# THE ORIGIN OF INSTITUTIONS ACCORDING TO CARL MENGER: THE ROLE OF THE STATE IN THE EMERGENCE AND EVOLUTION OF MONEY

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## 1. INTRODUCTION

*«All things are subject to the law of cause and effect»*
MENGER (2007 [1871], P. 51)

This year marks the 150th anniversary of the publication of *Principles of Economics*, the first academic work by Carl Menger, founder of the Austrian school of economics and one of the pioneers of the marginal revolution. We can identify three major contributions of Menger to economics.

First, his approach to economic analysis through the prism of subjective value, which revolutionized economics.

Second, his defense of the deductive approach articulated in the course of the *Methodenstreit* ("Dispute over Methods") with representatives of the German Historical School which, according to Menger, allows the formulation of universal laws of economics. During this debate, Menger published *Investigations into the Method of the Social Sciences with Special Reference to Economics* in 1883.

Third, his formulation of the evolutionary theory of social institutions, which he developed in almost all his works. It is notable that Menger emphasized this orientation, considering that the most remarkable question of social science is that of explaining the unintended emergence of institutions without a general will motivating their creation.

> How can it be that institutions which serve the common welfare and are extremely significant for its development come into being without a common will directed toward establishing them? (Menger, 1985 [1883], p. 289)

Thus, Menger designates the central question of economic science, while admitting the necessity of a global interdisciplinary consideration of such phenomena, which he calls organic institutions.

> The solution of the most important problems of the theoretical social sciences in general and of theoretical economics in particular is thus closely connected with the question of theoretically understanding the origin and change of 'organically' created social structures. (Menger, 1985 [1883], p. 289)



Menger's methodology is based on individualism, subjectivism and causalism, while also incorporates Aristotelian deductivism and realism (Campagnolo, 2011, pp. 95-99). Due to these methodological features, Menger's analysis of social institutions as the result of emergent processes loses neither relevance nor reliability.

The theory of the emergence of money is of major epistemological importance. Menger studied this question through several major contributions, starting with his *Principles* in 1871 and culminating in the final revision of his *Geld* article for the *Handwörterbuch* in 1909. Menger firmly denies any role of the State in the emergence of money, but admits the possibility of the positive influence of the State in the process of perfecting the monetary system at later stages.

The aim of this article is (1) to analyze Menger's theory of the organic origin of money as an institution (2) analyze the role of the state and the effects of its intervention in the development of money, and, (3) discuss the emergence of new media of exchange in the light of Menger's theory of money.

## 2. THE METHOD OF ECONOMIC SCIENCE ACCORDING TO MENGER

In his work, Menger places the causal-realist and deductive method at the center of economic analysis (Salerno, 2009). Menger's methodological portrait can be described by five main features presented as follows.

The first is methodological individualism, which is an approach to the analysis of socio-economic phenomena according to which each phenomenon are considered in terms of the individual behavior (plans, habits, actions, goals etc.). Consequently, social phenomena are explained as the result of individual actions. Menger describes more complex social relationships as emerging from human interactions (Menger, 2007 [1871], p.136,138). The goals of a social group are always deduced from and reducible to the goals of the individuals that compose the group, and Menger denies the existence of a collective intelligence. In order to understand the relationship between economic variables, it is therefore necessary to understand the motives of human behavior.

The second pillar of Menger's method is methodological subjectivism. It entails that the economic analysis of human interaction or institutions must be based on the subjective values motivating the actions of individual. Methodological subjectivism focuses on the importance that individuals attribute to their chosen ends. The concept of subjectivism is particularly evident in the interpretation of value and information. In the Mengerian tradition, value is an individual's judgment of the importance of one good relative to another good. Value is subjective, because it is relative to the preference of a person. It is ordinal, so we can neither aggregate values nor using cardinal mathematical functions to measure it. This very concept leads to the explanation of price determination on the market.

The third characteristic of Menger's approach is that it is a realist approach. Menger's work shows the influence of ancient Greek thought, particularly that of Aristotle (Campagnolo, 2011, p. 98). Menger's analysis seeks to understand things «in their nature» (their essence). Menger uses what he himself calls *Realtypen* or «real types». The use of this instrument of analysis implies « relating the behavior of the agent to general and real essential features » (Menger, 2007, p.80) In the *Principles*, Menger presents an economic agent as an « individual engaged in his activity ». The real types from which he represents economic activity constitute the instrument for understanding typical relations by manifesting behavioral characteristics (Menger, 2007, p.80).

The fourth feature of Menger's theory is deductivism. In contrast to the historical-inductive approach championed by the Historical School and dominant German universities, Menger uses a deductive approach when formulating economic laws. The title of the third section of the *Principles*, « The Laws Governing Goods-Character », demonstrates that the formation of laws is presented by Menger from concepts formulated a priori. This does not mean that the national economy should be analyzed in isolation from other social institutions; on the contrary, according to Menger, actions are seen through the prism of the institutional framework: morality, law, tradition and culture. However, he considers it to be a mistake to base economic theory on historical facts.

Finally, crucial to Menger's analysis is causalism. In order to explain the essence of a phenomenon, it is necessary to understand the causal process at the origin of its emergence.

> Before proceeding to other topics, it appears to me to be of preëminent importance to our science that we should become clear about the causal connections between goods. In our own, as in all other sciences, true and lasting progress will be made only when we no longer regard the objects of our scientific observations merely as unrelated occurrences, but attempt to discover their causal connections and the laws to which they are subject. Before proceeding to other topics, it appears to me to be of preëminent importance to our science that we should become The General Theory of the Good clear about the causal connections between goods. In our own, as in all other sciences, true and lasting progress will be made only when we no longer regard the objects of our scientific observations merely as unrelated occurrences, but attempt to discover their causal connections and the laws to which they are subject. (Menger, 2007, p.55-56)



In order to emphasize the significance of the teleological approach to comprehend human action through the prism of «goals – means», Menger changed the title of the section "The Causal Connections between Goods" to "On the relationship of the goods in the process of people's awareness of their goals" in the second edition of the *Principles* (Menger, 1923).

> It is wrong to understand the task of economic theory as considering the cause-and-effect relationships between goods and the establishment of the corresponding laws. This problem is solved by natural sciences, including psychology. We must consider goods as a means of achieving human goals, investigate their connection with the awareness by economizing individuals their goals (that is, the teleological context) and establish the corresponding laws. (Menger, 1923, p. 21)

Menger considers that a cause and effect analysis is a necessary condition a teleological approach of economic analysis. If something cannot be the cause of a phenomenon, it cannot be used as a means to the corresponding end (Yagi, 2010).

According to Menger, economic theory has three dimensions: 1) exact or "pure" - science should present general theoretical results with universal value; 2) "empirical-realistic" - to grasp economic reality empirically; 3) and "historical" - to give historical descriptions of individual singular events. Menger advocates the theoretical approach in political economy for its rigor in conceptual analysis. He considers that science must first present the general theoretical results only with legitimate value in order to determine the exact laws of knowledge of general order (Menger, 1985).

Menger's approach allows us to understand socio-economic phenomena in their general scope. Due to his methodological foundations, Menger analyzes and interprets real economic processes convincingly. In the following section we will outline Menger's analysis of institutions.

## 3. Institutions according to Menger

The analysis of institutions is conditioned by Menger's methodological considerations that allow us to understand socio-economic phenomena in their generality.

Menger proposes a classification of socio-economic phenomena by drawing an analogy with natural organisms. The organisms are made up of several organs that serve the mechanical function and guarantee the functioning and development of the organism as a whole. Any disturbance in the function of one of the organs will impact the entire system and each of the organs to a greater or lesser extent. Conversely, a disturbance in the organism will affect the function of the organs. Thus, the existence of each organ is conditioned by the other organs.

In the same way, Menger emphasizes the reciprocal conditioning of social phenomena:

> The normal function and development of the unit of an organism are thus conditioned by those of its parts; the latter in turn are conditioned by the connection of the parts to form a higher unit; and finally, the normal function and development of each single organ are conditioned by those of the remaining organs (Menger, 1985, p. 130).

Social-economic phenomena could be seen as the functions expressing the life of any economy appreciated as an organic unit. Menger brings out the reciprocal causality in the analysis of social-economic phenomena.

On the other hand, Menger points out that the mere application of the methods of natural sciences is inadmissible in social sciences. An organic explanation of social phenomena could only be used partially.

> The so-called «organic» interpretation could at any rate be adequate only for a part of social phenomena, and only in consideration of certain aspects of their nature. Also, in this consideration it must not simply be borrowed from the natural sciences, but must be the result of independent investigation into the nature of social phenomena and the special aims of research in the realm of the latter. Menger, 1985, p. 136)

Natural organisms are the results of pure causal processes, of the mechanical interplay of the forces of nature. In contrast, social «organisms» cannot be interpreted as the products of a pure effect of mechanical forces. They are the results of the efforts and aspirations of men who think, feel and act aiming at the pursuit of their own interests. According to Menger, the economic analysis of social-economic phenomena seeks to explain the nature of a component of social phenomena and to determine their origin and function.

He proposes a classification of social phenomena according to the nature of their origins. One kind of social phenomena, known as pragmatic, results from an intentional activity of individuals who have their establishment and their development for their objectives. These phenomena represent «the result of the agreement of the members of society or of positive legislation» (Menger, 1985, p. 276). This implies calculations made by individuals, calculations that implement a multiplicity of means in meeting a single goal.

The analysis of these phenomena aims to understand the essence and the origin of these social phenomena from the intentions and the means available to the individuals gathered in groups, as well as to their leaders. The observer seeks to know the objectives of the agents who act and the means deployed to reach them. Thus, pragmatic phenomena must be interpreted in a pragmatic way (Menger, 1985, p. 146):

> We interpret these phenomena pragmatically by investigating the aims which in the concrete case have guided the social unions, or their rulers, in the establishment and advancement of the social phenomena under discussion here. We investigate the aids which have been at their disposal in this case, the obstacles which have worked against the creation and development of those social structures, the way and manner in which the available aids were used for establishing them.… We make use of historical-pragmatic criticism of social phenomena of the above type when in each concrete case we test the real aims of the social unions or of their rulers by the needs of the social unions in question, when we test the application of the aids to social action, on the other hand, by the limitations of success.



The other kind of social economic phenomena, called organic, presents an analogy with natural organisms. « Social phenomena come about as the unintended result of individual human efforts (pursuing individual interests) without a common will directed toward their establishment ». (Menger, 1985, p. 133)

The unintentional character of the emergence of these phenomena has led to them being qualified as "natural" or "organic". The essential difference with processes occurring in natural organisms could be presented this way: «The difference in the above respect turns out, rather, to be a fundamental one, like that between mechanical force and human will, between the results of mechanical force effect and purposeful activity of the individual human» (Menger, 1985, p. 134)

Several social phenomena such as language, religion, law, money, competition and market represent organic institutions and play a fundamental role in the life of a society: « ... but as a rule these are formed and changed free of any state influence directed toward regulating them, free of any social agreement, as unintended results of social movement» (Menger, 1985, p. 146)

Menger puts the question of the nature of organic institutions, and of the understanding of their essence and their evolution, at the center of economic science. In that sense, the analysis of phenomena of organic origin leads us to explain the individual intentions and objectives of the actions of agents, but also the means deployed by the individuals to achieve them. All this leads to the spontaneous and unexpected emergence of institutions. Understanding this process allows us to determine the essence of institutions and the consequences of their emergence in society.

Menger's evolutionary theory of organic institutions still maintains its relevance and credibility. This gave origin to Hayek's theory of spontaneous order (Hayek, 1998[1973]). We will now outline Menger's thinking on the organic origin of the institution of money; demonstrate its essence, and the implications that follow from its establishment in the market. We will also discuss state intervention and its consequences.

## 4. The emergence of money as a fundamental example of the genesis of organic institutions

### 4.1. Money as a spontaneous institution

The emergence of money is considered a classic example of the genesis of an organic institution. In the *Principles*, Menger devotes the final chapter to money, in which he develops the evolutionary theory of the origin of social institutions *via* the example of money. Menger returns to the question of the genesis of money in the *Investigations. Origin of Money* (Menger, 1892) develops some of the initial ideas. Finally, Menger wrote the substantial article on money for the *Dictionary of State Sciences* (*Handwörterbuch der Staatswissenschaften*) in 1892. This article was twice edited by author for the 1900 and 1909 editions (Menger, 1936 [1909]). In *Geld*, Menger clarifies the arguments concerning the role of the state in the evolution of the monetary system and discusses some of the consequences of the appearance of money substitutes. In the second edition of the *Principles* (Menger, 1923), the chapter on money is presented according to the *Geld* article.

Menger indicates the absence of a satisfactory theory of money: "The enigmatic phenomenon of money is even at this day without an explanation that satisfies; nor is there yet agreement on the most fundamental questions of its nature and functions. Even at this day we have no satisfactory theory of money". (Menger, 2009 [1892], p.15)

Menger considers that most authors in social sciences through the ages share the idea that money is the result of a social convention or of positive legislation. This leads to a fundamental misunderstanding of the intentions and actions of economic agents.

As soon as the division of labor reaches a certain level, barter exchange hinders the economic development of a society. The emergence of a universal medium of exchange solves this problem. The authors of the time noticed that certain goods, notably silver and gold in the form of coins, were accepted in exchanges by agents, even when they did not need it for their own direct use, or when they already possessed it in sufficient quantity. This generalized behavior of individuals was explained by a convention or law, as an expression of their will (Menger, 2007).

The authors who have defended this point of view refer to Aristotle, who had repeatedly stressed the "rationality" of the origin of money, considering money to be a product of the human mind.

> …the coin has appeared by mutual agreement... it is in our power to change it or to put it out of use (Aristote, Eth. Hic., V, 8)



> [Men] agreed to give and receive in exchange something which, having a value in itself, would at the same time be very convenient in everyday life. (Aristote, Pol., I, 6).

Menger criticizes this approach: First, many social institutions have emerged «in epochs of history where we cannot properly speak of a purposeful activity of the community as such directed at establishing them» (Menger, 1985, p. 146). Second, he the natural character of the origin of different forms of money (various commodities) can be denied.

The rationalistic theory permanently faces an unsolvable logical problem, i.e. the impossibility of explaining the origin of this common agreement/convention . This problem pushed the rationalistic theory to reinforce the role of the state in the emergence of money and eventually took the shape of G. F. Knapp's chartalism (1924 [1905]).

However, even in this form, the theory is unsatisfactory, as it cannot explain the logical paradox that follows from it: how can we invent a social institution that has never existed before? Menger warns:

> To be sure, it must not be overlooked that in most of these cases the legal stipulation demonstrably had the purpose not so much of introducing a certain item as money, but rather the acknowledgment of an item which had already become money. (Menger [1883] 1985, p. 153).

However, the statement is just about choosing a commodity to fulfil the role of money, and not about inventing money as a universal medium of exchange. Would an economic agent agree to wait for the State to decree some goods as a medium of exchange, when his condition would already be improved by an exchange of his own commodity for another with greater salability? Menger states:

> The economic interest of the economic individuals, therefore, with increased knowledge of their *individual* interests, without agreement, without legislation compulsion, *even without any consideration of public interest*, leads them to turn over their wares for more marketable ones, even if they do not need the latter for their immediate consumer needs (Menger 1985, p. 154).

Contrary to the rationalistic approach, Menger affirms that the emergence of money is an evolutionary process, spontaneous in character, and conditioned by the economic interest of agents, which appeared without convention or legislative constraint:

> 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 the product of a legislative act. Even the sanction of political authority is not necessary for its existence (Menger 2007, p. 261-262).

### 4.2. Theory of saleableness, and how a commodity becomes a money

With the development of the division of labor and the production of goods, the direct exchange makes market participants confront the inevitable problem of finding a counterparty to carry out the transaction. Menger emphasizes two aspects of this problem: first, a precondition for an exchange to take place is an inequality of subjective values. This in turn means that the value of the good that individuals forgo should be lower than the value of the good they receive in exchange. This is also called the double coincidence of needs. Second, a sufficient level of development of the market infrastructure is necessary for these two people to meet and exchange. (Menger, 2007, pp. 257–258).

However, in a situation where the realization of the exchange is difficult, economic agents will act irrationally if they neglect the opportunity to advance towards the final objective, exchanging their goods for another commodity with greater exchangeability on the market: «The theory of money necessarily presupposes a theory of the saleableness of goods» (Menger, 2009, p. 21).

Menger gives the example of an Homeric age arms manufacturer who preferred to exchange the weapons he produced, the marketability of which is very low, for cattle which he did not directly need to satisfy his needs, but which possessed a higher degree of saleableness. Thus, the arms manufacturer could exchange cattle for the goods he needed (Menger, 2020, p.259). The characteristic of goods to be sold (saleableness or marketability) is not an intrinsic property of goods. It is based on the subjective preferences of economic agents and depends on various factors. In *Principles*, Menger distinguishes the following ones: the group of persons interested in the good; the markets; the transportability of goods and the development of means of delivery; the regularity of markets over time; the possibility of arbitrage.

*The Origins of Money* clarifies these factors (Menger, 2009, p. 29): the number of demanders and the durability of needs; the purchasing power of these people; the number of products corresponding to unsatisfied demand; the divisibility of the good and its adaptability to individual's needs; the level of development of markets and of speculation in particular; the number and nature of restrictions imposed on the exchange and consumption of goods by the state.

Speculation is presented as one of the factors of the saleableness of a good on the market. The purchase of goods in the present by speculators with the aim to resale them in the future indicates the possibility of accumulation of such good without incurring a loss.

The possibility of speculation (i.e. the absorption of surplus of goods today and their resale tomorrow) is presented as a separate factor. It indirectly indicates the importance of the role of money as a store of value. This situation is typical for goods with an expanding demand, when the sales uncertainty is reduced and relative price stability is preserved:



"Commodities whose prices are not well known or subject to considerable fluctuations also do not pass easily from hand to hand" (Menger, 2007, p.255)[i].

The demand for an exchange intermediary expands due to "network effects": the more people use a good as money, the more the demand for that good increases. This increase in demand comes from both new users and those who have used it before.

The process of the emergence of money is evolutionary, progressive and dependent on habits and imitations. Not all individuals understand immediately the benefits of owning a commodity that is more exchangeable than other commodities but "there is no better way in which men can become enlightened about their economic interests than by observation of the economic success of those who employ the correct means of achieving their ends..." (Menger, 2007 [1871], p. 261), so people who realize the benefits of owning such a commodity, develop the practice of indirect exchange. As people realize that there is an advantage to use one specific commodity to reduce the cost of exchange, indirect exchange develops and promotes this commodity to the rank of universal medium of exchange.

The diffusion of knowledge leads to the formation of a social institution:

> Increasing understanding of the causal connections between things and human welfare, and increasing control of the less proximate conditions responsible for human welfare, have led mankind, therefore, from a state of barbarism and the deepest misery to its present stage of civilization and well-being (Menger, 2007, p. 74).

This idea has often been interpreted for technological knowledge. However, it could also apply to the emergence of money.

A. Festré in her study on the role of knowledge in the Mengerian process of emergence of social institutions identifies four mechanisms in the process of the selection of a good as money: asymmetry of knowledge between "leaders" and "followers"; learning by imitation; selection process depicted as self-organizing procedure, i.e. lack of legal interference; and network effect, modeled as the spread of a specific commodity as money increasing the value of its use. It makes it possible to characterize this process as a "self-enforcing learning process" (Festré, 2012).

Therefore, money arose from the intentions and interests of economic agents, from their actions in finding an instrument to achieve their ends in the shortest time possible (in this case: the rapid acquisition of goods to satisfy human needs). The theory of the origin of money is consistent with the theory of human action and the general theory of goods. The final purpose of all economic activity is to satisfy human needs. Both production and exchange operations, which can satisfy human needs only indirectly, are undertaken in the pursuit of this final objective. The selection of goods for the role of money takes place between economic goods which are scarce in relation to human needs. In Menger's conception, it is impossible to choose a "sign" or a "certificate of acquisition of goods" as money emptied of its value in consumption.

**4.3. THE FUNCTIONS OF MONEY AND ITS EFFECTS**

The essence of money exclusively lies in its role as a medium of exchange. Menger repeatedly insists: "in trade markets certain wares emerge from the sphere of all the others and become means of barter, «money» in the broadest sense of the word" (Menger 1985, p. 152).

Money fulfils the role of a measure of exchange value because: "The valuation of commodities in terms of money thus not only answers, as we saw before, the ordinary practical purposes of valuation most effectively, but is also the most convenient and the simplest in practical operation. Valuation in terms of other commodities is a more complicated procedure that presupposes prior valuations in terms of money" (Menger 2007, p. 277).

For the same reason, money is the preferred instrument to store value to intends to acquire other goods. However, "the functions of being a "measure of value" and a "store of value" must not be attributed *to money as such*, since these functions are of a merely accidental nature and are not an essential part of the concept of money" (Menger 2007, p. 280).

The impact of the existence of money on the economy is wider than the reduction of the transaction costs (i.e., the time to find a counterparty for the direct exchange of goods). Any social institution contributes to reducing uncertainty, and money contributes to it in several ways (Kavaliou, 2021).

First, Menger interprets the emergence of money as a way of eliminating the fundamental uncertainty that lies in the production and exchange process.[ii]: "This difficulty [Uncertainty] would have been insurmountable, and would have seriously impeded progress in the division of labor, and above all in the production of goods for future sale, if there had not been, in the very nature of things, a way out" (Menger, 2007, p. 258).

It is this uncertainty that pushes individuals to hold goods with the highest degree of saleableness. Money as an exchangeable commodity reduces uncertainty because under indirect exchange, entrepreneurs are relieved from the need to predict the future demand for money. Everyone sells for money, and everyone buys for money.

Second, holding money also allows economic agents to reduce uncertainty. In *Geld*, Menger points out: "…the quantity of money used for payments at any time forms only a part, indeed only a relatively small part, of the cash resources required by a nation, while another



part must be held in the form of reserves of various kinds to provide for uncertain payments that in fact in many cases never take place at all (for the sake of the undisturbed functioning of the economy!" (Menger 2002 [1909], p. 85).

Third, the existence of money makes it possible to determine monetary prices and allows entrepreneurs to engage in economic calculation (costs vs. revenues, profit vs. loss): «As soon as essentially all or nearly all prices are in fact money prices, the valuation of goods at their exchange values expressed in money becomes a matter of course; hence the function of money as 'price indicator and standard of exchange value'» (Menger 2002, p. 76).

Menger anticipates Mises' monetary argument concerning the problem of economic calculation and indicates the presence of monetary prices as one of the conditions to achieve economic efficiency. Menger quoted "one of the most advanced and meticulous younger representatives of our science", E. von Philippovich:

> Only the general adoption of the valuation of goods in money makes possible accurate calculations of production costs and revenues in individual enterprises and so their detailed comparison and the exact quantitative assessment of the success of production for the wealth of the entrepreneur. The valuation in money of all goods and services entering or leaving the enterprise is the necessary basis for every calculation of profitability and so for careful management. Furthered by competition among the individual enterprises, it contributes substantially to making the principle of maximum efficiency prevail in their management. In particular, it provides for an accurate calculation of prices and a mathematically accurate estimate of the limits of profit and loss (Menger 2002, p. 61).

Economic calculation is carried out by entrepreneurs. For Menger, the concept of uncertainty is closely connected to the concepts of time and entrepreneurial activity. In Menger's conception, the entrepreneur acts in the real world and in real time (Salerno, 2014). Menger sees entrepreneurship as the process of transforming high-order goods into first-order goods suitable for the direct satisfaction of human needs. The main uncertainty of the economic system is related to the difficulty to predict the quantity and quality of consumer goods that consumers wish to consume in the future. Owners of higher-order goods are always in a state of uncertainty about future demand of first-order goods. A special category of entrepreneurs solves the problem to determine the quantity of output of various commodities and services:

> As soon as a society reaches a certain level of civilization, the growing division of labor causes the development of a special professional class which operates as an intermediary in exchanges and performs for the other members of society not only the mechanical part of trading operations (shipping, distribution, the storing of goods, etc.), but also the task of keeping records of the available quantities (Menger 2007, p. 351).

Entrepreneurial activity allows to meet consumers' needs. It requires an appropriate capital structure, and it is money that allows capital to be allocated to its fullest potential. Capital as an asset is able to be deployed to meet future needs, exists in Robinson Crusoe's non-monetary economy. But Menger agrees with K. Knies: "... capital was everywhere able to develop its economic power strongly only after the introduction and widespread use of metallic money and to reveal its more extensive power only at higher levels of civilization." (Menger 2007, p. 305).

In addition, money facilitates the allocation of higher-order goods in another way. Sometimes their owners cannot discover the best way to use those higher order goods themselves. As a consequence, these goods remain partly idle. Due to the possibility of monetary valuation, another entrepreneur might find a more productive allocation for such underused assets. Monetary exchange in this context allows to buy or rent these higher-order goods more easily from current owners. So, money tends to increase productivity, ensure an optimum allocation of higher-order goods and expand the national output.

Naturally, economic calculation requires the relative stability of the value of money: «An appreciation of the value of a currency [due to government intervention] is no less an anomaly for the national economy [...] than a depreciation one» (Menger, 2009. p. 206)

Any government intervention in the monetary sphere is liable to distort the relative price system, so Menger strictly disapproved the attempts to "regulate" the value of money by manipulating the money supply. Menger warns proponents of such measures: "fluctuations in the world-market prices of the precious metals seem to me to involve still lesser dangers than regulation of the inner exchange value of money[iii] by governments or social and political parties" (Menger 2002, p. 71).

During the design of the monetary reform in Austria-Hungary, Menger was one of the 35 experts participating in the parliamentary debates on the determination of gold quantity embedded in the new currency unit and the appropriate international monetary system. He opposed the change from the guilder to the crown and the alignment of its gold content with the German mark or the French franc, arguing that such changes in the money supply due to the inertia of the population's thinking and habits would lead to an increase in uncertainty and would cause economic actors to revise the value of money holdings (Menger, 1892b), which could lead to serious disruptions of economic processes (Chaloupek, 2003).

**5. THE ROLE OF THE STATE AND LEGAL TENDER**

Menger denies any role for the state in the origin of money, but he does not exclude state intervention in the process of the evolution of money in its later stages. Menger



considers that this intervention could have a positive impact, without denying the possibility of some simultaneous negative effect.

In the *Principles*, Menger emphasizes two aspects of the state's influence on the development of the institution of money. First, recognizing a certain good as a legal tender increases its saleableness in the market, thereby increasing the demand for it as a medium of exchange. «The sanction of the state gives a particular good the attribute of being a universal substitute in exchange, and 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 2007, p.262).

Second, during the transition from different commodity-moneys to a single metallic money, the state took over the certification of the quality and weight of bars and coins, thereby reducing transaction costs and increasing the saleableness of precious metals. Despite the fact that market process would be capable to fulfil the function of certifying bars and coins through private coinage , Menger does not deny that the unique position and power of the state in society could also lead to the same effect: "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 the coinage" (Menger 2007, p. 282).

Menger reinforces this argument in *Geld*, where he already points out the *inevitability* of government intervention in the coinage process due to the inability of private producers to supply sufficient quantities of means of payment to the market. The reasons for this inability are: a) the large amount of capital required for this type of business and b) the high degree of competition that leads to low profitability in this activity. This reasoning seems contradictory: a high degree of competition that leads to low profitability of coinage is an evidence of the presence of a multitude of producers in this market, able to acquire the necessary capital.

Coinage (compared to the use of bars) reduces the costs of exchange in the same way as the appearance of money itself, as it became easier to ascertain the quality of one's money. The period of the use of bars was characterized by its inconvenience and the need for regular quality controls of the ingots, weighing and cutting[iv]. The presence of an economic interest to obtain the most convenient payment instrument leads to the appearance of coins, in the same way that the production of French baguettes satisfies the corresponding demand. Thus, legislative initiative is not necessary for this type of activity. (Hülsmann, 2008)

In *Origins*, Menger makes an additional argument in favor of legal tender. It is the unification of the monetary system:

> The difficulties experienced in the commerce and modes of payment of any country from the competing action of the several commodities serving as currency, and further the circumstance, that concurrent standards induce a manifold insecurity in trade, and render necessary various conversions of the circulating media, have led to the legal recognition of certain commodities as money (to legal standards) (Menger, 2009, p. 52).

This idea was developed in *Geld*: the unification of the monetary system helps to simplify the understanding of economic activity by market actors, to create the basis for reliable accounting and to promote the cooperation between various economic regions.

Nevertheless, legal tender law presents additional difficulties: a) the necessity to maintain a face value ratio for coins issued in different metals when metal prices fluctuate, and b) the different market valuation of coins with different degrees of wear. This requires additional legal measures, including a requirement for the state to buy back worn coins at their nominal value (Menger 2002, p. 46–48).

To decree a legal tender by a law is not absolutely necessary. There is at least one example where a state has not enforced any such a law during its existence, namely the Grand Principality of Litva. Different types of currencies co-existed, including foreign ones, during more than half a millennium (Kavaliou, 2018). To secure the trade, the state provided information such as charters covering the "completeness" (weight and rate) of various thalers.

The choice of one currency via legal tender helps to reduce transaction costs, but creates the possibility of abuse in relation to the quality of the coinage. In his analysis Hülsmann demonstrates that the introduction of legal tender and coinage monopoly could lead to a decrease in the diversity of coins available on the market and lead to the alteration and debasement of the money (Hülsmann, 2008). Moreover, it may spur fractional reserve banking (Hülsmann, 2014).

In addition to the problem of the quality of the money issued by the state, legal tender has a negative influence on money as an institution. The state propagates among the public a dangerous illusion about the essence of money: a coin, which is actually a certified unit of weight, could be represented as a kind of conventional sign (Menger, 2007). The function of legal tender is emphasized by the state, while distorting the understanding of the essence of money.

Money is a legal payment by its own nature, without any recognition by the state. Menger interprets the «legality» of money as a means of payment in a broad sense: as soon as money is accepted as payment for goods, it becomes recognized from the point of view of Civil Law, which means it becomes legal:

> If one keeps in mind the function of money as the thing that mediates commodity and capital



> transactions ... it would be redundant to ascribe to money a special function as medium of payment or even as general medium of payment, since the above functions and ways of employing money already embrace all money payments that actually occur in the economy (Menger 2002, p. 51).

A logical aberration leads to the fact that the state tries to retroactively invent the purpose of the institution of money. As a rule, the state proclaims price stability as its purpose with all the consequences this doctrine entails.

The idea of the "reference value" of money is meaningless, since there are insoluble contradictions in the construction of an index measuring price stability. Menger considers that each household has its unique set of consumer's goods and therefore its own structure of consumer spending that could vary. Menger considered the prejudice that money with an "unchanging intrinsic value" should be eliminated from science (Menger, 2005 [1892]). The fixation of such a goal leads the state to more important interference in the monetary sphere. Moreover, government officials find various loopholes to demonstrate successful achievement of far-fetched goals, which requires constant efforts to refute this fact.

K. Israel and G. Schnabl wittily raised the question of revising the calculation of the price growth index (K. Israel, G. Schnabl, 2020). The authors found a discrepancy between the perceived inflation rate by economic agents and the harmonized price index (HICP) in the euro area. This discrepancy is explained not only by permanent adjustments to the rules for calculating the HICP index, but also by the exclusion of some commodities and services from the basket of reference goods. Actually, these commodities and services are an important part of current and future consumption. First, some of them are public goods. For instance, education and health care are included in the HICP only when they are out of the scope of the public sector. Their weightings are therefore underestimated in the HIP compared to reality (0.93 and 5.38% respectively). More importantly, the index takes into consideration only the prices of current consumer goods, while individuals do not limit themselves to care about today's consumption; humans are "homo saving", so the dynamics of long-term assets prices (real estate, bonds) is of great importance for individuals. The inclusion of such commodities in a representative basket allowed the authors to calculate alternative inflation rates. The average annual price growth in Germany was 1.1 % higher since the introduction of the euro, and even by 2.5% since 2010. Real economic growth turns out to be much slower, as does the growth of real incomes. At the same time, those households, whose incomes are based on present wages, suffer the most. All attempts to achieve price stability in order to properly value goods and efficiently allocate resources in the face of changes in the value of money (gold and silver) have given rise to ideas of "neutralizing" the influence of the value of money on prices through government regulation of the quantity of paper money.

Menger points out that the government monopoly in the production of money can ruin the money institution: «the monetary system of a country is the more perfect the less it depends on legal tender» (Menger 2002, p. 81). He took the example of the *assignats* during the French Revolution, which were good media of payment, but bad money, and the hyperinflation of *assignats* completely distorted the French economy and impoverished the French people:

> The assignats of the French Revolution, whose status as legal tender was backed up by the guillotine and a series of legal regulations intended to thwart any attempts by creditors to escape the effects of legal tender, undoubtedly were quite ideal 'media of payment' from the standpoint of the administration of justice and perhaps also of debtors who had already satisfied their credit requirements. But were they also ideal money? That is not a legal but an economic question, which the history of money has answered: we know from it that despite all laws and all government regulations involving force, these 'legal media of payment', which were so splendid from the standpoint of the judicature and of debtors, eventually ceased altogether, and indeed for reasons of the 'convenience of trade', to be generally used media of exchange (usual money), that is, money in the economic sense of the word (Menger 2002, p. 79).

An interesting aspect of a possible positive influence of the state on the evolution of the monetary system would be the possibility of importing the institution of money (Menger, 2011 [1883], p. 297): Nonetheless, it is certain that the institution of money, like other social institutions, can be introduced by agreement or legislation, especially when new communities are formed from the elements of an old culture, e.g., in colonies. (Menger 1985, p. 153). However, contemporary studies indicate controversial effects of the import of institutions. (Milgrom, North, Weingast, 1990).

Although, Menger did not deny the role of the state in improving the institution of money in the later stages of its evolution, he did not abandon the spontaneous evolutionary theory of the origin of money (Kavaliou 2020a). For this reason, we cannot agree with Y. Ikeda's conclusion that Menger's position on the emergence of the institution of money has changed from an organic approach (spontaneous order) to a "more balanced approach" (Ikeda, 2008). It is important to analyze the evolution of Menger's thought in the context of scientific controversy. The inclusion in *Geld* of elements reinforcing the role of the state in the process of the evolution of money could be seen as a concession to the Historical School during the Dispute over Methods, a certain convergence of positions with unconditional fidelity to the basic approach of the emergence of social institutions in an organic way (Semenova, 2014). Such an interpretation is in line with the temporal evolution of the Dispute over Methods (V.



Avtonomov, Yu. Avtonomov, 2016).

### 6. Some contemporary problems in the light of Menger' theory of money

The world economy in the twenty-first century demonstrated a new round of research to improve the institution of money. The emergence of new means of payment such as cryptocurrencies based on decentralized blockchain technology, and their analogue attempt to develop **stablecoins** by large companies, question the current paper money system. Finally, plans to implement official digital currencies such as Central Bank Digital Currency (CBDC) are under study. How can these trends be explained in terms of Menger's theory of money?

The first observation concerns the status of cryptocurrencies, likes bitcoin. In various studies, the definition of its role in the economy ranges from money ("bitcoin is the digital equivalent of gold") to a money laundering tool. Finally, there is an approach in which bitcoin in the economic system is determined on the basis of the state's attitude toward it - and because bitcoin appears not via legal tender, it cannot be considered as money in its essence (Dubyansky, 2017), which contradicts the evolutionary theory of the origin and development of institutions.

We consider that for a correct understanding of this phenomenon it is very important to emphasize the lack of competition among the goods selected for the role of money. Under state monopoly over fiat money as means of payment, we cannot determine whether bitcoin would be money at all, and it is not just a question of whether bitcoin could compete against fiat money in a centralized monetary system. The question is that we do not know which of the many commodities would have been chosen by economic agents to play the role of money under free competitive choice in the same way that gold and silver were once chosen to play this role.

According to Menger's evolutionary theory, the selection of goods for the role of money is the result of countless human actions, each of which improves the condition of an individual, but none of which are intended to "invent" money or even to select any commodity for this role. Bitcoin, by its nature and the functions it performs, can be considered as one of the candidates for the role of money. Nevertheless, the state is not ready to abandon legal tender laws and to allow individuals to select a universal medium of exchange.

The second comment concerns the prospects of digital currencies and CBDC in particular. Most central banks around the world are exploring the possibilities of digital currencies: China is testing CBDC and Russia has approved the concept of creating a digital ruble. Such an high activity of central banks can be explained by the desire not to lag behind private issuers in the technological development of the monetary system, although in fact the planned CBDC will be the fungible with fiat money that central banks are already issuing, but in a form which may enable money expansion even more (Hansen, 2019).

It is important to note at this stage the restrictions announced by central banks on the use of CBDCs. China may introduce the possibility of a discretionary limitation of the duration of the digital yuan in order to stimulate consumer demand, if necessary. In Russia, the digital ruble may perform the role of an instrument of payment only with the impossibility of using it in deposit and credit transactions. It seems that any limitation of the functions of digital currencies compared to alternative forms of money will cause, in the understanding of economic agents, an increase in the costs of storing assets in digital money - thus, accordingly, reducing demand for them.

Digital currencies provide the ability to control payments and excludes any anonymity. The "coloring" of the currency (meaning that each digital record has a number and it is possible to forbid that number to participate in any transactions) will limit the scope of its use by the owner - and the state will move on to a new level of control over citizens, determining for everyone the level of purchasing power of the currency he "deserves". This leads to the search for new spheres of regulation of the money institution.



## 7. Conclusion

Menger's methodology is based on individualism and subjectivism; it also incorporates deductivism and Aristotelian realism.

The analysis of organic institutions demonstrates their evolutionary, gradual emergence, without the state playing a role. The emergence of an organic institution is not designed by individuals, but occurs through the individual actions of people pursuing their subjective ends.

The example of the emergence of money is of great epistemological importance. Menger studied this question through several works: beginning the study in the *Principles* in 1871 and completing it with a final revision of the *Geld* article in 1909.

Menger firmly refutes any role for the state in the emergence of money without denying the intervention of the state in the process of perfecting the monetary system at later stages.

Any social institution contributes to reducing uncertainty - and money contributes in several ways. The existence of money makes it possible to set up monetary prices that allow entrepreneur to make economic calculations. Menger anticipates Mises' argument concerning the problem of economic calculation and the role of money in this regard.

The essence of money is being a universal medium of exchange. Other functions of money, such as that of store of value and price measurement, are derived from its principal role.

The theory of the origin of money which assumes the creation of money by the state leads its supporters to determine an objective which underlies the governance of monetary institution such as Central Bank. This purpose is most often represented by the stability of the price level, that is, the stability of the value of money. Menger warned against the dangers of state regulation of money.

Menger states that legal tender provisions improve the monetary system but cause confusion about our understanding of the essence money.

Bitcoin, or other cryptocurrencies, could be considered candidates for the role of money. Nevertheless, we could see if bitcoin becomes money only with the abolition of legal tender laws that allow economic agents to choose what to use as a universal medium of exchange.

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[i]The possibility of being used as an instrument of accumulation is important precisely in the process of selecting this or that commodity for the role of money. As to accumulation in money itself, Menger points out the absurdity of such an exercise.
"Analysis of the economy's demand for money has often started from misleading premises. The view that it is especially advantageous for a nation to accumulate the largest possible stock of cash resources ... are, to be sure, errors already refuted". (Menger, 2002, pp. 84-85).
At the same time, the accumulation of money and the demand for money are for Menger unequal concepts; the stock of money is absolutely necessary to the economic agent, and money in this stock continues to perform the function of a medium of exchange: "As soon as one commodity or a number of commodities have become generally used media of exchange for a people, there arises in every individual economic unit that participates in the division of labour, in addition to the demand that may have existed previously for these commodities for purposes of consumption and technical production, a further and different demand for medium-of-exchange purposes". (Menger, 2002 , p. 83).
In a developed monetary economy, money (even paper money) performs the most important function of a medium of exchange not only at the moment of realization a transaction, but also at every moment of its presence as a stock, providing to his owner at any desired moment of time the possibility of exchange for any good.

[ii] The term «uncertainty» disappeared in the English translation. In the original German version Menger did not use the words «future sale», but «uncertain sale» [«ungewissen Verkauf»] (Menger 2007, p. 251).

[iii] Menger uses the terms «outer» and «inner» value of money for the external and internal factors of its value, i.e. factors affecting the value of money from the side of goods, and from the side of money itself (see Menger 2005, Campangolo 2005, Kavaliou 2020b, Salerno, Dorobat, Israel, 2020)

[iv] In *Principles*, Menger in details analyzes the term «money» in different languages. It give us some light on the basic commodity-money in different regions. The name of one of the monetary units of the time of Kievan Rus'–« rezana» («rezat » means «to cut off» in Russian) is the proof of the existence upon a time a such period of «before coinage».