a perishable to a non-perishable good. Briefly, the objects of booty redistributed by the leader to his followers commonly included metals (among other luxury objects brought from abroad). The ambiguous, non-ritualized, uncontrollable process via which booty was redistributed has exacerbated the crisis of inequality. To rectify this inequality, an idea emerged to distribute both perishable and non-perishable objects during the rituals of communal sacrificial meals. Now, a roasted bull's flesh would be distributed on an iron spit known as obelos. Unlike the roasted bull's flesh destined for immediate consumption, the roasting spit was marked by its material permanence. While the idea of iron spits as money was already present in Laum (1924a), Seaford supplemented Laum's thesis by integrating the causal role of the crisis of centralized redistribution (of booty) into the analysis.

Thus, we see the development of the phenomenon of representation. Money in the form of roasted bull's flesh is superseded by money in the form of iron spits known as obelos. Both serve as a means of recompense, as a reward, administered by the priest to his subjects in the order of social rank. Laum (1924a) further noted that obolos is the name of the sixth century BC silver Greek coin, while drachma is the name for another sixth century BC Greek coin of a larger denomination. It is interesting to note that drachma originally meant a handful of six iron spits (or a handful of six obeloe) (Seaford 2004, 102). Therefore, it is possible to suggest (as Laum

[2] See Henry (2004) for a similar role of religious practice and ideology in 3200-3000 Egypt.

did) that the coin (obolos) took its name from the spit (obelos). In fact, Laum argued that in the origins of coinage we see a further development of the phenomenon of representation. Coins come to replace the actual portions of meat distributed to ritual participants. The accumulation of permanent wealth in the form of coinage aims to rectify the growth of inequality. This transition from roasted bull's flesh – to roasting spits – to coinage may explain why so many of the earliest Greek coins bear an image of a bull on their surface (For summaries of Laum's (1924a) thesis, see Desmonde 1962; Seaford 2004; Einzig 1949; Burns 1927; Peacock 2011).

To conclude chapter 6, I explore a parallel development of the phenomenon of representation in the sphere of votive offerings (as opposed to the sphere of redistribution). Here, I rely on Seaford (2004) who explains how votive offering in the form of food and livestock were gradually superseded by their symbolic representations in the form of miniature figurines. If such figurines were produced by religious establishments, while they served as units in which offerings had to be made, then Seaford's thesis (which was already in Laum 1924a) lends direct support to the traditional Chartalist monetization mechanism. Sacrifice was an "early agent of monetization," argues Seaford (2004, 81).

Finally, Chapter 7 takes us back into ancient Mesopotamia in the fourth millennium BC to investigate the questions of possible money uses there. To do this, I first examine the socio-economic organization of ancient Mesopotamian societies. Here, I arrive at a picture of centralized redistributive economies organized by massive Mesopotamian temples. Another conspicuous feature of Mesopotamian 'bureaucratic' economies is the ubiquitous presence of small geometrically-shaped objects – clay tokens (and later their assemblages into spherical clay cases known as bullae). The conventional perspective is that tokens served as simple record-keeping devices in both public and private households. While the socio-economic power aspect of tokens in the context of ‘taxes’ and tribute owed to Mesopotamian temples has been noted, this power aspect has been largely neglected (Schmandt-Besserat 1981; 1982; 1996). My research revitalizes the socio-economic power aspect of the token system, while it also reconsiders the conventional interpretation of the token function as a simple record-keeping device. In doing this, I put forth a ‘certificate of contribution’ hypothesis according to which tokens served as ‘tax receipts’ distributed to ‘taxation units’ upon payment of ‘taxes’ and tribute to the temple. Tokens therefore served as certificates of fulfilled contributions to the temple. Such a system was designed to achieve maximum possible collection of ‘taxes’ and tribute by the Mesopotamian temple from the underlying population, and to locate non-compliant ‘taxation units’ (i.e. those without tokens). Such system would be instituted in a highly urbanized and densely populated society where writing was still underdeveloped and census systems did not exist (tokens led to writing, rather than vice versa). The token, as a certificate of a fulfilled contribution, was an instrument of control by the temple over the collection of taxes and tribute. I argue that tokens could be viewed as the earliest form of money Mesopotamia. As a certificate of fulfilled contributions, the token could likewise be viewed as a means of just recompense administered by Mesopotamian temples. If we have accepted the role of coins as a means of ‘just recompense’, why should we think otherwise once it comes to clay rather than silver objects?

CHAPTER 2

STATEMENT OF THE PROBLEM AND METHODOLOGY

> . . . Gladstone remarked that not even love has made so many fools [out] of men as the pondering over the nature of money.[1]
>
> —Karl Marx, A Contribution to the Critique of Political Economy

In the opening sentence of chapter 2 on "Money or Simple Circulation", Karl Marx ([1859] 2010) drew attention to Gladstone's remark that an inquiry into the nature of money has made more fools out of men than some of the greatest human passions. However, as Marx ([1859] 2010) further wrote: "The main difficulty in the analysis of money is overcome as soon as the evolution of money from commodity is understood" (Ibid., 31). Marx further proceeds with the analysis of gold as the money commodity. Rather than evaluating Marx's conception of money's origins as a commodity, let us take note of Marx's method. Here, Marx clearly sides with a methodological position that to understand the nature of money one has to inquire into the origins of this institution. When addressing the question "Why study the origins of money?" a similar view was expressed by L. Randall Wray (2004): "Just as peoples have stories about their origins in order to explain (and shape and reproduce and justify) their character, economists tell stories about the origins of money to focus attention on those characteristics of money that they believe to be essential" (Ibid., 225). In other words, a study of money's origins is believed to shed light on certain prevailing characteristics of money as a social institution that have persisted since money's emergence.

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[1] The statement refers to Gladstone's remark in a parliamentary debate on Sir Robert Peels Bank Act of 1844 and 1845.

The State of Scholarship on the Nature and Origins of Money

The Case of Economics

While a lot has been written on the nature and origins of money in economics, ancient economic history, economic anthropology, and numismatics, the scholarship has largely failed to provide satisfactory, historically-situated and institutionally-grounded accounts of money's origins and early development. A number of reasons can help explain this 'intellectual freeze'. Let us begin with the case of economics. Here, two competing theoretical perspectives on the nature and origins of money have been developed: Metallism (also known as the exchange-based or Mengerian approach) and Chartalism (also referred to as the State theory of money). These two approaches present fundamentally different views on the causes and conditions of money's origins and early development, its nature and social functions.

Chartalism and Metallism: An Overview

The foremost proposition of the Chartalist approach is that money emerged as a result of state action (or the action of a central public authority) as opposed to the actions of individual traders. Likewise, the social functions of money and its early evolution have been directly affected by the actions of the state. More specifically, money emerged in a context of a debt relationship between the state and the underlying population. Money saw its gradual development as a unit of account in which debts and other obligations to the state were denominated and had to be repaid. It was from its monopoly power to extinguish debts and other obligations to the state that money acquired its value. In the Chartalist mechanism(s) of money's introduction (the details of which will be explored in chapter 3), the intrinsic value of money is therefore immaterial, for the only factor that matters is the unique power of money to extinguish debts and other obligations to the state. Acquiring a monopoly on the issue (or production) of money (i.e. a unit of account for denominating and repaying debts to the state), the state could theoretically choose and introduce any object as money regardless of its intrinsic composition (or intrinsic value). As Wray (1998) has put it in a hypothetical example with the purpose of illustrating the point of the Chartalist argument, "the governor could photocopy a picture of herself to use as paper money" (Ibid., 55). The Chartalist framework is therefore in strong opposition to the prevailing Metallist (or Mengerian) perspective according to which money necessarily emerged as an object with an intrinsic value (such as gold and silver metal). Rather than intrinsic value, it is the unique power of money to extinguish debts and other obligations to the state that gives value and general acceptability to money.

Contrary to the Chartalist perspective, the Metallist framework views the origins and the early evolution of money as an unintended consequence of spontaneous individual actions in the context of barter exchange. Here, money emerged via a 'natural' process of transaction cost minimization. Notably, money came into being as a commodity with an intrinsic value and special characteristics conducive to its function as a universal medium of exchange (such as gold and silver metals due to their divisibility, portability, homogeneity and durability) (see Menger 1871, 1892, 1909; Jevons 1875, 1-7). Obviously, following the demise of precious metal currencies and standards of value, "it is no longer argued that money need consist of a material with an intrinsic exchange-value" (Ingham 2004, 7). Yet, for modern economic analysis money is still conceptualized as a commodity "in the sense that it can be understood, like any other commodity, by means of the orthodox methodology of micro-economics – 'supply and demand', 'marginal utility' and so on" (Ibid.). Even when "no more than a symbol or token," money is a commodity in the sense that it can directly represent real commodities (Ingram 2000, 17).

Chartalism and Metallism: The Problem of a priori Preconceptions

While the details of these two perspectives on the nature and origins of money will be explored in chapter 3, at this stage I would like to point out some of the general methodological shortcomings shared by Chartalism and Metallism in common, though in different degrees.

Formulated by modern scholars working in the late-nineteenth and twentieth centuries, these theoretical accounts of money's origins are not without a priori preconceptions that result from the scholars' exposure to modern institutions and habits of thought. For example, in formulating its theory of money's origin, the Metallist perspective projects a notion of a pre-eminence of markets (domestic and not just foreign) and market exchange or trade (among individuals and not just between states) into ancient and even primitive forms of socio-economic integration. With a market-oriented institutional frame of reference (Polanyi 1971, 16-17) imposed on early (non-market) societies, money emerges logically as a convenient medium of exchange. In fact, the Metallist perspective prides itself in its ability to specify money's origins and nature in terms of purely logical reconstructions (see Selgin and White 2002, 133; Aydinonat 2008).

The Chartalist approach, on the other hand, assumes ancient societies to exhibit a modern-type state entity (though it may be referred to as a palace, a temple, a ruler, a governor) and some salient attributes of modern socio-economic integration such as taxation. In this approach, money emerges as a unit of account in which debts (or fines, fees, tribute, tithes or taxes) owed to the state by the underlying population are denominated and have to be repaid.

Thus, both approaches commit this fallacy of projecting modern institutions, habits of thought, transactional modes, and forms of socio-economic integration into early historical periods characterized by distinct forms of socio-economic integration and institutions, not found in modern societies. With these modern institutions and habits of thought transplanted into ancient societies, the origins of money follow logically rather than based upon historically-situated and institutionally-grounded inquiry. Within the Metallist perspective, the fallacy is with projecting the notion of trade and commerce into ancient societies. Chartalist theories, on the other hand, tend to focus on the role of taxation in the origins of money. Yet, this is not to deny that Chartalist theories are grounded in more historical methods as well. These historical methods are particularly evident when examining the causal role of fines, fees, tribute and tithes in the evolution of a unit of measurement, and, subsequently, money.

Chartalism and Metallism: The Problem of Historical Empiricism

This brings us to the next related problem – the problem of historical empiricism. Notably, both the Metallist and the Chartalist perspectives lack an adequate historical, anthropological background to support their theoretical formulations of money's origins. In comparison, however, the Chartalist perspective is known to be "historically and empirically more compelling" (Goodhart 1998, 408), while its Metallist rival has been widely acknowledged in the interdisciplinary circles as "constitutionally weak on institutional detail and historical empiricism" (Ibid., 408-409). Instead, the Metallist approach "has been strong on formal theory" (Ibid., 408), priding itself in the elegancy of deductive analysis "whatever the facts may be" (Ibid., 409). Here, with the assumption of universal markets and economistic behavior of individuals firmly in place, the origins of money become logically grounded in its medium of exchange function, and the study of history becomes either not necessary at all, or some sort of "conjectural history or arrant fantasy" (Peacock 2003-04, 206) is relied upon to 'prove' the Metallist framework. As Ingham (2004) and Ikeda (2008) have commented on this matter:

> . . . the orthodox theory of money, as a medium of exchange, is unable uniquely to specify money except in terms of a purely logical description. Money is specified as the commodity that can be traded for all other commodities . . . . (Ingham 2004, 22)

> It is a Mengerian 'conjectural history', if one is allowed to borrow a terminology from the field of Scottish Enlightenment. (Ikeda 2008, 457n3)

Notably, a similar argument was made by A. Mitchell Innes (1913) almost a century ago. As Innes (1913) observed, at the time of his writing, the belief in the Metallist theories was so universal, to the point that "they have grown to be considered almost as axioms which hardly require proof, and nothing is more noticeable in economic works than the scant historical evidence on which they rest, and the absence of critical examination of their worth" (Ibid., 377-78). Critically examining the worth of the Metallist theories, Innes concluded that "in fact they are false" (Ibid., 378).

While Chartalists have embarked on the substantivist task of taking ancient history, anthropology, numismatics and other fields of inquiry into account, the predominant state of scholarship in ancient economic history, economic anthropology and numismatics themselves has limited the scope of Chartalist inquiry into historical-institutional relations of money's origins and early development.

As far as the origins of money are concerned, these disciplines' findings are not without serious shortcomings that have led to their rejection or critical acceptance by the Chartalist group.

The Case of Other Historical and Social Sciences

Trying to make sense of the early evidence of money and its uses, ancient economic historians, economic anthropologists, and numismatists have predominantly (though not exclusively) adopted Metallism as their underlying theoretical framework for causal explanations of money's origins and early development. For example, as Leslie Kurke (1999) has commented on the state of scholarship pertaining to the origins of money in ancient Lydia and Greece, while a lot has been written on the subject, the "scholarship has tended to misrepresent the invention of coinage . . . unproblematically identifying money with trade, commodification, and a "disembedded" economy" (Ibid., 14)[2]. This identification of money with trade, exchange,

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[2] The notion of *embedded* vs. *disembedded* economies was advanced by Karl Polanyi. According to this distinction, a *disembedded* economy implies that a society is run as "an adjunct to the market" (Polanyi [1944] 2001, 60), that the economy "is institutionally separated from the political and governmental center" (Ibid., [1957a] 1965a, 68). Standing apart from the political and governmental sphere, a disembedded economy "is governed by laws of its own, the so-called laws of supply and demand" (Ibid.). There is no place for "blood-tie, legal compulsion, [or] religious obligation" (Ibid.). Separating political, governmental, religious and other spheres from the analysis gives us "that extreme case of a disembedded economy which takes its start from the widespread use of money as a means of exchange" (Ibid.).

Polanyi compares this with an "economy [which is] being embedded into social relations" (Ibid. [1944] 2001, 60), "absorbed in the social system" (Ibid., 71); an economy which is "enmeshed in institutions, economic and noneconomic" (Ibid., [1957b] 1965b, 250). Here, the inclusion of noneconomic is crucial: "For religion or government may be as important for the structure and functioning of the economy as monetary institutions," writes Polanyi (1965b, 250). Inquiring into the nature and origins of markets, Polanyi concludes that "the economic system was [always] submerged in general social relations; markets were merely an accessory feature of commodities, and a market economy in general, representing “our [modern] prejudices about money” has been “anachronistically imposed” on the early historical evidence, providing the main theoretical framework (i.e. Metallism) for the studies of money’s origins (Ibid.) in the disciplines of ancient economic history, economic anthropology and numismatics.

But “the socio-economic system of today is very different from the systems of five hundred, one thousand or two thousand years ago” (Hodgson 2001, 23). Consequently, different types of socio-economic systems “may require different conceptual and theoretical tools” for their analysis and understanding (Ibid.). Nevertheless, the common fallacy, or rather, the common ‘normalcy’ has been “to treat the de-institutionalized fundamentals of a market economy as universal” making market-related ideas a “foundational for the analysis of any economic system” (Ibid., 273). Importantly, this tendency to “treat the market as universal” (Ibid., 274) has been conspicuously present not just in mainstream economics but in many other social sciences, including ancient economic history, economic anthropology and numismatics (see Kurke 1999, Ingham 2004).

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an institutional setting controlled and regulated more than ever by social authority” ([1944] 2001, 70) such as blood-ties, religion and legal compulsion (as above).

> As a rule, the economic system was absorbed in the social system, and whatever principle of behavior predominated in the economy, the presence of the market pattern was found to be compatible with it. (Ibid., 71)

As far as the ‘great transformation’ from an embedded to a disembbeded economy is concerned, Polanyi is careful to point out that “individual acts of barter and exchange–this is the bare fact–do not, as a rule, lead to the establishment of markets in societies where other principles of economic behavior prevail” ([1944] 2001, 64).

Clearly, to understand the causal relations underlying the origins and early development of money, we must situate money in its proper historical and institutional contexts (Kurke 1999, 14) rather than seek logical origins of money by transplanting our modern market-oriented institutions and habits of thought into fundamentally distinct institutional frameworks of ancient societies. Historical analysis will be "distorted and impaired if we misapply the categories pertinent to one system – such as a market-based economy – to another" (Hodgson 2001, 273). Yet, this historically-situated and institutionally-grounded inquiry has been impaired by the intellectual dominance and strong cross-disciplinary influence of neo-classical economics in general, and its Metallist perspective on money and its origins, in particular.

Yet despite these unfortunate developments affected by cross-disciplinary dominance of neo-classical economics, an array of studies has been recently produced attempting to situate the origins of money in its specific historical-institutional contexts (see Kurke 1999, Seaford 2004, von Reden [1995] 2003). Further, some vital contributions to the study of money's origins that constituted a further development of a non-Metallist approach to money, in particular Bernhard Laum (1924a, 1924b, 1925a, 1925b), have been recently resurrected after almost a century of neglect. For example, Christina von Brown (2006) has recently published a second edition of Laum's (1924a) work on the origins of money in ancient Greece; a work that "on the whole suffered neglect rather than refutation" (Seaford 2004, 102).

Cross-Disciplinary Influence of Neo-Classical Economics and Compartmentalization of Social Science

The ‘intellectual freeze’ produced by the influence of neo-classical economics on the study of the ‘economic’ aspects of pre-modern societies (including money and its uses) has been widely explored by Karl Polanyi. It may be surprising, – noted Polanyi (1971), – that neither economic anthropology nor ancient economic history (i.e. disciplines that deal with non-market institutions and forms of socio-economic integration) have “reached any notable accuracy” in describing pre-modern non-market economies in their different aspects (Ibid., 8). However, a more detailed look at the influence of neo-classical economics on other social sciences and ancient history will demonstrate that such an intellectual dead-lock may have come as no surprise.

Specifically, neo-classical economics has succeeded in imposing a market-oriented institutional frame of reference not just on the field of economics proper, but on other social sciences that attempt to make sense of the ‘economic’ aspects of early societies (including the origins and early uses of money) such as ancient economic history, economic anthropology, and numismatics. The “conceptual whole” or the “institutional frame of reference” for analyzing non-modern economies has predominantly been that of a “market-organized livelihood” (Polanyi 1971, 16).

> Economics in its full-fledged intellectual armor tended to monopolize initiative in primitive economics, economic history, and economic sociology alike. (Ibid., 17)

Inevitably, this transforms different forms of socio-economic integration into “a potential market system with commercial trade and commercial money as logical corollaries” with “neither necessity nor room left for empirical inquiry” (Ibid.). Institutional equivalents of modern markets would be seen, "though none were present – wherever any sort of trade or money occurred, and market economics would take over" (Ibid.). Under the influence of neo-classical economics, economic anthropology would accept "a one-sided exchange definition of money," while ancient economic historians would follow the "myth of an invisible market pattern" reluctant to accept or develop a "less commercial and more realistic interpretation of the facts" of the ancient economies (Ibid.; see also Hodgson 2001).

Without doubt, the intellectual division of labor has aided neo-classical economics in 'monopolizing' the field of inquiry that deals with the 'economic' aspects of ancient societies. The monopoly on the analysis of 'economic' aspects of early societies has enabled neo-classical economics to firmly engrain Metallism as the underlying frame of reference for the analysis of money's origins and early development. Obviously, this carries an implication that the causal relations underpinning the origins of money were purely 'economic' (such as rational, utility-maximizing behavior of individuals in the context of transaction cost minimization).

As Ingham (2004) has commented on this issue, due to the academic division of labor and the wide acceptance of neo-classical economic orthodoxy, "the other social and historical sciences have fared no better in the analysis of money" (Ibid., 9). This is because they simply "abnegated all responsibility for the study of money, by either simply ignoring it or uncritically accepting orthodox economic analysis" led by a "mistaken belief that it [money] is essentially an 'economic' phenomenon" (Ibid.). In the passage quoted below, Ingham summarizes this point utilizing the case of economic sociology:

> . . . the analysis of money had suffered as a result of the division of intellectual labor after the Methodenstreit. Economics abandoned any theoretical interest in the ontology of money, and sociology appeared to shun those very sociological and historical questions about money that were an essential part of the methodological battles. Outside the Marxian schools, sociology began to redefine its interest in the economic realm in terms

> of the social and cultural field that economics had allowed it to retain. This one-sided emphasis on the 'cultural' and the narrowly 'social' would not matter if economics had provided an adequate explanation of money's existence and functions; but it did not. The question of the nature of money somehow got lost. (Ibid., 59)

Notably, Polanyi (1971) made a similar conclusion more than three decades earlier:

> Apart from the market frame of reference that was here forced upon non-market societies, there was that fragmentation of knowledge about non-market economies, the relevant facts being domiciled in the different social sciences. Hence, "The place of the economy in society" would mean to the anthropologist, its place in the cultural spectrum; to the sociologist, its place in a subsystem in a structured society; to the historian, its place on a time scale. Differences of semantic coloring would in this way tend to produce a puzzle of non-fitting items. (Ibid., 17)

The State of Scholarship on the Nature and Origins of Money: Conclusions and Implications

The academic dominance of neo-classical economics, together with the scholarly division of labor have led to a common (though not entirely exclusive) practice among ancient economic historians and economic anthropologists (as well numismatists) to project a (modern) market-oriented frame of reference as a theoretical foundation for the analysis of the 'economic' aspects of ancient societies (including money and its origins), as if these societies were market-oriented, and as if they had a 'disembedded' economy that would warrant an isolation of the 'economic' sphere from the rest of society and justify an inquiry into a 'pure economic' domain (akin to the practice of modern neo-classical economics).

This state of affairs can somewhat explain the Chartalist skepticism over the substance of scholarship produced in ancient economic history, economic anthropology, and numismatics, as the bulk of the literature has uncritically reproduced a Metallist (or Mengerian) framework for the analysis of money. Even John Maynard Keynes[3] ([1930] 1971), whose approach to money reflected a Chartalist bent, abandoned his historical inquiry into the origins of money in ancient Near Eastern empires (his famous "Babylonian madness") after the rich body of literature produced by the younger German Historical School "had been more or less expunged from the growing economic orthodoxy" (Ingham 2000, 16-17) and Metallism was firmly engrained as the underlying theoretical framework.

With Metallism remaining the dominant framework for the analysis of money, its origins and nature "whatever the facts may be" (Goodhart 1998, 409), Chartalism has been largely considered an alternative (and thus, marginal) framework (Ibid., 407). No doubt, the more "formal and elegant terms" (Ibid., 409) of analysis offered by the Metallist perspective can, to a large extent, explain its uncritical acceptance within the economic orthodoxy. As is well known, economic orthodoxy prefers the elegancy of formal models and deductive reasoning over the substance of institutional-historical inquiry. Yet, the elegancy of formal analysis is not the only reason for the acceptance of Metallism as the prevailing theoretical framework for the analysis of money's origins and nature.

Perhaps even more important is the socio-economic philosophy towards which the Metallist perspective is geared. More specifically, the spontaneous process of money's origins devoid of any intervention or presence of the state, the self-organizing nature of societies comprised of private self-seeking and rational individuals, the ubiquitous presence of economic exchange (trade) as a dominant mode of socio-economic integration, the overall 'invisible-hand'

[3] Keynes became so consumed with the puzzling question of money's origins in the ancient Near-Eastern societies that he referred to it as his 'Babylonian madness'. Keynes devoted five to six years to this project, incessantly studying numismatics and metrology. "At times, he thought the enterprise to be 'purely absurd and quite useless'; but, none the less, 'became absorbed to the point of frenzy'" (Ingham 2000, 6).

type of explanations for the origins of one of the most important social institutions, resonate well with the socio-economic philosophy of the neo-classical economics orthodoxy.

Thus, it is important to note that the acceptance of Metallism within the economic orthodoxy is due to both 1) the unshakeable attachment of mainstream economics to the formal analysis, and 2) the specific social ideology implicitly and explicitly present within the Metallist framework. At this point it is also interesting to note that, despite its strong ideological underpinning, the Metallist perspective prides itself in alleged ideological neutrality. After all, it is all about politically neutral transaction cost minimization processes, unlike the Chartalist involvement with the "messier political factors" (Innes 1913, 409) such as the state and its ability to impose a debt relationship upon the underlying population.

General Theory, Empiricism and Historical Specificity

Because a significant part of this research is devoted to examining historical, anthropological, archeological and numismatic accounts, and, further, towards formulating a theoretical framework of money's origins, the following methodological issues have to be considered:

1) The problem of empiricism vs. general theory
2) The relationship between theory and evidence (i.e. to what degree theoretical insights inform the analysis of historical, archeological and other evidence?)
3) The degree of generality of a theory of money's origins

In one way, this research could be viewed as a reaction against those general, a priori forms of theorizing about the origins of money (e.g. Metallism) that have given little or no consideration to the actual historical and institutional contexts in which the earliest moneys emerged, but, rather, deduced their theoretical framework from a set of a priori assumptions that are aimed at transforming different forms of socio-economic integration into a potential market system. At the same time, however, this research is not an exercise in pure empiricism. Both empiricism and general a priori theorizing in social sciences suffer from severe intellectual and methodological limitations (Hodgson 2001, 8). Let us explore these methodological issues in more detail. What exactly do we mean by the opposing methodological extremes of 'general theorizing' and 'pure empiricism'?

The Problem of General Theory vs. Pure Empiricism

By general theory we mean any attempts to understand societies and institutions that are "largely unconfined to any historically specific epoch or type of social structure" (Hodgson 2001, 6). General theories commonly provide theoretical explanations "in terms of features that are assumed to be common to most conceivable social or economic systems" (Ibid.). General theories are commonly built upon a set of a priori assumptions deemed universal in time and space rather than being historically and culturally specific. Deductive reasoning follows and a theory emerges logically. Attempting to fit all socio-economic circumstances into one theory, general theory inevitably denies a possibility of historically and institutionally specific circumstances (Ibid., 5, 7).

Empiricists, on the other hand, ascertain that the only way to understand reality is through detailed, empirical investigation. Extensive empirical inquiry is taken as the only basis for theoretical generalization, if it is possible at all. "It is believed that the search for truth is an empirical matter; it involves the gathering of data rather than the unsupported erection of theoretical postulates" (Hodgson 2001, 8). Today, this empiricist position is rejected by almost all philosophers of science for a variety of reasons.

To begin with, any empirical inquiry inevitably involves a priori acts of classification and taxonomy (for example, what is and what is not 'money'). Theoretical abstractions are necessary to classify empirical phenomena, and, hence, to begin to discern, analyze and explain them (Hodgson 2001, 81).

> . . . trying to establish any empirical regularity, acts of classification or taxonomy are unavoidable. For empirical inquiry, entities are placed into groups. The most important properties and relations are identified. Connections are made. Accordingly, all empirical investigation involves prior judgments of sameness and difference. For example, we cannot examine transaction costs in firms without having first a notion of what is, and what is not, a transaction cost is not, and a firm. Classification, by bringing together entities in discrete groups, must refer to common qualities. These qualities themselves have generality: they must be assumed to endure through space and time. (Ibid., 8-9)

> . . . all descriptions of facts are theory-laden, and all descriptions are dependent on prior theories and conceptual frameworks. In short, no fact can be identified, not given any meaning whatsoever without some pre-existing conceptual framework. (Ibid., 75)

Secondly, the evidence itself, or the empirical data on their own, cannot suggest, locate, or establish the relationships of cause and effect. In other words, the evidence in itself cannot provide causal explanations – the goal of any scientific inquiry (Hodgson 2001, 9, 76). While data can show us correlations between sets of events, these correlations are not necessarily indicative of the underlying mechanisms of cause and effect (Ibid., 76). Rather, prior conceptual-theoretical frameworks will be required to suggest and formulate possible causal relations and to further test them against empirical evidence, if possible.[4]

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[4] Yet, as emphasized by Hodgson (2001), this does not imply that "science *always* works by first formulating a theoretical explanation and then testing it" (Ibid., 9). In the history of science,

Let us now turn to a case of an economic historian working on the questions of money's origins. While he may wish to emancipate himself from a theoretical bias (e.g. Metallism or Chartalism) and work with historical (and other) evidence as the only point of reference, this task will prove impossible. Firstly, one has to determine what is and what is not, money, which requires some prior conceptual-theoretical framework(s). Secondly, if one mistakenly perceives history as a pure narrative and description of 'facts', it can be demonstrated that such a 'pure' narrative is impossible because all descriptions of 'facts' are to some extent theory-laden. Prior theories and concepts will be necessary to formulate any factual statement (Hodgson 2001, 9, 75). Further, if we are to move to a different, more accurate understanding of history as analysis of underlying causes and relationships, then, again, it can be shown that theory will have primacy over facts.

The Lessons of the Methodenstreit

The lessons of the Methodenstreit (the 'battle of methods') between the Austrian branch of neo-classical economics and the German Historical School are especially relevant because the analysis of money was "a prominent issue" (Ingham 2004, 10), if not at the "centre stage" (Ibid., 47) of this methodological dispute:

> It is very significant that the analysis of money was a prominent issue in the Methodenstreit that shaped the disciplinary divisions in the social sciences in the late nineteenth and early twentieth centuries. (Ibid.)

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there are many cases where facts emerged without a theory to explain them. Such facts can further inform the formation of new theories (Ibid.).

Here, the German Historical School put its main emphasis on the importance of institutions and historical context when analyzing complex socio-economic phenomena (Forstater 2007, 96). The members of the Austrian School (such as Carl Menger), on the other hand, advocated a more conventional economic analysis that commonly relied upon deductive reasoning and formulation of 'universal laws' based upon a set of a priori assumptions about the economy and the economic behavior of individuals (Ibid., 96).

Yet, contrary to a common misunderstanding, the members of the Historical School did not reject the need to formulate theory (Hodgson 2001, 27, 81). While they critiqued the deductive method of analysis as overly abstract, while they rejected the existence of natural or universal laws of the economy, and encouraged the use of inductive-statistical and historical methods, the members of the Historical School did not neglect the need to formulate theory (Hodgson 2001, 27, 75-76, 81-83). The problem with the Historical School was, rather, their belief that theory could emerge from or build upon mere data or empirical phenomena "and facts could be ascertained independently of concepts or theories" (Ibid., 75).

> Generally they placed their faith in the philosophical method of induction. The facts, they believed, would be their salvation: theoretical development would come afterwards. (Ibid., 78)

According to Hodgson (2001), the Historical School failed "to understand sufficiently that the empirical data alone could not reveal the causal mechanisms involved" (Ibid., 76). This is what made the Historical School so vulnerable to the 'attack' by Carl Menger and the Austrian School who "rightly argued that theoretical presuppositions were necessary before empirical phenomena could be described and understood" (Ibid., 81).

Importantly, the methodological dispute did not give a clear victory to either side (Hodgson 2001, 90). In the wake of the Methodenstreit, both Menger and his Historical School opponents “spent much time in attempting to revise and refine their views in the light of the dispute” (Ibid.). The ‘middle path’ lesson of the Methodenstreit was that while the “absolutism of theory” should be abandoned, theoretical insights could not be eliminated altogether (Laum 1924a, 3-4). Since the time of the Methodenstreit, it has been widely recognized that an economic historian cannot work without theoretical terms. Theoretical insights serve as analytical tools that help recognize underlying historical causes and relations which someone without a theoretical background could easily overlook. Theoretical terms are necessary to both formulate factual statements and to uncover causal relations (see Laum 1924a, Gay 1953, Clapham 1953, Einzig 1966, Hodgson 2001).

How General Is a Theory of Money’s Origins?

Finally, my goal is not to develop a universal theory or a universal law of money’s origin applicable to all societies. Rather, my goal is to formulate historically and institutionally grounded accounts of money’s origins in ancient Lydia and Greece, and in ancient Mesopotamia. I do not claim that there were no differences in specific mechanisms of money’s origins in different societies.

While there can be no universal theory of money’s origin independent of time and space, a theoretical generalization can be made that the origins of money always involved a specific set of underlying social structures such as power asymmetries, debt relations, the presence of a central public authority, centralized redistribution, and socio-economic inequality. These theoretical generalizations, at the same time, do not preclude a possibility that specific mechanisms of money's emergence may vary (and in fact varied) depending on concrete historical, institutional, geographic, geological and climatic (and other) conditions of different societies.

On the issue of historical and geographical specificity, I side with Hodgson (2001, 23) who argued that by over-emphasizing the similarities, and neglecting the differences, "general theory can clumsily obscure all historical and geographical differences between different socio-economic systems" (Ibid., 12). At the same time, however, avoiding general theory or universal laws and acknowledging the differences does not preclude us from retaining a set of general principles, guidelines, and theoretical frameworks (Ibid., 3, 279, 282).

> While we may retain general principles or guidelines, detailed analyses of particular events, structures and circumstances are required. (Ibid., 3)

This general theoretical framework, however, must operate "at the most abstract level, concerning features common to all evolving complex systems" (Ibid., 282). The purpose of informing our analysis with this most abstract theoretical level "is to adduce a framework of ideas and principles by which to build something more solid and historically sensitive" (Ibid.).

> It is that the entire analysis of any given system cannot and should not be based on universal concepts alone. The first levels of abstraction must be quite general, but if those universalist layers are extended too far – as in the case of neoclassical theory – then the danger is that we end up with conceptions that are unable to come to grips with reality. The scope of analysis of the more general levels of abstraction should be confined. (Ibid., 279-80)

This most abstract theoretical level will allow us to explore historical, institutional, geographic and other specificities of different societies.

> If different socio-economic systems have features in common, then, to some extent, the different theories required to analyze different systems might reasonably share some

common characteristics. But sometimes there will be important differences as well. (Ibid., 23)

Substantivist economic anthropology can be brought as a case in point. To begin with, one of the major tasks of anthropology is to "examine the universal features of human culture" (Hodgson 2001, 283). Yet, these universal features must be ascertained on some basic level of abstraction (Ibid.). For example, as noted above, Karl Polanyi (1971) distinguished between three fundamental types of integrative societal patterns, and argued that every society would exhibit one of them as a predominant arrangement (i.e. reciprocity, redistribution or market exchange). Thus, while ascertaining "universal cultural principles" (i.e. a dominant mode of socio-economic integration), Substantivist economic anthropology at the same time retains institutional and historical specificity (e.g. reciprocity, redistribution, and market exchange) (Hodgson 2001, 283).

Paving the way towards a further development of historically sensitive economics, a project that has been "a tortuous story lasting more than 160 years" (Hodgson 2001, 273), Hodgson put forth the following methodological framework, which I attempt to follow in my work. Hodgson summarized his methodological standpoint in the eight pillars quoted below:

1. Science cannot be merely the analysis or description of empirical particulars. Descriptions themselves always rely on prior theories and concepts, either explicit or tacit.
2. Science cannot proceed without some general or universal statements and principles. Explanatory unifications and generalizations that explain real causal mechanisms are worthy goals of science.
3. However, general theories of complex phenomena are always highly limited simplifications, largely because of the complexities and computational limitations involved in attempting any truly general theory.
4. Unifications and generalizations in social science provide powerful conceptual frameworks, but they often lack the ability to discriminate between and adequately explain concrete particulars.
5. Purportedly general theories have explanatory power in the social sciences only when additional, confining and particular, assumptions are made.

6. In dealing with complex (socio-economic) systems, we require a combination of general concepts, statements and theories, with particular concepts, statements and theories, relating to particular types of system or subsystem.
7. The most powerful and informative statements and theories in the social sciences are those that emanate from particular theorizing that is targeted at a specific domain of analysis and also guided by general frameworks and principles.
8. The social sciences must thus combine general principles with theorizing that is aimed at specific domains. These operate on different levels of abstraction. (Ibid., 39-40)

Defining the Term 'Money'

> Most numismatists, at some time or other, have put to them the question, 'How did money begin?'. The chances are that they counter it by a distinction, 'It depends upon what you mean by money.' They do this not out of the Joadian desire to gain time, whether to collect their thoughts or to formulate their reply more elegantly, but because of the ambiguity involved. For many people 'money' means 'coin', and what one is really being asked is 'How did coinage begin?' 'How did money begin?' is a quite different question, and one that cannot be answered so easily, or in the same way.
>
> —Philip Grierson, The Origins of Money

One of the most important methodological issues to be considered in this research is the conceptual definition of the term 'money'. What definition of the term 'money' should be adopted when working on the questions of money's origins? Here, as was well documented by Paul Einzig (1966), a scholar is commonly confronted with a "dilemma" involving two alternatives: 1) proceeding with a specific preconceived definition of money; or 2) letting this definition emerge from the historical, archeological, anthropological and other material collected during the research (Ibid., 22). Both methods suffer from serious methodological shortcoming.

For example, if a scholar proceeds with the second method, i.e. without any specific a priori definition of money adopted, his research may be extended over objects which could not be properly described as money; or objects may be excluded from research which should have been included (Einzig 1966, 22). The result often will be "a loose and indiscriminate application of the term "money", leading to much confusion of thought, arguments at cross-purposes, and the production of much misleading or irrelevant information" (Ibid.). On the other hand, should a researcher follow the first method and adopt a strict definition of money in advance of the actual research, the inquiry will likely become subordinate to economic dogmatism, restricted and prejudiced by the strict a priori definition of money adopted (Ibid.).

The Fallacy of Proceeding with an a priori Definition of the Term 'Money'

Those scholars who follow the first method commonly use the standard (modern) textbook enumeration of money functions as their point of reference. Specifically, modern textbooks uniformly define money in terms of the four functions performed by money in a market-oriented economy. These functions include a medium of exchange, a store of wealth (value), a unit of account and a standard of deferred payments. Thus, when following the first method of inquiry, the possibilities for conceptual definition(s) of money are limited from the start by the four functions of money performed in a modern market economy. John Smithin (2000) brings this problem to light in a passage quoted below:

> Mention of the textbook functions of money highlights another difficulty which seems endemic in most discussions of monetary theory. The textbook triad (medium of exchange, store of value, unit of account) has in itself tended to structure and limit the discussion [of money] in a variety of ways. (Ibid., 5)[5]

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[5] Here, Smithin (2000) refers to the *three* functions of money, thereby subsuming the 'unit of account' and the 'standard of deferred payments' functions into one single category (that of a 'unit of account').

Here, two approaches are possible. Firstly, money can be defined as that which fulfills each of the four functions of money "in any given society at any point in time" (Smithin 2000, 5). Alternatively, "there are debates on which [one] is the most important or significant of the different functions of money" (Ibid.). A similar point has been raised by Geoffrey Ingham (2004):

> Leaving aside . . . economic analysis's misleading implication that the functions explain the existence and nature of money, the presence of multiple attributes in the list raises two questions. Do all the functions have to be performed before 'moneyness' is established? If not, which are the definitive functions? In short, how is money to be uniquely specified? (Ibid., 5)

Economists have traditionally committed the fallacy of choosing one function of modern money as primary and definitive – "their favorite definition of modern money" (Einzig 1966, 22). They further tend to project this definition into ancient societies and even primitive communities attempting to formulate theoretical accounts of money's origins. The favorite primary definition of money chosen is commonly based on the theoretical perspective adopted by a researcher (see Laum 1924a, Einzig 1966, Grierson 1977). For example, a Metallist would maintain that the earliest money was a universally accepted medium of exchange (commodity), while a Chartalist would argue that the earliest money was a unit of account introduced by a central public authority (e.g. a state[6]) in a context of monetary taxation or monetary debts. The passages quoted below illustrate this point:

> The original (primary) function of money, common to all its manifestations and stages of development, is that of a generally used intermediary of exchange. (Menger [1909] 2002, 75)

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[6] For convenience and consistency of exposition, the term 'state' will be predominantly used in reference to the Chartalist perspective. However, this is not to imply that the Chartalist account is limited to an introduction of money by a *state*. Rather, it is any sovereign, central public authority that the Chartalist perspective refers to in a context of monetization.

> Neo-classical analysis of money "is concerned exclusively with money as a medium of exchange. The other functions (unit of account, means of payment, and store of value) are taken for granted or assumed to follow from the medium of exchange functions. (Ingham 2000, 17)

> While many economists (and historians and anthropologists) would prefer to trace the evolution of the money used as a medium of exchange, our primary interest is the unit of account function of money. . . . [W]e will speculate on the origins of money, and specifically, on the money of account. (Wray 1998, 47)

Clearly, the alternative definitions of money presented above are based upon modern institutions, such as market economy in the case of Metallism, and, monetary taxation and monetary debts in the case of Chartalism. To apply such definitions of money into ancient societies is to imply that modern and ancient institutions and modes of socio-economic integration are equivalent or very similar (see Laum 1924a; Einzig 1966). As a result of such applications, "the stories told about money's evolution shed light on the nature of money assumed by the story-teller" (Bell and Wray 2004, 11). For example, the credit money approach, which shares important similarities with the Chartalist perspective, logically establishes the concept of money as 'money of account', and then attempts to locate the actual historical and social contexts of the origins of money of account.

> The elaboration of this argument involves establishing the 'logical origins' of money in the concept of money of account, then locating the latter's actual historical and social conditions of existence. (Ingham 2000, 24)

Similar methodological approaches are reflected in the Chartalist literature. For example, while Wray (2004) admits that "money is social in nature; it consists of a complex social practice" (Ibid., 231), he, at the same time, argues that "tracing the origins of money necessarily requires selective attention to those social practices we associate with money – [yet] knowing full well that earlier societies had complex and embedded economies that differ remarkably from ours" (Ibid.).

> When we attempt to discover the origins of money, what we are in fact attempting to do is to identify complex social behaviors in ancient societies that appear similar to the complex social relations in our society today that we wish to identify as 'money'. (Ibid.)

Here, it bears noting that the later Carl Menger ([1909] 2002) was fully aware of this methodological issue of projecting modern money functions in ancient history. He openly critiqued the common "ahistorical" practice of "stringing together" money functions familiar to us and transplanting them into distant history:

> All those definitions of money that are nothing other than a superficial stringing together of the functions and forms of money derived from observing the trade of modern civilized nations, or nothing other than an arbitrary selection from these, fail to recognize the problem of the development of the concept of money and must be regarded as both inexact and, since they are mostly limited to the mere observation of money in its most modern manifestations, as ahistorical. (Ibid., 75)

Yet, while aware of this methodological flaw, Menger could never escape it, postulating, instead, that the "original (primary) function of money, common to all its manifestations and stages of development, is that of a generally used intermediary of exchange" (Ibid.).

Thorstein Veblen on the Problem of a priori Preconceptions

The scholars' habit of projecting their ideal of money into ancient history rather than inquire into historical-institutional causal relations of money's origins and early development was noted by Thorstein Veblen[7] as early as 1898. Veblen (1898) astutely observed that money is

[7] During the time of Veblen's writing, 'commodity money' was the accepted monetary theory (Ingham 2004, 15-16).

commonly “discussed in terms of the end which . . . it should work out according to the given writer’s ideal of economic life, rather than in terms of causal relation” (Ibid., 383). Expressing a hope that historical-anthropological inquiry would alter the then (and now) prevailing trend of transplanting modern institutions and habits of thought into ancient history, Veblen cited an eminent anthropologist of his time, M. G. de Lapouge, in the opening sentence of his seminal contribution “Why Economics is Not an Evolutionary Science” (1898):

> Anthropology is destined to revolutionize the political and the social sciences as radically as bacteriology has revolutionized the science of medicine. (Ibid., 373, citing M.G. de Lapouge)

As an alternative methodology, Veblen (1898, 1900, 1909) developed the concept of cumulative institutional change. To begin, the notion of ‘cumulative change’ clearly conveys the idea that institutions are not of a static character, as they are continuously transformed over time. No institution or institutional phenomenon, – underscored Veblen (1909), – can be “taken for granted as pre-existing in a finished, typical form and as making up a normal and definitive . . . situation” (Ibid., 624). Because social scientists deal with the phenomena of institutional change (Ibid., 621), any theory of institutions must necessary account for their “genesis, growth, sequence, change, [and] process” (Ibid., 620). A theory of institutions cannot be a theory of an end state[8].

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[8] While the evolving nature of institutions (including money) is emphasized here, this is not to imply that no important institutional characteristics *prevail* in the course of their historical development. For example, while it may seem that the institution of money at the stages of its origins and early development was fundamentally distinct from the institution of money as we witness it today, on a closer examination it can be shown that there are certain characteristics of money as a social institution that have persisted since its emergence. After all, as Wray (2004) has put it, “if we are to understand the nature of money, it is important to uncover the social relations that are obscured by this institution” (Ibid., 232). Arguably, a specific set of social relations provides for continuity in the evolving institution of money. Otherwise, we would find

> In so far as modern science inquires into the phenomena of life . . . it is occupied about questions of genesis and cumulative change . . . . (Ibid., 627)

However, when scholars project modern functions of money, together with modern institutions and habits of thought into ancient societies in order to formulate theoretical accounts of money's origins, they inadvertently imply an assumption that modern institutions (including money) are very similar if not equivalent to their non-modern predecessors. In other words, they imply an assumption that institutions, including money, have not changed or evolved over time. Specifically, it is the modern institution of money that is "taken for granted as pre-existing in a finished, typical form" (Veblen 1909, 624), as representing a 'definitive situation'. This is precisely the fallacy of method that Veblen warned us against.

When institutions are "conceived to be given a priori in unmitigated state," – argued Veblen (1909, 624), – they tend to become "part of the nature of things; so that there is no need of accounting for them or inquiring into them, as to how they have come to be such as they are, or how and why they have changed and are changing" (Ibid.). Instead, the 'ready-made' state of institutions (such as modern money) is projected back into history and installed there as 'given'. But any theory of institutions, including that of money, must be "a theory of a process, of an unfolding sequence" (Veblen 1898, 375). Correspondingly, the current (modern) institutional state of money cannot be projected back into distant history. As Veblen (1909) argued:

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ourselves in "the worst of all theoretical worlds" attempting to apply the same term, 'money', to cover different institutional phenomena (Hodgson 2001, 275). In other words, if not for the continuity in the specific set of social relations that have underpinned the institution of money, we could never define and grasp this institution (however broadly).

> But it would be mere absentmindedness in any student of civilization therefore to admit that these or any other human institutions have this stability which is currently imputed to them . . . . (Ibid., 627)

Today's institutions, – wrote Veblen, – "are no doubt good for their purpose as institutions, but they are not good as premises for a scientific inquiry into the nature, origin, growth, and effects of these institutions" (Ibid.). As a premise of inquiry, the state of modern institutions and their acceptance as given and immutable, limits inquiry in decisive ways, to the point of shutting if off (Ibid.).

Instead of projecting modern institutions and habits of thought into distant history, Veblen (1901, 1909) urged scholars to scrutinize historical details[9]:

> The scrutiny of historical details serves this end by defining the scope and character of the several factors causally at work in the growth of culture, and, what is of more immediate consequence, as they are at work in the shaping of the economic activities and the economic aims of men engaged in this unfolding cultural process as it lies before the investigator in the existing situation. (Veblen 1901, 80)

> . . . any science, such as economics, which has to do with human conduct, becomes a genetic inquiry into the human scheme of life; and where, as in economics, the subject of inquiry is the conduct of man in his dealings with the material means of life, the science is necessarily an inquiry into the life-history of material civilization, on a more or less extended or restricted plan. (Ibid., 1909, 627-28)

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[9] Here, it bears noting the interface between Veblen and the German Historical School. Even though critical of the School's stance towards the development of theory, Veblen was nevertheless influenced by the Historical School (Hodgson 2001, 144). For example, Veblen's works clearly "undermined some of the major supports for an entirely general or ahistorical economic theory" (Ibid., 148). Further, Veblen's writings had major implications for the problem of historical specificity in economic theory, even though Veblen did not directly address this problem (Ibid., 140), i.e. Veblen did not engage into "the more sophisticated discussion of the relation between theory and empirical investigation" as in the later German Historical School (Ibid., 150).

The Substantivist School of Anthropology on the Problem of a priori Preconceptions

The Substantivist School of anthropology in the tradition of Karl Polanyi has embarked on this task of a detailed historical and anthropological inquiry. Demonstrating that money's origins, development and social functions are closely intertwined with particular institutions, transactional modes and forms of socio-economic integration of different societies (Dalton 1971, 169), the Substantivist School has likewise critiqued the common practices of projecting modern money functions into ancient history. George Dalton (1971) summarized this fundamental point in the passage quoted below:

> The essential point is that the characteristics of money in any economy, including our own, express the basic organization of that economy. . . . Money is linked to specific modes of transactions. (Ibid., 169)

In a similar vein, Walter Neale (1971) formulated a Substantivist anthropological position according to which the use of money does not unambiguously "tell us the kinds of transactions in which money is used" (Ibid., 25). Correspondingly, neither does the use of money necessarily imply a commercialization of economic activities (Ibid.).

Following Karl Polanyi and the Substantivist School of Anthropology, Neale (1971) argued that the study of money must always be situated in its proper historical and institutional contexts. The economic anthropologist went as far as to suggest that while we can use the term 'monetized', we must "always be aware that there are no necessary implications about specific uses of money or specific consequences of monetization" (Ibid., 28). Similarly, Neale argued that "commercialization of some kinds of economic activities does not imply that all, or even the most important economic activities are market-oriented or market-dependent" (Ibid., 25).

Outside the domain of Substantivist economic anthropology, the renowned numismatist Philip Grierson similarly argued that money cannot be universally conceived in terms of an institutional structure familiar to us. Grierson (1977) was highly critical of the prevailing habit of discussing money in terms of its modern functions, and within the overall framework of modern institutions and habits of thought:

> If the concepts of primitive religion or political organization cannot be properly analyzed in terms of those familiar to us in western society, as most anthropologists would now hold, why should we expect otherwise where money is concerned? (Ibid., 15)

As an alternative methodology, Grierson (1977) suggested that money "must be considered in the context of the society in which it exists, with different uses of money institutionalized separately in different monetary objects to carry out reciprocal and redistributive transactions" (Ibid., 15). Grierson (1977) also questioned the practice of taking the evidence of 'primitive' moneys in modern non-western societies when studying the origins of money in early historical periods, arguing that primitive money's "present functioning may not throw any light on how they originated and were first used" (Ibid., 13).

Method Adopted in This Research

As discussed earlier, while evidence cannot be understood without a set of theories and concepts, no single theory should form a basis for a theoretical bias (Hodgson 2001, 83). For example, while working on the questions of money's origins, neither the Chartalist nor the Metallist framework with its unique definition of the term 'money' should be taken as an end in itself. Neither the Chartalist nor the Metallist definition of the term 'money' should be treated as a "measuring rod" when approaching historical and other inter-disciplinary evidence. To do so, and to attempt to bring historical, archeological and other evidence in support of a chosen theoretical perspective would be a violation of historical method (see Einzig 1966).

Rather, the theoretical perspectives offered by Chartalist and Metallist scholars should be approached as analytical tools that help recognize underlying historical causes and relationships which could have been overlooked if a prior theoretical framework(s) was absent. Likewise, the specific definitions of the term ‘money’ proposed by the Chartalist and the Metallist perspectives should be handled as tentative generalizations, as research hypotheses, the validity of which will have to be tested against historical and archeological material collected during the research (see Gay 1953). Theoretical insights provided by Chartalism or Metallism may be dismissed, validated or modified (reformulated) once the knowledge of historical, archeological, and other evidence is obtained.

CHAPTER 3

CHARTALISM AND METALLISM AS TWO CONTENDING PERSPECTIVES ON THE NATURE AND ORIGINS OF MONEY

> There has, in fact, been a continuing debate between those who argue that the use of currency was based essentially on the power of the issuing authority (Cartalists) – that is, that currency becomes money primarily because the coins (or monetary instruments more widely) are struck with the insignia of sovereignty, and not so much because they happen to be made of gold, silver and copper (or later paper) – and those who argue that the value of currency depends primarily, or solely, on the intrinsic value of the backing of that currency (Metallists). A conjoint debate exists between those who have argued that money evolved as a private-sector, market-oriented, response to overcome the transactions costs inherent in barter (let us call them Mengerians), and those who again argue that the state has generally played a central role in the evolution and use of money (Cartalists).
>
> —Charles A. E. Goodhart, The Two Concepts of Money

Chartalism and Metallism represent two contending theoretical frameworks for the analysis of money's nature, origins and social functions. While a brief overview of the Chartalist and Metallist theories was offered in chapter 2, in what follows I will provide a more detailed examination of these two perspectives. As was noted earlier, Metallism remains the dominant paradigm not only in economics, but in other social and historical sciences, while Chartalism is considered a heterodox alternative.

The Chartalist or State Money Approach

The Chartalist framework is rooted in the seminal contribution of Georg Friedrich Knapp's book The State Theory of Money (1905). A key distinction of the Chartalist approach to the nature and origins of money is its alternative to the Metallist (Mengerian) or 'exchange theory of money' view. Published originally in German in 1905, Knapp's work was further translated into English in 1924[1]. This was more than three decades after an English translation of Carl Menger's article "On the Origin of Money" (1892) appeared in the Economic Journal.

Money as a Chartal Means of Payment

Knapp's State Theory of Money was clearly written in response and opposition to the "metallistic view" of money advanced by Carl Menger. In Knapp's own words, his goal was to "replace the metallistic view [of money] by one founded on Political Science" (Knapp 1924, viii). More specifically, the political science aspect of Knapp's approach rests in his underlying proposition that the institutions of money and the state are inseparable. Consequently, any attempts to deduce money and the monetary system "without the idea of a State" are "not only out of date, but even absurd" however widespread these attempts may have been (Ibid., viii). Money, in Knapp's view, is always "associated with the State which introduces it" (Ibid., 40). For this and other reasons explicated below, Knapp's theory of money is also known as the State money approach. Below I examine Knapp's State money framework in more detail.

First and foremost, Knapp noted that money is a means of payment:

> All money, whether of metal or of paper, is only a special case of the means of payment in general. (Knapp 1924, 2)

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[1]The first German edition of 1905 was followed by the second, third and fourth editions in 1918, 1921 and 1923, respectively. The English translation of 1924 is based on the fourth German edition of *The State Theory of Money* published in 1923 (Knapp 1924, v).

But what exactly did Knapp mean by “the means of payment in general?” By emphasizing the general form of the means of payment, Knapp underscored that their validity as such was independent of their intrinsic composition. Consequently, the validity of a means of payment is independent of its role as an exchange commodity (Ibid., 2). In Knapp’s approach, an exchange commodity would be ‘a special case’ of the means of payment in general (Ibid., 4). Knapp thus subsumed precious metals (such as gold and silver) into the category of a special rather than general case of a means of payment.

Knapp employed an adjective ‘chartal’ to describe a means of payment the validity and general acceptability of which is independent of its intrinsic composition (Knapp 1924, 32). Derived from Greek chártēs, meaning a papyrus leaf, a sheet of paper, literally, something to make marks on[2], the adjective ‘chartal’ clearly conveys an idea that a validity of a chartal means of payment, or money, is independent of its intrinsic value. This being said, a chartal means of payment can be perceived as a simple pay ticket or pay token to use the terminology employed by Knapp (Ibid.).

This idea of a ticket or a token communicates no information and attributes no significance to the actual physical material from which a chartal means of payment is produced. It can be “made both of precious and of base metal and also of paper, to mention only the most important” (Knapp 1924, 32). A chartal means of payment is therefore not bound to any particular material, whether intrinsically worthless or valuable (see also Wray 1998, 23-29).

> The Chartal form does not forbid the use of costly material for the making of means of payment, but, on the other hand, it does not demand it. Chartality makes the concept of the means of payment independent of the material. (Knapp 1924, 40)

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[2] *Webster’s New Universal Unabridged Dictionary*. Under ‘charta’.

Money as a Unit of Account for Denominating and Repaying Debts to the State

If money is a chartal means of payment (Knapp 1924, 38) the material content of which is not essential to establish its general validity and acceptability, then what is essential? If money is not intrinsically valuable, why does the public generally accept it as a means of payment in private transactions? This is where the political science aspect of Knapp's approach comes into play.

Recall that in Knapp's argument, the institution of money is inseparable from that of the state. To begin, the state is the political and the economic entity that introduces money, or chartal means of payment, into circulation. Undoubtedly, a mere introduction of the chartal means of payment by the state does not yet explain its general acceptance among the population, more so when the chartal means are intrinsically worthless. The key to understand money's general acceptance by the public, then, is to understand money's vital role in the context of a debt relationship between the state and its underlying population.

For example, consider a situation where a state imposes a tax obligation upon its population, denominated in a unit of account the state itself created (or produced). Everyone with a tax obligation to the state will need to obtain 'that which is necessary to pay taxes' (Wray 1998, 36). A universal demand for 'that which is necessary to pay taxes' will be created. Thus, it is the unique power of money to extinguish debt obligations to the state (such as taxes) that gives it its value and general acceptability. Money is generally demanded and accepted because "the state has the power to impose and enforce tax liabilities and because it has the right to choose 'that which is necessary to pay taxes' ('twintopt')" (Ibid.).

> In the Chartalist approach, the public demands the government's money because that is the form in which taxes are paid. (Ibid., 37)

> Once the state imposes a tax on its citizens, payable in a money over which it has a monopoly of issue . . . the public needs the government's money in order to pay taxes. (Ibid., 18)

It should be stressed that "a simple declaration [by the state] that such and such is money" (Lerner 1947, 313), or an attempt to compulsorily establish money's general acceptance, "will not do" (Ibid.). Rather, the state must be willing to accept the proposed money in payments to itself (Wray 1998, 26). Emphasizing money's primary role as a unit of account in which debts to the state must be repaid, Knapp (1924) argued that "the money of the state is not what is of compulsory general acceptance, but what is accepted at the public pay offices" (Knapp 1924, vii). The follower of Knapp, Abba Lerner, succinctly summarized this focal point of Knapp's Chartalism in the passage quoted below:

> The modern state can make anything it chooses generally acceptable as money and thus establish its value quite apart from any connection, even of the most formal kind, with gold or with backing of any kind. It is true that a simple declaration that such and such is money will not do, even if backed by the most convincing constitutional evidence of the state's absolute sovereignty. But if the state is willing to accept the proposed money in payment of taxes and other obligations to itself the trick is done. Everyone who has obligations to the state will be willing to accept the pieces of paper because they know that the taxpayers, etc., will accept them in turn. On the other hand if the state should decline to accept some kind of money in payment of obligations to itself, it is difficult to believe that it would retain much of its general acceptability. (Lerner 1947, 313)

This explains why Chartalism is also known as the 'taxes-drive-money' approach (Wray 1998, 18). Consequently, this leads to the Chartalist understanding of 'sovereignty' as "the power to tax and collect in the token of choice" (Rochon and Vernego 2003, 58)[3].

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[3] Recent research by Tinel (2010) highlights the prescience of Norbert Elias's account of the historical co-evolution of money and the power of the state in the 13th-14th century France. Elias shows how the central power of the evolving state is – in addition to military means – reciprocally related to the monopoly over tax levying. Once Princes and Kings established a

Monetization Mechanisms

Now, the question arises about the specific manner in which the population could obtain the means of payment necessary to discharge their debts to the state? The answer to this question is that the state's 'chartal pieces' can be obtained by supplying goods and (or) labor services to the state: the state "need only define what must be done to obtain 'that which is necessary to pay taxes'" (Wray 1998, 54). In other words, the state need only stipulate what goods and (or) labor services, and in what quantities and qualities, must be provided in exchange for the chartal means of payment (the issue of which is the state's monopoly).

In this context, Chartalist theories often argue that the state "uses taxes as a means of inducing the population to supply goods and services to the state" (Wray 1998, 37). The mechanism of monetary taxation is viewed as an alternative to using overt coercion (i.e. overt

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certain level of hegemony by eliminating their rivals in a brutal power struggle, their power could further be increased via the process of levying monetary taxes. The rulers learned that demanding taxes to be paid in their own money allowed them a solution to the problem of fragmentation of power. Now kings – instead of giving children parts of their domains – could simply pay out money. The important conclusion for the Chartalist theory of money is that the levying of taxes by the central authority caused a demand for money within the taxable population that lead to the stimulation of monetary exchanges and thus the institutionalization of markets (Tinel 2010). In the words of Elias (1982): "Again and again it is the military power concentrated in the hands of the central authority which secures and increases his control of taxes, and it is this control of taxes which makes possible an ever stronger monopolization of physical and military power" (Ibid., 215). Importantly, Elias does not argue that the Kings created money in the first place. Elias points out that money, which he describes as "a means of exchange" (Ibid., 49), never disappeared from circulation. What we see in the 11th century, then, is a resurgence of a money economy which previously receded in scale and scope (Ibid., 47). "It must be pointed out that money never went completely out of use in the older inhabited area of Europe. Over this whole period there were enclaves of money economy within the barter economy . . . . One can, therefore, always and very rightly ask about the "antecedents" of the money economy in the Christian West . . . . One can ask: where did the money economy originate?" (Ibid., 47). Thus, Elias is more concerned with the revival of the money economy in the context of political power consolidation in the 13th-14th century Europe, and points out to the role of levying taxes as an instrument of solidifying sovereign power.

force, violence, or threat thereof) to extract goods and services. Money is viewed as a non-violent means of establishing and maintaining a debt relationship between the state and its population. Though it is an alternative to overt force, money performs a coercive function as it enables the state to extract goods and services from its citizens. This logical monetization mechanism builds upon a previously non-existent debt relationship between the state and the underlying population (Ibid., 54-57). Here, monetization could be viewed as a solution to the work effort inducement problem. Yet, this is not to deny the more historical monetization mechanisms within the Chartalist perspective where money and taxation evolve out of fines.

Alternatively, money may be introduced by the state as a means of facilitating its fiscal base after a debt relationship between the state and the population was already in place. Arguably, collecting and managing the supplies of various goods obtained as in-kind payments of taxes could become quite burdensome and inconvenient. Further, in-kind taxation could result in an overabundance of some types of goods and a shortage of others (i.e. fiscal base imbalance) (Tymoigne and Wray 2005, 2; Goodhart 1998, 416).

> When taxes are received in goods or labor, the balance of goods (and labor) obtained will not be that required for public sector expenditure . . . . (Goodhart 1998, 416)

Moreover, in-kind taxation could create an "incentive for the taxpayer to provide the lowest quality goods" in payment of taxes or tribute to the state (Tymoigne and Wray 2005, 2).

To eliminate the above problems associated with payment of taxes in-kind, the state could introduce a mechanism through which payments would be standardized (Ibid., 2; Wray 1998, 50-51). Rather than payment of taxes in the form of various goods and (or) services, the state could stipulate payments in the form of standardized units the state itself created (Kraay 1964, 90). Upon collection of these units through taxation (yet, this time monetary rather than in-kind), the state could determine which goods and services to purchase from the population, as well as when to purchase them (Wray 1998, 50). The population would be willing to accept the state's money in payment for goods and services purchased by the state because a universal demand for 'that which is necessary to pay taxes' would be created via an imposition of a monetary tax (Ibid., 36-37). A passage quoted below illustrates this monetization mechanism:

> More specifically, it is believed that the state (or any other authority able to impose an obligation – what we will describe as 'sovereign power') imposes an obligation in the form of a generalized, social unit of account – a money – used for measuring the obligation. The next important step consists of movement from a specific obligation – say, an hour of labor or a spring lamb that must be delivered – to a generalized, money, obligation. This does require the pre-existence of markets, and, indeed, almost certainly predates them. Once the authorities can levy such an obligation, they can then name exactly what can be delivered to fulfill this obligation. They do this by denominating those things that can be delivered, in other words, by pricing them. To do this, they must first 'define' or 'name' the unit of account. (Wray 2004, 242-43)

Of course, the theoretical mechanisms outlined above are not to prove that this is the way that money actually emerged (Wray 1998, 57). As Wray noted, "there is no evidence to support an extreme position that taxes alone will be sufficient to create a monetary economy out of a traditional economy" (Ibid.). Further, evaluating the Chartalist proposition that money is a means of inducing the local population into supplying goods and labor services to a central public authority, Wray noted that real world governors did rely on force. Thus, it would be an extreme position to maintain that money emerged as a practical solution to the work effort inducement problem, as real world rulers generally relied on the threat of force and violence to extract goods and services from the underlying population. Besides, Wray also notes that "it is not apparent that any real-world [colonial] governor fully understood the implications of the taxes-drive-money view, even though many of them did explicitly acknowledge that taxes were imposed to induce indigenous populations to offer goods and labor services in exchange for 'twintopt'" (Ibid.).

Finally, Chartalist theories allow for an evolution of state money (and monetary systems in general) out of the archaic institution of Wergeld. This monetization mechanism deals with an institutional evolution of money and payments from Wergeld, to in-kind payments of tithes and tribute to a central public authority, and, finally, to standardized payments of taxes to the state.

Briefly, within the Wergeld system there was no need to standardize the form of payment(s) because compensations for personal injuries were commonly negotiated ad hoc, whether between the parties directly involved in the conflict or in central assemblies (Wray 2004; Peacock 2003-04). Yet, when payments for transgressions came to be made to a central public authority (rather than to the victim's family), standardization of payments became a matter of practical necessity (Wray 2004):

> At first, the authority might have levied a variety of fines (or tributes, tithes and taxes), in terms of a variety of goods or services to be delivered, one for each sort of transgression. When all payments are made to the single authority, however, this wergild sort of system becomes cumbersome. Unless well-developed markets exist, those with liabilities denominated in specific types of goods or services to which they do not have immediate access would find it difficult to make such payments. Or, the authority could find itself blessed with an overabundance of one type of good while short of others. (Ibid., 228)

Hence, the need to standardize the payment of tributes, tithes or taxes by denominating payments in a single unit of account to simplify matters (Ibid.).

Development of Private Markets

One of the key propositions within the Chartalist perspective is that development of private (domestic) markets took place after, and as a result of an introduction of money by the state in a context of a debt relationship (such as monetary taxation). An imposition of a debt relationship and an introduction of money as a means of discharging debts to the state precede the development of private markets and the use of money as a medium of exchange. In fact, all other money functions derive from money's primary role as a unit of account in which debts to the state are denominated and have to be repaid (Wray 1998, 23-29, 37, 51; see also Goodhart 1998; Wray 2004). Money will become "acceptable as means of settlement of private debts" after "the state first decides what it will use or accept as money in its own transactions" (Wray 1998, 26).

Recall that individuals will first transact with the state to acquire 'that which is necessary to pay taxes' (Wray 1998). Should they accumulate a surplus of the state's chartal pieces or tokens (i.e. more than what is necessary to discharge a tax liability in a given period) they could further transact with other individuals who are short of tokens. Those with a shortage of tokens could offer goods and services in exchange for a surplus of tokens accumulated by other individuals. In this way, the pay community between the state and the underlying population would eventually lead to the development of a 'private pay community' to use the terminology employed by Knapp (Wray 1998, 56).

Also note that in the Chartalist monetization mechanism(s), an imposition of a monetary tax by the state leads to a previously non-existent habit of evaluating goods (and services) in terms of an abstract unit of value (or unit of account). With the advent of a token-denominated debt to the state, the population is "confronted with an abstract unit of account with which all goods and services could be compared. If subjects sold services [and goods] directly to the state to acquire [tokens], then irrespective of their nature, the services [and goods] were assessed in terms of so many units of the [token], unlike the case in which taxes were paid in-kind" (Peacock

2003-04, 213). Correspondingly, if individuals engaged in private exchange of goods and services among each other, they would use the state's unit of account as a unit to express the value of different goods and services traded. Therefore, a monetary habit of thought, i.e. a habit of expressing the values of different goods and services in terms of a single abstract unit, would come into being as a result of an imposition of a token-tax (Ibid., 213; see also Wray 2004).

Finally, unlike the Metallist perspective which suggests the origins of money in a socially equal and politically symmetrical relationship of voluntary exchange, the Chartalist theories "necessarily connote (or at least imply) some underlying inequality, as those who claim obligations must be in a superior position to those who are obligated to the former. Otherwise, there would be no social reason to fulfill said obligations or any mechanism to enforce payment" (Henry 2004, 79). As Ingham has put it, money is "a system of social relations based on power relations and social norms" (Ingham 2000, 19; see also Ingham 1996). This conception of money as a social relation "differs radically from economic orthodoxy's fixation with the actual forms of 'money-stuff' as commodity-objects" or as symbols directly representing those commodities (Ingham 2000, 19). The orthodox approach "utterly fails to recognize that money necessarily consists in social relations between economic agents and between them and a monetary 'authority'" (Ibid.).

The Metallist or Mengerian Approach

The dominant perspective on money's origins and nature, Metallism is best known from the works of a prominent Austrian economist Carl Menger. Menger's article "Geld" [Money], first published in Handwörterbuch der Staatswissenschaften [Concise Dictionary of State

Science] in 1892, is up to this day considered "one of the most influential papers on the origin of money" (Latzer and Schmitz 2002, 1; see also Ingham 2000). An English translation of the abridged version of "Geld" (1892) further appeared in the Economic Journal in the same year. Prior to this, Menger expressed his theoretical perspective on money in the first edition of Grundsätze der Volkswirtschaftslehre (Principles of Economics) published in 1871. Menger subsequently elaborated his theoretical perspective on money's origins and nature in his numerous works[4], including further encyclopedia entries (1900, 1909) and the second edition of Grundsätze which appeared posthumously in 1923[5].

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[4] Ikeda (2008, p. 58) provides a detailed bibliography of Carl Menger's works on money and monetary systems:
1871. *Principles of Economics*. 1st. ed.
1883. *Investigations into the Method of the Social Sciences with Special Reference to Economics*.
1892. Geld. In *Handwörterbuch der Staatswissenschaften* 3
1892. On the origin of money. *Economic Journal* 2
1892. La monnaie mesure de valeur. *Revue d'économie politique* 6
1900. Geld. In *Handwörterbuch der Staatswissenschaften* 4, 2nd. ed.
1909. Geld, In *Handwörterbuch der Staatswissenschaften* 4, 3rd. ed.
1923. *Grundsätze der Volkswirtschaftslehre*. 2nd. ed.

[5] In what follows, I will examine Menger's theory of money and its origins as expressed in Menger's earlier works, such as the *Economic Journal* article "On the Origin of Money" (1892) and the first edition of the *Principles of Economics* ([1871] 1981). In chapter 4, I will examine Menger's theory of money and its origins as expressed in Menger's later works, such as the third version of 'Geld' (1909) published in the *Consice Dictionary of State Science*, and in the second edition of Menger's *Principles of Economics* (1923). The goal of examining Menger's later works is to address the claims that Menger later modified his theory of money admitting an essential role for the state (see Ikeda 2008, Hodgson 2001).

Money as a Spontaneous Institution

As emphasized by scholars of Menger's works, to fully appreciate the essence and implications of Menger's argument, one has to go back to the first four chapters of Adam Smith's Wealth of Nations (Streissler 2002, 12). As is well known, these are the chapters on the causes and consequences of the division of labor; market exchange; and the origin and use of money. Arguably, in these four chapters Adam Smith let "slip the opportunity of a more exchange-oriented explanation of the development of society" (Ibid., 13) offering, instead, a more "production-oriented theory of economic and social development" (Ibid.). Menger, then, set himself a task to enhance Smith's production- and capital-accumulation argument with a theory of exchange and money.

More specifically, Menger's goal became to explain the 'obvious and simple system of natural liberty' as an autonomous development of a free society propelled by individuals' natural economic propensities (such as to 'truck and barter'), with minimum or no intervention by the state (Streissler 2002, 13). In particular, with his theory of money and its origins, Menger aimed to demonstrate that "the economy can work perfectly well without any need for the 'state', and even without conscious agreements and compacts of men" (Ibid., 15). This became the focal point of Menger's Metallism "that in order to create money there is no need whatsoever for any action of the government" (Ibid.). The idea of money as 'a creature of the state', or as a product of the legislative system, or even as a result of a conscious agreement between market participants, was an "absolute anathema to Menger" (Ibid.). The passages quoted below illustrate this point of Menger's monetary thought:

> . . . according to Menger, a sound monetary system does not require legal sanctions, and is not predicated upon the explicit agreement of market participants. (Ikeda 2008, 461)

> Menger discarded explanations of the emergence of social institutions that relied on a 'social will' . . . that could not in turn itself be explained in terms of the purposeful behavior of individuals. Menger is thus remembered as a critic of methodological collectivism and as an early architect of a version of methodological individualism. (Hodgson 2001, 83)

> In the Untersuchungen and elsewhere, Menger countered the view of the historical school that a historical description of the involvement of the state in the evolution of money showed that the state was necessary for the creation of money, and essential to its nature. He attempted to show that institutions such as money could emerge through the interaction of individuals, without the state. (Ibid., 87)

Rather than a product of deliberate state action, Menger viewed money as a spontaneous, unintended outcome (or consequence) of self-interested behaviors of free individuals. The origin of money, – wrote Menger (1892), – can only be understood "as the spontaneous outcome, the unpremeditated resultant, of particular, individual efforts of the members of a society" (Ibid., 250). In two other paragraphs which could not have been more explicit, Menger (1871, 1892) famously declared that the institutions of the state and legislation have little to do with the origins of money:

> The origin of money (as distinct from coin, which is only one variety of money) is, as we have seen, entirely natural and thus displays legislative influence only in the rarest instances. Money is not an invention of the state. It is not a product of a legislative act. Even the sanction of political authority is not necessary for its existence. Certain commodities came to be money quite naturally, as the result of economic relationships that were independent of the power of the state. (Menger [1871] 1981, 261-62)

> Money has not been generated by law. In its origin it is a social, and not a state-institution. Sanction by the authority of the state is a notion alien to it. (Ibid., 1892, 255)

As is evident from the above-cited passages, Menger employed the terminology 'natural' and 'social' as synonymous, opposing 'natural' or 'social' developments and outcomes to those produced by conscious actions of the state (or those generated by law). Menger's 'social' origins of money imply a spontaneous process of evolution of the monetary system propelled by self-seeking behaviors of individuals in a free market context. The term 'social' in Menger's analysis is also synonymous to 'automatic', 'spontaneous', 'institution-free', 'state-free', 'state of nature' (see Hodgson 1992, 408)[6].

Money as a Medium of Exchange Commodity Evolving from Barter Exchange

Unlike Knapp (1905) who insisted that money was not limited to an exchange-commodity (Knapp 1924, 2, 4), Menger's fundamental view of money was that of a commodity mediating exchange. This inevitably transforms an inquiry into the origins of money into "the problem of the genesis of a medium of exchange" (Menger 1982, 242), and the theory of money becomes a theory of the market in general (Ibid.).

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[6] At this point, the work of a German sociologist Georg Simmel ([1907] 1978) must be acknowledged. Simmel's work on the philosophy of money is commonly placed within the Austrian tradition of economic thought, the influence of Carl Menger on Simmel's work being widely acknowledged (Laidler and Rowe 1980, 97). Similar to Menger and the Austrian tradition, Simmel does not view the monetary system as a conscious creation by a political entity, but as the unintended product of social evolution (Laidler and Rowe 1980, 98). In fact, the relationships of exchange *lead* to the establishment of a society, rather than *vice versa*: "The exchange of the products of labour, or of any other possessions, is obviously one of the purest and most primitive forms of human socialization; not in the sense that 'society' already existed and then brought about acts of exchange but, on the contrary, that exchange is one of the functions that creates an inner bond between men – a society, in place of a mere collection of individuals" (Simmel 1978, 175). Contrary to Knapp (1905), Simmel believes that the monetary system and the acceptance of money in exchange is a function of *trust* among individuals (For a comparison of Knapp's and Simmel's approaches see Frankel [1977]). The relationship of trust among individuals is not preconditioned upon any guarantees by a central public authority (e.g. a guarantee to accept money back in payment of taxes). Thus, while Simmel does not exclude a possibility of *token* money, he warns that "money transactions would collapse without trust" (Simmel 1978, 178-79). "Without the general trust that people have in each other, society itself would disintegrate" (Ibid.). Simmel further argues that a *subjective* element is involved when an individual establishes trust in the monetary system. Simmel refers to this subjective element as a "supra-theoretical belief" or "social-psychological quasi-religious faith" (Ibid., 179). Even the value of metal in exchange, argues Simmel, is in the first place created by the power of this subjective element of trust (Ibid.).

The Difficulties of Barter, the Different Degrees of 'Saleability' of Goods and the Spontaneous Origin of Precious Metal Money

Menger's story of money's origins commences with the difficulties involved in primitive barter (or direct exchange of goods for goods between two parties). Barter exchange presupposes a 'double coincidence of wants', otherwise this exchange cannot be carried out.

A double coincidence of wants refers to a situation in time and space where one individual (say, individual A) is willing to give up an exact quantity and quality of specific good(s) (good(s) X) that another individual (say, individual B) is willing to acquire, while individual B is also willing to give up in exchange for good(s) X an exact quantity and quality of goods (goods Y) desired by an individual A. And, importantly, individual A with good(s) X must encounter an individual B with good(s) Y at the same point in time and space in order for direct exchange between these parties to actually take place (see Menger 1892, 242; Andolfatto 2010, 35-36).

Further, different commodities offered for exchange are marked by different degrees of 'saleability' (or the ease with which they can be disposed of at the market) due to differences in their durability, portability and divisibility (Menger 1982, 244). For example, imagine the difficulties confronted by an individual attempting to exchange one sheep (or any other commodity which is not readily and easily divisible) for a number of other commodities owned by different individuals (and even by different individuals at different times and places). Applying Menger's terminology, a sheep can be characterized as one of the least 'saleable' (marketable, tradeable) commodities. These "different degrees of saleableness of commodities" become a key theoretical concept in Menger's inquiry into the origins of money (Ibid., 242). As Menger postulated:

> The theory of money necessarily presupposes a theory of the saleableness of goods. (Ibid., 243)

Given the difficulties of barter and different degrees of saleability of goods, each individual would attempt to exchange his less saleable commodities for more saleable goods, even if the latter were not required for the purposes of individual's consumption (Menger 1892, 248-49). The process of indirect exchange will set itself into motion, led by individuals' recognition of their economic interest. In this fundamentally spontaneous process, there would be no place for social convention, legal compulsion, or even recognition of societal interest (Ibid., 248).

> It lies in the economic interests of each trafficking individual to exchange less saleable for more saleable commodities. (Ibid., 249)

> Now in point of fact this seems everywhere to have been the case. Men have been led, with increasing knowledge of their individual interests, each by his own economic interests, without convention, without legal compulsion, nay, even without any regard to the common interest, to exchange goods destined for exchange (their 'wares') for other goods equally destined for exchange, but more saleable. (Ibid., 248)

A similar 'invisible hand' account was presented by Menger in the first edition of the Principles of Economics ([1871] 1981):

> As each economizing individual becomes increasingly more aware of his economic interest, he is led by this interest, without any agreement, without legislative compulsion, and even without regard to the public interest, to give his commodities in exchange for other, more saleable, commodities, even if he does not need them for any immediate consumption purpose. With economic progress, therefore, we can everywhere observe the phenomenon of a certain number of goods, especially those that are most easily saleable at a given time and place, becoming, under the powerful influence of custom, acceptable to everyone in trade, and thus capable of being given in exchange for any other commodity. (Ibid., 260)

Thus, a process of indirect, incremental exchange will spontaneously evolve, whereby each individual would exchange his less saleable commodities for more saleable goods. The goal would be to further exchange those goods for even more saleable commodities, and to ultimately arrive at the objects desired for actual consumption. Through this "devious' way of exchange, – argued Menger, – individuals would attain their desired objects of consumption faster and more efficiently (as compared to direct exchange reliant on a double coincidence of wants):

> By the devious way of a mediate exchange, he gains the prospect of accomplishing his purpose more surely and economically than if he had confined himself to direct exchange. (Menger 1892, 248)

While one could accept Menger's proposition that a self-interested individual would readily give up a less saleable for a more saleable commodity, an objection may be raised in regards to an equally self-interested counter-party in voluntary exchange who is willing to give up the more saleable commodity for a less saleable. Menger (1892) attempted to solve this issue by evoking the problem of knowledge and information.

According to Menger's (1892) 'informational asymmetry' argument, not all individuals will know what is more and what is less saleable at a point in time. Only a limited number of the "more intelligent bargainers" would recognize the higher marketability of some goods relative to others (Ibid., 254). These more "discerning and capable" bargainers will be the first to establish a selfish routine of exchanging less saleable wares for more saleable commodities. Gradually, then, other individuals would recognize and follow the behavior of the more intelligent traders. In other words, other individuals would gradually learn to follow the behavior of the more intelligent and capable bargainers (Ibid., 248; see also Hodgson 2001). Or, to put it differently, the routine behavior of the more intelligent bargainers would gradually and spontaneously establish (1) a social convention regarding what is more saleable, and (2) the habit of exchanging less saleable for more saleable goods (Menger 1892, 248; see also Hodgson 2001). In the words of Menger (1892):

> And so it has come to pass, that as man became increasingly conversant with these economic advantages, mainly by an insight become traditional, and by the habit of economic action, those commodities, which relatively to both space and time are most saleable, have in every market become the wares, which it is not only in the interest of every one to accept in exchange for his own less saleable goods, but which also are those he actually does readily accept. And their superior saleableness depends only upon the relatively inferior saleableness of every other kind of commodity, by which alone they have been able to become generally acceptable media of exchange. (Ibid., 248-49)

Gradually, then, there remained one medium of exchange – the relatively most saleable commodity – or money (Ibid., 250). This relatively most saleable commodity came to be embodied in precious metal (such as gold and silver) due to its special properties of divisibility, durability, portability, low cost of storage, high concentration of value, and homogeneity (Ibid., 253-54).

> The reason why the precious metals have become the generally current medium of exchange among here and there a nation prior to its appearance in history, and in the sequel among all peoples of advanced economic civilization, is because their saleableness is far and away superior to that of all other commodities, and at the same time because they are found to be specially qualified for the concomitant and subsidiary functions of money. (Ibid., 252)

Notably, the state (or a central public authority) had no role to play in the above-outlined mechanism of money's origins. To the contrary, money emerged spontaneously, in the course of a 'social' or 'natural' developmental process (Ibid., 252) whereby individuals learned to exchange their less saleable for more saleable commodities, thus promoting gold and silver metal to its unique status of a universal medium of exchange.

> From the preceding exposition of the nature and origin of money, it appears that the precious metals naturally became the economic form of money in the ordinary trading relations of civilized peoples. (Menger [1871] 1981, 280)

The Role of the State: Adjusting and Perfecting the Institution of Money to Meet the Growing Needs of Commerce

The state 'intervention' into the process of monetary evolution came at a much later stage, after money had already emerged and evolved via a spontaneous process. More specifically, Menger believed that "by state recognition and state regulation, this social institution of money has been perfected and adjusted to the manifold and varying needs of an evolving commerce" (Menger 1892, 255).

How exactly, then, could the state perfect and adjust the institution of money to meet the growing needs of commerce? To begin, while Menger asserted that gold and silver metal were "with some practice not difficult to recognize" (Menger 1892, 255), he did not entirely discard the 'informational difficulties' associated with the use of precious metal as money. Specifically, when precious metals circulate as money, it will be necessary to test their weight and fineness, as well as divide them, with each and every transaction.

> But the use of precious metals for monetary purposes is accompanied by some defects whose removal had to be attempted by economizing men. The chief defects involved in the use of the precious metals for monetary purposes are: (1) the difficulty of determining their genuineness and degree of fineness, and (2) the necessity of dividing the hard material into pieces appropriate for each particular transaction. These difficulties cannot be removed easily without loss of time and other economic sacrifices. (Menger [1871] 1981, 280)

Such testing and dividing of metal pieces with each and every transaction required not only labor, loss of time, and the use of precision instruments, but was also accompanied by a loss of the precious metal itself (Menger [1871] 1981, 280-81). Such inefficiencies led to a practice of dividing and testing metal pieces in advance and imprinting them with a stamp – to certify metal's conformity to certain weight and purity standard(s) (Ibid., 281-82). The institution of coinage thus naturally came into being as a result of severe inefficiencies associated with circulation of uncoined metals.

> This was naturally best accomplished by dividing the precious metal into small pieces corresponding to the needs of trade, and by marking the metal in such a way that no significant part could be removed from the pieces without the removal becoming immediately apparent. This aim was achieved by coining the metal, and it was in this way that our coins came into being. Coins are thus, in their very nature, nothing but pieces of metal whose fineness and weight have been determined in a reliable manner and with exactness sufficient for the practical purposes of economic life, and which are protected against fraud in as efficient a manner as possible. The fact of coinage makes it possible for us, in all transactions, simply to count out the necessary weights of the precious metals in a reliable manner without irksome assay tests, division and weighing. The economic importance of the coin, therefore, consists in the fact that (apart from saving us from the mechanical operation of dividing the precious metal into required quantities) its acceptance saves us the examination of its genuineness, fineness, and weight. (Ibid., 282)

While in the passage quoted above, Menger credited the invention of coinage with efficient protection against fraud (as far as metal weight and fineness is concerned), he did not fully attribute this efficiency to the private sector. While coinage was, without doubt, an invention of the private sector, the state proved a better guarantor of a coin's weight and fineness given the state's unique "power to prevent and punish crimes against the coinage" (Menger [1871] 1981, 282). It was the government, not the private sector, who could best guarantee the institution of coinage:

> The best guarantee of the full weight and assured fineness of coins can, in the nature of the case, be given by the government itself, since it is known to and recognized by everyone and has the power to prevent and punish crimes against coinage. Governments have therefore usually accepted the obligation of stamping the coins necessary for trade. (Ibid., 282-83)

Coinage thus became an "important function of state administration" bolstering public confidence in money by forestalling the risk concerning its genuineness, fineness and weight, i.e. risk endemic to the system of private mint (Menger 1892, 255; see also Hodgson 1992, 396). The state could provide a reliable monetary unit, something that could not be achieved by the private sector alone. While money's origins and early evolution (including the invention of coinage) was a spontaneous process devoid of any action or intervention by the state, the needs of an advanced commercial economy could not be fully met by the private sector alone.

> . . . although the state is not responsible for the existence of the money-character of the good, it is responsible for a significant improvement of its money-character. (Menger [1871] 1981, 262)

The Metallist Approach: Some Logical Flaws

Apart from its lack of historical evidence, and other methodological issues discussed in chapter 2 (see Laum 1924a, Polanyi [1944] 2001, [1957a] 1965a, [1957b] 1965a; Grierson 1975, 1977; Goodhart 1998; Kurke 1999; Seaford 2004), the Metallist framework is weak on purely logical grounds. Notably, the logical flaws within the Metallist perspective are acknowledged and debated within the Metallist group itself (see Laughlin 1903; Gregory 1933).

The most conspicuous logical flaw within the Metallist perspective concerns the primacy of the medium of exchange function of money. This is because an exchange of commodities via a certain medium (media) presupposes an existence of a unit of value (or a unit of account) in order to estimate the values of different commodities destined for exchange against each another (see Einzig 1966, 355-58).

The point of logical and practical precedence of a unit of account function of money has been ubiquitously emphasized by the Chartalist group (see Wray 1998; Ingham 2004; Peacock 2003-04). Chartalists have consistently argued that in the absence of a universal standard of value (or a unit of account), "goods and services lack a common denomination and hence they cannot be compared with each other abstractly" and cannot be exchanged (Peacock 2003-04, 208).

CHAPTER 4

ON THE EVOLUTION OF CARL MENGER'S MONETARY THOUGHT: A RESPONSE TO REVISIONISTS

This chapter reconsiders the revisionist accounts of Carl Menger's monetary thought, such as Ikeda (2008). These accounts argue that Menger's monetary thought went through a complicated process of development, leading to Menger's recognition of the essential role for the state to play in the evolution of monetary units and systems. This chapter argues that while Menger's monetary thought did undergo a complicated process of development, and his later works on money reflected new Chartalist insights, Menger never escaped his underlying theoretical framework on the spontaneous origins of the monetary unit, devoid of any action or intervention by the state. Rather, the role of the state in Menger's monetary theory was always confined to the later stages of money's evolution, in order to allow for a full development of the monetary system, something that could not be achieved by the private sector alone. While Menger (1909) once admitted a possibility of money's origins by the influence of public authority, he never offered a theoretical elaboration of this possibility, and never incorporated it into his overall theoretical framework.

The Revisionist Accounts of Carl Menger's Monetary Thought

It has been argued in the literature (see Ikeda 2008; Egashira 1999; Hodgson 2001) that Carl Menger's monetary thought "followed a complicated course of development" (Ikeda 2008, 457). More specifically, it has been noted that Menger "later modified his argument concerning the evolution of money, and admitted an essential role for the state" (Hodgson 2001, 88)[1]. It has been stressed that the modification of Menger's monetary thought is particularly reflected in his second and third encyclopedia entries on "Geld" [Money] (1900, 1909) published in the Handwörterbuch der Staatswissenschaften [Concise Dictionary of State Science], and in the second edition of Menger's Grundsätze der Volkswirtschaftslehre [Principles of Economics] that appeared posthumously in 1923[2] (see Ikeda 2008).

The most detailed examination of Menger's intellectual evolution on the subject of money has been provided by Yukihiro Ikeda (2008). Ikeda traces the development of Menger's monetary thought from the first edition of the Principles of Economics (1871) to the third version of "Geld" (1909). In addition, Ikeda makes a reference to the posthumous German edition of Grundsätze (1923) and offers an English summary of the key insights provided there. In his "revisionist account of Menger's monetary theory" (Ikeda 2008, 455), Ikeda summarizes Menger's intellectual evolution in the passage quoted below:

> First, in Menger's monetary theory, states do play an important role in shaping monetary systems. This assertion is contrary to the conventional understanding of Menger as viewing monetary systems as spontaneous orders in which governmental intervention should be minimized. . . . Second, Menger's monetary thought differs from Hayek's; applied to the monetary system, it is more balanced than Hayek's radical liberalism. (Ibid., 457)

Thus, Ikeda disputes the "conventional understanding" of Menger's monetary thought according to which monetary systems are "spontaneous orders in which governmental intervention should be minimized" (Ikeda 2008, 457). Rather, Ikeda argues that in Menger's

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[1] Here, Hodgson refers specifically to Menger's 1909 version of 'Geld' ['Money'].

[2] Carl Menger's posthumous second edition of *Grundsätze der Volkswirtschaftslehre* (*Principles of Economics*) (1923) was prepared for publication by his son, Karl Menger, and the volume was never translated into English (see Polanyi 1971; Berger 2008).

theoretical framework, “states do play an important role in shaping monetary systems” (Ibid.). For instance, drawing attention to the title of the fourth section of “Geld” (1900) – “The Perfecting of Money by the State” – Ikeda argues that “[t]he title of this section [alone] shows that Menger’s viewpoint had been enlarged between 1892 and 1900; the 1892 version deals only briefly with the question of the state, in a subsection entitled ‘Influences of State Power’” (Ibid., 458).

This chapter argues that while Menger’s monetary thought had been enlarged and elaborated between 1871 and 1923, Menger’s fundamental theoretical framework did not change. While in the course of his intellectual development Menger came to more fully appreciate the role of the state at the later stages of money’s evolution, the fundamental theoretical propositions of Menger’s monetary thought remained in stark contrast to the Chartalist or State money perspective in the tradition of Georg F. Knapp (1905). This means that Menger never abandoned his fundamental proposition that, in its origins, money was not a product of conscious state action. Rather, Menger firmly retained his theoretical account of money’s spontaneous origins as a medium of exchange commodity. In what follows, I will support this thesis by providing a detailed examination of Menger’s third version of “Geld” (1909). After all, this work by Menger serves as the basis for Ikeda’s revisionist account of Menger’s monetary thought. I will further discuss Chapter 9 “Die Lehre vom Gelde” [The Theory of Money] presented in the second edition of Menger’s Grundsätze (1923).

Menger's 1909 "Geld": The Old Metallist Arguments

To begin with, the structure of the lengthy encyclopedia entry "Geld" (1909) (see Menger [1909] 2002, 26) already conveys the bulk of Menger's argument. Here, the title and structure of the first chapter alone ("The Origin of Generally Used Media of Exchange") reduce the theory of money's origins to the theory of a genesis of commonly used media of exchange:

> Chapter I: The Origin of Generally Used Media of Exchange.
> 1. Introduction.
> 2. The difficulties of barter.
> 3. The different degrees of marketability (saleability) of goods.
> 4. The emergence of media of exchange.
> 5. The effect of the emergence of generally used media of exchange on commodity markets and prices. (Menger [1909] 2002, 25)

As is evident from above, the structure of chapter 1 of "Geld" (1909) conveys exactly the same theoretical argument as was advanced by Menger (1871, 1892) in his earlier works. Likewise, the opening statement of the 1909 encyclopedia entry does not differ substantially from the opening statement of Menger's 1892 Economic Journal article "On the Origin of Money". Similarly, the argument is focused on the medium of exchange function of money, its commodity-character, its precious metal form at the more advanced stages of monetary evolution, and, finally, its paper certificate character where the backing is provided by the precious metal (Menger 1909 [2002], 26):

> The phenomenon that certain goods, which in advanced civilizations are coined gold and silver and subsequently documents representing these, become media of exchange has always attracted the special attention of social philosophers and people active in economic life. (Ibid.)

Correspondingly, the difficulties of barter due to rare occurrences of a 'double coincidences of wants' are evoked as explanatory theoretical arguments (Ibid., 28):

> They [difficulties] lie in the fact that on barter markets pairs of contracting parties who need each other's commodities are actually presented only in a relatively small number of cases, and it is therefore anything but easy for a person offering a commodity to find another market participant who is offering the commodity he is looking for and at the same time wants the commodity he is offering. (Ibid.)

Further, the opening statement of "Geld" (1909) anticipates Menger's theory of the 'saleability' of goods, i.e. Menger's key explanatory element in the theory of the genesis of the media of exchange. When precious metal in uncoined state or even other "commodities" such as cattle, animal skins, tea, salt, or cowries function as media of exchange, – wrote Menger, – we are confronted with "the phenomenon that economizing persons are willing to accept certain goods, even when they do not need them or when their needs for them have already been satisfied, in exchange for the goods that they have brought to market" (Menger 1909 (2002), 26).

Importantly, it was not an invention of a government bureaucrat, it was not even something that was agreed upon by individuals, but it was "in the very nature of things" (Ibid., 29) for individuals to exchange their less saleable for more saleable wares (Ibid., 29-30). Obviously, the advantages of this practice could not be realized by all economic agents at the same time (Ibid., 29). Hence, it was "practice, imitation, and custom" that gradually led all economic agents to accept certain goods in exchange for their wares (Ibid., 32). In another passage that is remarkably similar to Adam Smith's 'invisible hand' explanation, Menger explicated the natural, spontaneous process that led to the emergence of a common medium of exchange (Ibid., 30):

> . . . the fact that the most reasonable and efficient economic agents, in their own economic interest, have long accepted eminently marketable goods in exchange for all others. Such progress in economic knowledge did indeed occur as a result of general cultural progress wherever external conditions did not hinder it. The interest of individual economic agents in their supply of goods and the increasing recognition of this interest led them led them to pursue their individual economic ends more and more by means of intermediary acts of exchange, without mutual agreements, without the force of law,

> indeed without any regard for the common interest, and eventually to regard those as a normal form of exchanging goods. (Ibid.)

In accord with his earlier argument (1871, 1892), Menger (1909) maintained that the economic interest of individuals gradually led them to promote precious metals among the mass of all other intermediaries of exchange. Importantly, neither "legal compulsion" nor a "voluntary agreement" among individuals led to the adoption of precious metals as money (Menger [1909] 2002, 40). Rather, it was "the proper recognition of individual interests" which caused gold and silver to drive out other media of exchange (Ibid.). In another passage, Menger stressed the universal character of such monetary evolution referring to it as the "law of development":

> The history of media of exchange of all times and peoples and the trade phenomena still observable today in countries of primitive culture confirm to the above law of development, which is grounded in the economic nature of human beings and their respective situations. Everywhere we see that the goods most marketable under the prevailing conditions of place and time, besides being put to actual use, also acquire the function of generally used media of exchange. (Ibid., 3)

Following its precious metal stage, further evolution of "money and its functions, too, at first took place along essentially organic lines" (Ibid., 32). The practice of weighing metal pieces and verifying their fineness with each and every transaction was gradually succeeded by the institution of private coinage.

Thus, so far we do not see any modification in Menger's (1909) theoretical framework on the genesis and development of a monetary system, compared to Menger's earlier works (1871, 1892). However, a further reading of "Geld" (1909) will reveal some new important insights which were not present in Menger's earlier writings on money (1871, 1892). Such insights include, among others, a set of observations on the origins of money compatible with the Chartalist or State money framework in the tradition of Georg F. Knapp (1905). The question remains, however, whether these new (Chartalist) insights remained peripheral observations, or whether they became central propositions within Menger's overall theoretical framework on money?

Menger's 1909 "Geld": The New Chartalist Insights

To begin, while the early Menger (1871, 1892) saw the advantages of gold and silver metals in their divisibility, portability, homogeneity (etc.), the later Menger (1909) did not exclude a possibility that precious metals were promoted to their function as intermediaries of exchange due to their social role as goods conferring prestige, power and social status (Menger [1909] 2002, 30). Moreover, Menger advanced an argument that certain goods could become intermediaries in exchange due to their power to extinguish payment obligations to chieftains or priests; or their power to compensate victims for personal injuries (Wergeld); and (or) their power to serve as bride-price:

> Goods in which, because of social customs or prevailing power structures, certain frequently repeated unilateral performances are effected or have to be effected (for example, gifts and dues to be paid by custom or because of obligations in specific goods to chieftains, priests, medicine men, etc., compensation for damages specified in particular goods, fines for having killed someone, certain goods customarily paid in bride purchases, etc.); for precisely for these goods, which are mostly eagerly desired anyway by those members of society who are best able to pay for them, there is the added special, ever-renewed demand for the above-mentioned purposes. (Ibid., 31)

Notably, when speaking of unilateral payments such as dues to priests or chieftains, Menger acknowledged the existence of "prevailing power structures" (Menger 1909 [2002], 31) and thus deviated from his underlying (1871, 1892 and 1909) framework of socio-economic equality among the participants in voluntary exchange. What is more, from the above-cited passage one would infer that a medium of exchange function of money is not primary, but derives from the power of the monetary unit to extinguish payment obligations, including dues to central public authorities such as priests[3].

Further, Menger went as far as to admit a possibility that "the institution of intermediaries of exchange" may be "established" by the government (Menger 1909 [2002], 33):

> Like other social institutions, the institution of intermediaries of exchange, which serve the common good in the fullest sense of the term, may, as I shall explain later, emerge or be promoted, but also impeded, in its automatic development by the influence of authority (for example, public or religious) and especially by legislation. This manner of emergence of media of exchange, however, is neither the only nor the earliest one. Here, a relation exists similar to that between statute law and common law: media of exchange generally used not by way of law or agreement but by way of 'custom', that is, through similar actions, corresponding to similar subjective impulses and similar intellectual progress, of individuals living together in a society (as the unreflective result of specific individual strivings of the members of society) – a circumstance which subsequently, as with other institutions that arose in like manner, does not rule out, of course, their being established or influenced by government. (Ibid.)

Without doubt, the above-quoted passage is not without severe ambiguities and contradictions in the argument. Again, the advancement in Menger's thought is indicated by his concession that money may emerge "by the influence of authority" such as "public or religious" (Menger [1909] 2002, 33). In the same sentence, however, Menger stressed the "automatic development" (Ibid.) of the monetary system, and the possibility that the influence of authority could likewise impede its spontaneous (or automatic) development. Thus, in the same sentence, Menger attempted to combine two conflicting mechanisms of money's origins: 1) as a result of the conscious action by a central public authority, and 2) as an unintended consequence of a

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[3] When referring to central public authorities such as priests and their power to establish a monetary unit, Menger (1909) anticipated the work of a German monetary historian and theoretician Bernhard Laum (1924a). Laum's thesis was on the religious origins of money in ancient Greek temples.

spontaneous social[4] process (thereby maintaining his original theoretical framework). Further, Menger argued that the establishment of a monetary unit "by the influence of authority" "is neither the only nor the earliest one" (Ibid.). Finally, in the concluding statement of the above-cited passage, Menger emphasized over again that the development of the monetary system was automatic, i.e. "as the unreflective result of specific individual strivings of the members of society" (Ibid.). At the same time, however, Menger did not rule out the possibility of "their [monetary system] being established or influenced by government" (Ibid.). Also note that, in the first place, Menger's inquiry into the origins of money is still confined to an inquiry into the genesis 'of intermediaries of exchange', as the opening sentence of the above-cited passage demonstrates.

Another important passage from Menger's "Geld" (1909) deserves attention. Here, Menger made a further acknowledgement that money may not be a consequence of a spontaneous social development, but rather, money could be "created" by the government. This, however, is "irrelevant," – argued Menger, – for what really matters is the function of money as a mediator of exchange (Menger [1909] 2002, 75):

> It is likewise irrelevant for the general concept of money whether an object of trade has acquired the above functions automatically or by some sort of compulsion. Whether it is money that emerged automatically or money created and influenced in its development by government – in particular, money developed and perfected (or corrupted!) automatically or by government – in either case it is money when and insofar

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[4] The terminology 'social' in Menger's monetary thought is synonymous to 'automatic', 'spontaneous', 'institution-free', 'state-free', 'state of nature' (see Hodgson 1992, 408). Menger contrasts the 'social' origins of institutions to those generated by law or the state. In the words of Menger (1892):

> Money has not been generated by law. In its origin it is a social, and not a state-institution. Sanction by the authority of the state is a notion alien to it. (Ibid., 255)

> as it actually performs the functions of a generally used intermediary of trade in goods and capital (or the functions deriving from that). . . . (Ibid.)

What is more, Menger studied the etymology of the word 'money' in different languages, arguing that such an etymological analysis "is an important question regarding the evolution of the concept of money" an inquiry into which has been lacking (Menger [1909] 2002, 90n11). This inquiry led Menger to conclude that not all peoples named 'money' after the commodity serving as a medium of exchange. For instance, Menger noted that the Greeks and Romans referred to their money as argyrion and argentum "without regard to the metal" (Ibid.). Menger also observed that the German and Dutch word geld derived from gelten meaning 'to pay, 'to make a return gift or compensation', and originally denoting 'performance, compensation of any kind'. Likewise, Menger noted that Gothic gild stood for 'tax, rent, due', while Old English gilt meant 'replacement, sacrifice', and the Old Norse gjald stood for 'payment, due', etc. (Ibid., 91n11). Thus, Menger's etymological analysis pointed to the origins of money in the context of unilateral payments, gift-exchange, and even religious practices (sacrifice). This etymological inquiry, however, was not incorporated into Menger's underlying theoretical framework.

As the above analysis indicates, we do see important developments in Menger's (1909) monetary thought. These new developments could be attributed to Menger's study of history, anthropology, linguistics and even sociology – interdisciplinary inquiry Menger undertook in the wake of the Methodenstreit (see Menger [1909] 2002, 90-93; Polanyi 1971; Berger 2008). Yet, as will be demonstrated below, these new developments did not lead Menger (1909, 1923) to revise or modify his earlier (1871, 1982) theory of the spontaneous origins of money as a medium of exchange commodity. In fact, in all other sections of "Geld" (1909), Menger reinforced the spontaneous theory of money's origins as a medium of exchange commodity, fiercely attacking the “fallacious doctrine” that money could emerge as a result of conscious state action.

Menger’s 1909 “Geld”: Refuting the “Fallacious Doctrine” of Government Token Money

It was in Chapter 2 of “Geld” (1909), titled “The Controversy among Economists and Jurists over the Nature of Money and Its Distinctiveness as Compared with Other Goods,” that Menger set himself the task of refuting the “fallacious doctrine” that money could be “a mere token” or a “ticket” valueless in itself and whose value derived “from a government order” (Menger [1909] 2002, 36). Notably, Menger observed that at the time of his writing this “doctrine” had become accepted by “many students of monetary theory” (Ibid.):

> The possibility, observable precisely with money, of an arbitrary regulation of its (nominal) value by government, and also the often misunderstood phenomenon of document money, whose substance is valueless, have considerably . . . induced many students of monetary theory to regard money as a mere token of value, as a mere (immaterial) pledge of an expected return performance, as something valueless in itself (like a trading ticket!) whose actual exchange value derives only from an agreement among the people, from custom, or from a government order. (Ibid.)

Responding to the “fallacious doctrine” presented above, Menger stressed his unyielding proposition that money’s value came “directly” “from the value of its material” similar to the exchange value of other objects of trade (Menger [1909] 2002, 36). Paper money, then, would acquire its value “from the value of the legal claims connected with its possession” in the context of trade (Ibid.). Menger thus fiercely dismissed the objections made by many students of monetary thought against “the general character of money as a commodity” used in exchange (Ibid., 37):

> All this, however, only points to the medium-of-exchange function of money, that is, to the distinctiveness of the ‘commodity’ that has become money; it is not evidence against the character of money as a commodity as such. (Ibid.)

Menger went on to further defend the commodity-character of money, stressing its “essence” as an object mediating trade in goods (Menger [1909] 2002, 74). Continuing to dispute the position that money was a product of conscious state action, Menger underscored his fundamental view that a commodity became money not “because of mere acts of will of rulers” but via a spontaneous process of “historical development of a people’s trade in goods” (Ibid.):

> The essence and concept of money are determined by its position in the national economy and by its functions in goods trade. No thing is in itself money because, for example, of its material or technical properties or its external form, let alone because of mere acts of will of rulers (simply because of these circumstances!). On the other hand, a good of whatever kind, be it a commodity previously serving consumption or technical production, a raw material or a finished product, a metal weighed out, or a document capable of circulating, becomes money when and insofar as in the historical development of a people’s trade in goods it actually acquires the function of a generally used intermediary of exchanges (or the functions deriving from that) and thus assumes that distinctive position in trade and in the national economy by virtue of which it becomes something unlike all other objects of trade whose exchange it mediates: an object of trade mediating the exchange of goods. (Ibid.)

Further, Menger went on to emphasize that all other money functions derived from its primary role as a medium of exchange commodity[5] and “[were] not constituent elements in its [money’s] emergence” (Ibid., 76). Thus, despite his earlier concession that money may emerge as a means of payment to a central public authority, Menger further reversed to his fundamental theoretical argument that “the original function of money [was] an intermediary on the commodity market” (Ibid., 77).

[5] While money is a special commodity because it is not removed from the market to be consumed and enjoyed, this does not negate its commodity-character, but, in fact, reinforces it for “money is vested with the character of a commodity permanently, while other goods only temporarily,” i.e. until they are enjoyed in consumption (Menger [1909] 2002, 37).

Addressing the debates among the jurists, Menger likewise disputed the notion of money as “a mere token” or “ticket” (Menger [1909] 2002, 39). While jurisprudence could give a separate treatment to money as compared to other goods, – argued Menger, – “it can in no way be inferred from this that money is an asset whose exchange value is not governed by the economic laws of exchange of goods, that it is a mere token of value, a trade ticket, an anomaly of the economy” (Ibid.). It is not because of the “discretion of the legislator” that money is given a “special place” in jurisprudence, but because of the distinctiveness of money compared to other objects of trade (Ibid., 38). Correspondingly, the doctrine that the government can regulate the value of money “by merely declaratory acts” is fallacious (Ibid., 39).

In accord with his earlier (1871, 1892) argument, Menger (1909) confined the role of the state to the “perfection” of the metallic unit after the institution of private mint proved unreliable and inefficient. In chapters 4 and 5 of “Geld” (1909) titled “The Perfecting of Metallic Money through Coinage of the Metals” and “The Perfecting of the Monetary and Coinage System by Government”, respectively, Menger explicated the process that led to the involvement of the government with the monetary system. In this, Menger’s argument shows no fundamental modification compared to his earlier thinking on the subject (1871, 1892). Similarly to his previous works, Menger’s argument commences with inefficiencies associated with dividing and weighing metal pieces – inefficiencies that “severely impeded trade in goods” (Menger [1909] 2002, 42). What is more, a certain level of technical knowledge and expertise was required to attest the fineness of metal pieces which further increased the costs of trading.

> The weighing of monetary metals, however, involved disadvantages that severely impeded trade in goods. Reliable assaying of the genuineness and fineness of the metals has to be left to experts, who must be compensated for their trouble; and dividing hard metals into such portions as happen to be required in trade is a task that, because of the accuracy with which it must be undertaken, especially with the precious metals, requires

precision instruments and involves a not inconsiderable loss of material (from fragmenting and repeated melting!). (Ibid., 41-42)

The practice of weighing and testing metal pieces in advance, and, further, imprinting them with a stamp to certify weight and fineness, evolved as a consequence of the above inefficiencies. Importantly, the circulation of weighted and stamped metal pieces first happened "automatically", i.e. without any action or intervention by a public authority (Menger [1909] 2002, 42). Private merchants would be the first to establish this practice for their own purposes[6]. However, the potential for counterfeit and the profit-oriented nature of the private sector proved that this "automatic development" was inadequately suited for the needs of commerce (Ibid.). The potential for counterfeit meant that, as a rule, a metal test would have to be repeated with each and every transaction, thus making goods' trade highly time-consuming and inefficient (Ibid.).

> But experiences on the markets of those peoples who, up to most recent times, had not yet achieved an orderly system of coins show us how inadequately the disadvantages inherent in the circulation of uncoined metals were overcome by the above automatic development. The tests of weight and especially of fineness by the assayers active on these markets prove unreliable and, seeing how easily the stamps of these functionaries may be counterfeited, have to be repeated, as a rule, with every transaction, a circumstance that makes payments highly time-consuming and costly. (Ibid.)

This begs a conclusion that:

> An advanced economy's demands on the monetary system are not to be met by a system such as develops automatically. (Ibid., 45)

Therefore, it is because coinage could not be effectively supplied by the private sector, that government 'take-over' of the private mint proved "inevitable" (Ibid., 45-46). This means that

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[6] A stamp on a metal piece would remind the merchants that the bar "had passed through their hand already and had been assayed and found to be of good content" (Menger [1909] 2002, 42). Subsequently, the testing and stamping of the metal pieces was generally performed by private assayers working on the market and paid for their services (Ibid.).

"an essential role for the state" (Hodgson 2001, 88) in the evolution of monetary systems came at a much later stage of money's evolution, after the institution of private mint proved unreliable in meeting the needs of commerce. Only when the 'public good' (i.e. coinage) could not be effectively supplied by the private sector in such a way that private and public interests would coincide, the government involvement in the monetary system would be necessary.

> Above all, wide experience has shown that coining the monetary metals, as soon as and insofar as this proves necessary for the economy, makes government intervention more and more inevitable. The costly supplying of the markets with coined metals appropriate (in kind and quantity) to the requirements of the economy is certainly in the interest of both individuals and the economy as a whole; but, as experience shows, it cannot be expected from a country's individual economic units, which are under the pressure of competition and are dependent on and oriented toward profit. Accordingly, even in recent times, private coinage has met the general requirements of trade only imperfectly. (Menger [1909] 2002, 45-46)

Unlike the private sector which is dependent on and oriented towards profit, the government could reliably supply the market with coined metals, using its unique power to protect the monetary unit against counterfeit:

> It is clear that, as a rule, only government has an interest in, and will even bear the cost of, continually supplying the economy with coin-money according to the requirements of trade; for only government also has the instruments of power at its disposal for effectively protecting the coinage against counterfeiting and the media of exchange in circulation against fraudulent reductions in weight and other kinds of violation harmful to trade. (Ibid., 46)

The essential role played by the government at the advanced stages of monetary evolution, however, should not be confused with the "fallacious doctrine" that money was in the first place created by the government (or by law). In its origins, – stressed Menger, – money was not a governmental phenomenon. Rather, the government merely perfected and adapted the 'natural' institution of money to the expanding needs of commerce. Government 'intervention' was necessary to allow for a full development of the monetary and commercial systems, something that could not be achieved by the private sector alone (Menger [1909] 2002, 45-46).

> Money was not created by law; in its origin it is not a governmental but a social phenomenon. Government sanction is foreign to the general concept of money. Certainly, though, the institution of money (its function as intermediary of exchange and the functions following from this) has been perfected and adapted to the diverse and changing needs of developing trade by government recognition and regulation, just as the common law has been affected by legislation and as all aspects of social life, especially trade, have been affected by government intervention. (Ibid., 45)

Last, when considering other roles for the state to play at the more advanced stages of monetary evolution, Menger (1909) discussed the question of legal tender. Here, in accord with his overall theoretical framework, Menger maintained that legal tender money is merely a response to the growing needs of commerce, and thus "is not part of the general concept of money" (Menger [1909] 2002, 79). Rather than a general attribute of money, legal tender "by its nature" is a special case, "an exceptional regulation" (Ibid.), established by government "in certain cases" (Ibid., 82), always "in the interest of free, unhampered trade" (Ibid.). To assert the opposite – Menger argued again – would be a "far-reaching error" (Ibid., 79), and those who maintain that money "first appears as a state's legal tender" are "more than a little prejudiced" (Ibid., 81).

> Those authors who still cling to the counterhistorical opinion that the origin of money may be traced back to positive legislation or a social contract for the most part confuse the problem of the emergence of money and that of legal provisions for settlement of money debts. They fail to see that while the latter are indeed often the result of positive legislation, they already presuppose the existence and function of money. (Ibid., 92n12)

Who Are "Those Authors"?

Who are those authors attacked by Menger (1909) for their 'a-historical' position that the origins of money may be traced back to the legislative activity of the state? While Menger makes no explicit reference to Georg F. Knapp and his seminal contribution, Staatliche Theorie des Geldes [The State Theory of Money] (1905), the terminology employed by Menger may be indicative that he was familiar with the Chartalist or State money approach. In particular, Menger utilized the terminology of "a mere token of value," of "something valueless in itself" and of "a trading ticket" when refuting the "fallacious doctrine" (Menger [1909] 2002, 36) that the value of money could derive from a government order, or from "mere acts of will of rulers" (Ibid., 74). But the terminology of 'tokens' and 'tickets' is the very terminology employed by Knapp ([1905] 1924) in The State Theory of Money:

> The "ticket" is then a good expression … 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 a means of payment.
>
> The idea of the ticket or token tells us nothing as to the material of the disc. It is made both of precious and of base metal and also of paper, to mention only the most important. (Ibid., 32)

> Perhaps 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. (Ibid.)

As the above passages demonstrate, it was Knapp who put forth the view of money as a "token" or "ticket" whose value did not derive from its intrinsic composition (see also Wray 1998). Further, Knapp explicitly stated in the "Author's Preface to the First German Edition" that the goal of his book was to "replace the metallistic view [of money] by one founded on Political Science" (Knapp [1905] 1924, viii).

> . . . I hope for the approval and perhaps the help of those who take the monetary system (or, better, the whole system of payments) to be a branch of political science. I hold the attempt to deduce it without the idea of a State to be not only out of date, but even absurd, however widely these views may still obtain. To avoid polemics, I have always called this the metallistic view, and have opposed metallism as such without naming its supporters, and also without opposing the use of metal. (Ibid., viii)

The political science aspect of Knapp's approach is precisely that the institutions of money and the state cannot be separated, for money is always "associated with the State which introduces it" (Ibid., 40).

Thus, it cannot be excluded that Menger implicitly attacked Knapp's State theory of money, where money is viewed as a product of deliberate state action. Menger interpreted this action as merely legislative activity of the state (e.g. establishment of legal tender laws), and, in doing so, he over-simplified and even misinterpreted Knapp's thesis. As a scholar of Knapp, L. Randall Wray (1998) has pointed out, "[Knapp's] Chartalism is often identified with the proposition that legal tender laws determine that which must be accepted as means of payment" (Wray 1998, 25). However, such interpretation of Knapp's thesis would be too narrow, for in Knapp's analysis "it is not simply a 'legal tender' law that makes state notes acceptable in private transactions" (Ibid., 26), but, rather, it is the state's decision to accept money in payment of taxes and other obligations to itself (the state's acceptance of money "at public pay offices").

> In the autumn of 1895, in a course of lectures in Berlin, I put forward my views fully for the first time, laying down: that the money of a State is not what is of compulsory general acceptance, but what is accepted at public pay offices; and that the standard is not chosen for any properties of the metals . . . . (Knapp [1905] 1924, vii)

A "simple declaration" by the state "that such and such is money" will not be sufficient to establish general acceptability and give value to money "even if backed by the most convincing constitutional evidence of the state's absolute sovereignty" (Lerner 1947, 313). Rather, the state must be willing to accept the proposed money in its own transactions[7]. This point of Knapp's Chartalism has been succinctly summarized by Abba Lerner (1947) in the passage quoted below:

> The modern state can make anything it chooses generally acceptable as money and thus establish its value quite apart from any connection, even of the most formal kind, with gold or with backing of any kind. It is true that a simple declaration that such and such is money will not do, even if backed by the most convincing constitutional evidence of the state's absolute sovereignty. But if the state is willing to accept the proposed money in payment of taxes and other obligations to itself the trick is done. Everyone who has obligations to the state will be willing to accept the pieces of paper with which he can settle the obligations, and all other people will be willing to accept these pieces of paper because they know that the taxpayers, etc., will accept them in turn. On the other hand if the state should decline to accept some kind of money in payment of obligations to itself, it is difficult to believe that it would retain much of its general acceptability. (Ibid., 313)

However, it would not be surprising if Menger misinterpreted the fundamental point of Knapp's State money framework, for up to this day Knapp's "taxes-drive-money" approach (Wray 1998) is confused with the view of money as simply 'a creature of legislation'. For example, when commenting on the place of Menger's "Geld" in the history of economic thought, Erich Streissler erroneously characterized Knapp's State money approach as a "dictum that money is the creature of the legal system" (Streissler 2002, 15):

> Absolute anathema to Menger is the idea that money might be the creature of the 'state' or even Georg Fr. Knapp's dictum that money is the creature of the legal system. (Ibid., 15)

But the mere fact that Streissler, a historian of Menger's monetary thought, contrasts Menger's theoretical framework to that of Knapp is indicative that it was Knapp who Menger associated with the "fallacious doctrine" that money was 'a creature of the state' or its legislative activity.

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[7] Correspondingly, private bank notes will not automatically become money of the state, unless the state agrees to receive them in payment of taxes and other obligations to itself (Wray 1998, 27).

Finally, it is worth noting that a contemporary of Carl Menger, Fred M. Taylor (writing across the ocean), likewise misinterpreted the State theory of money as a theory where "the value of money is determined by the mere decree of government" (Taylor 1906, 226). Similar to Menger, Taylor attacked this "false or one-sided" theory of money (Ibid.) where "the law can by simple decree" establish the value of money above the value of its intrinsic component (Ibid., 227).

> According to the fiat doctrine, governments can issue printed pieces of paper not redeemable in anything and, by merely decreeing that they shall be worth a dollar, really make them so . . . . (Ibid., 230)

While Taylor also makes no reference to Knapp (1905), Taylor's discussion of iron or clay moneys (Taylor 1906, 229) reminds us of Knapp's thesis according to which the value of the Chartal means of payment is immaterial to their intrinsic composition (Knapp [1905] 1924, 32).

But even long before Knapp, the notion of money "as a creature of the state" (Lerner 1947) was not novel. Indeed, this notion can be traced back to the writings of Plato and Aristotle. For example, when Aristotle referred to money he called it nomisma (the classical Greek word for convention, usage and law), suggesting that the value of money was not based upon its intrinsic characteristics, but rather upon usage, convention and law (see Seaford 2004, 5, 143; von Reden [1995] 2003, 184-187; Kurke 1999, 41-42; Del Mar 1968, 172, 338).

> And currency has become a sort of pledge of need, by convention; in fact it has its name (nomisma) because it is not by nature, but by the current law (nomos), and it is within our power to alter it and to make it useless. (Aristotle, Nichomachean Ethics, Book V, Chapter 5§11)

The words of Plato confirmed the same position, i.e. that the value of money depended upon law and convention, rather than upon its intrinsic characteristics (Del Mar 1968, 338). While Menger made no direct references to Knapp's State Theory of Money (1905), in the 1909 version of

"Geld" Menger explicitly attacked the position of Plato and Aristotle, and Knapp's State money approach is said to have its roots in the works of these early Greek thinkers (Hodgson 1992, 397). Refuting the "fallacious doctrine" of government 'token' money, Menger postulated that the erroneous conception of money that has prevailed since the times of Plato and Aristotle "may be considered as refuted" (Menger [1909] 2002, 92n12):

> The error that suggested itself and has prevailed ever since Plato and Aristotle, namely, that money is the product of a general convention or of positive legislation (thus the result of government and social measures undertaken in awareness, from the outset, of both ends and means), may be considered as refuted . . . . (Ibid.)

Menger's Posthumous Second Edition of Grundsätze (1923)

Finally, let us turn to the posthumous second edition of Menger's Grundsätze der Volkswirtschaftslehre [Principles of Economics] (1923) where the theory of money is explored in chapter 9. Here, the structure of the first section of chapter 9 "On the Nature and Origins of Money", does not reveal any significant modification in Menger's theoretical framework on money's origins and evolution, as compared to the 1909 version of "Geld":

Chapter 9: The Theory of Money.
§1) On the Nature and Origins of Money
Introduction
a) The difficulties of barter.
b) The emergence of media of exchange.
c) The effect of the emergence of generally used media of exchange on commodity markets and on price formation.
d) The nature of money and its uniqueness among other goods
e) The emergence of precious metal money and its perfection through coinage of the metals.
f) The influence of the state on money and coinage. (Menger 1923, xxvi)

As Carl Menger's son, who prepared the posthumous second edition of Grundsätze for publication, noted in the Einleitung des Herausgebers [Editor's Introduction], "[t]he chapter on money in the second edition corresponds, except for linguistic changes, to the article "Geld" in the third edition of the Concise Dictionary of State Science. Only the beginning of §1 and §2f have been elaborated" (K. Menger 1923, xvii, translation author's) [8]. Besides, Karl Menger specifically indicated that a further development of the theory of money was, in general, of little concern to his father (Ibid., xvii).

Also Karl Polanyi (1971), who analyzed Menger's second edition of Grundsätze in great detail, made a conclusion that while the second edition was a first step toward a development of a "more general theory" (Polanyi 1971, 8) of the economy, "every word of the original book" was retained (Ibid., 21).

> In the second edition of the Grundsätze (1923), he [Menger] retained his original theory – he retained, in fact, every word of the original book – but made a more general theory of the economy in order that he could make a place for history, anthropology, and sociology. (Ibid.)

What this means is that Menger came to acknowledge the 'special case' application of the first edition of his Principles to an exchange economy (see also Hodgson 2001, 90). This is why the second edition distinguished between "the exchange or market economy for which the "Principles" were designed" and the non-market economies which were not the subject matter of the Principles (Polanyi 1971, 18).

Lastly, let us take note of Susumu Egashira's (1999) conclusion regarding the essence of Menger's monetary thought in the second edition of Grundsätze (1923). After all, in his revisionist account of Menger's monetary thought, Ikeda (2008) relies upon Egashira's analysis of Menger's second edition of the Principles (1923). Egashira (1999) writes:

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[8] § 2f) deals with "[m]oney as standard of the exchange value of goods" (Menger 1923, xxvi).

> While acknowledging the spontaneous development of social systems, Menger also recognizes that the state plays a role in the emergence of money; this is a difference between Hayek and Menger. Hayek does not pay due attention to this aspect of Menger's thought when he endorses the Mengerian understanding of organic social phenomena. In this sense, Hayek's quotations on Menger cannot be considered well-balanced. (Egashira 1999, 157, quoted in Ikeda 2008, 456)[9]

The above conclusion by Egashira suggests that there are no fundamentally new insights in the second edition of Menger's Grundsätze (1923) compared to the 1909 version of "Geld". As the above discussion demonstrates, Menger (1909) believed in the spontaneous development of money, while, at the same time, he did not exclude a possibility of money's emergence by the influence of authority. However, Menger never incorporated this possibility into his overall theoretical framework which was fundamentally restricted to the spontaneous origins of money as a medium of exchange commodity. While Menger's emphasis on the vital role of the state at the later stages of monetary evolution in order to allow for a full development and continuity of the monetary system distanced Menger from Hayek and his followers (as Egashira rightly observes), this did not convert Menger into a follower of Knapp's State money approach. To the contrary, as the above discussion clearly indicates, Menger staunchly resisted and took great effort to refute the "fallacious doctrine" of money's origins by the influence of public authority. In fact, it seems that the sole purpose of Menger's historicist concessions was to settle the Methodenstreit, albeit in an Austrian way[10].

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[9] This quote is translated from Japanese by Ikeda (2008).
[10] I am thankful to John F. Henry for pointing this out to me.

What Menger Really Did: Appeasing the Historical School

Without doubt, Carl Menger's 1909 "Geld" and the second edition of Grundsätze (1923) cannot be properly understood outside the context of the Methodenstreit, into which Menger was directly involved, being "one of the most important participants in an extensive debate over the proper methodology for the social sciences" (Hunt 2002, 262). "It was, after all, Menger who fired the first shot in the Methodenstreit" (Alter 1990, 16). Highly familiar with the work of the German Historical School and harshly critical of its scope and method of inquiry (Milford 1990), Menger (1883) wrote a new methodological tract, Untersuchungen über die Methode der Socialwissenschaften und der Politischen Oekonomie inbesondere [Investigations into the Method of the Social Sciences with Special Reference to Economics] (1883) [11], the work credited with the 'origins' of the Austrian school of economics (Alter 1990, 23).

As is commonly noted, the Methodenstreit did not give a clear victory to either the orthodox or historical economists, as both groups consequently attempted to revise their findings in the light of the dispute (Hodgson 2001, 90). Neither side could claim a clear victory without conceding some ground to its opponents. For example, attempting to reconcile the orthodox and historicist movements, John Neville Keynes, the father of John Maynard Keynes, worked on The Scope and Method of Political Economy (1891), and the overt conciliatory tone of this work led to its wide recognition as "the definitive methodological tract" (Moore 2003, 5) containing all the intellectual weaponry necessary for settling the Methodenstreit. Providing an orthodox solution to the 'battle of methods', The Scope and Method thus marked "the beginning of the end of the historicist movement" (Ibid., 18) as J. N. Keynes elaborately re-worked the historicist

[11] Formerly published under the title *Problems of Economics and Sociology*.

framework so that it would not appear in conflict with its orthodox opposite (Ibid.). As Moore (2003) has characterized Keynes's gambit, it was the "passive-aggressive" strategy of "conceding ground while, in effect, conceding little" (Ibid., 5). For example, within the grand theoretical framework of the economic orthodoxy, Keynes (1891) was able to find room for historicist findings by delegating them to the place of the transient, less predominant, deviant, or interfering causes and forces (Moore 2003, 25).

The strategy employed by Menger (1909; 1923) is in many regards similar to that developed by Keynes in The Scope and Method (1891). By conceding some historicist findings, Menger likewise adopted a conciliatory tone, thus attempting to counter the historicist claims that his account was based on conjectural rather than actual history. Yet, the historical findings that proved in conflict with the universal law of money's origins as a medium of exchange commodity would be assigned the place of the marginal or peripheral phenomena that, overall, had little or no bearing for Menger's underlying theoretical framework. This strategy is particularly notable when Menger (1909) concedes that money may emerge by the influence of public authority, while he further underscores that such a channel of money's origins would be neither the only nor the primary one (see Menger [1909] 2002, 33). In this manner, the origin of money as a medium of exchange commodity remains a universal law of development, while, at the same time, it does not preclude the presence of some abnormal, deviant forces.

And it is not surprising that the analysis of money "was a prominent issue" (Ingham 2004, 10) in the Methodenstreit, if not at the "centre stage" (Ibid., 47) of this methodological dispute. For it was with the theory of money that Menger could most convincingly install the principle of methodological individualism as one of the central tenets of Austrian economics.

> Yet it is Menger's theory on money, his explanation of its origin as an institution, which most forcefully brings to light the role of the principle of methodological individualism and thus his criticism of the organic theory of the state. (Milford 1990, 219)

And just like Keynes's (1891) methodological tract put an end to the historicist movement in the discipline of political economy, Menger's works (1909; 1923) put an end to the study of money by other social sciences. After the Methodenstreit, the analysis of money was ultimately delegated to the sphere of 'economics' proper, in a belief that money was essentially an 'economic' phenomenon (Ingham 2004, 9). Other social sciences uncritically accepted the Mengerian framework of money's origins and nature (Ibid., 9).

A Response to Revisionists

To conclude the discussion of this chapter, let us go back to Ikeda's (2008) two points regarding the evolution of Menger's monetary thought:

> First, in Menger's monetary theory, states do play an important role in shaping monetary systems. This assertion is contrary to the conventional understanding of Menger as viewing monetary systems as spontaneous orders in which governmental intervention should be minimized. Second, Menger's monetary thought differs from Hayek's; applied to the monetary system, it is more balanced than Hayek's radical liberalism. (Ikeda 2008, 457)

To begin with, there is no question that in Menger's theory "states do play an important role in shaping monetary systems" (Ikeda 2008, 457). While Menger fundamentally believed in the spontaneous origins and development of monetary systems, he came to realize that a full development and continuous existence of the monetary and commercial systems was not possible without the presence of the state. Specifically, the state could provide 'the public good' (coinage and legal tender laws) which the private sector could not deliver reliably and efficiently. Thus, Ikeda's critique of the conventional understanding of Menger's monetary thought "as such in which governmental intervention should be minimized" (Ibid.) is correct.

> For Menger, it was a natural role for the state to play, without which the monetary system could not have developed fully. Thus, the necessity of state intervention for Menger is justified by public utility. (Ibid., 469)

Correspondingly, as Ikeda rightly observes, Menger did not view the historical role of the state in a negative light because state intervention was "justified by [its] public utility" (Ikeda 2008, 469). Further, Ikeda rightly emphasizes the important difference between Menger and Hayek on the subject of governmental involvement in the monetary system. Menger's perspective is different from Hayek's where historical intervention by the state is viewed in a negative light "necessary only to solve the financial problems of the state" (Ibid.).

> Whereas Menger held that the right to mint coins was justified by 'the general good' of society, because private firms could not effectively supply money, Hayek saw public coinage a good source of profit for the state. Hayek did not accept that public good justified public coinage; for Hayek, this argument amounts to an almost deceptive account of history. (Ibid.)

Likewise, unlike his followers in the later Austrian school, including Hayek, Menger was not a proponent of free banking (Ibid., 465-67).

However, Ikeda's overall revisionist position against "the conventional understanding of Menger as viewing monetary systems as spontaneous orders" (Ikeda 2008, 457) must be revised. While Menger saw a role for the state to play at the later stages of monetary evolution, Menger staunchly retained his fundamental theoretical position on the spontaneous origins and development of money as a medium of exchange commodity in the context of trade. In the third version of "Geld" (1909) and in the posthumous second edition of Grundsätze (1923) Menger did not reconsider this central tenet of his theoretical framework. Menger's observations that money may emerge by the influence of public authority were never incorporated into his overall theoretical framework. In fact, Menger fiercely refuted the "fallacious doctrine" of money's origins by the influence of public authority as "counter-historical". And after all, Ikeda (2008) seems to revise his own revisionist account of Menger's monetary thought in the following passage:

> . . . Menger believes in the fundamentally automatic development of the monetary system, but admits the necessary role of the state in advancing the development of the system. (Ikeda 2008, 467)

The passage cited above only reinforces the argument made in this chapter, i.e. that no revision of Menger's monetary thought is necessary. The "conventional understanding of Menger as viewing monetary systems as spontaneous orders" (Ikeda 2008, 457) is correct[12]. As Alter (1990) concluded:

> Various issues remain unclear in the Grundsätze, but looked at in the light of the Undersuchungen, and also the second (posthumous) edition of the Grundsätze, Menger's thought stands out as being shaped by one all-embracing vision. (Ibid., 24)

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[12] As Paul Einzig (1966) interpreted Menger's discussion of money's origins in the context of political payments, it was *after* money's automatic development happened in the process of trade that the means of political payments came to be expressed in money. While "Menger realized that non-commercial payments (primarily political payments) constituted the earliest form of payments, and preceded barter" (Einzig 1966, 377), he at the same time held the view that these political payments "were made in kind until a medium of exchange [i.e. money] had developed through trade, after which they were made in money" (Ibid.). Thus, Menger viewed these processes as two separate developments: 1) the development of a medium of exchange (money), and 2) the establishment of the means of political payments. Menger's underlying premise on the spontaneous origins of commodity money in private sector trade precluded him from a theoretical generalization where a means of political payments could give rise to money in the first place. In the words of Einzig:

> Since he [Menger] assumed that money could only originate from a favourite medium of barter, he concluded that no object used for political payments prior to the existence of such a favourite medium of barter could be described as money. (Ibid., 377)

To conclude, no revision or modification can be found in Menger's theory of money's origins, development and nature. While Menger came to concede some important historicist and Chartalist insights on the origins of money by the influence of public authority, such insights remained peripheral observations as they were not integrated into Menger's underlying theoretical framework. Rather, Menger staunchly retained his interpretation of money's origins, development and nature as a medium of exchange commodity, and viewed government action as alien to the general concept of money per se. In accord with his earlier works (1871, 1892), the later Menger (1909, 1923) reserved the role of the state for the more advanced stages of monetary evolution. Finally, in the light of the Methodenstreit, Menger's historicist concessions could be viewed as attempts to settle the dispute, albeit on orthodox terms, as the historicist findings were delegated to the status of auxiliary and marginal phenomena with little or no bearing for the underlying law of money's spontaneous evolution as an intermediary of exchange.

CHAPTER 5

NON-COMMERCIAL PERSPECTIVES ON THE ORIGINS OF MONEY AND COINAGE: A SURVEY OF INTERDISCIPLINARY LITERATURE

> For many people 'money' means 'coin', and what one is really being asked is 'How did coinage begin?' 'How did money begin?' is a quite different question, and one that cannot be answered so easily, or in the same way.
>
> —Philip Grierson, The Origins of Money

> To be sure, coin is not the origin of money, but it was undoubtedly significant.
>
> Geoffrey Ingham, The Nature of Money

The "intellectual confusion" over the nature and origins of money can be traced to the seventh century BC when coinage was 'invented' in ancient Lydia and Greece (Ingham 2004, 97; see also Kim 2001, 7). Ever since then, the origins of money have been commonly associated with the origins of coinage and the more immediate stages preceding its circulation (such as circulation of metal bars) (Ingham 2004, 5, 97). This association of money's origins with the "revolutionary invention" (Schaps 2007, 1) of coinage has been questioned by Philip Grierson in the 1970s, and Bernhard Laum in the 1920s. What is more, as chapter 2 discusses in detail, the origins of coinage are commonly associated with the development of trade and a disembedded economy of market exchange. The goal of this chapter, then, is to examine those scholarly contributions which did not uncritically accept the Metallist perspective as the underlying theoretical framework for the analysis of money's origins, but embarked on a substantive task of examining specific social, political, religious and symbolic spheres into which the Greek economies were embedded in the period during which coinage emerged. Specifically, in what follows I examine recent contributions by Leslie Kurke (1999) and Sitta von Reden ([1995] 2003)[13]. In addition, I analyze the earlier scholarship by Philip Grierson (1975, 1977), and the more recent contribution in the numismatic profession by Henry Kim (2001, 2002). Also, Martin Price (1983) and his hypothesis on the origins of coinage in the sphere of aristocratic gift-giving will be examined. Finally, I analyze fiscal theories of the origins of coinage as advanced by Robert Cook (1958), Colin Kraay (1964, 1976) and, more recently, by Jeremy Trevett (2001). Berhnard Laum's (1924a) thesis on the religious origins of money and coinage, and related contribution by Richard Seaford (2004) deserve special attention and will be examined in Chapter 6.

Philip Grierson and the Origins of Money in Wergeld

A professor of numismatics at the University of Cambridge, Philip Grierson (1975, 1977) is famous for clearing coinage out of the way of inquiry into the origins of money (Grierson 1977, 7). Arguing that "money lies behind coinage" (Ibid., 12), Grierson characterized the history of money as "much more complex" compared to the history of coinage (Ibid.):

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[13] Underscoring the vital importance of the recent works by Sitta von Reden and Leslie Kurke, Kim (2002) points out that their scholarship has "substantially altered the landscape of early coinage and money, by examining their role within the social context of the archaic Greek polis" (Kim 2002, 44). Kim further explains that von Reden and Kurke have successfully challenged the "dominant market-based accounts of early coinage" (Ibid., 44), stressing, instead, the prominent role of coinage "at the centre of a growing ideological conflict between traditional elites and new elites" (Ibid., 45). Kim concludes by saying that, in light of the new approach developed by von Reden and Kurke, coinage has been "placed . . . back onto the agenda of Greek history" (Ibid.), as the basis for a new discussion has been established. No doubt, the new discussion and debate "will run for some time" (Ibid.).

> In studying the origins of coinage, the scholar has mainly to answer the questions 'where' and 'when'. In studying those of money he is more concerned with 'how' and 'why'. (Ibid.)

> The origins and spread of coinage are thus topics with which the historian can properly be expected to deal, for they can be studied in well-defined historical and chronological contexts. But money lies behind coinage. (Ibid.)

Thus, according to Grierson, the history of coinage is "relatively simple" (Ibid.), because we are "dealing with a very limited group of phenomena whose evolution is in the main not difficult to trace" (Ibid.). The history of money, on the other hand, is much more difficult to trace and comprehend.

Grasping the notion of institutional evolutional change, Grierson (1977) described coinage as a "specific" case within the general phenomenon of money (Ibid., 12), arguing that each of the coinage systems "replaced at its creation some earlier form of 'primitive' money" (Ibid.). Grierson likewise disputed the origins of money as a commodity mediating market exchange, urging, instead, an inquiry into the earlier institutions of communal development such as Wergeld:

> But behind the specific phenomenon of coin there is the more general phenomenon of money, the origins of which are not to be sought in the market but in a much earlier stage of communal development, when worth and wergeld were interchangeable terms. (Ibid., 33)

To conclude our discussion of Grierson's methodological position, an inquiry into the origins of money is not to be reduced to the history of coinage. Rather, one should inquire into what forms of money preceded coinage and why. The prevailing 'where and when' historical chronological accounts of the origins and spread of coinage cannot easily answer the 'how and why' questions regarding the origins of money in the first place.

When inquiring into the questions of money's origins, Grierson (1975, 1977) rightly raised the following issue: What is the origin of a mere idea (or notion) of valuing an object in terms of another object(s)? How and why did this idea come into being? To put it differently, Grierson (1975, 1977) inquired into the origins of a unit (or standard) of value (measurement or account).

Accounting for the marginality of trade (both foreign and domestic) in archaic and ancient societies, Grierson (1975, 1977) excluded the possibility that the idea of a unit of value (or account) emerged in a market context. Rather, Grierson (1975, 1977) suggested that the idea and practice of a unit(s) of value originated in the archaic Germanic institution of Wergeld. Derived from wair meaning 'man' and gildan meaning 'to pay' or 'to render' (Grierson 1977, 22), the term Wergeld refers to the archaic Germanic tradition of paying in-kind compensations for personal injuries to, or murders of kin members (Ibid., 19).

Within the Wergeld tradition, each injury or murder was evaluated and had to be recompensed in terms of "objects of some value which a householder might be expected to possess or which he could obtain from his kinsfolk" (Grierson 1977, 20). According to Hudson (2004), such Wergeld objects commonly involved "living, animate assets such as livestock" (Ibid., 99). By compensating the family of an injured or murdered person, retaliation by force, blood feud and other "inconvenient social consequences" could be avoided (Grierson 1977, 19). Importantly, while the "tariffs for damages were established in public assemblies" (Ibid., 20), the Wergeld payments were made "directly to the victims or their families [and] not to public institutions" (Hudson 2004, 99).

Grierson (1975, 1977) advanced a thesis that objects first employed as units of value in Wergeld could be viewed as the earliest form(s) of money. Thus, money (together with the idea and practice of abstract valuation in terms of a unit(s) of value) did not emerge in a market context. Rather, the origins of money as a unit(s) of value must be sought in the archaic institution of Wergeld (evaluating and recompensing personal injuries) (Grierson 1977, 19).

Moreover, Grierson (1977) speculated that the practice of Wergeld could further lead to the institution of bride-price and subsequently slave trade (Ibid., 23). In the first place, this institutional evolution would be attributed to the fact that both bride-price and slave trade were directly involved with human beings with whom the notion of compensation was already strongly associated as a result of Wergeld:

> Both involve human beings, with whom the notion of wergeld was strongly bound up. Both involve a loss to one's household, and though the marriage of one's daughter is somewhat different from the getting rid of a superfluous slave they both invite a compensation, partly honorific in the first case but likely to be directly based upon usefulness in the second. Both are events that would have frequently occurred, so that people could easily arrive at a general notion of how much brides and slaves should be worth. (Ibid., 23)

Thus, from assessments of personal injuries to evaluations of females, the idea of valuation in terms of abstract unit(s) of measurement could eventually carry over into a 'market context' where trade in humans took place. Given this analysis, Grierson (1975, 1977) would argue that a function of money as a medium of exchange in market transactions would derive from money's primary role as a unit of value in the context of Wergeld and further in bride-price (Grierson 1977, 22-23).

Notably, Grierson (1977) does not associate the origins and early development of money with one standardized unit of value (or account). Rather, Grierson held that there could be a number of such units, and they would be negotiated between households rather than being stipulated by a central public authority. Grierson also argued that the institution of Wergeld was not confined to Germanic territories, and he pointed to ancient Greece as another "obvious example" of this practice (Ibid., 26). In this, Grierson relied upon Homeric epics as an important piece of evidence for the early existence of Wergeld and tariffs in Greece:

> Pecuniary compensations for manslaughter are an accepted practice in Homer. Ajax, when reproaching Achilles for refusing Agamemnon's peace offering where a mere girl is concerned, points out bluntly that men are prepared to accept compensation for the death of even their sons or brothers, 'and so the man-slayer at a great price abideth in his own land'. A dispute over the acceptability of a wergeld was one of the many scenes depicted on the shield of Achilles . . . . (Ibid., 27)

Alternatively, turning to the 'testimony of language', Grierson argued that "the ordinary Greek word for price" – timē – had "amongst its great variety of meanings that of compensation, satisfaction, [and] penalty" (Ibid., 27). Grierson further suggested a common etymological root between the Greek words timē and timōreō meaning 'to avenge' (Ibid.).

Notably, Grierson's (1977) thesis shares important similarities with the Chartalist perspective on money's origins and nature. Both see coinage as a 'special' rather than general phenomenon of money, and both agree that the origins of money "are not to be sought in the market" (Ibid., 33). Similar to the Chartalist position, the 'test of moneyness' is the unit of account function of a monetary object, and its role as a medium of exchange is viewed as derived there from.

> Money as a standard in fact lies behind money as a medium of exchange, and we must for the present turn aside from the fascinating variety of objects which have served as media of exchange, and concentrate on money as a measure of value. (Ibid., 17-18)

However, some important differences remain. While Chartalists would argue that a unit of account was first established by a central public authority, Grierson (1977) does not exclude the role of social conventions. For example, speaking of bride-price and slave trade, i.e. institutions that in Grierson's thesis evolved out of Wergeld practices, he noted that "people could easily arrive at a general notion of how much brides and slaves should be worth" (Ibid., 23). Thus, Grierson does not necessarily see a role for a central public authority in establishing a unit of measurement (or value).

Further, Grierson (1977) did not view the origins of money as that of a 'universal equivalent' considering that Wergeld payments "were often never systematized and were settled each time on an ad hoc basis" (Ibid., 28). The Chartalist group, on the other hand, underscores the importance of a standardized unit of payment. Therefore, within the Chartalist perspective it would not be unequivocally accepted that the means of payment of Wergeld represented the first form of money given the absence of standardization of the means of payment:

> However, even though payment of compensation required social consensus on the form of payment, there was no need to settle on a 'universal equivalent', for each specific injury inflicted put a specific debt on the individual transgressor. Thus while wergeld may have been the original source of the notion of debt and measurement of indebtedness, it probably could not have directly generated monetary payments because there was little private incentive for the standardization of the terms. (Wray 1998, 49)

Thus, while the Chartalist perspective does not exclude a possibility that the notion of debt and its measurement originated in Wergeld-type institutions, the latter are not viewed as generators of monetary payments proper, as such payments would require standardization, something that would necessitate the action of a central public authority. Rather, within the Chartalist perspective, money as a 'universal equivalent' first appeared in the context of taxes, fees, fines and tribute levied by rulers (Wray 1998, 49-50):

> As these [Wergeld-type] compensatory payments do not appear to have been originally measured in a [common] unit of account, it seems more likely that money as a unit of account first appeared as a means of standardizing tribute or taxes levied by rulers. (Ibid., 50)

Yet, the Chartalist perspective further conceded some ground to Wergeld-type explanations of money's origins in the tradition of Grierson (1975, 1977). Here, Wray (2004) advanced a more evolutionary perspective according to which Wergeld payments (first negotiated ad hoc between specific parties to transgressions) could gradually evolve into standardized payments to a public authority (Ibid., 227). "It is almost certain that wergild fines were gradually converted to payments made to an authority" once a transition to a class society took place (Ibid.). Payments for injuries inflicted upon individuals came to be superseded by fines for 'transgressions against society':

> The key innovation, then, lay in the transformation of what had been the transgressor's 'debt' to the victim to a universal 'debt' or tax obligation imposed by and payable to the authority – whether that imposition followed from democratic practices or otherwise. The next step was the recognition that the obligation could be standardised in terms of a handy unit of account. (Ibid., 228)

Thus, Wray (2004) clearly sees a possibility of institutional evolution of standardized monetary payments and centralized taxation out of Wergeld-type institutions:

> In any case, with the development of 'civil' society and reliance mostly on payment of taxes rather than fines, tithes or tribute, the origins of such payments in the wergild tradition have been wiped clean from the collective consciousness. (Ibid., 228)

In this context, recall the discussion of the third Chartalist monetization mechanism: from Wergeld – to in-kind payments of tithes and tribute to a central public authority – to payments in standardized units to the state (payments of taxes).

Sitta von Reden and the Origins of Greek Coinage in the Context of 'Distributive Justice'

In her thought-provoking volume Exchange in Ancient Greece, Sitta von Reden ([1995] 2003) disputes the origins of coinage in a disembedded economy of market exchange. As an alternative, she explores the broader political and social context for the origins of coinage in ancient Greek societies. As opposed to a disembedded economy of commercial exchange, von

Reden examines what she dubs an "embedded economy of civic exchange" as the primary context for the origins of coinage (Ibid., 220).

Though von Reden's account is primarily concerned with coinage and metals, the scholar is not blinded by modern 'economistic' interpretations of these phenomena as commodities mediating exchange in the market place. In fact, von Reden's work abounds in critical methodological observations regarding the impact of economics on our 'commonsense' understanding of the 'economic' aspects of early societies. For example, von Reden addresses the substantivist-formalist controversy in economic anthropology, noting the strong influence of [neo-classical] economics upon the discourse on early money, markets and exchange:

> We are all accustomed nowadays to thinking of exchange, markets and money in terms of economics. (Ibid., 217)

Here, the classicist clearly refers to modern neo-classical economics (which she rightly describes as "capitalist economics" (Ibid.), i.e. the dominant perspective within the economics profession that has provided the main theoretical framework for a cross-disciplinary discourse on the origins and early uses of money (as well as other 'economic' aspects of early societies such as markets and exchange).

In particular, von Reden takes an issue with the [neo-classical] economics' universal mode of thinking about 'exchange' and its implications for the analysis of ancient economies, including an erroneous construction of history altogether. In this, von Reden makes a sharp methodological observation on the prevailing practice in the [neo-classical] economics profession to construct history in such a manner as to justify the [neo-classical] economic theory itself:

> The language of capitalist economics has so much dominated our way of thinking about exchange that it has led to the construction of a history according to which people are

> necessarily driven into markets and money use. Here is a subtle example of a circular argument: economic behavior is represented as the result of a history that economic theory presupposes in order to justify itself. (Ibid., 217)

In this context, von Reden also notes the [neo-classical] economics' method of projecting or presupposing "a clear concept of property" in ancient economies where "socially binding relationships towards people" would be a more appropriate analytical framework (Ibid., 218). Based on her analysis of Homeric epics, von Reden concludes that the ancient Greek conception of 'ownership' where "objects were never totally alienable from people" (Ibid., 219) was more akin to our modern notion of socially binding relationships among people:

> Since the value of possessions was that of a sign of the relationship between the donor and the recipient, the epics convey a concept of ownership that is closer to our concept of relationships and suggest that there was an open boundary between the status of subjects and objects in exchange. (Ibid.)

Further, von Reden disputes the [neo-classical] economics' technique of "methodological individualism" when applied to ancient history. In the context of Greek antiquity, von Reden argues that "no concept similar to the 'individual' existed" (Ibid., 218):

> Instead, a person was either a member of a community or no person – that is simply a body. Any interest that he pursued not as a member of a community could thus only be understood as an interest of his body. (Ibid.)

Finally, dismissing a separate treatment of "economically functional forms of exchange" (Ibid., 219), von Reden argues that all forms of 'exchange' that took place within a Greek polis symbolized the political and social status of its members (Ibid.). Hence, money could not have emerged in a 'disembedded' economy of market exchange. Emphasizing that "the ancient [Greek] economy was regulated by religious, moral and political concerns" (Ibid., 2), von Reden argues that it would be futile to restrict the use of the earliest Greek coinage a priori to any specific transactions such as a dis-embedded market exchange[14]. Rather, money and payments would be "at first meaningful within the political symbolism of exchange" (Ibid., 220):

> Monetary payments were at first meaningful within the political symbolism of exchange rather than introducing a new economic or 'disembedded' mode of exchange. (Ibid.)

The "political symbolism of exchange" implies that coinage first functioned in political, legal or ritual contexts such as payment of taxes and rewards, penalties and compensations, and administration of prizes and gifts (Ibid., 178).

The administration of 'social justice' within a broader political context of the changing 'authorities' over the maintenance of social order (kosmos) is key to understanding von Reden's insights into the 'political' origins of coinage. More specifically, von Reden advances a thesis according to which coinage was 'introduced' as a means of recompense administered and controlled by the civic authority of a Greek city-state. This asserted the polis as an institution in control of social justice and replaced the previous authority of the gods that was closely intertwined with the powers of the older aristocratic elites. Thus, coinage represented a shift from "a divine order of justice" (Ibid., 175) controlled by the gods and interlinked with the old aristocracy, to the social order of justice controlled by the civic authority of the polis (Ibid.).

The first step in this process, – argues von Reden, – was "a decline of faith in the reliability of divine justice" (Ibid., 175) which was prompted by unequal distribution of wealth (chrêmata) in society. As far as can be judged from the poems of Solon and Theognis, – concludes von Reden, – excessive accumulation of wealth "came to be regarded as the main threat to order (kosmos)" (Ibid.). Given a decline of faith in the justice of divine retribution, the

[14] Similar links have been underscored by John Davies (2001), who points to "much useful recent work, which has shown the value and complexity of exploring the interface between (a) cult, ritual, and theology, (b) economic (especially agrarian) history, and (c) administrative practices and their underlying value structures" (Ibid., 118).

central political problem became to create “a means of retribution which was under human control” (Ibid., 177). In a society where justice came to be regarded as distribution of valuables, an “idea emerged that social justice could be achieved politically by the ritual of distribution of pieces of metal,” thus giving rise to coinage (Ibid.). In the words of von Reden:

> There are some indications that the introduction of coinage was motivated by the desire to create a political means of payment controlled by humans so that they would not have to rely on the uncertain rewards by the gods. (Ibid., 220)
>
> The lack of a means of retribution which was under human control seems to have been a central political problem. It has been suggested that this was the motivation for the introduction of coinage. Its purpose was to create a means of retribution to (re)establish social justice within the polis. (Ibid., 177)

Further, von Reden utilizes etymological evidence to lend support to her thesis that coinage emerged as a political means of payment in the context of (re)distributive justice. Specifically, the classicist notes that the Greek term nomisma which came to be associated with money and coinage is etymologically related to:

1) nemô meaning ‘to distribute’, ‘to deal out’
2) nemesis meaning ‘distribution of what is due’, ‘divine resentment’, ‘assignment of due anger’
3) nomos meaning ‘anything allotted or assigned’ (by convention, custom or law), or convention, custom and law in general (Ibid., 177).

Initially, then, the term nomisma referred to ‘order’, implying that something was ‘arranged’, ‘given out’, ‘distributed’ or ‘measured out’ (Ibid.). As nomisma gradually came to be associated with coinage, this signified that coin became “the token which materialized nomos” (Ibid.) or ‘just distribution of what is due’ according to current or established usage (Ibid., 189). As von Reden concludes in the passages quoted below:

> Nomisma (coinage) is linguistically related to nemô (to distribute, to deal out), nemesis (distribution of what is due, divine resentment, assignment of due anger) and nomos (anything allotted or assigned, convention, custom, law). (Ibid., 177)
>
> The use of the term nomos increases rapidly in the texts of the 7th century but first meant 'order', and especially 'military order', implying in a strong sense that something is 'arranged', 'given', 'distributed', measured out'. Nomisma was the token which materialized nomos. In the 5th century it could still simply mean 'measure', or 'official measure'. Nomisma might, then, have its origins in the political necessity to express 'measure' in the construction of relationships of power and authority. (Ibid.)

Von Reden's thesis inevitably raises a question regarding the specific nature of political authority that first authorized the issue of coinage. As noted above, the scholar attributes the origins of coinage to the shift of authority over social justice from the gods and the old aristocracy to the civic authority of the Greek poleis. However, this does not yet address the nature of the transitional political authority that first authorized the issue of coinage as a political means of retribution (Ibid., 175).

Clearly, our knowledge about the changing structure of political power leading towards the development of the polis is scarce:

> Little is known about how the structure of power changed in the early development of the polis. The evidence from most places is scarce, while the early history of Athens which we know only through later texts can hardly be taken at face value. (Ibid., 179)

Yet, the existing evidence leads us to conclude that it was not "the state" proper that first authorized the issue of coinage (Ibid., 178). It is not until the last quarter of the sixth century BC that we see some of the salient attributes of a state apparatus (Ibid., 179):

> 'State funds' and a public treasury were alien concepts at a time when government changed rapidly with the temporary success of aristocratic families. Regular assemblies, council meetings and theatrical performances – areas associated most closely with public payment – did not take place in the city before the last quarter of the 6th century. (Ibid.)

Richard Seaford (2003) arrives at similar conclusions, arguing that political leadership in the archaic period "remains largely personal rather than institutional," and there is no presence of "royal officialdom, taxation, judicial function, or legitimate monopoly of coercion of power" (Ibid., 22):

> Indeed, Homeric society has been classified, from the perspective of comparative anthropology, as the kind of pre-state society called 'chiefdom', or more specifically 'low level' or 'immature' chiefdom, in which there is unstable centralized direction, with the power of the political leader (basileus) based not on centralized institutions, stratification, or a formal apparatus of repression, but on wealth, prestige, military prowess, and informal authority over the other like-named chiefs (basileis), and on his ability to act as redistributor. (Ibid.)

In this manner, Seaford (2003) characterizes Homeric society as that of a "pre-state society" with political leadership of a basileus, and the presence of some salient attributes of socio-economic inequality such as uneven distribution of wealth and the ability of the basileus to act as a redistributor[15].

Lastly, based on Peacock's (2010) analysis, "political institutions in Homeric society are too little developed to speak of "the state" or polis, as it was to become in the classical period" (Ibid., 7). Nevertheless, while we cannot observe "the state" or polis in a proper sense, we can speak of a Homeric polis, implying underdevelopment yet nascence of many political institutions which are to culminate in the classical Greek period.

> . . . the Homeric polis is underdeveloped but nascent; there is no system of regular taxation, and "state expenditure" is rudimentary. Nevertheless, political institutions which were to develop in classical Greece were in-the-making. (Ibid., 15)

Analyzing specific institutional arrangements of Homeric societies, Peacock notes the primacy of oikos as a social unit, whose members are made up of family, servants and slaves. Yet, the primacy of oikos should not belittle the importance of political institutions, as "political

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[15]Yet, Seaford (2003) argues that the redistributive powers of the Homeric *basileus* were relatively modest if compared "to the more complex, centralized redistribution of more politically integrated societies such as the Mycenaean 'palace' economy" (Ibid., 22).

community (polis) plays a role in Homeric society nevertheless” (Ibid., 7). Specifically, the Homeric polis can be viewed as a “collection of oikoi” (Ibid.) led by a male ruler whose oikos is marked by greater wealth:

> The polis is formed of a collection of oikoi (located in town, on an island or group of islands), each of which has a (male) head who sits in the assembly of the polis. The ruler of the polis is often described as a primus inter pares (the pares being the other oikos heads). This is illustrated by thirteen Phaeacian nobles who are each described as a “king” (basileus) and of whom their ruler, Alkinoös, is one . . . . What marks the leader of the polis from the other kings is the greater wealth of his oikos on which his status and authority are predicated. (Ibid., 7-8)

Finally, upon reviewing von Reden’s ([1995] 2003) thesis, Peacock (2006) concludes that while we “cannot comprehend the development of money in Ancient Greece without considering the state” (Ibid., 645), it would be misleading to assert that coinage first emerged as ‘a creature of the state’ understood in a proper sense. Such an assertion “would imply that an already existing body, the state, created a new phenomenon, money” (Ibid.). Yet, the period during which we witness the emergence of coinage in Greece is also a period during which we observe the emergence of political institutions which subsequently became “the state” (Ibid.). And not only did the evolving state play a part in the development of money, but the emergence of money played a role in the development of the state:

> The history of the path from the Homeric world to that of Classical Athens can be told as the history of the development of the city-state (polis) and its political institutions; and just as the developing state had an important role in the development of money, so did the development of money play a part in the development of the state. (Ibid., 644-45)

Against the backdrop of this evolving political context, von Reden ([1995] 2003) has argued that the initial issue of coinage most likely was not a ‘state initiative’ proper considering that “the idea of the state was only in its infancy in that period” (Ibid., 177). Rather, the internal politics of the period were characterized by political rivalry among aristocratic families.

Arguably, in this political context "authorities of a more temporary kind needed a means of payment to create social peace" and to gain political power (Ibid.). Thus, before coinage was issued by "the state" proper, members of the old aristocratic elites employed the use of coinage in their political struggle "as their token of value in civic exchange" (Ibid., 181, emphasis added):

> The issue of coinage is also unlikely to have been a 'state initiative' from the beginning, given that the idea of the state was only in its infancy in that period. Internal politics of the 6th century seem to have been characterized, rather, by a serious of more or less successful attempts by rival families to gain power with the help of a group of loyal followers. Before the 'state' issued its coinage, authorities of a more temporary kind needed a means of payment to create social peace. (Ibid., 177)

Note that the rival aristocratic families did not regard coinage "as the commodity of traders" (Ibid., 181). Rather, coinage was seen as a civic token, the acceptance of which signified recognition of the issuing political authority. For this reason, von Reden characterized coinage as a "token of value in civic exchange" (Ibid.), thereby emphasizing an important distinction between her approach and the 'commonsense' commercial interpretations of the origins of coinage:

> Members of the elite, rather than regarding coinage as the commodity of traders, took it as their token of value in civic exchange. The political struggles over whose coinage was the accepted value were a necessary first step for coinage to become currency. (Ibid.)

Among other pieces of evidence, von Reden brings iconography to support her thesis according to which coinage was first issued by aristocratic families as a token of value in their attempts to gain and maintain political power. For example, von Reden examines the evidence of personal and civic emblems (sêmata) displayed on ancient Greek shields, gems, rings and stones. She notes that there are "significant iconographic links between the iconography of coinage and the sêmata on archaic shields, rings and gems" (Ibid., 178). Thus, von Reden argues that coinage was most likely meaningful in the tradition of displaying signs (sêmata) on shields, gems and rings "as symbols of ownership, personal trust and authority" (Ibid., 181). This supports von Reden's thesis that the first visual emblems on coins could be regarded as the marks of ownership.

Von Reden further argues that the final standardization of coinage did not occur until the turn of the sixth century BC (Ibid., 179). For example, the obverse of the first series of the early Athenian coins known as Wappenmünzen depicted a changing device for each issue, such as an amphora, a horse, a bird, an owl and a gorgon's head, among other symbols. The final standardization of Wappenmünzen saw an owl on the obverse and the head of Athene on the reverse (Ibid., 180).

The other three most important archaic Greek silver coins followed a similar evolution, from a variety of emblems to their final standardization by the turn of the sixth century BC, marked by a depiction of a civic emblem on the reverse (Ibid., 179)[16]. The standardization of coinage coincided with its rapid spread in political centers such as Corinth, Aegina and Athens:

> The evidence both from texts and coin hoards suggests that there was a rapid increase and spread of coinage at the turn of the 6th century in political centres such as Aegina, Corinth, Athens and some towns in Magna Graecia. The increase coincided with the standardization of the obverse type and the depiction of a civic emblem on the reverse. (Ibid., 195)

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[16] For a detailed description and graphical illustrations of the early Lydian and Greek coins see Z. Klawans (2003), W. Sayles (2007), and P. Rynearson (2008). Detailed illustrations are also provided in Howgego (1995). As far as the earliest electrum coins of Lydia (Asia Minor) [ca. 620 BC or earlier], they represent "typeless" lumps marked with a simple punch, or a combination of a punch mark and an animal representation (Sayles 2007, 3). Later, various animal representations are selected as types; inscriptions come afterwards (Rynearson, 20). As illustrated in Klawans (2003), animal types include images of a bull, lion, horse, ram's head, goat, cow, calf, goat, goose, etc. Such types are predominant until ca. 500-450 BC. Next, we see a transition to coins depicting human figures and, further, human heads (ca. 500-400 BC). Such coins usually depict various inscriptions.

It was at this stage that state coinage proper came into being, symbolizing self-governance of the Greek city-state:

> Only then did the polis as a whole authorize its value. Being thus symbolic of the power of states governed by themselves coins could be distributed for that reason alone. (Ibid.)

The final standardization of coin emblems reflected a shift in the power structure "from authority identified with individual archons [tyrants] to a more abstract and stable civic government" of the polis (Ibid., 181)[17].

Coinage thus became a medium through which the polis could "regulate interactions between its citizens in a just manner" (Peacock 2004, 645). Coinage became a "political means of payment" administered by the civic authority of the polis and serving as "a means of retribution to (re)establish social justice within the polis" (von Reden [1995] 2003, 177). In contrast to the uncertainty associated with divine justice, coinage issued by the polis could compensate virtue "immediately and precisely" (Ibid.). The payments of "stamped tokens" (i.e. coins) representing "just recompense" would be associated with political rather than divine power, asserting the polis as an authority over social justice and order (Ibid., 175)[18]. This meaning of coinage as "a means of retribution to (re)establish social justice within the polis"

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[17] See also M. Austin and P. Vidal-Naquet (1980, 56-58) for the role of coinage in the development of Greek cities and civic consciousness. When analyzing the significance of the invention and spread of coinage, the authors conclude that "one must emphasize especially the development of civic consciousness: in the history of Greek cities coinage was always first and foremost a civic emblem. To strike coins with the badge of the city was to proclaim one's political independence" (Ibid., 57).

[18] Howgego (1995, 15) confirms this thesis, arguing that "the introduction of coinage is itself an indication that the economy and society were not of a Homeric type" (Howgego 1995, 15).

(Ibid., 177) is related to Aristotle's observation "that political koinôniai create social justice by the use of coinage" (Ibid., 195).

Von Reden succinctly summarizes her thesis in this passage:

> A crucial distinction between coinage and other wealth lay in the question of their origins. The recognition of coinage as a recompense meant the acknowledgement of the polis as an institution that controlled justice and prosperity. Agrarian wealth and ancestral treasure, by contrast, referred to a divine order of justice which could be controlled by humans, if at all, only by religious ritual. The introduction of coinage indicates a shift of authority over social justice from the gods to the polis. The first step towards the introduction of coinage was thus a decline of faith in the reliability of divine justice. The polis replaced the divine order by compensating virtue immediately and precisely rather than with what we earlier called 'indefinite certainty' . . . . (Ibid., 175)

Although by the late fifth and fourth centuries BC the Greeks came to associate coinage with trade and apolitical behavior, at the turn of the sixth century BC, – emphasizes von Reden, – money was still part of an embedded economy of civic and political rather than commercial 'exchange' (Ibid., 175, 220). The classicist also notes that the Greeks employed a different term – argurion (or chrusos) – when referring to bullion and coined metal serving as media of exchange in commerce. The term argurion later used in commerce "was distinct from money, and the political difference was especially considerable" (Ibid., 174).

> Conversely, the idea that coinage is a medium of political exchange rests on the tradition which associated the payment of stamped tokens with political power and just recompense. (Ibid., 175)

As a specific example of the use of coinage as a means of "just recompense" let us turn to the case of the misthos received by Athenian citizens for the services rendered to the polis. Arguably, the meaning of misthos was distinct from that of a 'wage', the latter understood in a modern sense as payment for hired labor. Rather, misthos represented a "collective counter-gift" advanced by the polis to recompense and express the timè (worth) of its citizens (van der Vliet 1998, 499).

> This sheds particular light on the meaning of the misthos the Athenian citizen received as a compensation for his services as a citizen. In this perspective it explicitly is not a 'wage', in the sense of payment for hired labour, but a kind of collective counter-gift. It means to express the timè of the citizen. (van der Vliet 1998, 499)

Based on the example of misthos, van der Vliet (1998) concludes that coinage was "initially not meant as 'money' as we know it, but as a means to express value and not as an object with value of itself" (Ibid., 499, emphasis added).

Thus far, we discussed von Reden's ([1995] 2003) thesis regarding the role of coinage as a means of 'just recompense' administered by the polis to its citizens. But what did coinage really stand for in the context of social and economic inequality which the democratic polis tried to suppress ideologically, without actually making attempts to eliminate it (Ibid., 200). One example of this inequality is illustrated by monetary payments for personal services:

> The democratic city tried to suppress such relationships ideologically without ever making the attempt to fight social and economic inequality. The kind of exchange which symbolized this inequality most starkly – payment of money for personal service – was cursed, without thereby reducing the problems behind it. (Ibid.)

To answer the question "What money really stood for?" von Reden examines the imagery of the late archaic red-figure vase paintings (sixth and fifth centuries BC). What is so remarkable about these paintings is the ubiquitous presence of a money pouch in the scenes of prostitution and pederasty. Von Reden argues that this imagery of a money pouch conveys more than a common interpretation according to which a human body became a commodity. The imagery of a money pouch, – argues von Reden, – portrays (though subtly and indirectly) the actual reality of money disguised by the ideology of equal citizenship (Ibid., 197). Based on a detailed examination of red-figure vase paintings, as well as literary evidence, von Reden comes to conclude that the imagery of a money pouch (and hence coinage) aimed to convey the reality of unequal social and power relations dominated by male citizenship. Notably, red-figure vase paintings portray the money pouch exclusively as an attribute of the donor, and the donor is exclusively a wealthy adult man (Ibid., 206). Coinage, concludes von Reden, "was an exclusive symbol of man and his city" (Ibid.).[19]

Clearly, von Reden's approach shares important similarities with the Chartalist perspective on money's origins and nature. Both reject the 'commonsense' assumption of money's origins in the context of trade, and both associate the origins of money with the power of the state. At the same time, however, von Reden ([1995] 2003) undertakes a more detailed investigation of whether "the state" proper is necessary to introduce coinage. As shown above, von Reden's thesis is that the development of coinage took place parallel to the evolution of the state. Specifically, she examines the transition of political authority from old aristocratic elites to the Greek polis. In this, von Reden argues that the establishment of the Greek polis (i.e. the final stage in this political transformation) took place alongside the final standardization of coinage[20].

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[19] A word should be said about the status of women in Greek *poleis*. It is ironic, notes M. Atwood (2008), that throughout the millennia the allegorical figure of Justice remained female. After all, the Greek *polis* excluded women from courts, whether as witnesses, jurors, lawyers or judges. According to Atwood, the status of a woman was not much different from that of a slave: classical Athens allowed full liberties to male Athenian citizens only. "Slaves and women were excluded from citizenship, and the laws governing them were harsh" (Ibid., 39). A more detailed, though similarly harsh picture of the status of women is provided by Migeotte (2009): "free wives, even those of citizens, were treated as minors and lived under the guardianship or as a dependent of a man, either a father, a husband, a son, or some other male relative" (Ibid., 39). While in the Hellenistic period some wealthy women were occasionally entrusted with public responsibilities, it would be far-fetched to see this as a sign of female emancipation, "for public decisions always remained firmly in the hand of the men" (Ibid., 40).

[20] When discussing von Reden's contribution, credit should also be given to Christopher Howgego (1995). When discussing non-commercial contexts for the origins of coinage, Howgego (1995) arrives at similar conclusions, stating that "the growth of state authority may itself have been favourable to coinage, which was issued by the state, and to a degree regulated and guaranteed by it" (Ibid., 17). "The development of a coinage," writes Howgego, "was one aspect of a more fundamental tendency in the archaic period to define values and to codify, and

Yet in another work, von Reden (2001) demonstrated an even closer affinity to the Chartalist perspective, arguing that "aggressive insistence" by the state will be necessary for monetization to take place. As an example of state activity through which monetization might be realized, von Reden brought an example of taxation (Ibid., 65-66):

> Coinage and monetization are closely linked to state building, state power, and the representation of it to the citizens and subjects. Although, according to common sense assumptions, monetization rests on a simple act of state initiative and the convenience of money in exchange, thoroughgoing monetization of economic activity issues only from an aggressive insistence of the state. This might be realized by an insistence on payments of monetary taxes. The issuing authority, however, must also propagate and implement its own commitment to money in order to promote its acceptance. (Ibid.)

Also note that in the passage quoted above, von Reden's approach reflects another important Chartalist insight according to which "a simple act of state initiative" (Ibid., 66) will not be sufficient to bring about a thorough monetization. Rather, activity of a more "aggressive" type would be necessary, and taxation might be an example. Von Reden further concludes that viewed from this perspective, monetization can be seen "as a strategy of political integration and state formation" (Ibid.).

Finally, when analyzing von Reden's thesis, credit should be given to Edouard Will (1954, 1955a, 1955b) who was among the first scholars to establish the 'redistributive justice' aspects of the early Greek coinage. In many respects, von Reden revived and elaborated upon Will's contribution. In light of new numismatic evidence, von Reden was able to correct some factual errors and fill analytical gaps in Will's earlier argument (Kurke 1999, 13-14).

To formulate his thesis, Will (1954, 1955a, 1955b) examined the texts of Hesiod, Solon and Theognis which reflected the "crisis of justice and the unfair distribution of property" in

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thus to establish norms which could be enforced" (Ibid.). In this connection we can appreciate the semantic link between *nomisma* (coin) and *nomos* (law) (Ibid.)

Greece in the seventh and sixth centuries BC (Kurke 1999, 13). Will likewise employed the testimony of language, noting that the early Greek word for money, nomisma, was etymologically related to nemein meaning to ‘distributive’ or to ‘allot’ (Kurke 1999, 13-14).

The redistributive crisis in the seventh-sixth centuries BC Greece formed the context into which the origins of Greek coinage became embedded in Will’s theory. Will suggested that coinage was put into circulation by the early Greek rulers as free gifts to the needy, thus representing an attempt at distributing surplus wealth and rectifying socio-economic inequalities (see Kraay 1976, 322-23). Will went as far as to suggest that, when lacking sufficient reserves of precious metals, the early Greek tyrants could confiscate the property of the rich and distribute it in standardized form to the population at large (Kurke 1999, 13; Kraay 1976, 322-23). Thus, coinage was ‘invented’ by a public authority as a standardized means of (re)distributing wealth to the population, in an attempt to re-establish socio-economic equality and distributive justice. Greek coinage thus emerged as “a token of egalitarian ideology and practice within the polis” (Kurke 1999, 13-14).

Another notable contribution by Will was his attempt to link the emergence of coinage to the abolition of debt bondage: “Coins handed out from the treasure of confiscated property offered the opportunity for the indebted population to purchase their freedom without putting the creditors in a position of economic disadvantage” (von Reden [1995] 2003, 190n43). While this hypothesis has been questioned on chronological grounds, Will’s “attempt to relate the introduction of coinage to a crisis of social debt and credit is still worth considering on theoretical grounds,” argues von Reden (Ibid.).

Leslie Kurke and the Politics of Monetization in Archaic and Classical Greece

Similar to von Reden ([1995] 2003), Leslie Kurke (1999) begins her inquiry into the origins of Greek coinage by examining institutional arrangements, political structures and transactional modes of ancient Greek societies, relying on Homeric epics and aristocratic poetic texts (sixth and fifth centuries BC) as important literary evidence (analyzing, in turn, what poetic texts do and do not say). This substantivist inquiry leads Kurke to acknowledge the "extraordinary historical and cultural gap that divides our understanding of coinage from that of the first Greek coiners" (Kurke 1999, 7). Kurke further argues that "we cannot attribute to the earliest coiners the same "commonsense" motivations that would power us" (Ibid., 8). Here, the classicist critiques "the pragmatic modern assumption that coinage was invented to facilitate trade" (Ibid., 7). While trade may be acknowledged as one factor in the emergence and rapid spread of coinage, – argues Kurke, – it cannot be regarded as the only and definitive one (Ibid., 9, 12). Rather, coinage emerged as a result of "a complex interaction of causes" (Ibid., 12), among which political and social (rather than purely 'economistic') factors played a prominent role. Kurke's goal becomes to examine those political and social motivations within ancient Greek societies that led to the emergence and rapid spread of coinage. Kurke's task is to formulate an alternative account of the origins of coinage, where the causal factors behind its emergence would be embedded into political and social structures of ancient Greek societies.

> While acknowledging that part of the motivation for the first coinage may have been mercantile convenience and economic profitability, I would like to focus on other, social and political motivations that arguably coexisted within the Greek city.
>
> Thus we might offer an alternative narrative behind the development of various money forms in Greece . (Ibid., 12)

> If we are properly to understand the "meanings of money," we must situate coinage squarely in the frame of the political and social contestation . . . . Adopted by the cities of

> the Greek mainland in the third quarter of the sixth century B.C.E., coinage is a token of this struggle at its most intense. (Ibid., 22)

The above-mentioned "political and social contestation" (Ibid., 22), into which the origins of coinage were embedded, is the ongoing struggle between the emerging city-state and the traditional aristocratic elite (Ibid., 12). As noted above, coinage emerged as "a token of this struggle" (Ibid., 22). Thus, Kurke's approach shares important common ground with von Reden's ([1995] 2003) thesis, where political struggle between the emerging civic authority of the polis and the old aristocracy is likewise viewed as a key factor behind the origins of coinage.

In fact, as far as the causal factors behind the origins of money, Kurke accepts those articulated by von Reden ([1995] 2003). Kurke commends von Reden's efforts to "historicize and contextualize our reading of money in Greek antiquity" (Kurke 1999, 16), praising her "acute perception of the profoundly political nature of money and the major conceptual shift from "metaphysical" to civic order it betokens" (Ibid.). Kurke's critique of von Reden's otherwise "excellent analysis" (Kurke 1999, 18) pertains to her failure to incorporate a more thorough investigation of the ongoing opposition to coinage by the traditional aristocratic elite. According to Kurke, this opposition had a profound impact on the further development of coinage and social practices associated with its use (particularly in the classical period). Thus, Kurke supplements von Reden's analysis by tracing the evolution of coinage and other phenomena intertwined with its use (up to the fourth century BC). Yet, such an analysis inevitably sheds important light on the causal factors behind the origins of coinage in the first place, as the following discussion demonstrates.

To begin, Kurke's thesis on the origins of coinage builds upon the ability of the old aristocratic elite to maintain its socio-economic status by controlling (or monopolizing) the sphere of top-ranked goods in society, such as precious metals, gold (from the East) in particular (Ibid., 12). Specifically, the use of precious metals (such as gold and golden artifacts) first developed within the closed sphere of aristocratic gift-giving. Because precious metals were amongst the top-ranked goods upon which the status of traditional elite depended, "it is no accident" that Greek coinage (for most of its part) was made of precious metal (Ibid., 22). As will be shown below, it is likewise no coincidence that Greek coinage was, for the most part, made of silver (rather than gold or bronze).

Within a socio-political context where the old elite could maintain its status by monopolizing the sphere of top-ranked goods such as precious metals, the minting and distribution of coinage by the emerging city-state would undermine the elite's claims to authority. The standardized distributions of coinage by the polis to its citizens would dismantle the closed gift-exchange economy of the old aristocracy and the social status hierarchy it created and supported:

> For by its standardized distribution of precious metal, the city appropriates the highest, aristocratic sphere of exchange. The aristocracy can no longer monopolize the circulation of precious metals and the contexts in which it occurs. (Ibid., 22)

Becoming a "key player" in the circulation of precious metals (Ibid.), the polis subverted the old aristocratic authority (and the divine order and justice associated with it), asserting itself as the ultimate, autonomous and sovereign political power, while installing civic as opposed to divine order and justice (Ibid., 12-13)[21]. The distributions of coinage by the polis would provide for

[21] What is more, the minting of coinage by the *polis* was not just an inward gesture directed against the claims of the old domestic elite. The use of coinage by the *polis* would also become an outward gesture, asserting the sovereignty and independence of the *polis* from the other Greek city-states (Kurke 1999, 13):

civic order and civic identity of the citizens, protecting them from those arbitrary cosmic forces associated with divine order of justice propagated by the old elite (Ibid., 334). Via the use of coinage, the city would guarantee the individual's worth and protect the individual "from the randomness of fortune" associated with divine justice (Ibid., 331).

Because coinage came to evolve as a 'token' of the new emerging political authority of the city-state (Ibid., 17), its use was fiercely opposed by the traditional elite (Ibid., 19). The elite's hostility to coinage was part of "a larger project of aristocratic resistance to the encroaching authority of the polis" (Ibid.). In the passage quoted below, Kurke summarizes the threat posed by coinage to the traditional aristocracy:

> For coinage represents a tremendous threat to a stable hierarchy of aristocrats and others, in which the aristocrats maintain a monopoly on precious metals and other prestige goods. With the introduction of coinage looms the prospect of indiscriminate distribution, exchange between strangers that subverts the ranked spheres of exchange-goods operative in a gift-exchange culture. This threat, in turn, represents a social and political threat to elite control, for one of the premises of the system of ranked spheres of exchange is the complete identification of self and status with the precious metals possessed and controlled. Hence the aristocratic monopoly on precious goods within a closed system of gift exchange guarantees an absolute (naturalized) status hierarchy. Coinage represents a double threat to that system, for it puts precious metal into general circulation, breaking down the system of ranked spheres of exchange, and it does so under the symbolic authority of the polis. As stamped civic token, coinage challenges the naturalized claim to power of the aristocratic elite. (Ibid., 46-47)

Thus, coinage represented a double challenge to elite power and status contingent upon possession and control of precious metals (most likely due to association of gold with the gods). Not only is precious metal distributed into the common sphere (i.e. outside the closed and

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> For every Greek polis that issued its own coin asserted its autonomy and independence from every other Greek city, while coinage also functioned as one institution among many through which the city constituted itself as the final instance against the claims of an internal elite. (Ibid.)

controlled domain of gift-exchange among the members of aristocracy), but such distributions are enacted by the emerging new political authority of the polis which thereby portends to undermine the elite's claims to power (Ibid.).

It may come as a surprise that, despite the crucial role played by coinage in this political contestation between the old elite and the emerging city-state, there is no discussion of coinage in extant aristocratic poetic texts (Ibid., 24). For almost two centuries or more after its emergence, – notes Kurke, – the Greek word for coinage, nomisma, "is never named in any extant Greek text" (Ibid., 41). While the term nomisma is peculiarly absent, etymologically related terms such as nemein and others are present (see discussion of Seaford's (2004) thesis in chapter 6). Of extant texts, the first mention of nomisma occurs in Herodotus (Kurke 1999, 41), and it is not until Aristotle that we find any explicit statement about the original rationale behind the minting of coinage (Ibid., 332).

Rather than coinage, the single most important imagery system is that of metals. There is a persistence of references to the scenes of weighing, refining, and testing of precious metal in aristocratic poetic texts (Ibid., 42)[22]. This silence about nomisma and insistence upon the imagery of uncoined metal is, according to Kurke, part of the evidence for aristocratic hostility to coinage. The secrecy about or omission of nomisma formed part of the strategy "for displacing coinage and thereby denying it autonomy and legitimacy" (Ibid., 36).

To understand the power of coinage within the new emerging social context of the polis, we must take note of the "power and prevalence of egalitarian ideology in the Greek world as it emerges from the archaic period" (Kurke 1999, 22). Recall that earlier von Reden ([1995] 2003)

[22] According to Kurke (1999), the processes of weighing, refining and testing precious metals (against a touchstone) are mentioned six times by Theognis, at least once by Simonides, five times by Pindar, and once by Bacchylides (Ibid., 42).

attributed this pressure toward egalitarianism to the growth of socio-economic inequality and decline of faith in reliability of divine justice. It is not coincidental that the emergence of coinage took place alongside this "Panhellenic pressure toward egalitarian uniformity" that began in the eighth and continued into the fourth century BC (Kurke 1999, 21). It was coinage that emerged as "a [new] means of effecting retributive justice" (Ibid., 41). Etymologically understood as a "process or result of lawful distribution" (Ibid.), the power of nomisma was "egalitarian". The citizens were like coins, and coins were like citizens, all being alike, pure, and valuable to the polis (Ibid., 305, 316):

> We know what citizens are made of – what they are – partly because of the analogy with coin. (Ibid., 316)
>
> In the symbolism of the democratic city, all coins, like all citizens, were made of the same stuff, and all were pure and precious matter. (Ibid., 305)

Note the emphasis on "the pure and precious matter" (Ibid.). It is not an accident, – argues Kurke, – that the Greeks did not resort to pure token coinage in the sense that intrinsic composition of metal (the materiality of coinage) played a crucial role (Ibid., 300-302). For example, the history of Athenian coinage "is precisely a history of resistance to merely symbolic or conventional value" (Ibid., 302). Contrary to pure symbolic interpretations of Greek coinage, the "dominant idea" of minting, – maintains Kurke, – was "the merging of precious metal and civic stamp" (Ibid., 300, emphasis added). The civic stamp would signify the new political authority of the polis (as opposed to that of the old aristocracy intertwined with the gods (Ibid., 334)), while the distribution of precious metal into the hands of the citizens would subvert the elite's monopoly over the use of precious metal in the closed sphere of gift-exchange.

Yet, while subverting the elite's claims to the sphere of highest-ranked goods (i.e. precious metals), the Greek polis was careful enough not to carry the elitist 'model' too far.

Specifically, the Greek polis did not adopt gold as the metal of the city and its egalitarian civic order. Rather, the metal chosen was that of silver "famously pure and reliable" (Ibid., 302). To attribute this choice of metal to pure geological factors (as, for example, in the case of Athenian Laurion mines) would be half of the story, – argues Kurke, – for Greek coinage had both material and ideological dimensions (Ibid., 303). Thus, Kurke suggests that the motivation behind the avoidance of gold by the polis was due to the strong association of gold with the elite (Ibid., 304). While minting precious metal rather than pure token currency, the polis was careful enough not to adopt the metal identified with the elitist tradition. The goal was to draw a sharp line of demarcation between the divine and civic order and justice, and this could not be achieved via the use of gold (for gold was identified with divine order and justice the faith in which has been declining since the eighth century BC). In this resistance to gold we see how the "matter of ancient coinage is enmeshed in ideology" (Ibid., 303). The rejection of gold represented the city's ideological refutation of the elitist tradition:

> In contrast to gold, it [silver] rejects the elitist hierarchy of essence within the citizen body, while it imposes a firm boundary between the human, civic community and the domain of the gods. (Ibid., 309)

Finally, a coin stamp would imply that "all citizens take shape from and submit to the civic authority that forms them" (Ibid.).

Alongside its opposition to gold, another striking feature of Greek coinage is its resistance to bronze, especially in Athens (Ibid., 305). The use of bronze represented "unique experiments", undertaken only in times of contingencies such as foreign occupations or military expeditions[23] (Ibid., 306; see also Polanyi 1977, 258-62). Infinitesimally small pieces of silver coinage would be minted, where, practical sense would suggest, the use of larger bronze coins would be more convenient:

> Recent numismatic work has demonstrated that very small denominations of silver were minted already in the archaic period, very possibly in large quantities, by cities such as Athens, Corinth, and Aigina. The smallest Athenian silver coin that has been found to date is a sixteenth of an obol, weighing an infinitesimal .044 grams. (Ibid., 305)

Yet, regular use of much larger bronze coinage was fiercely resisted, especially in Athens, even after bronze coinage was introduced and adopted in Sicily and South Italy (second half of the fifth century BC). Athens resisted the use of bronze even after bronze coinage was adopted in mainland Greece ca. 350 BC (Ibid.).

The ideology seems to play a role here as well, for bronze (an alloy of copper and tin) would represent a pure token coinage (i.e. coinage with low intrinsic value), something that the polis strived to avoid when appropriating (yet subverting) the aristocratic 'model' of higher-ranked goods (Ibid., 305). Also note that as an alloy of copper and tin, bronze could not claim the 'purity' of metal which silver coinage could boast. The purity of metal was important, for in the ideology of the Greek polis, "all coins, like all citizens" were composed of "pure and precious matter" (Ibid., 305).

> . . . coins are like citizens, citizens are like coins. (Ibid., 309)

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[23] Karl Polanyi describes one such military expedition which relied upon an emergency issue of bronze coinage by the Athenian general Timotheus (ca. 360 BC). When the soldiers protested against their compensation in the form of bronze coinage (at the time, bronze was not commonly accepted in foreign trade, as silver coinage was the standard), the general assured the soldiers that foreign merchants would all sell their goods for bronze. Timotheus further informed foreign merchants that they could use bronze money to buy commodities brought in from the Athens; and should they accumulate any leftover bronze coinage, they could redeem it for Athenian silver. (Polanyi 1977, p. 258-62)

Silver was, therefore, chosen as a "middling metal" (Ibid., 306) characterized by pure and valuable substance (Ibid., 309). The passage quoted below summarizes the political-ideological factors behind the choice of silver as the "middling metal":

> In the symbolism of the democratic city, all coins, like all citizens, were made of the same stuff, and all were pure and precious matter. The silver-only coinage of Athens thus stands in opposition both to the elitist hierarchy of values and exchange spheres (gold-silver-bronze) and to the impure mixture of base metal (bronze is an alloy of copper and tin). The avoidance of bronze is furthermore the avoidance of token coinage – by the time Athens adopted bronze currency in the mid-fourth century, there was no connection between the weight of bronze and the face value of the coin, so that the long-term Athenian resistance to bronze must also be read as a reluctance to make coinage merely conventional. (Ibid., 305)

Hence, because the circulation of coinage was regarded as "analogous to the community of citizens," ideological factors imposed constraints on the choice of material for coinage (Ibid., 309). To sum up this discussion in the worlds of Kurke:

> Thus, in what we might call the micro-mechanics of ideology, material practices contribute to the civic imaginary, as pure silver coinage helps constitute the "imaginary community" of citizens who use it. As opposed to bronze token coinage, it asserts that civic order is more than just conventional; as opposed to bronze used at its full value or to debase the silver issue, it constitutes all citizens as the same noble substance. (Ibid.)

The analogy between the citizens and coins can also be confirmed by the Athenian legal practice known as dokimasia (Ibid., 309). Derived from dokimos, a "technical term for examining and approving coinage" (Ibid., 310)[24], dokimasia was a procedure (fourth century BC) whereby the polis "proofed its citizens, testing the quality of their birth and behavior" (Ibid., 310). Thus, we see a clear etymological link between the procedures of testing coinage and proofing citizens (Ibid., 311).

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[24] The term *dokimastēs*, in turn, referred to an Athenian public official who evaluated and approved coinage (Kurke 1999, 312).

The association of coinage with "good citizenship" (Ibid., 314) can also be found in the oath taken by Athenian city officials. What is so striking about the oath is the peculiar form of punishment assigned to officials found guilty of bribery. The punishment would require the offender to dedicate a life-size golden statue of himself at the Delphi. While there is no evidence that such punishment was ever administered, the articulation of this form of penalty in the oath sheds light on the continuing struggle between the city and the old elitist tradition (Ibid., 314-15).

To begin, note that bribery was understood as acceptance of gifts (not coins!). Recall the association of gifts with the closed and privileged sphere of aristocratic gift-giving, the sphere that the polis attempted to subvert in order to assert its own political status and authority. By privileging the acceptance of gifts over the acceptance of good civic coins for service to the polis, the official would extol the traditional elitist 'model', thus discrediting the sphere of civic law (nomos). This would subject him to an enormous 'cost' of setting up a life-size golden statue of himself. Yet, the 'cost' is not so much financial as it is social and symbolic. In fact, the idea behind the punishment was not to make it financially painful for the guilty official. Otherwise, why not simply subject the official to a monetary fee? Rather, the punishment was social and symbolic in the sense that a dedication of a golden statue would 'exile' the official's body to the "other", ideologically denigrated space of the traditional elite and its gods (Ibid., 315). Such form of punishment, therefore, demonstrates how the "highest goods of elitist ideology" became ideologically devalued by the polis to the point of becoming the "tokens of the greatest crime against the civic community" (Ibid., 316).

Coinage, thus, sets "the border between the citizen community and its others" (Ibid., 316) such as those who do not respect the civic law or nomos. The category of the "others" would likewise include slaves who did not possess coins. The institution of coinage, therefore, further intensified the divide between the free and the slaves: "[i]nsofar as a citizen is like a coin, he is not a slave" (Ibid.).

Conversely, being a "boundary marker", coinage could likewise change the status of the "others" (the excluded) to full-status members of the civic community. For example, in the Parabasis of the Frogs, Aristophanes mentions "the extraordinary granting of citizen rights to those slaves" who participated in war (specifically, the author refers to the Battle of Arginousai in 406 BC) (Ibid., 327). Participation in war could thus be a criterion for granting citizenship rights to the "others" (Ibid., 325). While the former slaves would presumably become the same 'good silver tokens' as citizens by birth, Aristophanes referred to them as "wicked little bronzes" (Ibid., 327), implying their impure and base quality. Hence, despite the presence of egalitarian ideology and coinage as a means of effecting it in practice, differentiation between citizens exists. There is "differential citizen quality" as some citizens are more equal than others (Ibid.).

Finally, in reviewing Kurke's thesis, there remains an unanswered question regarding the specific manner via which coinage could be distributed to the city's citizens? How exactly were "the positive, distributive aspects of coinage" (Ibid., 90) implemented in practice? Via what channels did coinage end up in the hands of the citizens? Was coinage distributed gratis or in 'exchange' for goods, labor services and military duties performed for the city-state? Was there a role for 'taxation'? On this, Kurke's discussion remains surprisingly vague. This either implies that Kurke accepts von Reden's ([1995] 2003) perspective or else she delegates the answer to future research. The only mechanism that Kurke tackles explicitly is the above-mentioned use of coinage as a means of payment for participation in war (Kurke 1999, 325):

> Thus insofar as all citizens, old and new, are useful to the city by their service in war, they are all interchangeable common currency. (Ibid., 327)

Another channel possibly implied by Kurke is the use of coinage as the city's means of payment for goods and labor services provided by the citizens. This distributive mechanism seems to be implied in the passage quoted below:

> By providing a standard against which all goods and services can be measured, money symbolically makes all labor comparable, and thereby constitutes a more egalitarian order opposed to ranked spheres of goods and activities. (Ibid., 22)

Also note from the above-quoted passage that coinage becomes a common unit of account by which the value of goods and labor services could be measured. As a standard of measurement of goods and services, – argues Kurke, – "coinage represents a civic, egalitarian challenge to the structure of elite authority" (Ibid., 22). The "silver standard" provides for non-arbitrary and stable valuations of men, their labor services and goods produced (Ibid., 318). Respecting the civic nomos, the polis engages in a "proper valuation and use of citizens, figured by the double valence of civic coin" (Ibid., 299). In this, Kurke further underscores the role of coinage in performing "the ideological work of representing and constituting the community of citizen equals" (Ibid., 327):

> As opposed to the tyrant's arbitrary valuation of men, the city is urged to "make its citizens equal" and not to leave anyone in the city "deprived of citizen rights" . . . . (Ibid., 325)

Yet, as noted above, Kurke remains vague on the specific mechanisms via which coinage could end up in the hands of the citizens. What her thesis certainly conveys, though, is the idea that citizen rights came to be materialized precisely via the possession of coinage.

Henry Kim and Advances in Modern Numismatics

The new interdisciplinary scholarship on money produced by Sitta von Reden ([1995] 2003) and Leslie Kurke (1999) is of vital importance, as it has been part of "the prime force" behind the recent "rethink" of approaches to the study of money (Kim 2001, 7). As Henry Kim, a Professor of Greek Numismatics at the University of Oxford, has summarized the impact of the above scholarship, "our understanding and appreciation of money in the ancient Greek world has undergone a remarkable transformation in recent years. The prime force behind this rethink of money has come from a number of studies which have explored the phenomenon of exchange, especially in its non-market-driven forms of social exchange. Scholars such as Seaford, von Reden, and Kurke have all contributed to reframing money by looking at the roles money took in the development of social commensurability, in non-economic exchange, and in how attitudes towards money use were formed" (Kim 2001, 7).

Scholars now tend to examine the roles played by money in non-economic contexts (such as non-economic forms of exchange, as described by von Reden ([1995] 2003), and the study of money has been "liberated" from the primary focus on commercial relations (Kim 2001, 7). With a "refreshing infusion" (Ibid.) of new insights and approaches which have changed our conceptual understanding of money, we are now led to examine religious, social, political and legal contexts in which money emerged and functioned:

> One of the most positive results to come from all of this is that the study of money has been liberated from concentration on its primary role as a key cog in the gears of the money economy. Money no longer needs to be treated as an object, and focus has now shifted towards examining its roles in legal and religious contexts, and how its presence may be a cause or a consequence of social change. As a whole our conceptual understanding of money in the Greek world has rapidly evolved, benefiting greatly from a refreshing infusion of new approaches provided by anthropologists and social historians. (Ibid.)

For example, noting the impact of modern non-orthodox approaches on the numismatics profession, Kim observes that the origins of money are no longer unproblematically identified with trade. Rather, numismatists now tend to associate the origins of Greek money with the political development of the Greek polis (Ibid., 7-8). Numismatists likewise tend to revisit the common conflation of money with coinage (or coinage with money). For example, as Kim has argued, when identifying the origins of money with the 'invention' of coinage, we ignore the existence of pre-coin money and its role in social change. In this research area, Kim is among the leading numismatists to revitalize the project undertaken by Grierson (1975, 1977) more than thirty years earlier. Money and coinage "are not synonymous," cautions Kim (2001, 8), and conflating the two may lead to erroneous conclusions that money did not exist before coinage. Unfortunately, such conclusions are still reflected in a range of recent works:

> A number of recent works, unwittingly or not, confuse the two, leading to claims that money was not abundant before coinage or that the creation of money by states was an important step in the development and growth of market economies. (Ibid., 8)

Thus, similar to Grierson (1977, 7), Kim (2001) views coinage as "a very specific form of money" (Ibid., 8), implying that "the possibilities of pre-coin money which may have operated prior to the development of coinage" (Ibid., 9) must be considered. Coinage is neither a test nor a "starting point" for a moneyed economy, as Kim argues below:

> As difficult as it may be, we must keep in mind that a moneyed economy does not require coinage in the first place, as can be documented in 'moneyed economies' which operated in the absence of coinage. Furthermore, the invention of coinage does not need to be considered the starting point of a moneyed economy, as can be documented in numerous 'moneyed economies' which eventually adopted coinage from the Greek world. (Ibid.)

Rather than a "starting point" of a moneyed economy, coinage should be viewed "as a milestone along a much longer road in the use of money" (Ibid., 9). In contrast to coinage "which can be said to have a definite beginning," the origins and evolution of "many other forms of money" that preceded coinage may be difficult to trace as some developed out of perishable commodities (Ibid.). In this context, Kim notes the use of grain as money in Roman Egypt, currency "suitable for grain-tax payments and rent" (Ibid.). In cases where the evidence of pre-coin money may be difficult to trace, the evidence of coinage may provide “hints and ideas about the use of pre-coinage money” (Ibid., 11). This is why the study of coinage remains crucial for our understanding of money’s origins, even though “coin is not the origin of money” (Ingham (2004, 97).

Thus, Kim’s related analytical position pertains to an evolutionary understanding of money, where no phenomenon, such as silver Greek coinage, should be viewed as a sudden revolutionary invention (Kim 2001, 13). In fact, Kim argues that the emergence of silver Greek coinage “in a fully developed form” and its rapid spread among Greek cities (Ibid., 13) only reinforces the above conclusion that coinage was a step in the long road in the use of money (Ibid., 9). If the notion of money and its pre-coinage form(s) did not exist in the Greek world, it would be hard to explain the emergence of silver Greek coinage in such a fully developed form:

> The relatively short period of time it took for a fully developed coinage to spread through the Greek world poses a pressing question: Was there money before coinage? The speed of its development and spread makes it hard to imagine that the use of money was unfamiliar when coinage was introduced. If anything, it suggests that the notion of money use and some forms of money preceded coinage, and that when coinage appeared is slotted into a system which was already well-established, serving as an improved substitute. (Ibid., 13)

It is more likely, – argues Kim, – that silver Greek coinage emerged as “an improved substitute” for a form of pre-coin money that existed prior to it (Ibid.). Without doubt, the commonsense culprit is the use of silver bullion. Yet, according to Kim, there is “little evidence” for the existence of “a transitional period in which ‘proto-coinage’ consisting of unmarked, weight-adjusted pieces of silver circulated. Nor is there any evidence of official stamps, whether civic or private, appearing on silver bullion in the Greek world prior to the appearance of coinage” (Ibid.). This is not to deny the use of silver metal per se (e.g. in the production of artifacts) before the emergence of silver coinage. Scientific analysis shows that the highly productive Laurieon mines in Attica "may have been producing silver as early as the Bronze Age" (Ibid., 16). Also, literary sources provide some "very promising evidence for silver refinement during the archaic period" (Ibid., 16; c. f. Kurke 1999). Yet, such evidence does not yet prove the use of silver as money, for, arguably, this silver bullion could be used "simply as a commodity in overseas trade" (Ibid., 17). To prove silver's use as money, – argues Kim, – we must "pin down its use in legal, religious and political contexts" (Ibid.)[25].

Martin Price and the Origins of Electrum Coinage in the Sphere of Gift-Giving

Martin Price's (1983) thesis on the origins of Greek electrum coinage in the sphere of gift-giving represents another (though much earlier) step towards the development of non-commercial perspectives on the origins of money. His approach inspired many scholars, including von Reden ([1995] 2003) and Kurke (1999). Many insights provided by Price (1983) could still prove valuable, if rethought in the light of new scholarship (such as von Reden ([1995] 2003), Kurke (1999) and Seaford (2004)).

Martin Price (1983) took the natural variability of electrum composition as a point of departure for countering the Metallist perspective, according to which coinage emerged to facilitate trade, whereby a coin stamp guaranteed its conformity to a certain weight and purity standard. The evidence of the earliest electrum coins, where the proportions of gold and silver metal are highly variable by nature, undermines the Metallist claims:

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[25] It must be noted that Kim's (2001) thesis is not unambiguous, as the numismatist further concludes that silver Greek coinage should be seen "as a formalization of the use of silver bullion" (Ibid., 19).

> The earliest electrum coins are found in western Asia Minor, in the general area in which they must have been minted. Their alloy, as far as has been ascertained, is extremely variable, although the weights are accurate, and the coins must therefore have been used at a fixed, generally accepted value. This in turn must have been no lower than the highest point of the range of their intrinsic value, with the result that most of the coins must have been valued above their intrinsic value. This overvaluation in itself would account for their remaining within a close radius of their place of origin, since no foreign merchant would accept an overvalued nugget of metal which would not retain its value abroad. (Price 1983, 5)

Thus, in the passage quoted above, Price argues that stamped electrum coins would have to be valued above the value of their intrinsic material. Given the high variability of its gold and silver components, electrum coinage would have to circulate at a fixed, generally accepted value (Ibid.). Such overvaluation would likewise imply that a 'banker' would have to guarantee "a coin at a value above the intrinsic value of the metal" (Ibid., 6). If possible at all, such a guarantee would only hold in limited areas controlled by the issuing authority (Ibid., 5). Price further concluded that "this idea of a guarantee is an assumption based on a preconceived notion of the function of coinage, which in turn is based on later practices" (Ibid.).

Yet, if viewed from the Chartalist perspective, it could be argued that the earliest electrum coins were issued by the state to facilitate its fiscal activities. The state could fix the value of electrum coins, regardless of variability in their intrinsic composition. In fact, Cook (1958) and Kraay (1964; 1976) applied a very Chartalist perspective to the evidence of the earliest electrum coins, arguing that they could have been issued by the state as a means of administering large-scale uniform (in size and weight) payments, possibly disbursements to soldiers for their services to the state. Yet, Price casted doubt on such Chartalist interpretations, arguing that there was no conclusive evidence to restrict the issue of electrum coins to a public mint. The issuing 'authority' could have been private as well, – argued Price. Further, Price challenged the possibility of administering large-scale payments in pieces of metal, arguing that such a practice was not yet institutionalized at the time when electrum coinage emerged (Price 1983, 6). In the passage quoted below, Price challenges the theories advanced by Cook (1958) and Kraay (1964; 1976), while he also stresses the distinction between the earliest electrum and the (fifty years') later silver coinage the issue of which was clearly an act of the state initiative:

> The theory assumes that payment for service was acceptable, and this in turn would suggest at least in part that coins were suitable for retail trade. Fines and taxes would still represent only a small part of the coins' function. The theory also rests on the assumption that the state or monarch was the issuer of the object. Although with later coinage this is clearly so, the nature of the early electrum coinage does not preclude the possibility that private individuals might have been responsible for their issue. Again, the difference with later silver coinage must be emphasized. Electrum coins were issued in numerous small series of many different types, very few of which were later adopted as city types or are obviously religious symbols – whereas the silver coinage forms into recognizable issues of particular city mints. None of the electrum coins from before the time of Croesus appears to have been inscribed with the name of a city. (Price 1983, 6)

In this manner, Price (1983) challenged both the Metallist and the Chartalist perspectives when applied to the earliest electrum coinage. As an alternative, Price developed a new theory according to which the earliest electrum coins, struck by individuals as well as public entities such as monarchs, could serve as personalized "bonus payments" or "parting gifts" advanced to individuals at the end of service (Ibid., 7). In this context, a coin stamp would indicate the coin's origin (or initial ownership), which, again, could have been private as well as public. The point is that, being bonus payments or parting gifts, electrum coins would embody a private, personal nature, as is the nature of a gift. While they might have been used to make payments, the coins would more likely be retained by the recipient as a reminder of the personal authority of the donor. The passage quoted below reflects the gist of this thesis advanced by Price:

> Coins could well have provided a means for standardizing bonus payments, or gifts of any sort. In the first instance coins must have been regarded as payments in the broadest sense, since only in this way could they have been put into circulation. But there

> is this difference; that, as bonus payments, the coins are far more akin to gifts (or medals) than to coins as we know them. On a theoretical level, others such as Edouard Will[26] have stressed the importance of the gift in the early Greek economy, and the personal nature of early electrum coins seems to require a specific function of this sort. The donor could be the state, or a monarch, or indeed a private individual. While it might be realized that the recipient could use the metal to acquire other objects or to make any form of payments, he could equally keep it as indicative of wealth. This, after all, is in the nature of a bonus. The coin type as the seal of origin represents the source of the bonus, the personal authority of the issuer. The coin, accurately weighed according to a recognized weight system, would be perfectly acceptable as a gift or bonus, even if made of electrum and not of gold or silver. (Ibid., 7).

Thus, the notion of payment in metal emerged in the sphere of gift-giving. From there, the practice could evolve further, and the idea of payment in metal could be adopted by the state. Here, Price mentions a possibility of coin's function "as a medium for standardizing payments to the state" (Ibid., 8). Yet, it was via the practice of electrum bonus payments in the first place, that the population became accustomed to this notion of metallic 'payment' for service (Ibid., 7-8).

In this manner, Price attempted to present an evolutionary challenge to theories advanced by Cook (1958) and Kraay (1964, 1976), arguing that this idea of standardized metal payments within the context of state administration had to evolve gradually out of some pre-existing practices. Gift-giving seems to be one possibility given "the personal nature of early electrum coins," as Price (1983, 7) argues above.

As Leslie Kurke (1999) has commented on Price's approach, his theory aimed to account for "the gulf between a gift economy," on the one hand, and "the unproblematic acceptance of metallic payment" on the other, thus inspiring a development of more evolutionary approaches towards the study of Greek money (Kurke 1999, 11):

> The same problem for which Price's theory aimed to account – the gulf between a gift economy with ranked spheres of exchange and the unproblematic acceptance of

[26] Here, Price (1983) refers to Will (1955a).

> metallic payment – has inspired other numismatists to suggest a more gradual development of money within Greece itself. (Ibid., 11)

Kurke herself was influenced by Price's approach, acknowledging that "various forms of money pre-existed coinage in Greece, so that we should perhaps regard coinage as the endpoint of a fairly long, gradual development, rather than a sudden new invention" (Ibid., 11; see also Kim 2001; Grierson 1977). In the passage quoted below, Kurke (1999) refers to some of these various forms of money that pre-dated coinage on the long road leading to its proper development:

> Thus, in the Homeric poems, finished objects of metal and other keimēlia functioned as a store of wealth, while cattle served as a measure of value. But within the strictly controlled gift-exchange circuits represented in epic, there was no place for money as a means of exchange. In the post-Homeric period, there is evidence that iron spits circulated in certain (top-rank) contexts, while archaic laws from Crete call for the payment of fines and penalties in specified numbers of worked metal bowls or tripods. Finally, John H. Kroll[27] has argued, based on the evidence of the laws of Solon, that silver in the form of weighed lumps or ingots may have served some – perhaps all – of the functions of money in some parts of Greece for a century or more before the adoption of coinage. Such a gradual development of the money-form in Greece, though difficult to make out in detail, would again provide a context in which the slow habituation to metallic payment over a wider range of spheres could occur. (Ibid., 11)

Fiscal Theories of the Earliest Greek Coinage: The Contributions of Robert Cook, Colin Kraay, and Jeremy Trevett

Robert M. Cook (1958) is known for one of the earlier attempts at questioning the Metallist perspective when applied to the evidence of electrum Greek coinage. When challenging the Metallist perspective, Cook was guided by contemporary numismatic and archeological

[27] Here, Kurke (1999) refers to Kroll (1998).

evidence. The evidence, available to Cook at the time, demonstrated two important patterns that led him to question the Metallist view.

To begin, Cook noted the infrequency of small 'denomination' electrum coinage. Cook's analysis indicated that the most widespread electrum coin (known as a 'third') had a purchasing power of about ten sheep, while the smallest coin could buy a third of a sheep (Cook 1958, 260). If the earliest electrum coins were not issued in small 'denominations', – reasoned Cook, – then they could not possibly facilitate domestic retail trade.

> For our small, every-day transactions it is essential that there should be coins of small value. In the earliest electrum issues of marked dumps and of coins properly stamped with a type the denomination which by its frequency can be regarded as normal is the so-called 'third' weighing about 4.7 grammes. . . . If then the electrum 'third' was worth more than ten sheep, it cannot have been a useful coin for small transactions. Even the smallest electrum coin, the rare 'ninety-sixth' would – if it existed so early – have been worth about a third of a sheep. It appears then that the early coinage did not assist small transactions either. (Ibid., 26)

Then what about foreign commerce which, presumably, required payments in large denominations? Here, Cook argued that foreign trade could be easily conducted with bullion, especially when foreign merchants were little familiar with the stamp and coining standards of a distant issuing authority (e.g. a foreign state or merchant):

> In the Greek world of the seventh and sixth centuries it is hardly likely that merchants would have had more trust in coins, especially if (as must often have happened) the coins offered were those of another state and of another standard. So it seems reasonable to suppose that coinage cannot have been invented to ease the larger commercial transactions. (Ibid., 260)

Countering the Metallist perspective on these two important grounds, Cook advanced an alternative explanation that shares some common ground with the Chartalist approach. If electrum coinage was most frequently issued in large 'denominations', and if its issue was conducted on a relatively large scale, then "it may reasonably be inferred that coinage was invented to make a large number of uniform payments of considerable value in a portable and durable form, and that the person or authority making the payment was the king of Lydia" (Ibid., 261). Thus, coinage emerged as a standardized means of payment, issued and administered by a central public authority, to make uniform and durable payments to a large number of people. One suggestion would be payment to mercenaries. In the passage quoted below, Cook speculates upon a process which could have led to this development:

> The process by which coinage was invented may have been something like this. Some Lydian paymaster had the idea of preparing dumps of the correct weight instead of weighing out separately for each mercenary the same amount of electrum pellets or dust. . . . For the paymaster's assurance the prepared dumps were marked at first with some casual mark and later with an official seal. The earliest coins were, then, intended only for the single payment and were regarded as bullion. But gradually they passed into circulation as money, and this new kind of currency was copied elsewhere, perhaps as much for prestige as for its usefulness. It was perhaps because the recognition of coinage was gradual that the name of the inventor was not remembered. (Ibid., 261)

While Cook's approach is laudable for a genuine attempt to "consider the data without prejudice," his account raises a number of questions which cannot be easily answered by looking at Cook's (1958) thesis. To begin, – as argued by Price (1983), – it is not clear whether the practice of payment in metal was institutionalized in the seventh and sixth centuries BC Greece. Further, the idea of payment in metal could not emerge ex nixilo, but had to evolve out of some existing social practices (Price 1983). Notably, Cook does not address these analytical issues. Further, if paid in metal rather than subsistence goods, there must have been some sort of mechanism via which mercenaries could 'exchange' their metal for agricultural staples. Cook does not elaborate upon the existence of such a mechanism. If, on the other hand, the idea of markets is presupposed, and the population would readily 'exchange' wheat and wine for electrum pellets offered by the mercenaries, then we are back to the picture of domestic retail trade mediated by metal. Yet, this is the very picture that Cook refuted earlier, based on the evidence available to him at the time. Thus, Cook's thesis would require a further elaboration, something that was attempted by Colin M. Kraay (1964, 1976).

To begin, Colin M. Kraay (1964, 1976) confirmed two fundamental points of Cook's (1958) theory, namely 1) that electrum coins were issued in too large 'denominations' to facilitate domestic retail trade, and 2) that electrum coins were not used in foreign commerce. Kraay (1964, 1976) validated these focal points of Cook's thesis based upon extensive numismatic and geographic-archeological evidence available to him at the time. In the passage quoted below, Kraay (1964) confirms Cook's (1958) theory regarding unsuitability of electrum coinage to serve the needs of local retail trade:

> . . . coinage originated, not among the silver-using states of mainland Greece and the West, but with the electrum issues of Asia Minor; these, even in their smallest fractions, must certainly have represented values much higher than those required for retail trade. The use of coinage in retail trade which, even at the end of the fifth century, was confined to a few of the more economically advanced states, cannot be regarded as its original purpose. (Kraay 1964, 89)

To counter the view that coinage emerged as a device facilitating foreign commerce, Kraay (1964, 1976) demonstrated that most of the earliest Greek coins remained within close geographic proximity to their place of origin, "of which the most conspicuous example is that of the earliest coinage of all, the electrum issues of Ionia and Lydia" (Kraay 1976, 318). While silver bullion was, no doubt, an object of foreign commerce, as soon as minted into coinage, it would tend not to travel abroad. Thus, when refuting foreign trade theories of money's origins, Kraay (1964, 1976) supplemented Cook's (1958) analysis by utilizing the evidence of both electrum and silver coinage. In the passage quoted below, Kraay (1964) summarizes his challenge to foreign trade theories:

> . . . most Greek coinages tended to stay within the areas in which they were minted; to this general statement there were two exceptions, the Thraco-Macedonian mints and

> Athens, both silver producers, who had surplus metal to dispose of. Neither of these exceptions operated at the very beginning of coinage, but only when the idea of affixing distinctive types to weighed lumps of metal was already well established. It would therefore seem that, since most coinages were not exported, and since those that were exported were not among the earliest coinages, the original intention in striking coins was not to facilitate foreign trade, or to provide merchants with a means of purchasing goods or materials not available locally. This is not to deny that bars of ingots of silver formed an article of trade, for the possession of silver mines was a stroke of rare good fortune; the majority had to obtain their silver from abroad by trade or service or loot. But it would seem that once silver was converted from bullion into coin, it was virtually withdrawn from all but local trade (unless it were Thraco-Macedonia or Athenian coin). . . . . We must conclude that coinage was not devised to meet the needs of foreign trade, and that, in so far as it came to do so, this was a secondary development. (Kraay 1964, 88)

Besides, Kraay (1964) argued that in the seventh and sixth centuries BC Lydia and Greece, traders were not influential enough to organize and secure a public and official adoption of "a device designed primarily to serve their interests" (Kraay 1964, 89; see also Kraay 1976, 312-18).

In accord with Cook's (1958) analysis, Kraay (1964, 1976) argued that the original purpose of coinage was to fulfill some non-commercial "internal social or economic function" (Kraay 1976, 320). Noting that the major distinction between coinage and bullion rested in a system of interrelated 'denominations', Kraay suggested that coinage was intended to facilitate "payments made in accordance with a scale and to large numbers of individuals" (Ibid., 320). Such payments were administered by the 'state', and could be advanced to mercenaries, public workers, hired professional experts, as well as foreign allies (Ibid., 322). Thus, in its origins, coinage was a deliberate public act, aimed at standardizing large-scale administrative payments.

The real novelty of Kraay's approach was his suggestion that coinage could likewise play a role in the context of official payments to the 'state'. Such payments could include taxes, fines, penalties, and harbor dues, among others. Rather than relying on a haphazard system of contributions in various forms, the 'state' could control the quality of what was received by "insist[ing] on payment in units which it had itself created" (Kraay 1964, 90). Recall that, in the first place, these units (or coins) were created by the 'state' to administer large-scale uniform payments. Now, the 'state' could control the quality of what was paid out and what was received:

> It had the further disadvantage that though the 'government' could know what it was paying out, it could not so easily determine the quality of what was received. This difficulty was most easily overcome if the 'government' could insist on payment in units which it had itself created, and of which the quality was therefore known. The adoption of such a system would have to be a deliberate act in each community. The first step would be to convert existing bullion into coin of determined weight and purity, and then to enact that official transactions should be conducted only with such χρήματα δόκιμα. (Ibid.)

Thus, Kraay's account on the public origins of coinage in the context of fiscal base facilitation, shares important common ground with the Chartalist approach. Similar to the Chartalist theorists, Kraay builds upon the growing complexity of the state's fiscal activities and the need to standardize payments. In the passage quoted below, Kraay (1964) explicates this growing complexity of the state's fiscal activities:

> In the seventh and still more in the sixth century life became very much more complex in the Greek world than it had been previously. Largely through the foundation of colonies the area actually occupied by Greeks became enormously greater, the relationships between different parts of the area much more elaborate. Raw materials and manufactured products were increasingly traded, and in many places a new level of wealth was attained. Evidence of this is to be found in both the public and the private sphere, in the quality of dedications and funeral stelai, no less than in the growing splendor of the temples. In such a world the functions of government were also becoming more complicated, and the number and kind of occasions on which official payments had to be made or received were rapidly increasing. Among receipts may be mentioned the harbour dues which are said to have formed the main revenue of the Bacchiads and Cypselids at Corinth, the fines and penalties which are commonly threatened in laws, and any other taxes. Payment will have included those occasions on which a surplus was divided among the citizens, as at Siphnos and Athens, the pay of mercenaries or soldiers, salaries paid to experts, and expenditure on public works; the latter category included both payments for materials and to craftsmen and labourers. (Ibid., 89)

Kraay's (1964, 1976) account is, therefore, more theoretically elaborated compared to Cook's (1958) earlier thesis. As previously mentioned, Cook's theory lacks a mechanism to explain the general acceptability of coinage by the population. In Kraay's thesis, on the other hand, the use of coinage as a means of payment to the state in the context of taxes and other mandatory obligations creates a universal demand for the state's currency. Notably, Kraay does not argue this explicitly. Yet, anyone familiar with the Chartalist approach will discern this mechanism implicit in Kraay's account, though not theoretically discerned.

Thus, Kraay does not fully explore the implications of "taxes drive money" view (Wray 1998). In fact, Kraay refers to legal enactment (1964, 90) as a mechanism to ensure the acceptability of coinage in payments to and by the 'state'. As noted in chapters 3 and 4, Chartalist theories do not rely on legal enactment: the demand for standardized units (coins) created and administered in payment by the state, will be driven by their unique role in extinguishing taxes and other obligations to the 'government'.

Finally, unlike the Chartalist perspective where seniorage is not viewed as part of motivation for the origins of coinage, Kraay's thesis clearly accounts for the 'profit' motive in addition to that of fiscal convenience:

> So far coins will have been only a matter of convenience to the 'government', but it is perhaps at this point that the motive of profit enters as well, for the service of converting bullion into coin will not have been performed free of charge; and the charge made may easily exceed the actual cost of the operation. The economic result of this would be that the value of a piece of coined metal would exceed that of a similar weight of uncoined metal, not only by the cost of coining, but by the amount of the 'government' profit as well. (Kraay 1964, 90)
>
> If, then, coins are struck by the ruler or governing body of a state, and bear that state's or ruler's distinctive badge, the original purpose of coinage will surely be in some way to the profit or convenience of the governing body or individual. (Ibid., 89)

Another distinction from the Chartalist perspective comes from Kraay's reluctance to view Greek coinage as pure token currency. Kraay's understanding of coinage as an object valuable in itself (e.g. silver), yet acquiring a higher value through the government's act of minting, is more akin to what Seaford (2004) describes as 'fiduciarity' and defines as "the excess of the fixed conventional value of pieces of money over their intrinsic value" (Ibid.,7).

Lastly, recent archeological finds have finally revealed the evidence of low-value fractional silver coinage. According to Kim (2001), the smallest silver coinage weighed as little as a tenth of a gram (Ibid.,12). Kurke (1999) points to even smaller .044 gram silver coinage (Ibid., 305). The large quantities involved represent another astonishing piece of evidence (Kim 2001, 12; see also Kim 2002). Small fractional silver coins as a whole "tend not to travel far from their issuing cities" (Kim 2001, 13). This evidence has been recently viewed as a challenge to Kraay's thesis. Some have interpreted fractional silver coinage and the local context in which it circulated as evidence for the origins of coinage in retail trade (Kurke 1999, 9; Kim 2001, 13). Yet, such interpretations do not seem convincing given the lack of evidence for the existence of retail trade in the first place. This lack of evidence has been convincingly argued by Grierson (1975, 1977), von Reden ([1995] 2003), Kurke (1999) and Seaford (2004). As Kim (2002) reasons, "we would expect commercial contexts to provide the bulk of references to small change" (Ibid., 49). "However," Kim (2002) further observes, "prior to the end of the fifth century there are few records of these ephemeral marketplace activities" (Ibid.). Instead, a number of early sources have survived which document the use of small change in a range of religious and legal activities (Ibid.). Thus, as Kurke has commented on the alleged challenge posed by the new finds of fractional silver coins, they "do not . . . dismantle his [Kraay's] overarching point":

> Kraay's argument still has value as a salutary challenge to "commonsense' explanations that presume the unproblematic working of market mechanisms as the motor behind coinage at its very inception. (Kurke 1999, 9)

Kraay's (1964, 1976)[28] contribution remains an important step towards the development of institutionally- and historically-embedded accounts of coinage's origins. As Kurke has summarized Kraay's legacy, he "dismantled the modern "commonsense" understanding of the invention of coinage and made the motivation for the beginning and spread of coinage in the Greek world a central problem for numismatics and ancient history" (Kurke 1999, 8).

More recently, Jeremy Trevett (2001) applied Kraay's (1964, 1976) fiscal interpretation of coinage's function to the case of Athens in the fifth-fourth centuries BC, while he also embedded the origins of Greek coinage into the context of political resistance to the powers of traditional aristocratic elite. This resistance was manifest on the part of both the tyranny and the emerging city-state (Trevett 2001, 27):

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[28] For a critique of Kraay's contribution see also Howgego (1990). Howgego's primary focus of criticism is Kraay's one-sided reliance on state expenditures as a causal factor behind the origins of coinage. Howgego (1990) argues that coins issued in the context of state expenditure were but one type of coinage, and we should not exclude "other types of motivations" (Ibid., 3). "In considering the motives of ancient states for producing coin we have to return to an uncomfortable pluralism," argues Howgego (Ibid., 25). While "state expenditure may indeed have been an 'important' motivation . . . we cannot know exactly how important it was or which classes of coinage were typically connected with state expenditure" (Ibid.). Thus, Howgego does not exclude the possibility that different coin issues served different functions, though all should be understood in "their political or social context" (Ibid., 3). On similar grounds, Howgego (1990) critiques the contribution of M. Crawford (1970). Crawford's thesis concerns the Roman world, the period of the late Republic and High Empire (ca. 200 BC to AD 200). Similar to Kraay's approach to the Greek coinage, Crawford advanced a fiscal interpretation of Roman coins, arguing that "coinage was probably invented in order that a large number of state payments might be made in a convenient form and there is no reason to suppose that it was ever issued by Rome for any other purpose than to enable the state to make payments, that is, for financial reasons" (Crawford 1970, 46).

> Indeed, the tyrants and the new democracy had a common interest in creating a civic focus as a means of diminishing the powers of over-mighty aristocrats – potential rivals to the former and oppressors of the latter. (Ibid.)

Similar to von Reden ([1995] 2003), Trevett (2001) draws attention to the evidence of the earliest Athenian coins known as Wappenmünzen. The lack of their standardization, the absence of a civic symbol or emblem on their surface, the highly individualized character of Wappenmünzen, all point to their issue by the old aristocratic families (Ibid., 25-26). In this sense, Wappenmünzen represented "a quintessentially pre-democratic coinage" (Ibid., 26):

> The Wappenmünzen lack any specifically Athenian symbol or legend, and their changing types reflect choices made by individuals, presumably aristocrats, rather than by the community as a whole. To that extent, they reflect an archaic society of powerful noble families and a relatively weak sense of community. This remains true even if, as now seems certain, they were first issued under the tyranny, rather than before its establishment. They are, one might say, a quintessentially pre-democratic coinage. (Ibid.)

By the turn of the sixth century BC, Wappenmünzen came to be "replaced" by their civic counterparts (the Athenian owls) (Ibid., 26-27). While the varying types of Wappenmünzen were associated with different individuals responsible for their issue (Ibid., 25-26, 28), the owls issued by the polis bore no reference to individuals, whether magistrates or engravers. As opposed to aristocratic coinage, civic coins reflected uniformity and standardization :

> In other words, at those periods in Athenian history when democracy was strong, the coins are uniform; when an élite predominated, they are more individuated. (Ibid., 28)

The city's coinage thus embraced the democratic ideology of community, equality and egalitarianism (Ibid.). In this, Trevett argues that coinage was "both necessary for and closely implicated in the operation of the Athenian democracy. Without it, it is hardly an exaggeration to say that democracy could not have existed" (Ibid., 25).

How exactly did coinage help implement the democratic ideology of the Greek polis in the fifth-fourth centuries BC? According to Trevett, the democratic ideology of the polis came to be most vividly reflected in the institution of public pay for services in the city assemblies, law courts, magistracies, and in the military (Ibid., 23)[29]. Thus, by the fourth century BC, coinage was firmly established as a means of administering official payments to the citizens of Greek poleis. Supporting the theories of Cook (1958) and Kraay (1964, 1976), Trevett went as far as to conclude that "an important reason why archaic poleis started to issue coins was precisely to make state payments" (Trevett 2001, 23)[30]. In the passage quoted below, Trevett explores the democratic, civic aspects of coinage in the context of state pay administration in classical Athens:

> That coined money played an integral role in the operation of the democracy of classical Athens can hardly de disputed. Pericles called Athens 'a salary-drawing city', and the author of the pseudo-Xenophontic Athenian Constitution refers to the common people holding magistracies 'for the sake of the pay they receive'. Jury pay and magisterial salaries were introduced in the middle of the fifth century, assembly pay in the early fourth. Payment for military service was also instituted in the fifth century. The development of state pay and of democracy are linked phenomena. In this respect, indeed, one might argue that the democracy was more radical in the fourth century than it had been in the fifth. The numismatic evidence is wholly consistent with this picture. There was a sharp increase in the middle of the fifth century in the quantity of coins of all denominations that were issued. Some of this increase was prompted by the needs of public pay. Smaller coins would have been needed to pay daily wages; payments for such regular duties as magistracies and military service might have been made in larger coins every prytany, or month, or at the end of the campaign. (Ibid., 24)

[29] In a similar vein, Martin (1996) argues that the *polis* could use coinage "to pay laborers in small amounts over time as the work proceeded . . . on a long-term construction project" (Ibid., 276). What is more, coinage could be accumulated ahead of time and stored securely until payday "because, unlike animals or produce, coins did not die or spoil and were easy to store" (Ibid., 276). Though the corollary was that coinage was easy to steal, compared to the more bulky foodstuffs (Ibid.)

[30] Within the context of state pay administration, Trevett (2001) underscores the internal (domestic) function of Greek coinage: "the Athenian issued coins for their own use in the first instance; there is no reason to think that they were interested in their acceptability in foreign markets, except to the extent that state payments could be made abroad" (Ibid., 28-29).

The link between Athenian democracy, coinage and regular state pay, – argues Trevett, – could likewise be established from the fact that some democratic institutions were informally referred to by the coin(s) that their participants received in payment for the services provided (Ibid., 25). And, what is more, the association of coinage and state pay with democracy can also be confirmed by the fact that oligarchic states, such as Sparta, never resorted to coined money. Instead, they continued with the use of the iron spits – "a deliberately cumbersome form of token money" (Ibid., 33). Emphasizing the image of Athens as Sparta's "ideological antipode" (Ibid.), Trevett argues that Sparta's resistance to coinage was not a coincidence. Because in the classical period coinage came to be firmly established as part and parcel of the city-states' urban democracy and egalitarian ideology, states associated with rural oligarchies (such as Sparta) tended to resist the use of coinage.

Overall, Trevett's thesis provides another non-commercial perspective on the origins and function of Greek coinage. Similar to von Reden ([1995] 2003) and Kurke (1999), Trevett views coinage as a political phenomenon, emerging during the struggle over political authority in ancient Greece. Further, glimpsing into the classical Athenian period, Trevett supports the theories of Cook (1958) and Kraay (1964, 1976), demonstrating the use of coinage in domestic context of fiscal policy administration (specifically, payments by the state to its citizens).

I will conclude the above discussion of non-commercial perspectives on origins of coinage with a reference to an earlier work by M. Austin and P. Vidal-Naquet (1980):

> It used to be believed that coinage had from the very beginning the economic function of serving as a standard of value in order to facilitate exchange. It seemed quite natural to suppose that the invention of coinage was intended to serve that purpose, and that it therefore provided decisive proof of the development of exchanges in the archaic period and of the beginning of a monetary economy. (Ibid., 56)

And yet the scholarship examined above illustrates a much more complex political, social and symbolic context for the origins of coinage, thus confirming the thesis advanced by Austin and Vidal-Naquet (1980), namely that “it does not appear that coinage necessarily had from the beginning the same significance and function that it subsequently had” (Ibid., 56). Various non-market considerations must be given for the ‘invention’ and spread of Greek coinage: the political contestation between the older aristocratic elites and the emerging authority of city-state, the development of a civic community and consciousness where values and norms, including those of ‘distributive justice’, had to be established; the evolution of the fiscal role of the state, the financing of mercenaries, etc. As Austin and Vidal-Naquet (1980) have put it: “Once more it can be seen that it is impossible to reach ‘economics’ in a pure form” (Ibid., 58).

CHAPTER 6

THE ROLE OF RELIGIOUS RITUAL AND IDEOLOGY OF 'DISTRIBUTIVE JUSTICE' IN THE EMERGENCE OF GREEK MONEY AND SUBSEQUENTLY COINAGE

The goal of this chapter is to examine the forms of money that causally led to the emergence of coinage. Recall that Ingham (2004), Grierson (1975, 1977) and more recently Kim (2001) have cautioned us that behind the specific phenomenon of coinage lies the more general phenomenon of money, the origins of which are much more difficult to trace (Grierson 1977). There is little doubt that coinage was not 'invented' ex nihilo, but had to evolve out of some earlier institutionally-embedded forms of money, which may not have taken the form of metal. While the scholarship examined in chapter 5 focuses specifically on the evolution of coinage and metal use, the task remains to examine those non-metallic forms of money out of which coinage evolved. This task has been undertaken by Bernhard Laum (1924a) in his seminal contribution Heiliges Geld [Holy Money] which examines the origins of money in the context of religious ritual and ideology in the archaic Greek period. Laum convincingly demonstrates that coinage did not evolve out of metal-use. More recently, Laum's approach has been revived by Richard Seaford (2004), Christina von Braun (2006), Mark Peacock (2011) and Alla Semenova (2011). Laum's approach has also been acknowledged by M. Hudson (2004).

Laum's thesis on the religious origins of money underscores the causal role of religious ritual and ideology in the emergence of money and subsequently coinage. To illustrate Laum's thesis, this chapter begins by examining the significance of the ox-unit of value and account in the ancient Greek world. While the ox-unit is commonly acknowledged as one of the earliest (if not the earliest) unit of value and account in ancient Greek societies, there are competing interpretations regarding the origins of this unit. Correspondingly, there are competing perspectives on the origins of a mere notion (or idea) of valuing objects in terms of other objects.

Highlighting the marginality of trade in ancient Greece, this chapter disputes the common interpretation that the origins of the ox-unit must be sought in barter exchange. As an alternative, this chapter revives Bernhard Laum's neglected contribution towards the theory of money's origins. One of the key propositions of Laum's thesis is that the origins of the ox-unit must be located in non-commercial 'state'-religious practices and institutions of ancient Greek societies. To locate such origins, this chapter examines the ancient Greek rituals of sacrificial offerings to deities. It is argued that by specifying the precise quality, type and quantity of oxen to be sacrificed, ancient Greek religion provided the first instance of a unit of value established and guaranteed by the 'state'. Further, this chapter examines the ancient Greek rituals of communal sacrificial meals to demonstrate how the ox-unit of value gave rise to the first form of money embodied in sacrificial bull's flesh that was centrally (re)distributed among the ritual participants. Next, it is explained how temple-issued coinage emerged as a symbolic representation of roasted bull's flesh, thus making the latter 'currency' obsolete. This chapter concludes that money emerged as a means of 'recompense' administered by the 'temple-state' to its subjects. Finally, while in the Chartalist framework money emerges as a token that extinguishes a population's debt to the state, the 'state'-religious approach expounded in this chapter views money as a token via which the state extinguishes its 'debt' to the underlying population in the context of administering 'distributive justice'.

The Ox-Unit of Value and Account

In the early history of the Graeco-Roman culture, oxen were commonly used as a unit of value and account (Desmonde 1962, 109; Burns 1927, 6-8; Seaford 2004; Angell 1929). Homeric epics, where values "are invariably expressed in terms of oxen" serve as one of the earliest written testimonies to this (Desmonde 1962, 109; see also Seaford 2004, 30)[1]. For example, the arms of Diomedes were declared worth nine oxen, while those of Glaucos were proclaimed equivalent to one hundred. "Female slaves skilled in crafts sold for four oxen, and the three-legged pot was worth twelve" (Desmonde 1962, 109) When metallic coinage appeared in ancient Lydia and Greece (ca. seventh–sixth centuries BC)[2], "it was common to talk of a given coin being worth so many oxen, not the ox being worth so many coins" (Angell 1929, 59). Further, the ox-unit of value became the unit of account in which various fines and payments were denominated in the earliest laws of the Graeco-Roman world, such as the laws of Draco (ca. 620 BC)[3] (Desmonde 1962, 110; Quiggin 1963, 271; Einzig 1966, 223). The testimony of language can also be evoked here. As is well documented (Laum 1924a; Quiggin 1963; Desmonde 1962; Grierson 1977; Seaford 2004) many modern terms pertaining to monetary and financial matters have been derived from the use of cattle as a unit of value and account in the

[1] See Peacock (2011) for a review of arguments supporting the use of Homeric epics as a historical source to illuminate archaic Greek society.

[2] The earliest electrum coinage of Lydia (Asia Minor) dates back to ca. 640–630 BC; the earliest Greek coins were struck in 595 BC on the island of Aegina; in 575 BC in Athens, and in 570 BC in Corinth (Davies 2002, 64-65).

[3] Cattle served as a unit in which fines and rewards were fixed in Athens by Draco (ca. 620 BC). One of the reforms implemented by Solon (ca. 590 BC) was the computation of fines and rewards in terms of coined money instead of livestock (Einzig 1966, 223).

early times. To begin with, everyone is familiar with the derivation of the term 'pecuniary' from Latin pecus denoting cattle. Another example is the term 'fee', presumably derived from Gothic faihi meaning cattle. The term 'capital' derived from capitale originally designating cattle counted by the head (Desmonde 1962, 110). And, finally, some have suggested that the term 'collateral' might have derived from Greek kōlakterai originally referring to the receivers of bull's limbs during the ancient Greek rituals of communal sacrificial meals, and later designating Athenian financial officials (Seaford 2004, 79). Lastly, the earliest Greek word for coinage, nomisma, derived from nemein meaning to 'distribute' and referring originally to the ordered distribution of roasted bull's flesh during the rituals of communal sacrificial meals (Seaford 2004, 49-50; von Reden [1995]2003, 177). These and numerous other examples attest to the fact that the ox served as "a recognized traditional and conventional" unit of value and account prior to and after the introduction of coinage in Lydia and Greece (Angell 1929, 60). Importantly, the use of the ox-unit persisted long after the introduction of metal use and the invention of coinage (Einzig 1966, 223).

While the role of oxen as one of the earliest units of value and account is generally acknowledged, views differ as to the origin of this role. Where did the idea of valuing objects in terms of cattle (in particular, oxen) come from? Or, one could raise a more fundamental question: what is the origin of a mere notion or idea of valuing one object in terms of another? How did the notion or idea of a unit of value and account come into being? (Grierson 1977) The conventional answer to this question is that barter gave rise to the notion and use of a unit of value. Within this barter-based perspective, there are two distinct mechanisms explaining how exactly this could have taken place. In the first mechanism, "the difficulties of pure barter were first overcome by the expression of values [of commodities] in terms of some common prized object before that object or any other object served as a medium of exchange, and the qualities which fitted the commodity to serve as a common denominator of values would not necessarily fit it to serve as a given medium of exchange" (Gregory 1933, 603, emphases added)[4]. In this way, 'price-lists' could be established and commodities of equal value could be exchanged against each other. In the second mechanism, the logical precedence of a unit of value for the carrying out of commodity exchanges is ignored. Instead, it is proclaimed that "a favorite medium of barter" became a unit of value. The ox was "the old unit of barter," wrote Ridgeway (1892, 6), which explains its further use as the (oldest) unit of value and account (Ibid., 6). Notably, this position is supported by Carl Menger ([1909]2002), who argued that Homeric valuation of goods in terms of cattle derived from the primary role of cattle as objects of barter in Homeric Greece:

> At the time of Homer, barter was already highly developed among the Greeks, and in the acquisition of substantial items of wealth, as even today on many barter markets, the larger of the domestic animals must have been preferably accepted in payment; that is why he [Homer] could value their heroes' arms in cattle, even though his assessments could not claim meticulous exactness. (Ibid., 59, emphases added)[5]

The barter-based view is contrasted by the state-religious approach, the advocates of which would argue that the ox-unit of value and account derived from the use of oxen in state-religious practices (Laum 1924a; Desmonde 1962; Seaford 2004). Likewise, it is argued that the mere notion of a unit of value and account was developed in the context of socially-embedded state-religious institutions. Because the institution of trade, both foreign and domestic, played a marginal role in archaic Greek and Lydian societies, it would be unlikely that the ox-unit derived

[4] Quoted in Einzig (1966, 356).

[5] The "heroes' arms" referred to by Menger are certainly the arms of Glaucos and Diomedes.

from the practice of exchanging commodities (Laum 1924a; Desmonde 1962; Grierson 1977; von Reden [1995]2003; Kurke 1999; Seaford 2004). For the marginality of trade in ancient Lydia and Greece, Homeric epics provide a good testimony (Laum 1924a; Grierson 1977; von Reden 1995[2003]; Seaford 2004) as discussed next.

The Marginality of Trade in Homeric Societies

A scholar of Homeric epics, Seaford (2004) notes the marginality of trade, both foreign and domestic, in Homeric societies (Ibid., 26-30). It is conspicuous that Homeric commerce "never occurs within a community" with trade almost always involving non-Greeks (Ibid., 27). Further, unlike all other types of Homeric 'transactions' (e.g. gift-exchange), trade "hardly ever has a function in the main narrative, and is generally confined to asides" (Ibid.). The mentions of trade in Homer "are generally brief" and few details are given (Ibid.). What is more, a medium of exchange is not mentioned, implying that all trade is, presumably, barter (Ibid.). Likewise, Homeric goods are rarely described as commodities exchanged impersonally in the market place. Rather, they are the objects that embody personal relationships and are exchanged as gifts, or redistributed as booty, or given away as rewards or prizes. "Exchange of things, not of people, and not to create interpersonal links but for the sake of the things," writes Seaford, occurs rarely in Homeric epics (Ibid., 2, emphases added).

Most of the (foreign) trade mentioned in Homer is confined to traffic in slaves. Trade as we know it, i.e. "exchange of things, not of people, and not to create interpersonal links but for the sake of the things" is only mentioned three times in Homer (Ibid., 25).

The marginality of trade in Homeric societies has also been emphasized by von Reden ([1995]2003), while Grierson (1977) stressed this point two decades earlier:

> In [Homeric] epic, sale is by definition an exchange between strangers. As Finley observed, not once is there a sale transaction which involves either two Greeks or two Trojans. This is supported by the semantic field of the word pernêmi and its derivatives pratêr and prasis. In all its occurrences pernêmi denotes transactions abroad; and it always describes the purchase or ransom of a captive. (von Reden [1995] 2003, 67)
>
> Virtually the only buying and selling in Homer, apart from jewelry and similar foreign luxuries, is that of slaves, and pernēmi, the early word for selling, seems to be confined to the selling of captives from abroad, so that scholars have doubted if it had any wider sense at all. (Grierson 1977, 27)

Thus, similar to Grierson (1977), von Reden ([1995] 2003) draws attention to the early term for 'selling'– pernêmi – stressing its wider connotations of provisioning and voyage rather than that of commercial exchange. The term pernêmi "is probably related to the word peraô and poros, which never assumed clearly commercial meanings but retained more precisely the connotations of voyage and provisioning" (Ibid., 67).

The marginality of market commodity-exchange is conspicuous in Homeric 'transactions'. Rather than market exchange, we see "the centrality of reciprocity and redistribution as principles of allocation" in Homeric society (Seaford 2004, 27). Specifically, reciprocal or redistributive 'transactions' mentioned in Homer can be grouped into the following categories:

1) Allocation by violence (violent theft, trophies, booty)
2) Prizes offered at games
3) Gift-giving between members of different groups
4) (Re)distribution within a group (including distribution of sacrificial animals at the rituals of communal sacrificial meals)

5) Rewards for services (such as military duties)

6) Compensation for loss or insult

7) Ransom

8) Bride price (Ibid., 23-26, 40)

In the context of Homeric gift-giving, Seaford underscores that gifts were commonly "given rather than exchanged" (Ibid., 23). While gift-giving may involve an expectation of a counter-gift, there was no "precise equivalence of value and enforceable immediacy of return" (Ibid.). Seaford also observes that gift-giving was mostly confined to members of different groups, and its purpose seems to have been the establishment of inter-group friendship and solidarity (Ibid., 24). Within the group, then, solidarity, cohesion and friendship could be achieved by means of distribution or centralized redistribution. In the words of Seaford:

> Whereas gifts create solidarity between individuals from different groups, solidarity within the group is created by distribution or (if centralized) redistribution. This is the mode of allocation obtaining within the basic economic unit, the household, as well as in two prominent contexts in particular – the sharing of booty, and the sharing of meat in the animal sacrifice. (Ibid.)

Also note that in the passage quoted above, Seaford identifies three major contexts in which redistributive activities took place:

1) The household

2) The sharing of booty

3) The rituals of communal sacrificial meals

The only 'money function' that we can locate in Homeric epics is the measurement of value, "performed only (and rarely) by cattle" (Seaford, 2004, 30). Specifically, the measurement of value occurs six times in Homeric epics, all performed in terms of cattle (Ibid., 34). For instance, the Iliad describes the golden tassels on Athena's aegis as 'each worth a hundred cattle' (Ibid., 33). Note that the value of a golden object is expressed in terms of cattle, rather than the value of cattle being expressed in terms of gold.

Christopher Howgego (2005) presents a similar picture of the archaic Greek world:

> Our picture of money before coinage in the Greek world is much less clear. … At any rate Homer reveals a world which seems to make sense when viewed as a society in which reciprocity (gift exchange) and hierarchical redistribution were dominant. Certain types of goods circulated in closely defined contexts. Gifts circulating among those of top rank included finished objects of metal, cattle, and women. Meat and related products (hides and textiles) seem to have been controlled from above and redistributed down the social structure. There is no trace of money as a means of exchange in this world, and not much room for it, although cattle were used in some contexts as a measure of value. (Ibid., 13-14)

Considering the marginality of market exchange and trade in general, and taking into account the prevalence of centralized redistribution and reciprocity as the dominant modes of integration in archaic Greece and Lydia, the ox-unit of value and account could not have derived from market exchange, and its origins must be sought elsewhere.

The Religious Context for the Origins of the Ox-Unit of Value and Account

Accounting for the marginal sphere occupied by trade in ancient Lydia and Greece, the use of the ox-unit must have derived from a non-market context. In fact, Bernhard Laum (1924a) was among the first scholars to question the conventional theory that the ox-unit of value derived from a market exchange of commodities. In his work Heiliges Geld [Holy Money] Laum

(1924a) suggested that “the evolution of cattle as a unit of value originated in their religious use” (Laum 1924a, 17, quoted in Burns 1927, 6n1; see also Einzig 1966, 369-70; Peacock 2011).[6]

Far from the market, the (re)distributive economies of ancient Greek and Lydian societies were shaped by religion and its normative character. This applies to both ‘chieftain’ societies reflected (though indirectly) in Homeric epics and the archaic Greek city-states. While the process of transformation of the largely ‘chieftain’ societies reflected in Homeric epics into the archaic Greek city-states is beyond the scope of this chapter, the point is that temples came to be “among the very first manifestations of the polis” (Seaford 2003, 197). As we know from archeological evidence, from the eighth century BC onwards (i.e. the period when the archaic Greek city-state came to emerge), the leader’s dwelling place was “replaced by, or transformed into” a temple – a center of giving to the deity (Ibid.).[7] With the state and religious authorities generally “inter-related in the closest and most ancient bonds” (Burns 1927, 81), “no distinction between State and Church [temple]” (Barker 1925, 8) could practically be made. Religion “was not another life,” wrote Barker, but “an aspect of the political life of a political society” (Ibid., 8). The pre-eminence of state religion in civic matters was signified by the Priest-King, the head of the archaic Greek and Lydian city-state; and a well-defined hierarchy of priests and other state-religious authorities (Desmonde 1962, 61)[8]. Thus, it was the economics of state religion rather

[6] Given the fact that none of Laum’s works on money’s origins has been translated into English, I rely upon references to Laum’s works provided in Desmonde (1962), Einzig (1949), Burns (1927), Seaford (2004), and Peacock (2011).

[7] Prior to the eighth century BC, monumental temple buildings were very rare. Most offerings to deities were conducted either in the open or at the house of the chieftain (Seaford 2004, 63).

[8] A similar perspective is presented by Henry (2004) in the context of third millennium BC Egypt. Henry argues that the transition from egalitarian to stratified society was strongly “intertwined with the religious character of early Egypt” (Ibid., 80). Religion served as a

than market exchange that provided an organizational framework for the archaic Greek and Lydian societies.

The well-being of the archaic city demanded that its protective divinity be pacified by public gift-offerings (Laum 1924a, 28, quoted in Burns 1927, 7). Here, the ox served as “the most prestigious and important sacrificial animal” (Peacock 2010: 10). Importantly, the types, quality and quantity of oxen used as religious offerings were subject to thorough regulation by the state-religious authorities (Laum 1924a, 28, quoted in Burns 1927, 6n1). The ox brought to deities had to be “of a very definite type and character”, conforming to “painstakingly described rules” (Desmonde 1962, 115). Considering the thorough regulation by the state-religious authorities of the type, quality and quantity of oxen offered, Laum (1924a) suggested that the ox-unit served as the first unit of value and account, a unit established and guaranteed by the state (Laum 1924a, 40, quoted in Burns 1927, 7n1). As Einzig (1966) wrote in summary of Laum’s (1924a) argument, “the State authority in Ancient Greece and elsewhere laid down rules determining the precise quality of animals suitable for sacrifice and guaranteed this quality, thereby providing early instances of State-guaranteed units of value” (Einzig 1966, 372)

Thus, it was in the relationship between humans and deities, mediated through the temple, that the ox-unit of value was developed. But what was the precise nature of this relationship? On the surface, the relationship between man and his gods consisted of offerings to deities in return for which certain blessings were expected, such as favorable weather conditions and good harvests, protection from sickness, safety from foreign invasions, etc. Alternatively, as

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unifying social force, as the substance of socio-economic relations was undergoing a fundamental transformation (Ibid., 86-87). On the rationalizing function of religion in the context of socio-economic inequalities see Henry (1990).

suggested by Einzig (1966), offerings could have been made to deities "in payment for blessings already received" (Ibid., 371, emphases added). It may be tempting to conceive of this relationship between man and god as an exchange akin to that in the market place, where god's blessings are traded for livestock. For example, Desmonde's (1962) characterization of the ox-unit as "a medium of exchange in the relationship between humans and deity" (Ibid., 115, emphases added), or as a "fixed unit . . . of payment in an exchange between man and god" (Ibid., emphasis added) is suggestive that the relationship between man and deities is perceived as a trade relationship. "[T]he practice of making sacrifices to deity was to a large extent a form of barter between man and his gods," wrote Einzig (1966) while summarizing Laum's (1924a) contribution (Einzig 1966, 371, emphasis added). If this interpretation is plausible, and the relationship between men and deities could be considered as a form of barter exchange, then sacred rather than profane exchange gave rise to the ox-unit of value. But would the archaic man barter with god?

As Desmonde (1962) himself admitted in another passage, the personal relationship between man and god was "similar to the reciprocities among individuals" (Ibid., 114, emphasis added). Likewise, questioning his previous argument, Einzig (1966) asserted that "there was no question of any barter between man and god" (Ibid., 372), because, as Laum (1924a) himself admitted, "man only returned to god a small proportion of the goods received from him" (Einzig 1966, 372). In a similar vein, Finley (1965) argued against a barter-based interpretation of the relationship between man and god, emphasizing that an act of giving was "in an essential sense always the first half of a reciprocal action, the other half of which was a counter-gift" (Finley 1965, 62, emphasis added). Therefore, rather than making payments for blessings received (or to be received in the future), a mortal could express his gratitude for the blessings obtained (or expected) from the deities through the acts of reciprocation. This transforms the relationship between humans and deities into a reciprocal gift-exchange rather than that of barter. Finally, as Polanyi (1965a) emphasized, "reciprocity demands adequacy of response, not mathematical equality" of the goods or services reciprocated (Ibid., 73). Therefore, as summarized by Einzig (1966), the 'exchange' between man and god cannot be interpreted as a barter relationship "unless it is assumed that the difference between value received and given was made up in prayers and various forms of rites designed to please the deity who, on a strictly commercial basis, came second best out of the bargain" (Ibid., 372)[9].

Further arguments could be made against a commercial interpretation of sacrifice. The presence of an obligation to make sacrifices to deities is one of them: "for if people have an obligation to make sacrifices to the gods, humans cannot be deemed equal partners in a 'free relationship of exchange'" (Peacock 2010: 13). Already in Homer, mortals are not free to refuse sacrificial interactions with deities (Ibid.). The presence of a sacrificial obligation suggests that humans not only wish to thank their deities for goods and blessings received (or to be received in the future), but "people also make sacrifices to honour the gods, as is their due" (Ibid.).

Finally, considering the normative character of state-religion prescribing a precise quality and quantity of sacrificial objects, while at the same time determining an exact timing of offerings (Desmonde 1962), the relationship between humans and deities, carried out through an intermediary of state-religious authorities, could be analyzed as a debt relationship. While this relationship could appear as a reciprocal gift-exchange to the archaic Greek men, the inherent

[9] For a critique of commercial, utilitarian interpretations of *reciprocity* and *gift-giving* see also Grierson (1971, 79-80).

nature of this relationship, mediated through the temple authorities, was that of a centrally imposed debt relationship, in which a man was a god's debtor. Within this debt relationship, a definitive unit of value and account was adopted for the repayment of debts to deities. The ox, as the most important sacrificial offering in archaic Lydia and Greece, whose quality and type was rigidly regulated by state-religious authorities, thus performed a monetary function of a unit of value and account in which 'debts' to deities could be extinguished (Laum 1924a, 40, in Burns 1927, 7n1).

Another important context for the social use of the ox-unit of value and account was the payment of fees to priests for the services they performed at religious rituals and elsewhere. Because livestock (such as oxen) served as the most important and prestigious category of sacrificial offerings to deities, they naturally became the means of payment to priests (Laum 1924a, 43, in Burns 1927, 7n1). It was in this state-religious context, therefore, rather than in the market place, as Laum (1924a) had argued, that oxen were first used in payments between man and man (Einzig 1966, 373). Gradually, the range of commodities offered as sacrifices to deities and in payment to priests began to increase, and it was necessary to establish equivalency ratios, so that fees and sacrifices previously expressed and paid in terms of oxen, could be reckoned in terms of other commodities. For this purpose, these other commodities became evaluated in terms of the already existent ox-unit of value and account (Ibid., 373).

It bears noting that Homeric epics contain important evidence in support of Laum's (1924a) overall thesis that the idea and practice of valuing 'commodities' in terms of cattle (such as oxen) originated in a religious context. In particular, what is so peculiar about Homeric valuation of things in terms of cattle (e.g. 'worth a hundred cattle', 'worth ninety cattle') is the correspondence between the numbers of cattle quoted as the value of various objects to the numbers of cattle sacrificed in Homeric sacrificial rituals (Seaford 2004, 61). More specifically, the numbers of oxen sacrificed are usually hundred, twenty, twelve, nine, four and one. But these units are also the customary units of value in the Iliad and Odyssey (Einzig 1966, 382; Seaford 2004, 61). This means that there is a distinct connection between the customized numbers of sacrificial victims and the specific quantities of oxen (the specific numbers of the ox-units) in terms of which the worth of various goods was estimated. Moreover, the above mentioned quantities of cattle would be "too large and cumbersome to be used as a medium of exchange, and so as a measure could not have derived from commerce" (Seaford 2004, 61). Rather, the numbers specified suggest that their suitability as a unit of value and account derived, at least partially, "from the sacrifice of set numbers of cattle of standard quality" (Ibid.). These numbers suggest that "valuations were relatively certain only when they mirrored sums … to which people were accustomed in sacrificial sphere" (Peacock 2010, 11). Notably, Laum (1924a) was among the first scholars to establish this connection between specific numbers of cattle sacrificed as offerings to deities and specific numbers of cattle-units in terms of which the worth of Homeric goods was reckoned (Seaford 2004, 61; Einzig 1966, 373).

The next section of this chapter will focus specifically on the sacrificial rituals of communal sacrificial meals that emerged in Homeric societies and gave rise to the ox-unit of value and account subsequently adopted by the Greek city-states.

The Rituals of Communal Sacrificial Meals

As “a universal feature of the city worship throughout Greece,” a communal sacrificial meal was a ritualized repast in honor of a commonly-worshiped divinity (Desmonde 1962, 60). The ritual consisted of a public killing, roasting and eating of sacrificial animals (such as bulls), accompanied by liturgies and prayers. A powerful tradition in ancient Greece, the rituals of communal sacrificial meals involved an ‘egalitarian’ distribution of roasted bull’s flesh among the ritual participants (Seaford 2004, 14). Among the main social functions of the communal feast, was to create solidarity and cohesion within a community (Ibid., 24). This is why the principle of ‘egalitarian’ participation, distribution and consumption played such a prominent role in the ritual. In the (six) lengthy descriptions of the sacrificial ritual, Homer stressed this point by a formulaic sentence ‘they feasted, nor was anybody’s hunger denied the equal feast’ (Seaford 2004, 40)[10].

At the same time, however, the principles of “equal distribution to all” (Seaford 2004, 41) and collective ‘egalitarian’ participation were not disturbed by a “privileged share” and a “leading role” for a chieftain or “the leading man” (Ibid., 24). This would hold as long as the right to perform a leading role and/or receive a special share was established by communal tradition (Ibid., 45). Further, a privileged share to some would be compatible with an egalitarian principle as long as the principle of ‘proportionate’ rather than absolute equality was practiced. Under the principle of ‘proportionate’ equality, one’s ‘equal’ share would correspond to one’s

[10] Notably, while Homer provides a detailed description of ritual meals and their all-inclusive, egalitarian character, “the source of the victim(s) receives only slight attention” (Seaford 2004, 76). Martin (1996) refers to a tradition in the archaic Greek polis “obligating the rich to make contributions and perhaps collaborate with one another to perform or finance “proto-liturgies” for the benefit of the entire civic community” (Ibid., 281).

social status. This explains the vital importance of the specific manner in which a sacrificial animal was allocated among ritual participants (Desmonde 1962, 115). Each person received a share deemed commensurate with his social status: "to the order of social rank there corresponded an order of rank in the apportionment of the roasted flesh" (Ibid., 116). An inscription from Attica ca. 330 BC, though belonging to a much later period, demonstrates the case in point very well. The inscription carefully describes the specific manner in which a bull's flesh was to be distributed, where the 'just' portion allotted to each communicant was proportionate to his social status:

> Five pieces each to the presidents
> Five pieces each to the nine archons
> One piece each to the treasurers of the goddess
> One piece each to the managers of the feast
> The customary portions to others.[11]

The 'just shares' allocated to ritual participants differed not only in quantity, but in quality as well. The more 'honored' parts of the sacrificial animal, such as the limbs, were customarily allotted to religious officials. Notably, the term kolakretai that was later used to designate Athenian financial officials, originally referred to the "receivers of limbs" suggesting a connection between sacred rituals and state finances (Desmonde 1962, 116; Seaford 2004, 79).

Finally, being a highly ritualized repast, the communal killing and eating of an animal was marked by a "traditional typicality of procedure" (Seaford 2004, 41), which correspondingly involved "a consensual expectation" as to when and how the ritual would be performed (Ibid., 45). The ritual thus represented communality, control and predictability in an otherwise conflictual, uncontrollable and unpredictable world (Ibid.).

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[11] Yerkes 1952, 108, quoted in Desmonde 1962, 105.

The principles of “equal distribution to all” and collective participation (koinōnia) in the ritual “are persistently emphasized in numerous later references to animal sacrifice performed by groups varying in size from the household to the whole city-state” (Ibid., 41). Therefore, the importance of animal sacrifice was carried over to the polis (ibid., 80). In this context, – notes Seaford, – the relationship between the polis and the sanctuary would be hard to disentangle (Ibid., 63-64). Seaford further notes that the development of the Greek polis took place alongside the development of monumental temples, a development that occurred rapidly from the beginning of the eighth century BC. Prior to this, most offerings to deities and communal rituals took place in open sanctuaries. Yet, it was at the sites of these (former) sanctuaries that temples came to be constructed. Correspondingly, in cases where sacrificial offerings and communal rituals were performed in the house of a chieftain, the chieftain’s house would provide the site for the construction of the temple. In this sense, the house of the chieftain became the temple (Ibid., 53, 63-65)[12].

The importance of sacrificial distribution in ancient Greek society is confirmed by its notable impact on a range of Greek institutions, conceptions, and vocabulary (Seaford 2004, 50). For example, the beginning of civilization was associated by Greeks with the ordered distribution of food[13]. Later, the principle of equal distribution came to express the solidarity of the Greek

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12 Analyzing religious rituals in ancient Greece, L. H. Morgan ([1877] 1985) likewise observes the transition from “democratic gens” (1985, 67) to hierarchical social arrangements which culminated in a hereditary office of a “high priest”. Morgan concludes that “the gens became the natural centre of religious growth and the birthplace of religious ceremonies” (Ibid., 81).

13 Speculating on the origins of this powerful tradition, Seaford (2004) argues that from the very beginnings of *homo sapiens*, the survival of the group would be dependent on both the power to kill an animal (first in the act of hunting) and upon an agreed mode of distributing its flesh (Ibid., 48).

polis. In fact, entitlement to participation in the sacrificial meal seems to be "one and the same" as full citizenship (Ibid., 49):

> The solidarity and articulation of the polis is expressed in its animal sacrifices, in which the principle of equal distribution (found in Homer) remains powerful. Full citizenship and entitlement to participation in the sacrificial meal seem to be one and the same. (Ibid.)

What is more, the terminology for dividing urban space commonly employs the terminology of carving up an animal. And, finally, the Greek word for law or convention, nomos, derived from nemein meaning 'to distribute', "and so presumably at first meant distribution, then the principle of distribution" (Ibid.). While the terminology of nomos does not occur in Homer, nemein is frequently used in the context of distributing food and drink. "And so it seems reasonable to infer," writes Seaford, that nomos "originated in the widespread and economically fundamental practice of distributing meat" (Ibid., 50). Related terms for which a sacrificial origin has been inferred include nemesis (retribution), isonomia (equality of political rights), and nomisdein (acknowledge, consider) (Ibid.). Finally, the early Greek word for money – nomisma – suggests a connection between the rituals of communal sacrificial meals and the origins of money and coinage. This connection will be further explored.

Finally, a right of participation in a sacrificial repast was perceived as 'recompense' received by the subjects for the goods and services rendered to the temple-state. Or, to put it differently, a portion of a sacrificial bull's flesh allotted to a communicant served as a priest-king's 'payment' or 'compensation' for the contributions rendered (Desmonde 1962, 116). The rituals of communal sacrificial meals restored 'distributive justice' as each communicant was allocated his 'just' and 'equal' share (in accordance with social status).

A Footnote on the Concept of Distributive Justice in Early Greek Thought

No society can persist without a social consensus regarding a man's 'just share' (Spengler 1980). In ancient class societies, where state religion served as a major form of ideological control, the concern with man's 'just share' was identical to a concern with his 'destined portion'. The latter, in turn, was grounded into the larger framework of a natural or divine law.

The conception of a divine (or natural) law and order of things in a society was widely reflected in the early Greek thought and state legislation. Heraclitus [ca. 540-470 BC], for instance, asserted that man was subject to the law of the universe, or Logos, understood as natural or divine law (Spengler 1980, 83). Likewise, it was believed that the law and justice of the Greek pólis harmonized with the law of Logos (Ibid., 81). For example, the famous Athenian statesman Solon (ca. 638-558 BC) was convinced by Hesoid's [ca. eight century BC] poetic wisdom that social justice was an inseparable part of the divine world-order (Ibid. 80n41).

It was generally held in the archaic and even classical Greek period that, in accordance with the divine (or natural) law, a society was made up of individuals differing by nature in their virtues and other important qualities. These natural differences determined the social class to which a man belonged, i.e. the social class to which god (or nature) made him fit. This, in turn, determined the kind of social labor a man would perform throughout his life, and dictated the social rewards and honors that would accrue to him. In this framework, some men were naturally rulers, while the others were naturally subjects (Spengler 1980, 83). The cooperation of the different social classes within their proper spheres of activity would establish "perfectly harmonious and truly well-ordered" relations in the pólis (Ibid.). These ideas are particularly reflected in Plato's notorious division of labor in a society based upon a natural (or divine) partition of mankind into three distinct classes. While all 'citizens' were admittedly brothers, god had framed them differently, - postulated Plato in his famous passage:

> "All of you in the city are brothers," we'll say to them in telling the story, "but the god who made you mixed some gold into those who are adequately occupied to rule, because they are most valuable. He put silver in those who are auxiliaries and iron and bronze in the farmers and other craftsmen. For the most part you will produce children like yourselves, but, because you are all related, a silver child will occasionally be born from a golden parent, and vice versa, and all the others from each other. So the first and most important command from the god to the rulers is that there is nothing that they must guard better or watch more carefully than the mixture of metals in the souls of the next generation. If an offspring of theirs should be found to have a mixture of iron or bronze, they must not pity him in any way, but give him the rank appropriate to his nature and drive him out to join the craftsmen and farmers. (Plato, Republic 415)

Thus, god created three distinct classes of men and assigned to each of them a performance of a specific social function. The members of the golden class are the natural rulers; those in the silver class are their "auxiliaries", presumably soldiers; while everyone else, i.e. the base metal class, are "servants" by nature. With such a divine design firmly in place, "[e]ach man should be doing one thing only, that to which his nature is best adapted" (Plato Republic). Each man "is to be directed to what he is naturally suited for", i.e. put to use for which nature intended him (Plato Republic 423).

To conclude, social justice in Plato's ideal republic is based upon the natural order of things with its underlying class-division of mankind. A socially just arrangement is manifest in everyone's discharging his proper socio-economic function ("the due performance of function by each class"), where each function is naturally prescribed (Barker 1925, 177). "A state of things at variance with the natural order would be considered injustice, such as, for example, interference by one class into the naturally pre-ordained function of the other.

Clearly, Plato's overall conception of social justice which is based upon the performance of one's 'due function' has important implications for his conception of 'distributive justice'. More specifically, an inference can be drawn from social justice understood and implemented as everyone doing his 'due function' to distributive justice as manifest in everyone having that which is naturally allotted for the performance of his 'due function'. Since men differ in their natural compositions, and their 'due functions' are not alike, their 'due shares' have to be unequal. To the 'due function' allotted by nature there inevitably corresponds a 'due share' for the performance of this function, doesn't it?

> Therefore, from this point of view also, the having and doing of one's own would be accepted as justice.
> That's right. (Plato Republic 433)

But what is 'man's own', what 'belongs to him'? This is contingent upon a man's natural rank: golden, silver, or iron. What is allotted to him in both doing and having, therefore, is allotted on the basis of this natural rank. In other words, a man's social destiny and his 'just portion' in having and doing are predetermined by a divine (or natural) ordinance regarding the class to which he belongs. Social inequality is the law of nature (or providence), and to attempt to rectify it would mean to act against the natural (or divine) law and order.

While scholars of Plato's works do not make the above inference explicitly, what they emphasize is Plato's conception of distributive justice as based upon the notion of 'proportionate equality'. This notion, however, leads to the same conclusions as inferred above. The conception of 'proportionate' or geometrical equality, originally formulated by Pythagoras [ca. 582 – 500 BC], is distinct from a strict arithmetical or absolute equality (Spengler 1980, 83). 'Proportionate equality', or 'equality of ratios', implies an equality of ratios between various merits and rewards accorded to them. For example, "the ratio between the desert and honour of the superior is equal to that between the desert and honour of the inferior" (Barker 1925, 334) "To pursue entirely the principle of absolute equality – to give equal power and honor to persons who are unequal in capacity and desert – is to pursue a false equality, and to abandon the way of justice" (Ibid.). Rather, proportionate equality should be pursued which "gives to the greater more and to the inferior less and in proportion to the nature of each" (Plato Laws 757, in Spengler 1980, 88-89). Thus, the rewards and honors that accrue to men in society should be set in equal proportions to their naturally determined virtues. Man's natural constitution (gold, silver or iron) and inherent therein 'due function' determine the degree of his social worth, and it is in proportion to this worth that social rewards are accorded to him. Thus, the natural division of men into social classes necessitates absolute inequality while at the same time allowing for their proportionate equality. The equality does prevail – "in proportion to the nature of each"! It is the geometrical equality, or "equality of ratios" – an equality "of a better and higher kind" as Plato described it (Ibid., 88). As Minar (1942) concludes, while "the eternal fact of inevitable inequality underlies everything and is the basis for social institutions" (Ibid., 108-109), in an aristocratic society equality does prevail:

> It has been seen that the fundamental character of justice is in giving each man his due, or treating him according to his worth. In politics this will mean that offices are assigned to each man (and class) in proportion to his natural merit. Since the state is for the advantage of all the citizens, the proportions must be so adjusted that men are treated equally. We may pause to note that "equality" . . . was the rallying-cry of democracy in Greek cities. Their universal demand was for the equal and indiscriminate admission of all free citizens to the privileges of office. The Pythagorean system endeavored to meet this demand by demonstrating that in the aristocratic society equality – of a particular kind – actually does prevail. This is the so called geometrical equality . . . . In terms of social relations this means that the privileges of each men are related to his worth as those of every other citizen. It follows readily that the better men will have more privileges. Geometrical equality is opposed to the arithmetical, which treats all free men as equal irrespective of innate differences, according to the democratic ideal. (Ibid., 118).

Clearly, the idea of proportionate equality was already manifest in practice during the rituals of communal sacrificial meals. Purporting to allocate to each his 'just share', embodied in a portion of a sacrificial bull's flesh, the all-inclusive rituals of communal sacrificial meals aimed to create an appearance of harmonious and consensual social relations, while the underlying conditions of socio-economic inequality and injustice in the relations of production and distribution prevailed[14]. In the words of Henry (2004), "the façade of equality had to be maintained while inequality was growing and solidifying" (Ibid., 87).

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[14] The beginning of Greek history proper was marked "by the decay of primitive communism, the growth of slavery and of inequalities of property" (Thomson 1955, 15). Martin (2000) points to the evidence of social hierarchy as early as ca. 950 BC., such as "the striking architecture and riches" of graves of some individuals who "enjoyed high social status during their lives and perhaps received a form of ancestor worship after their death" (Ibid., 39). While such wealthy and powerful individuals were probably still few ca. 950 BC, their existence nevertheless "proves that marked social differentiation had either persisted or . . . emerged in at least certain areas of the Greek world" (Ibid.). Even though such hierarchical social organization set the state for the emergence of the self-governing polis of free citizens (Ibid.), the increase of socio-economic inequality (and the growth of slavery) actually increased parallel to the rise and the establishment of the *pólis* (Laistner 1923, xi). With a free citizen at one end, the slave at the other, and "a considerable number of shades of dependence in between", the *polis* clearly exhibited a spectrum of social statuses (Finley 1981, 98). Addressing the question of "work", Migeotte (2009) notes that the producers of material goods "were part of the laboring classes, condemned perforce to such necessities" (Ibid., 29). The laboring classes were distinct from the upper strata, whose ideal lay in politics, warfare, prayer, or scholarly pursuits. While the workers were not referred to as "the poor" (in the modern sense of the word), they were known as "little people" (Ibid.). Migeotte further observes that, despite the presence of egalitarian ideology of the Greek *polis*, social statuses varied enormously, with slaves at the bottom of the ladder (Ibid., 38-40). Other forms of dependency involved "entire communities that cities had reduced to a state of collective dependence" (Ibid. 41). While such communities lived on their own land in their own homes, they cultivated the land for their masters. Most of such dependent communities maintained a collective name, usually an ethnic one (Ibid.).

Communal Sacrificial Meals as Opposed to Centralized Redistribution of Booty

The typicality, regularity and the all-inclusive character of communal sacrificial meals placed them in sharp contrast to the non-ritualized, irregular, ambiguous, uncertain and unpredictable procedures and outcomes involved in the distribution of booty between the leader and his followers (Seaford 2004, 41-46):

> The amount and kind of material for distribution [of booty] is, again in contrast to sacrifice, unpredictable and uncontrollable, dependent on what has been looted and what has been made available for distribution. Moreover, the kind of items that would be looted might be much more valuable, and much more variable in value, than animals: the armour of Glaucus is worth a hundred cattle (Il. 6.236), and so too apparently is the Sidonian bowl given as the price of Lycaon, whereas a skilled woman is worth four cattle (Il. 23.705) and a cauldron one (Il. 23.885). (Ibid., 46)

The contrast can be pursued further. Booty is distributed by a powerful individual (Ibid., 51), and this redistributive context can be viewed as a series of one-to-one dealings between the leader and all or some of his followers. This is in stark contrast to the rituals of sacrificial meals, where the right to perform a leading role and/or receive a special share is based upon communal tradition:

> The procedure of sacrificial ritual, as of ritual in general, is defined. For instance, it is performed at certain regular intervals (e.g. annually), or as a regular accompaniment to certain actions (warfare, purification, wedding, etc.). The rights to perform a leading role or to receive an equal or special share are established by tradition (later frequently by inscribed regulation), as are the number and kind of animals to be slaughtered. In Homer, the numbers are, when specified, a hundred, twelve, nine, or one. (Ibid., 45)

Also note from the above-cited passage, that the rituals of communal sacrificial meals involved standardization of quantity, as the number of animals sacrificed was generally set to one, nine, twelve, and one hundred (Ibid.). The distribution of booty, on the other hand, could not involve such quantitative standardization as the amount of objects looted would always be uncertain. What is more, the distribution of booty (performed mostly in the house of a chieftain) was relatively easy to conceal compared to a large-scale, open and public ritualized repast (Ibid., 46). Further, unlike the relative homogeneity of the roasted bull's flesh ("the animals, which are never distinguished from each other, must all be pleasing the deity and so do not fall below a certain standard" (Ibid., 47)), the items allotted via redistribution of booty were unique, personalized, of variable value and quality (Ibid., 46). Thus, the contrast between these two redistributive activities also corresponds to a distinction between two kinds of goods: perishable goods for subsistence, on the one hand, and durable objects conferring prestige and power (such as artifacts and metals), on the other.

The Homeric contrast between communal sacrificial meals and the distribution of booty is important as it reflects the existence of tension between communal distribution and individual appropriation (Ibid., 45). Control by the leader or by the community of nobles, as in the distribution of booty, produced inequality and brought about the crisis of centralized redistribution (Ibid., 39):

> Redistributive (centralized) reciprocity breaks down as a result of excessive appropriation by the redistributor (Illiad) or by the community of nobles (Odyssey). In the Iliad the distribution is of booty, in the Odyssey of food and wine in feasting which passes into the distribution of booty. In both cases there is a sharp contrast with the peaceful, ordered communality manifested in the lovingly described distributional procedures of the animal sacrifice, so pleasing to deity. (Ibid., 44-45)

The crisis of centralized redistribution becomes a key element within Seaford's thesis on the origins of Greek coinage. Specifically, in the process of its evolution, the Greek polis would attempt to solve this redistributive crisis via the means of what materialized in the phenomenon of coinage. In this sense, coinage played a role in the assertion of the political authority of the polis, while the polis played a role in the development of coinage (c. f. von Reden [1995] 2003; Kurke 1999). Within the process of money's emergence, the idealized 'model' of communal sacrificial distribution "will eventually predominate," yet no longer restricted to the distribution of perishables (such as pieces of meat destined for immediate consumption), encompassing, instead, the more durable and valuable goods (i.e. goods that previously occupied the privileged sphere of the distribution of booty) (Seaford 2004, 48).

Recall that the principle of communality and equality in distribution remained crucial to the cohesion of the polis (Seaford, 2004, 107). Yet, roasted bull's flesh had no material permanence. Therefore, when perpetuating the 'model' of communal egalitarian distribution, the polis substituted durable objects for the distribution of meat. At the beginning of this process, the transient act of the egalitarian ritual would find its permanent embodiment in sacrificial axes, roasting spits, and various vessels used in the killing and cooking of an animal. Among these objects, roasting spits occupy the most prominent place, as it is "almost certain that the spits played a role in the development of Greek money" (Ibid., 104). In what follows, I explore this development in more detail.

The Religious Origins of Money and Coinage

Recall that when Aristotle referred to money, he called it nomisma [15](von Reden [1995] 2003, 184-187; Seaford 2004, 143; Del Mar 1968, 172). To begin, this suggests that in the

[15] As is well known to classicists, Aristotle discussed the origins, functions and meanings of money and coinage in two different contexts and in two different works (von Reden [1995]2003: 184). One context is related to wealth, commerce and profit (as discussed in Aristotle's *Politics*), while the other context deals with the origins of the *polis* (as in *Nicomachean Ethics*). The two different contexts for the origins and functions of money and coinage correspond to Aristotle's distinction between money as a commodity (*Politics*) and money as a political token (*Nicomachean Ethics*). Money as a token was "a means of unilateral payment in a system of generalized reciprocity" while money as a commodity served as a medium of exchange in

classical period Greeks well understood that the value of money was conventional, i.e. based upon convention, usage, or law, rather than upon its intrinsic characteristics (von Reden [1995] 2003, 184-185; Seaford 2004, 5; Kurke 1999, 41-42; Del Mar 1968, 338, 172n22)[16].

Secondly, since nomos referred originally to the 'just' apportionment of the flesh of a sacrificial animal during the rituals of communal sacrificial meals, and later came to designate "anything assigned, distributed, or dealt out" by convention, this suggests an important connection between the rituals of communal sacrificial meals and centralized redistribution in general, and the institution of money (nomisma).

Another piece of evidence in support of a connection between communal sacrificial meals and the origins of money (and coinage) pertains to the iron spits commonly used in the ritualized repasts. Utilized for roasting a sacrificial animal, an iron spit, called obelos, was also used for distributing roasted portions of meat among the ritual participants. In the course of time, suggested Laum (1924a), sacrificial meat on an iron spit came to be known as 'obelos'. Notably, obolos is the name of the sixth century BC silver Greek coin. Another sixth century BC Greek coin of a larger denomination, drachma, originally meant a handful of six iron spits (or a handful of six obeloe) (Seaford 2004, 102). "The Greeks themselves were aware," writes Seaford, "that

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commerce (von Reden [1995]2003, 184). Aristotle evaluated the two functions of money "completely differently" (Ibid.). As a political means of payment coinage "was necessary in order to achieve justice in the *koinônia* (community) of the *polis*" (Ibid.). It is noteworthy that the proponents of the Metallist perspective simply ignore the two views of money advanced by Aristotle, focusing solely on his description of coin function in the context of exchange (see Meikle 2000, 157-59).

[16] When coinage was introduced by the Greek city-states, its value was "fiduciary" or conventional: the value of a stamped coin was higher than the value of its melted metal component (Seaford 2004, 7-8, 136-46; Peacock 2006, 639-40; Peacock 2010, 18).

their coin of low value the obol (obolos) took its name from the spit (obelos), and that 'drachma' meant originally a handful of (six) spits" (Ibid.)

A famous passage from Etymologicum Magnum describes the abrupt transition from iron spits to coins (obolos and drachma), carried out by King Pheidon of Argos on the island of Aegina in the first half of the sixth century BC:

> First of all men Pheidon of Argos struck money in Aegina; and having given them (his subjects) coin and abolished the spits, he dedicated them to Hera in Argos. But since at that time the spits used to fill the hand, that is the grasp, we, although we do not fill our hand with the six obols (spits) call it a grasp full (δραχμή) owing to the grasping of them. (cited in Ridgeway 1892, 214)

Notably, the above legendary dedication of iron spits in the temple of Hera in Argos was confirmed as factual when archeological excavations on the site of the temple ruins revealed a bundle of 180 iron spits (Quiggin 1963, 282; Burns 1927, 27). The exact reason for this dedication cannot be known with certainty. Most probably, however, the iron spits "were dedicated as specimens of obsolete currency which had been superseded by the coins" introduced by Pheidon, or as an "obsolete apparatus of the period before the introduction of coins which was no longer required" (Burns 1927, 27).

As argued by Seaford (2004), the role of roasting spits in the development of Greek coinage is "almost certain" (Ibid., 104).The production of roasting spits begins on a large scale during the late eighth century BC (or around 700 BC) leading to their mass production during the entire seventh century. The roasting spits continue to circulate, though in smaller quantities, until the first half of the sixth century, "that is to say precisely in the period leading up to the introduction of coinage into mainland Greece" (Ibid., 107)[17]. Given that the spitted portions of meat and the spits themselves would be distributed, a tendency to standardize their size would develop, reflecting the powerful tradition of "equal portions to all" (Ibid., 106). The standardization of roasting spits is confirmed by iconographic evidence of vase paintings:

> And we would expect all the spits used in a sacrificial meal to be of the same size. This expectation is confirmed by vase-paintings, which sometimes show identical spits in use and sometimes bundles of (four, five, or six) identical spits being carried in one hand. (Ibid.)

Importantly, the spits carried communal symbolic significance due to their role in the act of sacrifice and communal egalitarian distribution and participation (Ibid., 107), rather than any use-value in the context of (virtually non-existent) domestic trade relations. As an example, Seaford refers to a dedicatory inscription on a spit found in Olympia:

> The dedicatory inscription ('of Olympian Zeus') on a spit found in Olympia expresses not its metal value, which is very small, but the importance of the ritual in which an animal was sacrificed to Zeus and its meat fleetingly carried by the spit. (Ibid.)

Thus, we see the development of the phenomenon of representation. The distribution of perishable meat was gradually replaced by the distribution of roasting spits, and, finally, by the distribution of coins. Coins came to represent (or stand for) roasted pieces of meat distributed at communal sacrificial rituals. In this, we see the causal role of animal sacrifice in the genesis of money. Also recall the causal role of the crisis of redistributive justice in this process. During its evolution, the polis adopted the idealized model of communal egalitarian distribution, though substituted durable objects for perishable goods, thus claiming to subvert the outcomes of the

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[17] What is more, there exists archeological evidence of animal figurines "at least some of which were no doubt envisaged as substituting for (or commemorating) animal sacrifice" (Seaford 2004, 64).

redistributive 'model' employed by the old aristocracy (Ibid., 102). While Seaford does not mention this explicitly, this account of the emergence of coinage has a common root with von Reden's ([1995] 2003) and Kurke's (1999) theses according to which the newly emerging authority of the Greek polis needed a means to assert itself politically in the context of growing socio-economic inequality. The distribution of durable goods, such as roasting spits and subsequently coinage, which claimed to rectify the crisis of redistribution (at least partially), seems to have become the means of achieving this end.

To conclude his thesis, Seaford (2004) underscores the importance of communal sacrificial distribution in this process. It was from the ancient tradition of "equal pieces to all" that the idea of uniform payments in metal emerged. Likewise, it was the crisis of centralized redistribution that led to the storage of communal wealth in the temples, whereby the polis attempted to subvert the outcomes of the redistributive 'model' adopted by the older aristocracy:

> These distributions may well derive, at least in part, from the same powerful tradition of communal sacrifice that we have seen behind the storage of precious metal in communal sanctuaries and indeed as a factor in the development of Greek money, a tradition powerful enough . . . to persist from the vital ancient practice of sacrificial distribution at a communal centre into the storage and distribution of the relatively new kind of wealth (precious metal). This need for uniform payment of large numbers of people derives from ancient tradition, and yet may have been an important factor in the revolutionary invention of coinage. The ancient tradition is given a new and powerfully effective form by the invention of coinage. (Ibid., 99)

The (ideological) power of coinage was "egalitarian" in the sense that coinage could be used by all citizens of the polis (Ibid., 15).

Seaford's (2004) thesis is undoubtedly influenced by Bernhard Laum's (1924a) contribution, even though Seaford does not acknowledge it explicitly. In Seaford's work, credit is given to Laum on three occasions (Seaford 2004, 61, 102, 117).[18] Yet, it was Laum (1924a) who advanced the state-religious theory of money's origins, suggesting that money emerged in roasted pieces of bull's flesh distributed during the rituals of communal sacrificial meals. The development of the phenomenon of representation further led to the use of roasting spits and further to the emergence of coinage (Desmonde 1962; see also MacDonald 1905, 16[19]). Coins, when they first appeared, served as a symbolic representation of the spitted portions of the bull's flesh distributed among the communicants, i.e. coins served as a symbolic representation of 'obelos'. Coins superseded 'obelos': the distribution of coins replaced the actual distribution of the sacrificial bull's meat. In this, we see a transition from the actual forms (a portion of roasted meat on a spit) to symbolic representations (a coin as a representation of the roasted meat). Notably, because of a belief in magic, no distinction was made between a symbol (a coin) and that which the symbol represented (i.e. a sacrificial bull's flesh). Possessing a coin was equivalent to the actual sharing in the sacrificial flesh of a bull (Desmonde 1962, 134).

To conclude, coins began as religious symbols, each coin representing a piece of a sacrificial bull's flesh allotted to a communicant as a 'reward', 'recompense' or 'payment' for the goods and services rendered to the temple-state (Desmonde 1962: 121). This means that the earliest coins did not begin as media of exchange in commerce, but functioned "in the same

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[18] On one of these occasions, Seaford (2004) gives credit to Laum's work: "This apparent transition from roasting spits to coins was, along with other terms that seem to embody the transition from the sacrificial to the financial, adduced by Laum as part of an argument to the effect that animal sacrifice was an important factor in the genesis of coinage" (Seaford 2004, 102).

[19] In his critique of religious theories of money's origins, G. MacDonald refers to T. Burgon (1837) who was "the first to propound the religious theory in its extreme form" (MacDonald 1905, 16).

fashion as the portion of food distributed at the sacred meal" (Ibid., 125). In this, the earliest coins could also be regarded as "religious medals": similar to the allotment of 'obelos', coins (or medals) were given by the priest-king to his subjects in a manner that reflected the degree of their worth and esteem in the community (Ibid.)[20].

If a connection between communal sacrificial meals and the earliest coins is a plausible one, and a coin served as a representation of a sacrificial bull's meat, then we can explain why so many of the earliest Lydian and Greek coins bear the image of a bull or a bull's head on their surface (Gardner 1883; Head 1968). This also explains why the earliest Lydian and Greek coins were struck within temple precincts, under direct auspices of the priests (Head 1968, 7; Angell 1929, 96; Del Mar 1968, 162; Desmonde 1962, 113; Gardner 1883, 6; Seaford 2004). Further, because the earliest Lydian and Greek coins were not intended for commercial circulation, the image of a bull on a coin's surface did not serve as a guarantee of a coin's commercial value (Desmonde 1962, 125; Seaford 2004). Rather than economic, the value of the earliest Lydian and Greek coins was symbolic: a coin served as a symbol of one's contribution to the temple state. Coinage became a symbolic means of recompense by the priest-king to his subjects. Nor did the

[20] Another account of representation applies to tripods and cauldrons – vessels used for cooking sacrificial bull's meat. Providing a translation of Laum's (1924a) argument, Peacock (2010) writes that tripods and cauldrons were "part of a currency which emanates directly from the cattle currency, and, like the latter, is based in sacrifice. The difference with the pure cattle currency is that a symbol [cauldron or tripod] has taken the place of the real good [cattle]" (Peacock 2010, 18). As Howgego (1995) points out, we cannot "prove" that coinage evolved in this way, given the scarcity of conclusive material and literary evidence. Yet, we can "suggest" a mechanism via which money and subsequently coinage evolved in this religious context. In the words of Howgego (1995), "whatever the processes involved, it does seem that the Greek world had taken significant steps towards the use of money before the introduction of coinage. Etymology, later literary stories . . . and some archeological finds suggest, but do not prove, that iron spits were used as a form of currency before coinage. Other utensils, such as tripods and bowls, may have served a similar purpose in some areas" (Ibid., 15).

value of the earliest coins derive from their intrinsic characteristics: the earliest Lydian coins[21] were made of electrum, a natural alloy of gold and silver, the internal composition of which is highly variable by nature. This means that a coin's weight, purity and fineness, and, thus, its intrinsic value, could not be guaranteed (Grierson 1977, 7; see also Innes 1913).[22]

> As for the electrum coins, which are the oldest coins known to us, their composition varies in the most extraordinary way. While some contain more than 60 per cent of gold, others known to be of the same origin contain more than 60 per cent of silver, and between these extremes, there is every degree of alloy, so that they could not possibly have a fixed intrinsic value. (Innes 1913, 379)

Sacrifice as an "Early Agent of Monetization": Further Development of the Phenomenon of Representation

In what follows, I will explore the second monetization mechanism as articulated by Seaford (2004). Specifically, Seaford observes that the phenomena of representation and substitution were extended to the sphere of votive offerings as well. The scholar notes that from the eighth century BC, Greek sanctuaries come to be inundated with miniature (terracotta, bronze, etc.) figurines of sacrificial animals and other sacrificial objects (such as clay imitations

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[22] In the mid-sixth- century BC, silver coinage began to spread in mainland Greek states (Kurke1999, 9). Yet the only metallurgical device for testing precious metals, known to us from the texts of the sixth and fifth centuries BC, is the touchstone (*basanos*) (Ibid., 42-45). But the touchstone is ineffective in testing silver, as it is inadequate in testing electrum (Ibid., 45n13). Thus, the evidence does not support the common interpretation that the value of the earliest coins derived from their intrinsic characteristics. Rather, metallurgical knowledge pertaining to intrinsic properties of precious metals (electrum, in the first place) was not sufficient to provide near accurate assessments of the coins' intrinsic value (see also Desmonde 1962, 121-22).

of sacrificial cakes known as pelanos) (Ibid., 64-66)[23]. In this manner, durable 'wealth' came to be accumulated in Greek temples (Ibid., 54-56). Seaford argues that this phenomenon was favorable to the establishment of the polis, as objects formerly occupying a sphere of prestige gift-giving (i.e. durable wealth), became publicly stored and displayed in the temples, acquiring a standardized, permanent and visible character. In this, note the contrast between the public display of standardized communal wealth in the temples, on the one hand, and the concealed acquisition of individualized items of booty by the leader and his followers, on the other (Ibid., 64-67). These developments, favorable to the genesis of the polis (and coinage), are summarized by Seaford in the passages quoted below:

> The construction of these sacrificial places of sanctuaries and temples, which became – through dedication of gifts to the gods – stores of metal, combined the durability of the Homeric aristocratic interpersonal gift (treasure) with the ancient and tenacious visibility and communality of the Homeric sacrifice. (Ibid., 65-66)

> The development of the polis, in Homer generally neglected, will transcend these contradictions by the synthesis of sacrificial communality with the permanence of prestige objects, and their typicality, mass production, and substitutability (by mere symbol). (Ibid., 67)

Correspondingly, Seaford argues that the temple 'income' no longer consisted of food en masse. Such food offerings would be unnecessary and inconvenient given the "relatively small" number of temple personnel (Ibid., 78)[24]. Therefore, temple offerings to deities would be "for the

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[23] The phenomenon of representation as applied to votive offerings has been recently noted by Peacock (2010). Archeological finds reveal evidence of terracotta and wood figurines symbolizing cattle and serving as substitutes for real animal sacrifices (Peacock 2010, 16). Although such offerings are not mentioned in Homer, they "date back to the period in which he wrote, and increase greatly in number thereafter" (Ibid.).

[24] According to Seaford (2004), ancient Greek temples did not organize large scale production of food (Ibid., 86).

most part durable" such as durable parts of the animal and animal figurines, among other objects (Ibid.).

Yet, even durable miniature figurines may become inconvenient, if accumulated in excessive quantities. In this context, the practice of substitution and representation was extended even further: miniature figurines came to be substituted by coins. Thus, we see an evolution of votive offerings from the actual goods (such as animals and sacrificial cakes) to their symbolic representation in the form of miniature figurines, and, finally, to their substitution by coinage[25]. This transition can be illustrated with the case of a sacrificial cake known as pelanos:

> Another illustration of the need for cult to be monetized is provided by the pelanos – an offering, in particular a kind of cake. No doubt sanctuaries preferred money to a surplus of cakes, and pelanos comes to mean a monetary fee paid at a sanctuary. Perhaps a transitional stage was the offering of clay or metal imitations of round cakes. If so, then imitative (or symbolic) substitution prepared the way for monetary substitution: we pass from a cake to a non-perishable imitation of a cake, and from there to money, which – though it may still, as coinage, resemble the imitation of a round cake – has in fact left the particular use-value of the imitated cake well behind . . . . (Ibid., 78)[26]

Thus, "in the context of splendid temples with relatively few personnel" we see a gradual substitution of traditional food offerings for their imitative figurines, and, further, for coinage (Ibid., 81). The administration of communal sacrificial meals by the temples became one of the uses to which this durable 'wealth' was put. How exactly was this achieved? Answering this

[25] Notably, the utilitarian interpretation of the circular coin shape was questioned by A. M. Hocart as early as 1925. Disputing commercial perspectives on the origins of coinage, Hocart went as far as to argue that circular coins derived their shape from the form of the sun's disk. Hocart argued that coins made of gold served as an imitation of the sun's disk (both in shape and color). Such coins were attributed with magical properties, and served as personal amulets rather than media of exchange (Hocart [1925] 1970, p. 100-101). Hocart's argument is that coinage had religious origins, whose essence was not in its material utility, but in its supernatural value.

[26] Seaford (2004) notes that by the fifth century BC, *pelanos* could refer more generally to 'a fund' (Ibid., 78).

question, Seaford puts forth a Chartalist argument according to which the temple personnel could actually purchase the exact quantity and quality of animals they needed, rather than rely upon a haphazard process of in-kind contributions.

> And so the durable form naturally taken by the offerings is convenient also for use at the appropriate time to purchase animals of standard quality, thereby co-ordinating what would otherwise be a haphazard process. Much metallic wealth flows into and out of sanctuaries, which become centres of wealth that is durable and exchangeable. Sacrifice is an early agent of monetization. (Ibid., 81)

The purchase of animals by the temple would represent one channel via which the population (at least the wealthy owners of livestock) could acquire the ‘durable wealth’ necessary for the ‘payment’ of votive offerings. Yet, it is not until the context of the sixth and fifth centuries BC Greece, where Seaford offers a more detailed discussion of the specific mechanism(s) via which the population could obtain the ‘durable wealth’ necessary for votive offerings. Specifically, in the fifth century BC, coinage could be used by poleis as a means of payment for labor, military service, as well as political and judicial duties (among others):

> In the fifth century Athens made payments in coinage for building work, for large amounts of sacrificial meat distributed gratis in state festivals, as well as for military, political, and judicial service. The importance of these payments is illustrated by their frequent mention in Aristophanes. There were pensions for the disabled, and distribution (at least in the fourth century) of precious metal from the so-called theoric fund. (Ibid., 98)

But already in the sixth century, – notes Seaford, – Peisistratus used silver to hire troops and obtain tyranny at Athens. Seaford concludes that the “need to make uniform payments of small pieces of silver acceptable to numerous individuals might well have been a crucial factor in the decision to mint coins” (Ibid., 97). Making a further reference to Peisistratus, Seaford observes that the “convenience of coinage in payments by a central administration was not confined to military pay,” given that the tyrant could have utilized coinage in payment to workers on his building programs (Ibid., 98). Seaford also notes that silver was annually distributed to the citizens of archaic Siphnos, and such distribution was also proposed in Athens in 483 BC. Stamped sumbola made of lead and bronze were distributed in fifth century BC Athens, embodying the citizen's right for jury seating (Ibid.).

Seaford thus puts forth a very Chartalist argument according to which the introduction of coinage could facilitate both state expenditures and communal payments to the state. Viewing sacrifice as "an early agent of monetization" (Ibid., 81), Seaford further concludes that state taxation evolved directly out of liturgies:

> Presumably not only the communal expenditure but also the uniform contributions thereto were greatly facilitated by the associated processes of the centralization of the polis and its pervasion by small uniform pieces of monetary value (coins). The development of centralized taxation (in coinage) out of individual liturgies is indicated by a report that Peisistratus' successor Hippias set, for whoever was about to perform a liturgy, a timēta (evaluation, payment, fine), and told him to pay it (if willing) and be enrolled among those who had performed liturgies. (Ibid., 99)

The State-Religious Origins of Money and Coinage: Conclusions

Revitalizing the substantive approach to money's origins in the tradition of Bernhard Laum, this chapter disputes the formal approaches that see the origins of money in the context of trade. A wide range of evidence, from archeological to etymological, is utilized to demonstrate that relations between men and god, carried out through the intermediary of state-religious authorities, played a causal role in the genesis of the ox-unit of value and account, and, further, in the origins of money, and, subsequently, coinage.

As argued above, money and coinage did not originate in trade, whether foreign or domestic. Rather, as was suggested by Laum, the origins of money and coinage must be sought in the archaic Greek rituals of communal sacrificial meals. An integral part of the archaic Greek institution of 'distributive justice', the rituals purported to compensate the underlying population for their contributions to the temple-state. Alleging to allocate to each his 'just share', embodied in a portion of a sacrificial bull's flesh, the all-inclusive rituals of communal sacrificial meals aimed at creating an appearance of harmonious and consensual social relations while the underlying conditions of socio-economic inequality, exploitation and injustice in the relations of production and distribution prevailed. The distribution of the actual bull's flesh known as 'obelos' was further transformed into the distribution of its symbolic representation in the form of coins. It was shown that from its earliest inception money was a representation of one's 'just share' and 'just recompense', thus serving as a supportive device of a system built upon socio-economic inequalities. Charged with religious esteem, money reinforced the ideological superstructures that were disguised in harmonious ideals. Thus, money emerged as an integral part of exploitative relations in the sphere of production and distribution, while its exploitative nature was skillfully concealed by religion.

CHAPTER 7

A 'CERTIFICATE OF CONTRIBUTION' HYPOTHESIS OF MONEY'S ORIGINS IN ANCIENT MESOPOTAMIA

As Kim (2001) has argued, "the ancient Near East is a prominent example where a moneyed economy existed in the absence of coinage" (Ibid., 9n2). Thus the question remains what forms of money could have been in use? To answer this question, one must, in the first place, inquire into transactional modes and forms of socio-economic integration of ancient Mesopotamia societies – the task I undertake below. My goal is to derive a historically-informed mechanism of monetization with could have developed in the institutional context of ancient Mesopotamia in the fourth millennium BC. Such a mechanism would be grounded in actual transactional modes and forms of socio-economic integration of ancient Mesopotamia rather than in modern habits of thought. I will hypothesize how a conception of money could have evolved out of practical solutions to the material problem-situations faced by ancient Mesopotamian priest-kings and their bureaucratic apparatus.

In doing this, I will utilize the evidence of ancient Mesopotamian clay tokens and their assemblages into clay cases known as bullae. My interest in these artifacts is related to the Chartalist conception of money as a state's 'pay-token' devoid of intrinsic value. However, the goal must not be to project a modern Chartalist conception of money as a state's 'pay-token' into ancient history. Rather, the aim is to conduct a historical test whether a concept of a state's 'pay token' could have emerged in ancient Mesopotamian societies, and if so, how.

A Bird's Eye View of Ancient Mesopotamian Societies

An inquiry into ancient Mesopotamia in the fourth millennium BC will reveal a centralized redistributive economy organized by the Temple. An infiltration of civic, economic and religious matters is likewise prominent[1]. The Mesopotamian temple – the dominant social institution – organizes collection and redistribution of the agricultural surplus (from local villages to the members of the temple priest-kingship, priesthood[2], and their supporting apparatus such as various public officials, soldiers, professional experts, hired laborers, and slaves)[3]. Not only distribution, but production as well, was administered from the center by a temple's bureaucratic apparatus (Oppenheim 1965, 31-35). Schmandt-Besserat (1996, 107) presents a similar picture of ancient Mesopotamian economies, outlining their three major institutional components:

1) A temple which confers meaning and pomp on the act of giving
2) An elite which administers communal property
3) The commoners who produce surplus goods and surrender them to the temple

In a similar vein, Seaford (2004) argues that the degree of centralization of ancient Mesopotamian economies "has reached an extreme point" (Ibid., 69). An enforced collection of goods takes place at a temple or a palace, the goods being used for the maintenance of the temple

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[1] Seaford (2004) refers to this phenomenon as the "identity of religious and economic form" (Ibid., 74).

[2] Mann (1986) observes that many scholars "resist the religious connotations of the word "priesthood" in Mesopotamia" (Ibid., 86), regarding the priests as more secular, administrative and political bodies, as redistributors, irrigation managers, as a diplomatic corps (Ibid.)

[3] "Through a process whose details are not known to us, the [Mesopotamian] temple emerges as the first state in history" (Mann 1986, 86).

or palace personnel, redistribution among the population, communal functions such as storage against famines, and, notably, "the administration of justice, and irrigation" (Ibid., 69)[4]. Seaford likewise observes that the massive temple "owns much land" (Ibid., 74). Seaford underscored that the image of the deity "is at the hub of a great temple complex, indeed of an entire redistributive system" (Ibid.)[5]. The offering of food to the deity is the economically central practice: "the motor of the system is divine demand" (Ibid.)[6]. There is no doubt that much of the food collected was indented to feed the deity: In the passage quoted below, Seaford describes one such divine meal:

> . . . vast amount of [food] which are regularly supplied for the god, to be consumed in fact by the other members of his household, the temple personnel. Humans partake of a meal that is nevertheless envisaged as a meal for the god. The food is presented to the god as one presents food to a king. During the period of its presumed consumption, divine image and food are secluded by a curtain. (Ibid.)

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[4] See Henry (2004) for a causal link between the developments of irrigation projects in 3200-3000 BC Egypt, and the emergence and consolidation of social hierarchy with a distinct ruling class (hydraulic engineers who subsequently became priests).

[5] M. Hudson (2004) presents a somewhat different picture of Mesopotamian temples, describing them as self-sufficient, institutional lenders, who "advanced loans of seeds, draught animals, merchandize produced by temples" (Ibid., 114). Gardiner's (2004) portrayal of Mesopotamian temples as "the major business centers" (Ibid., 135) is similar to Hudson's (2004) description of the temples as "the prototype for modern corporations" (Ibid., 101).

[6] Underscoring the massive scale of food offering to Mesopotamian deities, Seaford (2004) refers to a later text from Uruk (from the the times of Seleucid), where a deity receives, among other offerings, a daily total of five hundred kilos of bread, forty sheep, two bulls, one bullock, eight lambs, seventy birds and ducks, four wild boars, three ostrich eggs, and also dates, figs, raisins, and fifty four containers of beer and wine (Ibid. 74).

Clay Tokens and Bullae: Salient Attributes of Mesopotamian Bureaucratic Apparatus

The Conventional Interpretation of the Token Function

Another conspicuous phenomenon present in ancient Mesopotamian economies is small, geometrically shaped objects commonly referred to as tokens. In what follows, I will analyze the conventional interpretation of the tokens function. Next, I will form an alternative hypothesis regarding the possible role of tokens as the earliest forms of money in ancient Mesopotamian societies.

Commonly considered among the earliest counting and inventory-keeping devices, Mesopotamian clay tokens (ca. 5000-2500 BC.) are small geometrically (as well as naturalistically) shaped objects. With each token representing a counted unit[7] as indicated by a token shape (and, later, markings on its surface), a collection of tokens would represent a sum of the units counted. Such a token assemblage could be "put away in a safe place with restricted access" in one of the earliest human attempts at inventory-keeping (Nissen et al.1993, 11). A one-to-one correspondence between a token and a unit counted, as well as a variety of token shapes (and, later, surface markings), made this inventory-keeping system cumbersome and awkward (Schmandt-Besserat 1996, 15-16, 95-96; Ibid.1981, 283).

While the earliest Mesopotamian tokens were characterized by a plain surface (the so called 'plain' tokens), somewhere in the middle of the fourth millennium BC various markings and inscriptions appeared on the token surface (the so called 'complex' tokens). This evolution in token design was paralleled by the process of urbanization, increased specialization of labor

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[7] A unit counted could be either a discrete entity like a sheep from a flock, or a specific measure of a certain product, such as a bag of grain (Nissen et al. 1993, 11).

and proliferation of manufactured goods. While 'plain' tokens represented agricultural staples (as well as cattle, land, etc.), 'complex' tokens became a method to signify city merchandise (Schmandt-Besserat 1996, 16, 82). Whereas plain tokens were a product of rank societies[8], "it was the advent of the state which was responsible for the phenomenon of complex tokens" (Ibid., 107).

Although the majority of tokens finds come from public districts (such as ancient temples, sacred precincts, palaces and warehouses), token assemblages were also found in private (secular) quarters (Schmandt-Besserat 1996; Jasim and Oates 1986; Nilhamn 2002). As Nissen (1988) cautions, such un-even distribution of tokens should not be attributed with universal significance, considering that public areas have been excavated more often than private quarters. When found in domestic settings, small quantities of tokens were commonly stored in kitchen utensils such as jars and pots (Schmandt-Besserat 1996, 37).

The evolution of the inventory-keeping system from 'plain' to 'complex' tokens was also accompanied by changes in the methods of storing them. With such innovations as a perforation in the middle of a token surface (ca. 3500 BC) tokens could be strung together – presumably to separate tokens dealing with the same 'transaction'. Another innovation was to enclose tokens into spherical clay cases known as bullae, the outer surface of which was sealed with official seal impressions (from ca. 3700-3500 BC to ca. 2600 BC). Apart from separating tokens dealing with the same 'transaction', a sealed bulla had an advantage of preventing unauthorized access to

[8] The distinguishing feature of rank societies is that "rank depends almost entirely upon *collective power* or authority" (Mann 1986, 37). While those in higher ranks can use collective resources (including power), they can do so only for collective purposes, and their ranks can be withdrawn by the participants in a group or society. While high rank-holders have status (which can also be transmitted hereditarily), the power to make decisions and to use material resources on behalf of the whole group, they do *not* possess coercive power over recalcitrant members of the group and cannot divert group resources to their own private use (Mann 1986, 37).

the tokens enclosed. At the same time, the sealing of a bulla allowed to identify the official parties to the transaction (Schmandt-Besserat 1996, 39-40, 44)[9].

Sometimes, an outer surface of a clay bulla could bear the impressions of the tokens it contained. This innovation was crucial for the evolution of writing for it was soon realized that the tokens enclosed within a clay bulla were made redundant by the presence of token impressions on its outer surface. Consequently, clay tablets (flat bullae) bearing impressed markings in the shape of tokens came into being (ca. 3500-3100 BC). This invention further led to the take-off of the Sumerian pictographic script (ca. 3100-3000 BC) (Schmandt-Besserat 1996, 125).

Thus, the scholars' primary interest in clay tokens and bullae is related to their function as one of the earliest accounting and inventory-keeping devices, and, even more so, to their significance in the evolution of Sumerian writing. The scholars are not so much concerned with exploring any possible role that the system of tokens and bullae may have played in the enforcement of in-kind payments of 'taxes' and tribute to the ancient Mesopotamian temples. While some historians have hinted at such a role (see Schmandt-Besserat 1981, 982; Ibid.,1982, 875-76; Ibid., 1996, 108), they failed to formulate a concrete mechanism that would explain how the system of tokens could play a part in the enforcement of in-kind 'taxes' and tribute owed to Mesopotamian temples.

Notably, in one of her earlier publications, Schmandt-Besserat (1982) seriously questioned the conventional interpretation of token-functions as counters or inventory-keeping

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[9] Schmandt-Besserat (1996) points out that the numbers of tokens enclosed into clay *bullae* varied from two to fifteen. The quantities of goods represented by the tokens enclosed were, on average, an equivalent of about five bushels of grain or five sila of oil (1 sila = 0.82 liters). Most of the tokens enclosed were 'plain', i.e. they represented agricultural staples (Ibid., 46, 49, 103).

devices, arguing that "this idea of keeping track of individual food reserves is not fully convincing" (Ibid., 874). Suggesting that the token system indicated a "large-scale constraint rather than the invention of a household gadget" (Ibid., 875), Schmandt-Besserat suspected that the fourth millennium BC tokens were directly linked to payment of involuntary obligations to a central public authority in a ceremonial ritual context:

> [T]he offerings were mandatory rather than voluntary and can be regarded as taxation. The first use of writing and, for that matter, the last use of tokens, was [….], a means of control upon the delivery of goods and ultimately a control on the production of real goods. Can it be inferred that a system of redistribution through ceremonial ritual had its origin earlier and the tokens were related to such a process? (Ibid., 875)

Here, Schmandt-Besserat (1982) recognized the function of tokens as "records of the pooling of resources" (Ibid., 875), or as "a means of control upon the delivery of goods" (Ibid.) in a context of taxation that had its origins in religious ritual. Yet, the scholar fails to explain how, via what mechanism tokens could perform such instrumental functions. Similarly, in her later work, Schmandt-Besserat (1996) suggested that "complex tokens played a part in the collection of taxes and tribute that is typical of a state economy" (Ibid., 108). Yet again, she fell short of providing a concrete mechanism that would explain how the complex could play such a role. Likewise, while arguing that the invention of complex tokens and bullae reflected "the need for enforcement of deliveries of goods owed to the temple" (Ibid., 110), Schmandt-Besserat did not specify a mechanism that would describe how the tokens and bullae could enforce such deliveries.

Formulating a mechanism that could explain how the system of tokens played an instrumental role in the process of in-kind 'taxation', the following section provides a reformulation of the Chartalist account of monetization based upon Veblen's notion of cumulative causation in means-ends problem solving. This account will be specific to the institutional setting of ancient Mesopotamia, while it will preserve the Chartalist conception of money as a token issued by a central public authority in a context of 'taxation'. However, non-monetary 'taxation' is a point of departure for formulating the alternative monetization mechanism, while the central public institution in question is the ancient Mesopotamian temple. The concept of temple-issued money specific to ancient Mesopotamian economies will differ from the conventional Chartalist conceptualization of money as a unit of account in which monetary taxes are denominated and have to be paid.

Reconsidering the Conventional Interpretation of Clay Tokens and Bullae: A 'Certificate of Contribution' Hypothesis

Building upon Schmandt-Besserat's (1996) interpretation of the fourth millennium clay tablets as "official receipts of commodities delivered by individuals or guilds" (Ibid., 105) and stored in the public archives (predominantly in temple premises and sacred precincts), this chapter suggests that "individuals or guilds" acquired some form of a 'receipt' as well, signifying their fulfilled contribution to the public sector (i.e. a temple). Because it is not known for sure whether individuals or collective entities such as families or villages were responsible for in-kind payments to Mesopotamian temples in the fourth millennium BC, the terminology of a 'taxation unit' will adopted here.

Clay tokens and their assemblages into bullae could have served as official receipts handed to the compliant 'taxation units' upon delivery of goods and services to the temple. In this way, a token-receipt' would serve as a certificate of a fulfilled contribution to a temple (or simply a 'certificate of contribution'). Such certificates could be issued to compliant 'taxation units' with an aim of identifying punishing non-compliant parties. More specifically, when the temple personnel would be commissioned to the local villages, charged with a task of verifying contributions, compliant 'taxation units' would have no difficulty presenting their certificates of fulfilled contributions (i.e. tokens), while the non-compliant parties (i.e. those without a token-certificates) could be easily identified. A 'certificate of contribution' (i.e. a token) presented to the temple personnel would be immediately confiscated to prevent its possible transfer to a non-compliant 'taxation-unit'. Charged with a task of collecting tokens from the villagers, the temple personnel could be referred to as public collectors. The villagers who failed to present token-certificates to the public collectors could be punished in various ways, such as being recruited into a pool of public laborers.

Why would such a mechanism be in place? The key is that in the forth millennium BC Mesopotamia, census systems were underdeveloped or not yet in place (Modelski 1997), while any formal means of personal identification of the villagers were absent. If the temple bureaucracy could record the compliant 'taxation units' on clay tablets, how could they possibly know about all the potential 'taxation units'? The problem posed by this situation is that 'tax-evading' parties could not be easily identified. Moreover, even if, hypothetically-speaking, the non-compliant parties could be identified, it would be difficult if not impossible for the temple personnel to identify them, given that the villagers did not bear any means of personal identification[10] and their places of residence were most likely unknown to the temple personnel. Note that the fourth millennium BC Mesopotamia represented a highly developed urban civilization (Goldsmith 1987). To appreciate why the temple officials could not keep a memory track of all potential payers of 'taxes' and tribute (i.e. their names, dwelling places) consider

[10] As is well documented, the means of personal identification (namely, personal seals) were a privilege of priest-kingship, priesthood and other temple bureaucracy (Nissen 1988, 77, 79, 117).

some population estimates of the ancient Mesopotamian cities. For example, while it is estimated that the City of Eridu hosted from 6,200 to 10,000 people ca. 3700 BC, the population of Uruk was projected at 14,000, 20,000 and 50,000 people ca. 3700 BC, 3400 BC and 3100 BC respectively (Modelski 1997, Table 2)[11]. Notably, population census systems were not yet in place: "censuses are nonexistent, even though the practice of counting e.g. armies and battle casualties does seem to be taking hold by the end of the period" (Ibid., 1997).

Of course, the above hypothesis, describing ancient Mesopotamian tokens as certificates of fulfilled contributions to a temple, raises a number of issues. To begin with, this hypothesis relies upon an assumption of non-compliance, i.e. an idea that at least some portion of the population did not voluntarily pay 'taxes' and tribute to the temple. Indeed, such an assumption may be considered as a projection of modern habits of thought into ancient societies. If 'taxes' and tribute in these societies were part of voluntary religious practices, in which religious leadership "conferred meaning . . . to the act of giving" (Schmandt-Besserat 1996, 107), personifying temple-contributions as "gifts for the gods" (Ibid., 105) then tokens could be viewed as 'counter-gifts' bestowed by a temple upon a contributing community in a social context of reciprocity. Here, an act of giving was "in an essential sense always the first half of a reciprocal action, the other half of which was a counter-gift" (Finley 1965, 62). Thus, the temple could 'reciprocate' ('on behalf of god') by issuing counter-gifts in the form of tokens and bullae, as well as by promising security and protection to its community. [12] As Polanyi (1965a)

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[11] See also Mann (1986, 80) for population estimates in the fourth millennium BC Mesopotamia. See also Goldsmith (1897, 11) for population estimates and the degree of urbanization during a later period (third millennium BC).

[12] The idea of reciprocity between the population and a religious authority was also suggested by Grierson (1971): "the relationship between the Church and its benefactors can be regarded as

emphasized, "reciprocity demands adequacy of response, not mathematical equality" of the goods or services reciprocated (Ibid., 73). Besides, the temple and the artifacts it issued could serve as the salient attributes of the villagers' collective identity, thus providing a basis for social cohesion.

The nature of 'taxation units' is another issue posed by the hypothesis developed in this chapter. Were they individuals or collective entities, such as families, clans or even entire villages? While Schmandt-Besserat (1996) has argued that taxes and tribute were paid by "individuals and guilds" (Ibid., 108), Oppenheim (1965) dismissed the notion of an individual 'tax-payer', arguing, instead, that the ancient Mesopotamian "villages contained a number of families . . . paying taxes collectively " (Ibid., 35), despite the fact that collective payment of taxes would counteracted individual deflections (Ibid.). Oppenheim thus point out the strength of communal bonds among the villagers (Ibid., 30). Further complicating the matters, Hudson (2004) seems to suggest an individual rather than collective unit, when he argues that Wergeld-type compensations in ancient Mesopotamia were owed to individuals, rather than their families or clans. Hudson's discussion of a 'head price' hints to an individual rather than collective identity of a person (Ibid., 104).[13] In another context, Hudson refers to "individual entrepreneurs" (Ibid., 104). Yet, at the same time, Hudson observes the presence of a "family-based rural economy" which existed alongside the public sector (Ibid., 104, emphases added).

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involving no more than a particular from of gift-exchange, the counter-gift taking the form of prayers for the souls of the donor and his family" (Ibid., 79-80).

[13] Specifically, Hudson (2004) notes that "earlier in Mesopotamia injury payments were owed to individuals under common law. . . . The value of such debt was a 'head price' determined by the payer's status and typically denominated in movable assets such as livestock" (Ibid., 104).

Finally, Seaford (2004) discusses both households and “fairly autonomous individuals” (Ibid., 69).

If payments were indeed made collectively, as Oppenheim (1965) has argued, then could a ‘tax receipt’ or a ‘certificate of contribution’ of a whole village community be embodied in a clay bulla? A unified whole of a bulla-certificate, as opposed to a loose and detached token-receipt, could signify a unity of a contributing community (such as a village) and their collective effort in meeting a payment obligation. In this case, the symbolic wholeness of a clay bulla would most likely be preserved, which means that a bulla would seldom be opened to reveal and redistribute its token-components. In fact, most of the clay bullae unearthed by archeologists have been found intact (Jasim and Oates 1986, 350). On the other hand, the quantities handled in clay bullae were typically small: on average, an equivalent of about five bushels of grain or five sila[14] of oil (Schmandt-Besserat 1996, 103). Could this evidence suggest that ‘taxes’ and tribute were paid by small households and small production guilds? No one will know for sure!

Another possibility is to suppose that the amounts of tax contributions increased gradually, requiring temple bureaucracy to issue more tokens (i.e. receipts) to the contributing community. Recall that a token stood in a one-to-one correspondence with a unit counted (whether a unit counted was a discrete entity or a specified measure of a certain product). It is possible to suggest that, to prevent the loss of receipts as their numbers increased, the tokens had to be enclosed into bullae. Alternatively, bullae could serve as a response to the problem of counterfeit: villagers could eventually attempt to produce their own tokens if access to clay was

[14] 1 sila is an equivalent of 0.82 liters.

not restricted by temple officials. An enclosure of token-receipts into an officially sealed bulla would provide for their authenticity and help solve the problem of counterfeit.

It can be further hypothesized that by the end of the fourth millennium BC, tokens could have served as a means of payment to public laborers, signifying their contributions to the socio-economic provisioning process. Public laborers were typically supported by daily disbursements of grain (as well as beer), where a daily ration of grain corresponded to the amount held in a bevel-rim bowl (Nissen 1988, 93-94). What is so conspicuous is the disappearance of bevel-rim bowls by the close of the fourth millennium BC. Prior to that period, the bowls were mass-produced in millions (Ibid., 84). Tokens could have been used afterwards as an alternative form of payment to public laborers, thus replacing the daily grain disbursements. While a system of in-kind payments to the public workers involved all the inconvenience associated with collection, storage, transportation, management and redistribution of food, administering labor payments in the form of tokens would have been much easier. A public laborer, in turn, could regularly exchange his tokens (his certificates of contribution) for subsistence in a nearby village. Of course, this mechanism would only take place in those circumstances where public works projects were located in a vicinity of a village. Note that with a universal demand for tokens created by the need to present them to a public collector, the villagers would eagerly accept the tokens from the public laborers. Such villagers would no longer be required to make an actual in-kind payment to the temple, as their contribution would be fulfilled by providing the means of subsistence to the public workers. Lending support to this hypothesis, archeologists and ancient historians believe that tokens representing labor were actually in use. Shaped in a form of a tetrahedron, they are perceived as representing two different units of labor such as one day's or one week's work. Alternatively, tetrahedron-shaped tokens are believed to represent the numbers of workmen, such as 'one man' or 'a gang' (Schmandt-Besserat 1996, 115).

An objection may be raised against the above account. Were such practices ever recorded, for example in written laws? A brief description of the general character of ancient Mesopotamian laws can shed some light on this issue. As noted by Hudson (2004), the earliest Mesopotamian laws did not reflect any society-wide practices. Such practices seem to have been part of oral common law, as well as customs inherited from one generation to another (Ibid., 105)[15]. If it was not common to record society-wide practices because they were well-known via custom and tradition, then we would not expect any written records of the 'certificate of contribution' hypothesis expounded above.

In sum, the scenarios outlined above offer hypotheses about the role of tokens and bullae as certificates of contributions or 'tax receipts' which played an instrumental role within the centralized, redistributive modes of integration of ancient Mesopotamian societies. The primary function of these tokens and bullae appears to have been a means of bureaucratic social control over the fulfillment of in-kind payment obligations to a central public authority, such as a temple (or, equivalently, a means of reducing the avoidance of such payment obligations). This extends the role of tokens and bullae as simple inventory-keeping devices to a means of accounting for the fulfillment of in-kind payment obligations to a central public authority. The token-system provided a mechanism of checks (verification) that allowed temple officials to detect the non-compliant 'taxation units'. As discussed above, there is no consensus in the literature as to the

[15] Discussing the Laws of Hammurapi, Hudson (2004) observes that obvious and indisputable cases (such as murder, theft, and sorcery) were not mentioned in the Laws at all. "Such cases were decided in court according to custom, evidently by oral common law" (Ibid., 105).

specific nature of the taxation units (i.e. whether taxes were paid individually or collectively). Yet, this does not diminish the causal explanatory power of the 'certificate of contribution' hypothesis. The hypothesis is compatible with both individual and collective payment of taxes.

While this chapter maintains that tokens likely served as certificates of contributions that were already fulfilled, i.e. tokens represented goods and services already delivered to the temple, in one of her earlier publications Schmandt-Besserat (1982) raised the question whether tokens could have played a role as a means of control over the fulfillment of future payment commitments. More specifically, she argued that an increased complexity of the contribution process (due to population growth and regional expansion) would make it impossible for temple personnel to keep a mental track of all "the great varieties of foods . . . to be supplied by different parties" (Ibid., 876). In such a context, tokens could be "viewed as standing for pledges of food offerings to be delivered by individuals and groups" (Ibid., emphases added). Once the actual goods would be delivered to the temple, their types and quantities could be compared to the types and quantities pledged, i.e. those represented by the tokens. Thus, according to Schmandt-Besserat's earlier hypothesis, tokens stored in public archives would serve as a means of accounting for (or keeping track of) the goods and services owed to a temple, as well as a means of verification for the goods (and services) delivered. "In this light," concludes Schmandt-Besserat, "the pristine function of the tokens would be an instrument of control, and, therefore, a germ of power over food production in the hands of an emerging central authority" (Ibid., 876).

Despite this slight difference in emphasis, there is a significant common ground between Schmandt-Besserat's (1982) position and my argument, since both perspectives emphasize the role of tokens as instruments of bureaucratic control over the fulfillment of in-kind payment obligations to a central public authority. The primary difference is that Schmandt-Besserat

(1982; 1996) views tokens as representations of future payment commitments, while I describe them as indicators of past (i.e. fulfilled) contributions.

It is unfortunate that although the link between tokens, bullae and taxation was never abandoned by Schmandt-Besserat, she did not fully pursue her 1982 research program in which she seriously questioned the role of tokens and bullae as simple inventory-keeping devices, and suggested their instrumental role in the context of in-kind payments of 'taxes' and tribute to the ancient Mesopotamian temples. My hypothesis points to the importance of Schmandt-Besserat's (1982) contribution for the development of non-commercial theories of money's origins.

The Origins of Non-Metallic Money in Mesopotamia: Conclusions

This chapter argues that money was introduced by ancient Mesopotamian temples, serving as a means of bureaucratic control over the fulfillment of in-kind payment obligations of the local population. Temple-money, or tokens and bullae, serving as certificates of fulfilled contributions to a temple, provided a system of checks that allowed temple officials to identify the non-compliant 'taxation units'. It was shown that money came into being via a cumulative means-ends problem solving process, emerging as a practical solution to a material problem of achieving a maximum possible fulfillment of in-kind payment obligations to a temple (or, likewise, reducing their avoidance).

Note that the alternative account of monetization developed in this chapter preserves the fundamental Chartalist arguments, namely, that 1) money is introduced by a central public authority; 2) money is universally demanded, accepted and mandated regardless of its intrinsic value; 3) money is introduced in a context of a debt relationship between a population and a central public authority. At the same time, however, this alternative account of money's origins 1) does not view monetization as a means of inducing a local population into a debt relationship with a central public authority in the first place; 2) does not rely upon monetary taxation; 3) does not view money as a unit of account in which monetary taxes are denominated and have to be paid. Rather, this alternative account relies upon in-kind taxation, and views the earliest money as a certificate of a fulfilled in-kind contribution to a temple. Overall, this chapter embedded the Chartalist perspective on money's origin into specific transactional modes and forms of socio-economic organization of ancient Mesopotamian societies.

CHAPTER 8

CONCLUSIONS

This thesis has investigated the origins of money in archaic Greece (roughly 900-500 BC) and ancient Mesopotamia in the fourth millennium BC, evaluating the applicability of Chartalist and Metallist theories of money's origins, nature and social functions. It was demonstrated that Metallist theories, according to which money emerged as a medium of exchange commodity, do not hold up to a historical test. Among other factors, the marginal sphere occupied by trade, both domestic and foreign, must be noted as a conspicuous piece of evidence speaking against the Metallist perspective.

Let us begin with the case of Homeric Greece. Here, reciprocity and redistribution are observed as the principal forms of socio-economic integration. Specifically, two types of redistributive activities must be noted: 1) the all-inclusive, open and 'egalitarian' rituals of communal sacrificial meals and 2) the closed and ambiguous sphere of redistribution of booty by a leader to his followers (Seaford 2004).

According to Laum's (1924a) thesis, the origins of money can be traced to these all-inclusive and egalitarian rituals of communal sacrificial meals. Laum suggested that money first emerged as the portions of sacrificial bull's flesh distributed among the ritual participants. The 'egalitarian' rituals of communal sacrificial meals purported to allocate to each communicant his 'just' and 'equal' share. Yet, these shares were allocated in the order of social rank. Nevertheless, such allocation mechanism did not disturb the egalitarian principle, as the conception of justice practiced was that of proportionate rather than absolute equality. Thus, we see the causal role of money and (religious) ideology in creating a façade of social justice and equality, while injustice and inequality were actually perpetuated (Seaford (2004) observes how redistribution of booty by the leader to his followers exacerbated the rise of socio-economic inequalities).

From roasted bull's flesh, money further evolved into sacrificial roasting spits known as obeloe. This transition from perishable to durable money form was causally related to increasing socio-economic inequalities most grotesquely manifest in unequal distribution of metallic wealth (mostly as a result of the distribution of booty among the leaders and their followers). Distributions of metallic objects during the communal rituals purported to rectify the crisis of unequal distribution of metallic wealth. Finally, money took the form of coinage, which initially served as a symbolic representation of roasted bull's meat. This evolution of money forms may help explain why the image of a bull (along with other sacrificial animals) is so prevalent on the obverse of many Greek coins.

Whether represented by a roasted bull's flesh, or a roasting spit, or a coin, money served as a 'means of recompense', as a 'reward', as a 'due share' administered by religious authorities to the members of the community. Money served as a material and ideological means of restoring 'distributive justice'.

The religious rituals of archaic Greek societies produced yet another monetization mechanism. While the previous mechanism of money's origins views money as a 'means of recompense' distributed by religious authorities to the community, in the second mechanism, money emerges as a means via which votive offerings are paid by the community to religious leaders (or deities). Here, Richard Seaford (2004) observes that votive offerings in the form of actual goods were gradually superseded by their symbolic representations in the form of miniature figurines (e.g. animal figurines). Such figurines were presumably manufactured by the religious establishments and had to be obtained from there, so that offerings could be made in their proper form. Unfortunately, Seaford not does explicitly address the mechanism via which the community could obtain the figurines necessary to make votive offerings. Perhaps the Chartalist perspective on money's origins could be applied here: the religious authorities indebted the community in the units they themselves created. The members of the community had to supply goods and labor services to religious authorities in order to obtain the units (miniature figurines) necessary to extinguish their debts to deities.

Consequently, did money emerge as a 'means of recompense' distributed by religious authorities to the community as a method of restoring 'distributive justice'? Or did money emerge as a standardized unit in which votive offerings had to be paid to the religious authorities? Or could these two monetization mechanisms be reconciled? This reconciliation is beyond the scope of this research. Yet a further inquiry into the evolution of coinage during the political transition from Homeric societies to civic poleis would lead us to conclude that money first emerged as a 'means of recompense' administered by a central public authority in the context of egalitarian, distributive justice ideology.

This evolution of coinage in the context of political transformation from Homeric societies to civic poleis is investigated in detail by Leslie Kurke (1999) and Sitta von Reden (1995).

Sitta von Reden (1995) argues that silver coinage of the Greek city-states served as a means of political recompense; as a means of administering social 'justice' by the polis, as opposed to the administration of social justice by the previous, divine authority, intertwined with the powers of the old aristocratic elites. In fact, it was the decline of faith in the reliability of divine retribution – prompted by increasing socio-economic inequalities – which led to the development of the new model of 'distributive justice' administered by the civic polis via the issue of silver coinage. While von Reden (1995) consistently stresses the 'redistributive justice' aspect of coinage and argues that coinage was re-distributed among the citizens of the civic polis, she does not provide a specific mechanism to elucidate how exactly this distribution was achieved.

Leslie Kurke (1999) further emphasizes the egalitarian and ideological power of silver coinage issued by the civic polis. In asserting its own political authority over 'distributive justice', the polis subverted the redistributive model of the old aristocracy, adopting silver as the 'middling' metal for minting. The possession of coinage became a symbol of citizenship: all citizens were like coins – pure homogenous and valuable matter – no inequality or injustice could be observed (Kurke 1999).

The scholarship advanced by Laum (1924a), von Reden (1995), Kurke (1999) and Seaford (2004) clearly represents a set of evidence in support of the Chartalist perspective, such as the introduction of money by a central public authority in a non-commercial context. In fact, Kurke (1999) and von Reden (1995) explicitly reject the Metallist perspective as anachronistic. While coinage, no doubt, led to the development of trade within the next two-three centuries, markets did not invent money in the first place. Distinctively non-commercial origins of money as a phenomenon of a Homeric proto-state and, subsequently, as a creature of a civic polis support the Chartalist insights of money's origins.

Yet, contrary to the Chartalist perspective, von Reden (1995) and Kurke (1999) do not view the emergence of coinage as a unit of account in which taxes to the state were denoted and had to be repaid. The salient features of the "the state" apparatus proper (such as monetary taxation) were not yet present during the period of political contestation between older aristocratic elites and the emerging authority of the civic polis. In fact, the mechanism is reversed: coinage is adopted by the civic polis only to be redistributed to its citizens as a 'means of recompense', as a means of restoring 'distributive justice'. The use of coinage in a fiscal context developed later in the classical period. Before that, coinage did not have to circulate back to the polis: the possession of coinage was a symbol of a citizen's civic identity and his acceptance of the new political authority of the polis.

Finally, this thesis addressed the question of whether "the state" proper is necessary for the origins of money. As was discussed in chapter 5, it would be misleading to assert that coinage first emerged as 'a creature of the state' understood in a proper sense (Peacock 2006). In Greece, the "the state" proper did not appear until the last quarter of the sixth century BC (von Reden 1995). Homeric society could be viewed as a pre-state society known as chiefdom, where the power of the political leader (basileus) was preconditioned upon wealth, prestige, military prowess, informal authority over lower-ranked chiefs, and the ability of the basileus to act as a re-distributor (Seaford 2003). Peacock (2011) refers to this proto-state as a Homeric polis, implying underdevelopment yet nascence of many political institutions which were to culminate in the classical Greek period. It goes without saying, that Homeric polis was marked by social stratification and inequalities in the distribution of wealth. Further, sacrificial offerings and communal rituals were commonly performed in the house of the basileus (Seaford 2004).

Thus, the period during which money and coinage emerged in archaic Greece is also a period during which new political institutions came into being and subsequently became "the state" (Peacock 2006). There was a reciprocal relationship between the development of the state and the development of money and coinage. Both developments reinforced one another. The civic polis needed coinage to assert its authority over 'distributive justice'. The acceptance of coinage by the citizens further solidified the power of the polis and weakened the authority of the old aristocracy (von Reden 1995; Kurke 1999).

Another important observation to be made is the emergence of the polis alongside the development of monumental temples. In was not uncommon that the chieftain's house would provide the site for the construction of the temple. In this sense, the leader's dwelling place was "replaced by, or transformed into" a temple (Seaford 2003, 197). In this, we see how the origins of money were causally intertwined with the power of religious practice and ideology upon which the wealth and status of the re-distributor were preconditioned.

Last but not least, this thesis took us back into ancient Mesopotamian economies in the fourth millennium BC to investigate possible money uses there. In the context of centralized, complex, redistributive temple-economies of ancient Mesopotamia, the evidence of clay tokens was utilized to formulate a hypothesis according to which money was introduced by the temple as a certificate of fulfilled contributions to the temple-state. The 'certificate of contribution' hypothesis presented in chapter 7 thus disputes the conventional interpretation of the token function as a simple record-keeping device, reviving the neglected socio-economic power aspect of the token system in the context of 'taxes' and tribute owed to Mesopotamian temples (Schmandt-Besserat 1981; 1982; 1996). The systems of tokens as certificates of fulfilled contributions to the temple was designed to achieve maximum possible collection of 'taxes' and tribute from the underlying population as it enabled the temple personnel to retrieve the non-compliant 'taxation units' (i.e. those without tokens). Such system of checks was instituted in a highly urbanized society where writing was still underdeveloped and census systems did not exist. As certificates of fulfilled contributions, the tokens could likewise be viewed as a means of 'just recompense' administered by Mesopotamian temples.

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VITA

Alla Semenova was born on November 24, 1982 in Lviv (Lwow, Lemberg), Ukraine. She was educated in public school No. 56 with advanced learning of English language. Upon her graduation with honors in 1999, Semenova entered the Economics Program at the National University "Kyiv-Mohyla Academy" in Kyiv, Ukraine. She graduated with honors in June 2004, with a Bachelor of Arts degree in Economics. During her senior year at the National University "Kyiv-Mohyla Academy", Semenova was awarded a scholarship which brought her to the University of Missouri-Kansas City (UMKC) for a non-degree academic year in Economics.

In January 2005, Semenova entered the Master's Program in Economics at UMKC, graduating with a Master of Arts degree in 2007. She further continued her studies at UMKC, enrolling into a Ph.D. Program in Economics and Social Science. While working toward her Ph.D. degree, Semenova was a research assistant with the Center for Full Employment and Price Stability (C-FEPS), UMKC. In April 2008, Semenova was awarded a three-year Preparing Future Faculty Fellowship administered by the School of Graduate Studies, UMKC.

While writing her dissertation, Semenova has maintained an active teaching career. From January 2009 to May 2010, she was an adjunct lecturer in Economics at Roanoke College. In August 2010, Semenova accepted a Visiting Instructor in Economics position at Dickinson College. Upon completion of her Ph.D. degree requirements, Semenova intends to continue her career at Dickinson College.

Semenova has successfully combined teaching with an active research agenda, publishing papers in peer-reviewed journals, edited volumes, and with C-FEPS. In 2009, Semenova was granted a student research competition award by the Association for Institutional Thought (AFIT). Semenova is currently a member of AFIT.