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The Menger-Mises Theory of the Origin of Money—Conjecture or Economic Law?

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Abstract: In recent years some economists have begun to doubt the scientific standing of the standard Austrian theory of the origin of money. They seem to think that it is only one possible solution to the problem of accounting for money's value. Of these economists, Gary North (North 2012b) has presented the most cogent counter-interpretation to how we should understand the theory of the origin of money as elaborated by Carl Menger and Ludwig von Mises. Unlike the rest of economic theory, the origin of money and Mises's regression theorem do not partake of the character of a scientific law deduced from the basic principles of the science, but is rather, and is presented as such in the writings of Menger and Mises, what North terms "conjectural history." In this essay we will respond to North's challenge and to the economists who agree with him.

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1. INTRODUCTION

In his essay (North 2012b) for the 2012 volume in commemoration of the centennial of the publication of Mises's *Theory of Money and Credit* (Hülsmann 2012b), Gary North poses a challenge to our understanding of monetary theory. Carl Menger and Ludwig von Mises, North argues, did not really integrate their theory of the origin of money into the rest of economic science. Rather, this part of the theory of money exists in the netherworld of conjectural history: it is plausible, given what money is today, that it came about the way Menger and Mises speculate, but it is by no means certain. It is simply the most convincing account to scholars in the Austrian tradition, but other accounts are possible, and given the lack of historical evidence, there is in the final analysis no way of settling the issue.

This argument is worthy of response, especially given the authority of the source, and the fact that other monetary theorists seem to agree with Dr. North in demoting the regression theorem (White et al. 2014) from the realm of pure theory. In other publications Dr. North has lucidly explained and discussed the Misesian theory of money (see North 1993, 2012a), so it might well be that he has discovered serious objections to the regression theorem and the origin of money as stated by Mises and Menger. We do not believe, however, that North's position can be sustained and that we have to demote the regression theorem to a matter of historical conjecture. In the following we will attempt to show why.

We will proceed by first restating North's thesis: the origin of money and the regression theorem are best understood as a historical hypothesis concerning how money could have come about. We will then examine in more detail how Menger and Mises themselves conceived of the status of the theory of the origin of money in the corpus of economic laws. Finally, we will answer North's challenge by showing the impossibility of any other origin of the value of money than the one Mises provides and argue for the logical nature of the temporal regression by which he proves it.

2. DR. NORTH'S CHALLENGE—THE ORIGIN OF MONEY AS A HISTORICAL CONJECTURE

Carl Menger began his *The Origins of Money* by rejecting the theory that money owes its existence to law or convention. Such

a law would surely have been remembered, there would be some material evidence for it—but there is no evidence, so therefore it is highly unlikely that this is how money originated (Menger 2009, 17). Gary North contends that the same is true of Menger's own theory. Menger understands money as evolving in a process of selection from the most marketable goods to a few and finally one good that comes to be used as the most common medium of exchange. This process takes place over time as first a limited number recognizes the value of acquiring more marketable goods in exchange for less marketable and the other members of society subsequently learn from the success of these entrepreneurs. (Menger 2009, 35–37) But there is no evidence for this, or, rather, Menger provides no evidence. Writes North:

> [W]e expect some historical documentation. There is none. This creates a tactical problem. A defender of the fiat dictate theory of money's origin can invoke the same argument against Menger as he had invoked against the critic's ideological peers. Each side declares that the origin of money was rooted in a particular institutional arrangement. What seems reasonable to one commentator does not seem reasonable to the other. (North 2012b, 170)

Menger is caught in a dilemma. He has rejected the conventional or state theory of money because of the lack of historical evidence to support it, but Menger himself provides a history of the origin of money unsupported by factual evidence. Mises's explanation of the value of money based on the objective exchange value the monetary commodity had based on its non-monetary use before being adopted as money (Mises 1981, 130–31) runs into the same problem: there is no historical evidence for this process (North 2012b, 171). As another critic of Mises's regression theorem wrote: "there is no unbroken sequence of uninterrupted economic causation from that far away hypothetical day to the present, in the course of which that original quantity of value has exerted its influence." (Anderson 1917, 102) The history simply cannot be proven.[1]

[1] Absence of evidence does not necessarily count as evidence against a given theory. There might be good reasons why we should expect no evidence and nevertheless hold to the theory. On the other hand, Menger was right to cite the absence of evidence against the state theory of money, since it is the type of historical conjecture that needs historical evidence to appear plausible. Our point

The origin of money, then, cannot be explained with the same apodictic certainty that Mises saw in the basic laws of economics. "[W]ith respect to the transition from value-in-use to value-in-exchange, the most we can say is that this transition was probable." (North 2012b, 171). There is, in the very nature of the case, no evidence for the transition, since societies practicing barter were too primitive to leave any detailed inscriptions or records behind. The records we have from ancient civilizations are precisely from societies that already had highly developed monetary arrangements (North 2012b, 172). This is why we have to resort to conjectural history in order to understand how these arrangements came about.

Menger and Mises therefore resorted to what we may call a sort of conjectural history or developmentalism, following Nisbet (1969). Since there are no facts to investigate, they simply offered "a theory of how it could have happened, and more than this, how it must have happened, given the goal of individuals to improve their circumstances. Yet they stopped short of identifying their account as inherent in human action in the way that higher prices reduce the quantity demanded" (North 2012b, 174–75). This theory is reasonable and difficult to reject for an Austrian school economist, although other people, economists and non-economists alike, with a more positive view of the creative possibilities of state action, might find the story of the origin of money as a matter of royal proclamation more plausible (North 2012b, 173–74).

We must therefore conclude that the origin of money and the regression theorem as explained by Menger and Mises seem more consistent with human behavior than the state theory of money (North 2012b, 175). But this is a matter of conjecture, of developmentalism, not something we can deduce from the timeless axioms of human action.

3. THE ORIGIN OF MONEY AND ITS STATUS IN THE THOUGHT OF MENGER AND MISES

So much for the proposition that the origin of money is a matter of historical conjecture. But would Mises and Menger themselves

in this paper is precisely that the Menger-Mises theory of money does not require historical evidence to be accepted as valid. I thank Dr. David Gordon for this point.

recognize this interpretation of their thought? Or would they lay claim to a much stronger position?

Menger

In the case of Menger, there are some statements that would suggest that he was not opposed to the idea that the state could play a role in monetary affairs, including in introducing the common medium of exchange in the first place. In *Origins*, for instance, he writes that the state may not have introduced money, but that it certainly plays a role in standardizing it and perfecting goods in their monetary function (Menger 2009, 51–52). Similarly, in his *Principles* (Menger 2007, 262), Menger writes that "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."

The strongest statement Menger makes that seems to agree with North's interpretation of the theory of the origin of money appears in his *Investigations*. Here he gives a précis of his theory of the origins of money, but he admits that not only can government authority serve to perfect and help smooth out the workings of the monetary system, it can even introduce the use of money through legislation (Menger 1985, 153). This is only true of modern conditions, when, e.g., a colony is formed from elements of an old culture. The primary, original way money emerged is still the same, but part of Menger's argument for this is the absence of any evidence of state involvement in the process. Menger thus seems to agree with North that the origins of money are indeed a matter of conjectural history.

Yet this agreement is only apparent. Throughout his writings, Menger insists that he is using the same method in dealing with all the problems of economic science: "The methods for the exact understanding of the origin of the 'organically' created social structures and those for the solution of the main problems of exact economics are by nature identical" (Menger 1985, 159). He insists on understanding economics, including the origins of money, in terms of individuals and their actions led by their own interest:

> 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 (Menger 2007, 260).

All that is needed for the emergence of media of exchange is the existence of a different degree of marketability of the different goods brought to market: "*The theory of money necessarily presupposes a theory of the saleableness of goods*"[2] (Menger 2009, 21; cf. 2007, chap. 7). And while Menger may concede a role to the state in the modern management of money and in the introduction of money to new territories today, he is quite insistent on the organic origin and development of money as a market phenomenon: "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." (Menger 2009, 51; *cf*. 2007, 261). This is not to say that Menger does not engage in historical conjectures. His account of how the precious metals came to be used as money is a hypothesis, not an historical account. But it builds on and presupposes his theory of the marketability of goods, just as he uses this theory to interpret the historical example of Mexican society at the advent of the Spanish conquerors (Menger 2007, 268–70).

Mises

If Menger can at times be interpreted in a way conformable to North's view on the origin of money, Mises is much more adamant about the logical status of the regression theorem. Indeed, he writes (Mises 1981, 131–32) that it "provides both a refutation of those theories which derive the origin of money from a general agreement to impute fictitious value to things intrinsically valueless and a confirmation of Menger's hypothesis concerning the origin of the use of money." Mises also insists on the general *a priori* nature of monetary theory when he writes (Mises 1998, 38, 40): "In the concept

[2] 'Saleableness' and 'marketability' are both English translations of the same German word, *Absatzfähigkeit*. Throughout, when not quoting, we have chosen to use the terms 'marketable' and 'marketability' exclusively.

of money all the theorems of monetary theory are already implied" and: "Unaided by praxeological knowledge we would never learn anything about media of exchange. […] Experience concerning money requires familiarity with the praxeological category *medium of exchange*." Since he explicitly refers to his explanation as the regression *theorem*,[3] it should be clear that he considered it part of the general body of economic theory, deducible from the basic axiom of human action.

To Mises, then, the origin of money follows once the conditions for it are given. In addition to an economic order based on division of labor and private property in the means of production (Mises 1981, 41), these conditions include a difference in the marketability of goods (Mises 1998, 398, 403). But once these are given, individuals will begin the process that will eventually result in the adoption of the most marketable good as money (North 2012a, chap. 1). That it must take place as a market process follows from Mises's regression theorem: the value of a good as a medium of exchange presupposes an already existing objective exchange value which can only come from demand for it based on its use value (Mises 2016, 60).

And so it appears that neither Menger nor Mises really saw themselves as doing conjectural history. To them, the origin of money and the regression theorem are just as theoretical as the rest of economics. This is not to suggest that Menger and Mises necessarily agreed on all matters of epistemology and method, except for the fact that they were both rationalists in the broad sense of the term and wanted to explain economics on causal-realist lines. But Menger was an Aristotelian while Mises at least sounded like a Kantian.[4] However, both were agreed that economics, including monetary theory, is a science best investigated by means of deductive reasoning, and that it rested on universally valid first principles or axioms, as Mises would say, and that the conclusions deduced from these were just as valid as the axioms themselves.

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[3] Mises's first use of the term, so far as we can see, is in *Human Action*, p. 406. But the argument is clearly present in *Theory of Money and Credit*, and Hülsmann (2007, 236) writes that the regression theorem "would become one of the pillars of his monetary thought."

[4] However, it has been argued persuasively that Mises was much more Aristotelian than he might at first appear. See on this point Hülsmann (2003, l–liv).

Nevertheless, it is still quite possible that they were mistaken. We therefore need to move on to an examination of the theory itself.

4. RESPONSE TO THE CHALLENGE: THE LOGIC OF THE TEMPORAL REGRESSION

> "Can a governmental authority, even if it were the most violent and the most persistent, attribute an exchange value to an object, which has no exchange value at all for the human beings that take part in the commercial life?
>
> […]
>
> The government authority could declare just as well that a mountain is twice as high as it is in reality or that two pounds are actually six pounds."[5]

Gary North is not the only economist who has thought it necessary to relegate the regression theorem to the status of historical conjecture. Professor Selgin (White et al. 2014) is of the opinion that "[t]he regression theorem itself constitutes […] but one particular solution [to the question of the origin and value of money]—a solution that might now be labeled 'backward-looking' expectations-formation." Even Professor Hülsmann (White et al. 2014), citing Dr. North's essay, thinks that "[f]rom an epistemological point of view, the regression theorem does not seem to be an element of Misesian praxeology. It does not concern an *a priori* causal relation." For while the subjective value of money depends on the expected future purchasing power of money (PPM), these expectations are not necessarily based on the prior PPM, or the earlier objective exchange value in Mises's terms. We should therefore rather speak of a progression theorem, since it is the expected future prices that determine present valuations of money (Hülsmann 1996, 169, note 21). Laurence Moss (1976, 21) has even stated that Mises was quite mistaken when he thought the only way the demand for money can be consistently incorporated into the general body of utility theory was by way of introducing historical prices.[6]

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[5] (Knies 1885, 1:189; quoted and translated in Gabriel 2012, 44–45)

[6] However, Moss concedes (p. 28) that Mises's use of historical prices to explain expectations-formation about future prices is "of great doctrinal importance."

The notion that the regression theorem is not part of the corpus of theoretical economics or praxeology is thus one that seems to be gaining ground among monetary theorists. In what follows, we intend to reassert what we think is Mises's own conception of the regression theorem as an integral and necessary part of monetary theory. Even Menger's theory of marketability can, we contend, be shown to have universal validity, and the difference in degree of marketability to be a necessary precondition for the emergence of any media of exchange.

Before we proceed, however, we must make explicit the definitions of the concepts we are discussing. Money is simply the most commonly accepted medium of exchange. It does not matter that 'most commonly accepted' is an imprecise definition, since everything that is true in regards to money is true of all media of exchange (Mises 1998, 395). But it does mean that a precise definition of medium of exchange is required. Mises (*ibid*.) writes that

> Interpersonal exchange is called indirect exchange if, between the commodities and services the reciprocal exchange of which is the ultimate end of exchanging, one or several media of exchange are interposed.

While Rothbard (2009, 189) says that

> The tremendous difficulties of direct exchange can be overcome only by *indirect exchange*, where an individual buys a commodity in exchange, not as a consumers' good for the direct satisfaction of his wants or for the production of a consumers' good, but simply *to exchange again* for another commodity that he does desire for consumption or for production.

From these statements about the purpose of media of exchange, the following definition emerges: a medium of exchange is a good desired not for consumption or production purposes, but in order to exchange it against other economic goods.

As with 'medium of exchange,' marketability is a concept restricted to goods in a market economy. It has no applicability to a household economy or a socialist commonwealth. Marketability means the facility with which a good can be sold at prices that conform to the general economic situation (Menger 2007, 248), that is, without too much of a discount below expected market prices. Marketability, then, is a question of degree, of more and less

marketable goods. That commodities must differ in their degree of marketability and that this fact is of importance for the emergence of media of exchange we will explain below.

The Regression Theorem

Praxeology is a science that deals with change through time. Change and temporal sequence are inseparably linked, and since action aims at change, it is in the temporal order (Mises 1998, 99). Yet most of economic theory can be elaborated without regard to time. The price of a capital good, for instance, is determined by the discounted marginal value product. While this determination looks to the future, the theoretical determination is essentially timeless, as is shown by the fact that it is elaborated under conditions where the element of uncertainty and change is assumed away (Rothbard 2009, chap. 7; *cf*. Mises 1998, 245–51 on the evenly rotating economy).

The regression theorem, however, and the explanation of the origin of money need to incorporate the temporal dimension. It describes a series of events that must follow one upon the other in order to establish how money came to exist and why it has the value that it has in the present moment:

> The central difficulty was the interdependence between the subjective value of money (SVM) and the PPM. Money was valuable because it had purchasing power, but the purchasing power resulted from the SVM. This seemed to be an instance of circular reasoning, not of causal analysis. But Mises could solve this problem by developing an explanation which he found in Wieser: SVM and PPM did not determine one another *simultaneously*—which would have precluded causal analysis—but *diachronically*. Today's SVM determined today's PPM, which in turn determines tomorrow's SVM, which determines tomorrow's PPM, etc. (Hülsmann 2012a, 10)

Or, as Mises put it: if the history of prices of any consumer or producer good were to be wiped out, the price system would soon reestablish itself, since these prices only depend on the judgment of actors as to the good's ability to alleviate present and future needs. But were all knowledge about the value of money to disappear, it would be impossible to reestablish the system, precisely because the use of a good as a medium of exchange is dependent on knowledge

of its past purchasing power. Men would have to start over with the process of selection of the more marketable goods as media of exchange (Mises 1998, 408).

It is this temporal nature of the theory that may suggest a historical conjecture instead of logical analysis. Benjamin Anderson, whom we have already had occasion to cite, objected to Mises's theory precisely because he wanted a logical analysis of the value of money. He thought the temporal regress, although interesting, hypothetical and abstract and not really compatible with a logical analysis of the present forces determining the value of money (Anderson 1917, 103–4). The question therefore is: can a logical argument, *contra* Anderson's implication, integrate the temporal element into our understanding of the value of money?

Indeed, the laws of logic are more than capable of doing the job. We may take Aristotle for our guide in this question (*Posterior Analytics* 95a10–96a19, 1984, 1:157–59. The example of the house is on p. 158). In the form of a syllogism, we start with the (later) effect and want to deduce the (earlier) cause. We do this, as with all syllogisms, by connecting them by means of a middle term that persists through time from cause to effect. Aristotle gives the following example: Consider a house. We can know from the existence of the house that there must have been stones. This is so because in order to have a house, there must have been a foundation on which to build it; and before there was a foundation, there must have been stones out of which to make the foundation. From the fact of the house now we can reason to the existence of the stones earlier.

Two features of Aristotle's argument are perhaps of special interest to our present considerations. The first is that such reasoning must proceed from effect to cause. This is so since there will be an interval of time between the existence of the cause and of the effect, and during the interval it will obviously be incorrect to say that the cause has caused the effect. The second is that the connection between cause and effect, the middle term, must be coeval with both—but cause and effect need not be coeval with each other. Now, in Aristotle's own example, stones and house do in fact need to exist simultaneously once the house is constructed, but we can easily think of other examples where this is not the case. The clearest example is perhaps that of a child and his father: from the

existence of a child now, we can infer that his father once existed, even if he does not now exist. To return to the sphere of economics, when we see a price offered for a good, we can infer that the good is subjectively valued by someone, and that this subjective value is precisely the cause that moves him to offer something in exchange for it—abstracting from speculative demand for the moment.

How does this apply to the regression theorem? It highlights, first of all, that Mises was correct in asserting that he delivered the proof for Menger's hypothesis as to the origin of money. Beginning at one end of the chain of causation with the existence of money of a given value, Mises traced the cause of this value back through time, through the subjective estimations of future exchange value based on the objective exchange value of the moment just past, to the point when the objective exchange value was based only on the good's use-value (Mises 1998, 406). Precisely because it is an argument proceeding from effect to cause is this certain. This is not to say that Menger's argument did not proceed in basically the same manner. But he began *in medias res*, so to speak, with the cognition by the economic subjects in a barter economy of the higher marketability of some commodities, and therefore laid himself open to the criticism that his reasoning from there to the existence of money is a mere conjecture.[7]

The other point worth emphasizing is that cause and effect need not exist at the same time. It is enough that there is an intermediate cause, or series of causes, leading from the existence of money today back to its origin in the first demand for a good with an objective exchange value for use as a medium of exchange. The use-value that is the terminus of this series of causes need not be present throughout. Again, Mises was the first to clear up this point in the earlier theories.[8] Anderson (1917, 102) was quite right in doubting that an "emotion" felt 10,000 years ago could have any

[7] To be clear, we think the logical structure of Menger's argument is the same as Mises's: he began from the fact that some goods were chosen as media of exchange and sought for the explanation in the array of market exchanges based on the difference in marketability.

[8] An economist named Oppenheim argued already in 1855 that money could continue to function as such once its original use-value has disappeared (Menger 2007, 319). So Mises may have had a forerunner in taking the theory of the value of money to its logical conclusion.

direct connection to the value of money today. No one claimed that it should. All the regression theorem claims is that at one point there was a good with objective exchange value based on such an "emotion" which was then gradually adopted as money. This is necessary since we need prices of goods—objective exchange value—in order to have a marginal utility of money (Rothbard 2009, 277, note 22). If we keep in mind the importance of the marketability of goods, we can see that this objective exchange value must have been a more or less constant phenomenon through space and time in order to ensure the adoption of a good as money. But as a matter of logic, as soon as a good is valued as money, its value can persist even should its use value disappear entirely. Rothbard (2009, 275) makes this point clear:

> Once a medium of exchange has been established as a money, money prices continue to be set. If on day *X* gold loses its direct uses, there will still be previously existing money prices that had been established on day *X* – 1, and these prices form the basis for the marginal utility of gold on day *X*. Similarly, the money prices thereby determined on day *X* form the basis for the marginal utility of money on day *X* + 1. From *X* on, gold could be demanded for its exchange value alone, and not at all for its direct use. Therefore, while it is absolutely necessary that a money *originate* as a commodity with direct uses, it is not absolutely necessary that the direct uses continue after the money has been established.

The value of money, in short, has two components: its use value and its exchange value, and these are analytically distinct. Strictly speaking, only the second source of value is necessary for a money to function as such, and it is precisely its exchange value which has a temporal component (Rothbard 1988, 180–81). It relies on knowledge of past objective exchange value in order for the economic actor to form his present judgment about the subjective value to him of units of the monetary good. And this objective exchange value must at some point have originated in valuations based only on use value. But once the good is established as money, it can persist solely on the basis of its exchange value.

An argument made by Professor Kirzner in an unpublished paper can help us clarify what we are claiming for the nature of money. Kirzner correctly points out that the way out of the circularity in the explanation of the value of money is to take account of expectations

in its determination. Mises's regression theory, according to Kirzner, is just one way to do this (Kirzner n.d., 6). However, he goes on to say (*ibid*., 7) that

> It should be observed, in any event, that insofar as potential buyers of *any* commodity base their price bids for it on anticipated—if speculative—possibilities of resale, these bids involve price expectations in exactly the same way as do those for money."

With this we cannot agree. This is to collapse specifically monetary demand into a general speculative demand and to erase the distinction between monetary goods and goods simply held in anticipation of selling them in the future at a profit. Speculative demand means demand based on the expectation of future profit. Speculative demand like all entrepreneurial action is about dealing with uncertainty. As such, all action is speculative, since there is always an element of uncertainty attached to it (Mises 1998, 254; Huerta de Soto 2010, 15ff). But speculation is especially about bearing uncertainty and, in the market economy, about maximizing profits.

Monetary demand is specifically demand for a medium of exchange based on the expectation of being able to exchange it for units of the goods the actor really wants. It is about minimizing uncertainty in the actor's future market exchanges by increasing the marketability of the goods he brings to market (Hoppe 2012). While there may at times be a particular speculative component in this demand—if, for instance, the actor adds to his cash holdings in anticipation of an expected increase in the PPM—the demand for money is *sui generis* and determined by the anticipated use value of the goods that can be exchanged against each unit of money and the subjective value of owning a marketable good. The yield from money held in cash balances is derived from the services it renders, i.e., from the expected future exchanges the actor expects to carry out with it (Hutt 1956, 198. Hutt recognized that part of the value of money might be speculative, but the main determinants of the value of money are still the expected future exchanges, as the speculative element is derived from this expectation). Mises at one point expresses this by saying that, in the case of money, subjective use value and subjective exchange value coincide (Mises 1981, 118). Or, rather, in order to make clear the distinction between the value of holding money and of its services, the use value of

money is derived from its subjective exchange value.[9] The value of the marginal unit of money depends on what the actor expects to be able to exchange it for, and the size of the individual's cash holding therefore depends on knowledge of the objective exchange value of money in the way Mises explained. Acquiring and holding money, then, is not in itself a speculation in future uncertainties, but an attempt to reduce the costs inherent in future exchanges by increasing the chances of quickly and easily completing one's market transactions.

This should, we think, also answer Hülsmann's objection. While we agree entirely that it is expected future prices that determine the present demand for money, such expectations must have a starting point. If this starting point is not based on prior exchange value, whatever array of prices the actor assumes is completely arbitrary. But the demand for money is precisely not arbitrary, so the value of money must be traced back in time to the point when acting man first demanded a given good for its services as a medium of exchange based on his appraisal of the good's already existing objective exchange value as determined by demand based on its use value and on his judgment as to its expected higher marketability.

The Theory of Marketability

The concept of marketability might appear to depend on empirical assumptions as to the qualities of the goods exchanged in the market. Our contention is that no such assumptions are needed—goods exchanged in the market must by necessity differ in their marketability. Hoppe (2006, 182–83) suggests as much, although he does not expand on this point. For there to be any market and division of labor, there must be a plurality of goods serving different ends. Demand for these goods cannot be equal—if they were equally in demand, this could only be because they were considered equal in their services, in other words, equally good at helping man achieve his ends. But this would, as Hoppe claims, mean that they were simply units of the same type of good. The

[9] Salerno (2015, 74) and Edwards (1985, 53) make clear that Mises made this distinction, even if he did express himself imprecisely at times. In this case, this is due to the influence of Wieser on Mises's thought, *cf.* (Hülsmann 2007, 238–39).

basic cause of difference in marketability, then, is unequal demand.

A few general remarks can be made about differences in marketability. Those goods demanded by more people will be more marketable than those goods that have a narrower market, i.e., goods with a 'deeper' market are more marketable.

Other causes also influence the degree of marketability – durability, for instance. Menger's (2009, 29–32) detailed exposition of what influences marketability introduces various empirical assumptions, but it is still a matter of theory, not conjecture.

A Note on the Challenge of Bitcoin

Has the emergence of bitcoin and other crypto-currencies as media of exchange disproven the Mises-Menger account of the emergence of money? After all, bitcoin were intended to serve as money by its creator(s), and since it has market value now, this would seem to suggest that its value need not be based on a prior commodity value. Economists who have analyzed the issue do not think that the regression theorem has been invalidated by bitcoin. Davidson and Block (2015) argue that bitcoin is not a challenge at all, since the regression theorem only applies when money emerges out of barter; Barta and Murphy (2014) argue that since bitcoin is a medium of exchange now, it clearly cannot contradict the regression theorem; Konrad Graf (Graf 2013, 3–4) writes that "[n]o contradiction between Bitcoin and the economic-theory insights associated with the regression theorem is possible"; and, finally, Peter Surda (2012, 38–43) argues persuasively that bitcoin conforms to the regression theorem.

The reason for debate on this subject is, we think, that bitcoin and other crypto-currencies were designed to be media of exchange. It could thus seem that private individuals had simply willed a new medium into existence. But the intentions of the suppliers are completely irrelevant—the nature of a good depends on the nature of the demand for it, not what the producers had in mind when they produced the good. What is often called the first transaction where bitcoin was used as a medium of exchange shows this clearly. On May 22 2010, one person "laszlo" bought 2 pizzas paying with 10,000 bitcoins. On the surface, this may look as the first use of bitcoin as a medium of exchange. In reality, what happened was that one person,

"jercos", in search of bitcoins, bought 2 pizzas using his credit card to trade for 10,000 bitcoins because he knew someone were willing to make this trade. If any good in this exchange was used a medium of exchange, it was the pizzas, not the bitcoins. It may be very hard to find out why exactly people valued bitcoin before it was used as a medium of exchange, but it is hopefully clear that some such value is necessary in order to be able to use bitcoin and all other crypto-currencies as media of exchange. What is different in the case of bitcoin from the original emergence of money out of barter is that only one price needs to be established before bitcoin can be used as a medium of exchange—namely, their price in terms of already established money.

5. IS THERE A PLACE FOR CONJECTURAL HISTORY?

The regression theorem is then not a matter of conjectural history. But this does not mean that we cannot make historical conjectures about how events unfolded and institutions were established. In the field of money, however, such conjectures cannot contradict the basic theory.

The account of the emergence of money that Menger gives us can be said to be conjectural history. Based on economic theory, he suggests how and why the precious metals specifically were selected as money due to their greater marketability. There was a constant, widespread demand for these goods for use and at the same time a widespread supply of them, making it easy to bring them to market. From these broadly historical facts or assumptions, Menger describes how the monetary metals were gradually chosen as the most commonly used media of exchange in a process parallel to and dependent on the accumulation of capital goods and the intensification of the division of labor. As such, it is a highly plausible story, and one which seems to receive some confirmation from Menger's Mexican example[10]—but other conjectures are possible. It is not possible, however, to make a historical conjecture at odds with the core of the Menger-Mises theory—that the medium of exchange must have had a preexisting exchange value not based

[10] More recent scholarship is also highly suggestive of the origin of money as a market phenomenon, completely independent of state sponsorship or interventions. See (Le Rider 2001, chap. 1).

on its monetary use, and that the selection of the medium was due to its greater marketability.

Can we, then, make conjectures that concede a larger role to the political power in the origin of money? Only if the actions taken by that power in pursuit of its goal of introducing indirect exchange or influencing the choice of the money commodity conform to the laws of economics (Mises 1981, 83–94). Three broad approaches may be used by the state in its attempt to influence the choice of media of exchange:[11]

1. It can try to increase the objective exchange value and increase the marketability of some goods by always being ready to buy them in the market and sell them again against the commodities the market actors wants to sell. This procedure is obviously limited by the economic resources of the state, but could possibly decide the issue between two goods of roughly the same quality competing for the role of most common medium of exchange. So the state may decide the choice between the gold standard and the silver standard, as, for instance, the US government did by demonetizing silver in the Crime of '73.
2. It can try to confer use value on some goods and make them more suitable as media of exchange by making them legal tender for the settlement of debts. Yet forcing people in a barter economy to substitute the sovereign's favored commodity for the one the parties to the exchange has agreed on simply disarranges all credit transactions. Credit is already very heterogeneous and probably very rare in a barter setting, and it is not conducive to the formation of money and credit markets to prevent them from operating to the profit of the market participants. Any government intervention substituting a means of payment for the one voluntarily contracted will serve to expropriate one party to the exchange to the benefit of the other. Instead of facilitating markets, this will make them cease functioning altogether.

[11] These remarks concern exclusively the influence of government on the emergence of money out of a barter economy. Mises himself discussed issues dealing with bimetallism and other monetary policies current at the time in the reference just given, while George Selgin (1994, 821–24) has applied Mises's insights to the introduction throughout history of new fiat money. I thank Dr. Patrick Newman for this reference.

3. It can try to confer use value on some goods and make them more suitable as media of exchange by making all taxes payable in these goods.[12] It could in this way make otherwise valueless things quite valuable. But another step is needed before they can become money—they must be recognized as the most marketable goods in the free estimation of the market.

These brief and by no means exhaustive remarks should be enough to make the point clear: if government intervention in the origin of money is to have any effect, it is only so long as the government conforms to the law of the market and recognizes that the choice of the monetary good is a matter of the relative marketability of the different goods. Any conjectural history of the origin of money that neglects this point is consequently inadmissible.

6. CONCLUSION

We have here tried to answer those economists who have begun to doubt the logic of Mises's regression theorem. Specifically, we have dealt with the challenge raised by Dr. North to the regression theorem and Menger's account of the origin of money. We have tried to show that these parts of monetary theory are truly praxeological laws, deduced from the basic principles of the science under the specific conditions needed for monetary exchange. Every time we come across a society using money, the value of the monetary good will have arisen in conformity to Mises's theorem.

This is not to say that there is no room for conjectural history in describing the origin of money. We have suggested that Menger's account of the establishment of gold and silver as money is in fact a historical conjecture—but it is based on economic theory, the theory of the marketability of goods, and only accounts so based will have any right to scientific standing.

Dr. North ends his essay with writing that he finds himself "knee-deep in developmentalism. This is not where I planned to be when I first read *The Theory of Money and Credit* in 1963." Hopefully, the present essay will be a help to him and other monetary theorists who find themselves trapped in the slough of developmentalism.

[12] Kuznetsov's (1997) idea about administrative goods is an example of this.

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