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# CHAPTER 1

## THE PLATONIC CREDIT ECONOMY AND FIAT MONEY

Money as Token of Credit in Exchange

*Πίστις ἀφορμὴ τῶν πασῶν ἐστὶ μέγιστη πρὸς χρηματισμόν.*

[«Credibility (trustworthiness) is the greatest asset for money making»].

Demosthenes, *In defence of Phormion* (the banker), XXXVI, § 44

The first extant philosophical investigation into the origin of urbanism to appear in the context of the Ancient Greek History of Ideas occurs in the Platonic corpus. The theory is meant as a genetic explanation of the existence of the city, while also constituting an adequate analysis of its essential nature.

For Plato, *need* and corresponding *utility* is the foundation for the relatively closed-packed cohabitation of human beings in the same place forming a *city*. Man is not self-sufficient with regard to goods and services that he requires for his existence and well-being. Thus he stands in need of the goods produced and the services rendered (or produced and rendered in a better, easier or more efficient way) by other men. Man is thus drawn to man by *human need* (ἡ ἡμετέρα χρεία): and so they coinhabit the same definite space, in order for each one to avail himself of the products and services of the other. This is the origin of an urban center, the dense nexus of society which constitutes a real city, and indeed the true example of society in strict sense, i.e. of an association of men standing in vital interdependence [1].

The reason according to Plato why human need pushes towards greater integration of human life in society is that the individual man is not optimally self-sufficient, in the sense that he can not cater to his needs *in the best way* on his own. *Self-sufficiency as goal of human existence contradicts man's optimal self-realisation*. Each man has by nature definite capabilities geared for particular kinds of work, and his overarching purpose in life is to heighten his characteristic powers and

maximize the activity, for which he is best suited, because this is what secures real happiness. *The principle of excellence as ultimate end implicates therefore the principle of specialization* [1a]. Best results are obtained when each one does one's own optimally, and thus acts with maximal efficiency.

*The social nexus rests on need and utility.* It is the principle of utility working into the very foundation of social life. In fact, the mode in which the societal bond satisfies the human need that provides the reason for its existence is through *exchange: utility is exchanged for utility in the most profitable way*. Any giving or receiving is realised under the belief that the transference augments the advantage of him who bestows or accepts the thing (good or service) transferred: as a result of the transaction *he raises the potential of usefulness that he commands* [2]. Furthermore a transaction in the social context (as against family ties or relationships of friendship [3]) is basically a two-way process between the two involved parties, with each one of them functioning simultaneously on both sides of the act of transference, as giver and receiver. That is, the transactions which constitute the reason for the existence of well-organised (urban) society are *exchange* transactions. Now this exchange does not consist simply in the mutual transference of goods or services, but specifically in a transference conducted by the influence of *need* under the principle of *utility*: both parties believe that by performing the transaction they thereby increase their respective advantage and potential of usefulness.

The exchange is essentially a plus-plus operation for the parties involved. If taken in isolation as a two-pole momentary interaction, an exchange constitutes a *perceived* gain-gain transaction. The exchanging parties act so as to maximise (in the given circumstances) profit, i.e. (total) utility - as they judge it there and then. Within the social nexus, and under conditions of perfect economic freedom, the same type of exchange (i.e. one involving the same exchanged commodities) is abstracted from the particular circumstances of the exchanging parties and is objectified (when properly calibrated as to quantity) into a definite relationship of utility between the two things

(goods or services). This objective utility-ratio cannot be grounded ultimately in anything else than the relative intensity of the corresponding needs (to be satisfied by the two commodities) according to *human nature*. This absolute norm determines the average relative degree of want regarding the two commodities, average of the relative degree of intensity between the corresponding aggregate individual wants in theoretically all possible situations. This opens the possibility of an essentialistic foundation of market-economy with a concept of absolute value. But of such basic work, more in the sequel [3a].

Genuine exchange is therefore a double operation of mutual, believed profitability. *It is a selling and buying instantaneous transaction. The foundation of the social bond is, for Plato, the market (ἀγορά); and money, as we shall see, lies at the heart of the matter* [4].

*The city, urban community, as such is essentially a market, and exists for the market.* In the core of a city there lies the physical market, the market-place, where exchanges take place. The physical market is the place where demand meets supply. But the existence of this meeting place by itself is not sufficient for the smooth flow of the market processes. A supplier cannot wait in the market-place all working time for the opportune encounter of another supplier who happens to demand the output of the first one, while simultaneously supplying such a commodity as that former one stands in demand of, and further on, the two standing in a relationship of need for their respective utilities which falls within an acceptable band around the *normal* ratio of demand for the commodities involved. Thus for the proper operation of the market, *retailers are required in the market place* [5].

A retailer cannot conveniently, and, in most cases esp. in the antiquity, cannot absolutely, keep in permanent supply all the marketed commodities so as to be able to sell instantly upon demand, and to buy instantly upon supply, by natural exchange. He cannot, for instance, possess or buy an impressive stock to begin with, many goods are not durable, services cannot be profitably located on

perpetual offer. The universal shop at immediate supply is a sheer impossibility. Any approximation to it would be an immensely wasteful enterprise.

But what a single retailer cannot do, the entire market-place can. Anyone may come to it and sell or buy anything. The market-place as a whole (with the services also being mostly available in it) constitutes the universal shop required for the establishment of a really closely-knit social nexus.

Still, one may want to sell without wishing to satisfy any particular present need, or to buy without wishing to sell any particular commodity of his business. One then sells against a past or future purchase, or buys against a past or future vending. Such selling and buying correspondingly increases and decreases *the liquidity of owned utility, a commodity being rigid utility*. When one parts with a commodity in the market, he frees the corresponding degree of the aggregate utility he possesses from a definite task and need-specific determination. And the contrary is the case with acquiring in the market.

In barter there is not only transference of utilities across the table between the two parties involved, but also a transformation of specific utilities in each party. In A utility a becomes b, while in B the reverse happens.

In a non-barter transaction, the seller liquefies a given specific (solid) utility thereby acquiring the equivalent degree of non-specific utility, i.e. the right to claim immediately or at some future time an equivalent degree of any of the available specific utilities. Liquid utility is the power to command any equivalent solid utility whatsoever; it is, in other words, a definite amount of purchasing power in general.

Once the market is established, it is self-propelled to higher and higher levels of efficiency. *Barter is thus substituted by credit transactions*, i.e. exchange transactions involving credit. For to liquefy utilities, or to buy and sell not in direct and complete two-way commodity exchange, but against the past or the future (when the complementary and reciprocal part of a full, natural exchange had

happened or will happen), is to institute credit. These credit-exchanges must be as good as full-blown, complete barter-exchanges. The liquid utility (or purchasing power) acquired in exchange for the commodity or service transferred is as good a utility as any specific (solid) commodity or service, even though it is a *right* or *claim* for some equivalent concrete utility, realisable at any time presently or in the future. A liquid utility as such cannot satisfy any need, unless by being first transformed in some particular solid form (good or service) by buying. But the *command* over an equivalent form of solid utility involved in the possession of a liquid utility must be as real as the command over some solid utility involved in the possession of this solid utility itself. Debt obligations arising from such credit-exchange transactions must therefore be absolutely binding and legally enforceable.

A credit economy could thus conceivably work without money as instrument of exchange or even conceivably without money as unit of account, in a manner more elemental than the one Hawtrey argued for [6]. Each debt created in a credit-exchange would have to be registered then in terms of the actual item and quantity transferred. One might abstractly even conceive of such transactions integrated into a complete system. But, without a common unit of value, the idea is no more, really, than a thought experiment. To give it flesh, one would have to envision a completely centralised society with a High Office of the Market overseeing all market transactions, keeping full notice of them, and simultaneously possessing adequate reserves of most kinds of commodities which would enable it to solidify on request any given liquidity of value in the form demanded. The Book of the Mart would then be an account of all liquid utility floating around (a replica of all transactions enacted), while the Central Reserves could answer any request for value solidification.

But this is a theoretical construct, not the way of History. The great Palatial centers of the Mycenaean World did in fact leave us in the form of written clay tablets a literature exclusively of an economic nature occupied with lists of goods and personnel. The great bulk of



the Linear B inscriptions have been found in the actual Palaces at Knossos and Pylos, so they should be taken as administrative archives registering offerings to the state-gods or «gifts» to the kings, or payments and distributions to officers, artisans, cultivators etc., or wages and rations to labourers, working or against work done, for the Lord of place, and the like. *They are the records of secular fiscality and sacral devotion, not the accounts of all economic activity, or a complete register of market transactions, going on in the realm.* In fact, the mass of the Linear B tablets discovered in Mycenae itself has been found in (presumably private) large houses lying far from the Palace and even outside of the Mycenaean Acropolis. They probably belonged to persons of substance, merchants, traders or big manufacturers and the like [7].

A similar situation obtained in prime Mesopotamia, even with the cities of Babylonia at the earliest Sumerian Dynastic Period (around the middle of the third millenium B.C.) [8], more strictly Temple-dominated in the beginning, to be sure, but soon developing into more and more private-oriented enterprising and professional activity in the sequel [9]. A very significant feature of the economic landscape in early Ancient Mesopotamia is the marked diversification in the size of the operating ventures. In the period of Ur supremacy, for example, their range stretches from the Temple's extensive domains and integrated activities on the one end, to huge agricultural concerns (of up to 50.000 sheep and 1.500 oxen) and big manufacturing establishments (comprising in one case eight distinct workshops - (1) wool workers and tailors, (2) carpenters and joiners, (3) carvers of wood and ivory, (4) smiths, (5) jewelers, (6) cutters and engravers of gems and semi-precious stones, (7) leather workers and (8) making of mats, baskets and waterproofing of the boats), to lesser enterprises and the free little cultivator or artisan at the other end [10]. The idea of an exclusively or overwhelmingly Temple-centered economy with practically no or minimal private ownership and private productive or trading and servicing activity is an unwarranted deduction from the fact that the economic registers preserved in the inscribed tablets which have been discovered represent, esp. at the earlier ages, temple

accounts. This is exactly what should be expected in view of the *overall* importance of the sacred places. Besides there is no denying the considerable role of the Temples in Sumerian and Akkadian Mesopotamia, as corporate institutions financial, with vast real property, selective manufacturing involvement and even some trading activity [11]. The point is that by the side of these corporations, (themselves not State-owned, i.e. not in the hands or under the control of the political authority), there existed right from the discoverable beginning private appropriation, ownership and economic activity [12]. In the Assyrian Empire, furthermore, we meet an early example of a clearly defined commercial strategy carried through private enterprise and based on a firm military power-base securing freedom of communications and transfers [13].

Palatial and Sacral Archives of the Ancient Near and Middle Eastern World do not represent a complete record of all economic transactions in the realm, nor did the Royal and Temple Stores function as the universal Reserves for an integrated, non-money credit-economy. Very far from it. King and God were big private economic agents, usually in sharp competition between themselves, and their influence reflected the impact of their respective productive potential, financial significance, but also overall authority temporal and spiritual correspondingly. It is an anachronism to speak of a *planned political economy* in early historical times. The very absence of *public* money from a complex economy signifies by itself how inconceivable it was that the otherwise very strong political power could *control* factors, or even *guarantee* structures, of economic activity. Means and instruments for the realisation of systematic planning were simply unavailable [13a].

It is significant that already in that age there was in Mesopotamia, with no fully integrated economy, even *credit* and *interest* in the absence of any material money [14]. There is some evidence from the Mycenaean world of a similar practice of credit in commodities [15].

In so far as we can judge empirically, *urbanization, invention of writing, developed artisanship (introduction of metallurgy) and the*

*primeval efflorescence of art went hand by hand in earliest (pre-dynastic) southern Mesopotamia (c. 3000 B.C.) [16]. Unmoneyed credit followed suit close by.* This confirms the Platonic deductions. Multiplication of tasks, refinement of skills, consequent specialization of labour, impossibility of self-sufficiency, need for exchange, in one word, the market lies at the heart of the urban development of human society. *Once in operation, the market forces push vigorously for maximal efficiency, and thus for optimal integration.*

An economy is integrated if the subjective and transient value-relationships of goods and services have crystallised in an objective and permanent system of relative values. Such a coherent and fixed market-nexus is further integrated in a higher degree, if that stable relative system of values has been reduced to an absolute system with the explication of a *unit of value*; then money as measure of value has already emerged (account money). Once things have proceeded so far, the introduction of money as instrument of exchange and means of discharging debts (legal tender) depends as much at least on civilizational parameters (societal unification, political authority, emergence of state identity, acceptance of public controls), as on purely economic considerations (expedience). Thus functional urbanization and full money go, according to Plato, together. It is a question of intensified integration, general as well as economic.

The decisive step towards such optimal integration is manifested with the introduction of money. Money is material purchasing power, physical embodiment of abstract wealth or value, an *instrument* thus of economic activity (including a medium of exchange). Its instrumental nature is explicitly noted by Plato [16a]. *Money*, we saw, is *according to Plato a token of credit*. When the mutual exchange is not completed, the second part of it rests unrealised for the time being but is (a) acknowledged as realisable at some arbitrary future moment, and (b) accepted in advance under whatever equivalent form the seller may choose to realise it. The vendor is empowered to draw at any future time upon the aggregate social produce and total pool of services to the extent represented by his actual vending, with regard to whomsoever supplier and to whatsoever commodity available in the

market. As Fisher put it: «it [i.e. a given paper money, a paper dollar] represents to that extent a claim of the holder on the wealth of the community» [17]. The symbol of this empowerment is the money received in exchange for the commodity he parts with. In fact, by selling he liquefies an asset that he possesses, and this floating of a solid commodity constitutes its monetization. Money stands as a token and guarantee for the unsubstantiated part of an exchange-transaction, and it is thus in reality of the nature of a *virtual tally* [18].

That money is essentially a token reveals itself by the fact that originally external commerce is always *exchange in kind*, whereas home trade, with the establishment of a city, becomes a real market and operates as *exchange by means of money* [19]. Urbanization provides the necessary physical and political environment for the systematic interaction and interdependence of autonomous, specialized economic agents, something which causes the organised correlation between their activities and thus institutes the market. With the city the conditions are created of the first veritable integration of the aggregate economic action, and this is expressed, if such integration is heightened, by the introduction of money. We shall see in the Aristotelian Theory of Value which exactly are the requirements for this monetary integration of the market forces.

The money of the state according to Plato is therefore pure token-money or fiduciary money, *money not primarily created by the State but by the Market itself*. A market transaction (a selling - buying one-way operation or an incomplete exchange, i.e. a «barter» with the complementary part of the full exchange liquefied) originally generates its own money, as a token of the credit incurred through it. At the basis of such simple financial structure lies the fact that any non-barter real market transaction constitutes a primary credit creation, irrespective of how exactly the indebtedness generated is finally settled. Now transactions are dependent on, or independent of, each other. Transactions are dependent when the one presupposes the other as e.g. wages paid for labour involved in the production of a commodity sold. In the case of such transactions, the value of the one involved in the other can be eliminated from the total quantity of

wealth produced over a certain period of time, and thus from the equivalent amount of credit created to finance the production of this wealth, or, which amounts to the same thing, to finance its consumption. For the value sum total of independent transactions equals the value of final (buying for) consumption within an appropriate time interval. In an economy in equilibrium, the value of aggregate consumption equals the value of aggregate production. And as in consumption the commodity passes away which has come into being through production, so, correspondingly, the credit yielded in transactions for consumption is engaged in the production aimed to satisfy the demand for consumption.

Thus for a given, steady level of economic activity there exists a certain amount of credit operating in the system reflecting in financial terms, and born from, the intensity of real economy. With it there goes also a certain amount of money employed activating the process, however this may be determined (for which see below) in relationship to that aggregate credit. Evidently, there always and automatically exists under such elementary conditions exactly the amount of money needed for the actual volume of realised market transactions. More money means increased economic activity in the production and trading of goods and services. One may formulate this fact in Fisherian terms by saying that the aggregate financial volume of market transactions within a given period (i.e. the sum total of the volume of goods and services sold and bought times their respective prices) equals the average amount of money circulating in that period times the velocity of its circulation. This, however, is a rough expression of the underlying structure as will appear in the sequel of this Chapter, where an exacter articulation of the Platonic theory will be given. In fact, the important point here is not the formula or even the validity of the Quantity Theory of Money in such circumstances, as the fact that money is not issued by the State's sovereign authority, but created by the market spontaneously. By increasing, or making more efficient, its real economic activity, any economic agent of the community generates money to the extent exactly answering its higher productivity. *Plato's fiduciary State money is not State controlled.* It

also follows that there cannot be any inflation or deflation in the Platonic state. The financial economy is an accurate mirror of the real economy. There is, further, no way of a financial manipulation of the real economy: for an improved economic condition one must have resource to heightened real activity, to an amelioration of his, ultimately, powers and/or a more intense or efficacious exercise of them. It is here that the crucial economic importance of the Ancient Greek Ethic of excellence and superiority is rendered manifest.

Initially (according to the genetic account of an institution) the City-State does not enter into frequent and systematic interconnection with other peoples and communities. Any need that the City cannot satisfy by itself, it will seek to fulfill by drawing from foreign resources. When this appropriation is done by mutual agreement, it will have to be realised as a barter exchange, even if one of the exchanged goods is gold or silver. The State money, being fiduciary, is of no worth to others outside the confines of the State-Market, and there has not been instituted a sufficient degree of articulate interaction between the State and the communities which are the object of its commercial interest to allow the existence of a stable value system, a definite price pattern, and thus, of the effective possibility of, even, money-commodity.

But as frequent interactions multiply and interconnection becomes more dense, some degree of integration is effected which is reflected in common value structures and relatively fixed price relationships; such conditions permit the employment of a common currency in the area of sufficient intercourse and integration. As these conditions do not amount to the full integration represented and safeguarded by the political unity of sovereign statehood, a token money is ultimately impossible, and immediately inappropriate and harmful. Such halfway situation lying between the in coordination of a barter exchange and the thorough nexus of a credit economy with pure fiduciary money is the proper ground according to Plato for the adoption of a commodity-money (gold and silver principally) which then can be used in trading with people inhabiting a wider area (who

will accept, getting used to it by familiarity of intercourse, the commodity-money at least as money-commodity) [20].

The citizens will possess only the State fiduciary money controlled by the internal market. The State itself will hold (in addition to a sum of this currency enabling it to fulfil its obligations at home) also a common Greek money in order to pursue its foreign policy, military and peaceful. This common money would naturally be the prevailing currency in the area as a result of its domination by a great power, like Athens in the 5th century B.C.; or it may be a currency otherwise generally acceptable without much difficulty; or, conceivably, even a mixture of various chief currencies in the absence of a clearly focused economic and financial system (like the different kinds of specie recorded in the accounts or treasure-lists of the major Greek Temples, or found in hoards). Such money would be in gold and silver. And thus, in effect, the amounts of common Greek money held by a State constitute its *reserves*.

However, the stock of common commodity-money held in reserve by the State is a pool for effective means of pursuing the outwardly oriented state-policy, and do not function as reserves in the monetary sense for the convertibility of the domestic token-currency. The State fiduciary money is of a purely token nature, *with no intrinsic worth whatever*, and is *inconvertible* to gold or silver (to common currency in gold or silver). There is no formally legal or customary obligation to back up the circulating credit-money (the state token-currency) by gold or silver in bullion or in usual coinage. In fact, there is no monetary need to do so, as the supply of the fiduciary money is not controlled by the state Treasury, but reflects spontaneously and accurately the market reality regarding the quantity and quality of its exchange-transactions.

Even if the stock of gold or silver currency in the State reserves does not function as reserves for the domestic token-money, it is clear that there is supposed to obtain a definite exchange rate between common commodity-currency and the State's own token money [21]. We should inquire how such an one may be established in the circumstances, given that no foreign exchange monetary mechanism is

available, as the state money is worthless abroad. Of course, the matter would appear otherwise if the national economy of the State in question was booming and regionally dominant, with a powerful trade involvement in the area. Its fiat money could then become the chief commercial currency on the international (i.e. the Greek developed world) scene, in which case exchange rates to the other currencies of the intertwined economies would then be determined by the market. But Plato was thinking of a world of commodity-money, in which his city would operate its own fiduciary money as an exception. (He had specifically, as will be observed below, in mind principally the Spartan precedent [22]). Further, for reasons that will be analysed in the sequel [23], his ideal was to institute such a cultural, social, economic, and political framework in the city-state which would ensure for its citizens prosperity without excessive affluence, a life lying between want and plenty, as being better conducive to their optimal self-realisation in the unrelenting pursuit of human excellence, his ultimate goal of all human conditions and endeavours, including the institutions of society and the *raison d'etre* of the state. This implied for him some degree of restrictiveness and a society relatively closed to foreign intercourse. With a currency uniquely exceptional, reduced ties to the exterior, and an economy steady rather than dynamic, indeed aiming at self-sufficiency rather than at maximal performance, the Platonic City-State could not (and Plato would not want it to) become the economic or, a fortiori, the absolute, Hegemon of the Greek area. *The failure of the Athenian Imperium in the 5th century B.C. left deep marks upon the Athenian cultural élite of the 4th.* Significantly, that miscarriage was the consequence of the Periclean adoption of Economism as a strategic principle for Athens after the middle of the 5th century, replacing the Themistoclean doctrine of total (including preeminently military) overwhelming power superiority. Athens opted (at the crucial moment of her ascent to the hegemonic position in the Greek World) for a policy based on the aseptic operation of economic parameters, on economic strength and freedom, on peace abroad and booming activity at home, as capable of effecting and sustaining regional



security, strategic hegemony, domestic wealth and spreading prosperity in the area. The resounding failure of this strategy (with Athens' crushing defeat in the Peloponnesian War) made Economism gravely suspect to the mind of thinkers during the next century, but without changing the principles, structure and operational modes of an exemplarily free economy, especially in the zones of its major development (Athens being again chief among them, having been spared from utter destruction, and rapidly recovered).

It is interesting to speculate on what Plato might have thought regarding the possibility of imposing his city's fiat money on a broader area of commodity money. However, the question was not raised for him. For the outside world, in his picture, the domestic fiduciary currency was virtually nonexistent: «our citizens, we say, must get a currency which is valuable among themselves, but not accepted and current among the rest of mankind» [24]. Therefore the foreign exchange rates must be an internal affair of the state in question. However, they are not arbitrarily set, *nor does their determination belong to the prerogatives of the monetary state sovereign*. Exports (which there will happen in some degree even in an economy geared to self-sufficiency, because of unavoidable, at least occasional, overproduction, and the lack of certain commodities, esp. various primary materials) will be paid in foreign currency at prices obtaining abroad. The foreign money will then be handed over by the exporter to the State Treasury in exchange for local currency. In fact the State foreign reserves, those among them that have been peacefully acquired, must flow in from such exporting transactions in the last resort, whether by direct transfers from the exporters or by substitution from them as taxpayers for the state revenues. Similarly, some quantity of gold and silver will circulate within the state for ornamental or emblematic purposes, despite enforced restraints in their use [25]. In any case, the price at the world-market in terms of gold and silver currencies of the rather few exported items will be equated to the price of those kinds in the internal market, and this equation will determine the exchange rate between, say, a leading Greek commodity-currency and the domestic fiat-money. Provided

that the internal market of the Platonic Polis is not considerably distorted (or not significantly distorted at least with regard to the articles traded abroad) relative to its free international market-environment as a result of its restrictive regulatoriness or its inbuilt or unwritten exclusiveness in pursuit of collective self-sufficiency [25a], then the equations of prices in the markets abroad and at home will give stable exchange rates between the currencies, and the fiduciary money will be naturally adjusted to the international currency system. Paradoxically, the very restrictiveness of the domestic economy in so far as its points of contact with the outside world are concerned, (in so far as the kind and volume of its external trade is at stake), increases the likelihood of a structural match between the corresponding external and internal markets in that confined area of exposure, given in particular the general free naturalness of Ancient Greek Economy: very few points have to be correlated, a minimal number of price-equations must be harmonised in an overall, unitary exchange-rate.

Leaving for the time being aside the question as to the extent of the actual distortion referred to above, it is important to be noticed the extent of the state non-interference in monetary matters, in fact the absence of a monetary policy altogether, and this from a type of state (the Platonic) which has been sometimes considered as a paradigm-case of heavy regulationism, indeed of a «closed society». The domestic fiat-money itself is a thoroughly market creation as we observed above. Now its rate of exchange with the commodity-currencies of the broader international field is also seen to be set by the markets. This is a major point to which we shall return repeatedly.

It has been stated before that in the financial context envisaged by Plato, there is inherent stability in the working of the economy, in particular there can be no permanent inflationary or deflationary pressures exercised in the same direction. But in a developed purely credit-economy (without money) such as the one described by Hautrey (cf. n. [6]) there is intrinsic instability in the system, in the sense that «every displacement from the equilibrium position tends to magnify itself» [26]. His argument consists in exhibiting the vicious circle consequent upon some change in the level of aggregate

indebtedness operating in the economy at a given moment. Thus «a curtailment of new borrowings», «a slackening in the creation of new credits means a diminution of orders to the manufacturers» with the result «that the labour and plant of the community are no longer fully employed, and the total amount of wages and profits will be diminished». This implies a reduction in the expenditure of the public, fewer «sales of the retailers and merchants», restriction of «their orders for fresh supplies of goods», «and so the original restriction of credit will tend to repeat and reinforce itself». What this means for the level of prices and the value of the unit of credit in the circumstances is clear [27]. And similarly with the (more probable) spiraling contrary variation, an expansion of credit bringing about escalating inflation and continuous depreciation of the unit of value. For, in short, «[t]he credit created for the purposes of production becomes purchasing power in the hands of the people engaged in production; the greater the amount of credit created, the greater will be the amount of purchasing power and the better the market for the sale of all kinds of goods. The better the market the greater the demand for credit. Thus an increase in the supply of credit itself stimulates the demand of credit, just as a restriction in the supply of credit leads to a decline in the demand for credit. Either the expansion or the contraction of credit may therefore proceed absolutely without limit, and the corresponding fall or rise in the wealth value of the monetary unit would therefore also proceed without limit. In each case all standard of value will be completely lost» [28].

It follows that «the problem of stabilizing credit is identified with the problem of stabilizing the value of money», and «that the expansive tendencies of credit are in perpetual conflict with the maintenance of a fixed standard of value, and a great part of our subject is taken up with the problem of how best to reconcile this conflict» [29].

In a fully developed credit-economy without money, there must needs exist (as we saw in the elementary case above) at a given moment a definite amount of indebtedness or credit, of floating value, of liquidity, of unspent (or, better, unrealised in specific wealth)

purchasing power. The total wealth of the community is the sum of all physical goods or specific services existing in it plus the undetermined wealth that is available for realisation in physical goods and specific services at will. Both determined and undetermined wealth are distributed among the citizens. An individual can realise a liquid asset that he possesses in a specific form by buying the particular commodity of that form. There occurs in such a transaction a mutual transfer of the particular commodity on the one hand from A to B and of a definite amount of liquidity on the other hand from B to A, this liquidity being the price of that commodity in the market. There is no new credit created in this way: a given credit is simply transposed from one individual to another.

Now suppose that an individual produces some commodity. He may utilise in the process goods that he is in possession of. But he must in general equally realise (solidify) part of his liquid assets to buy raw materials or instruments of the production or to remunerate his own or others' labour consumed in the process. The amount of credit involved in his production plans may be greater than the stock of his liquid assets, or than that part of it compatible with the volume of liquidity he wants to retain. He, then, must borrow in order to fund his production project. By borrowing he draws on the total existing sum of credit; some source is able and willing to part with a portion of its own accumulated liquidity for purposes other than buying in exchange for it. But this is not creation of *new* credit for the system either; only reallocation of the existing amount of indebtedness really occurs. The *novelty* consists in the different manner of reallocation: *one buys and sells not commodities (goods and services), but debt (and credit).*

The preparedness to diminish one's own stock of unrealised purchasing power, given especially the competitive character of the demand for liquidity [30] and also some degree of uncertainty (hence of risk) as to its eventual restitution, must depend on the availability of a handsome return to compensate for the temporary abridgement of one's own liquidity for no productive or consumptive purposes of oneself. *Interest* then seems inherent in *borrowing* (as transfer of

credit, liquidity or purchasing power). Transactions in *debt* involve necessarily interest. This is creation of *new* credit. Interest and new credit are generated by transactions other than market-exchange in commodities, i.e. not by buying and selling of goods and services. It is the business of the financial market to produce in one way new credit through interest payable upon transferences of debt not directly involved in real economy transactions.

The financial market can create new credit in another, more radical way. Someone in the above described system may decide to act as a dealer in debt: he will cater to the demand and supply of debt by bringing into contact lenders and borrowers. In this way he will simply perform on a smaller and realistic scale the function of the hypothetical Universal Overseer of the Market above idealised in connection with the early Middle Eastern developed economies and discarded as fictional. So far still there is no creation of new indebtedness. If we call such a dealer *banker* [31], it is banking in the first degree that is here involved: one pools together portions of existing credit and disposes of the stock accumulated as is (or thinks it is) more advantageous [32].

But (and this is a logically distinct moment in the banking activity) brokerage in credit may involve issuance of credit not necessarily subjected to the above condition. It is sufficient now that the banker should be able to deliver as the calls upon his liabilities come actually across, not simultaneously and at all moments. The dispersion in time of such demands on him as emanate from his lending levels permit the creation of new credit within the economic system in which he operates. The interdependence of the financial system allows the banker under occasional pressure to have recourse to other bankers' resources. The existence in the system of a lender of last resort with the capacity (or essentially associated with somebody with that capacity) of creating in principle unlimited credit in order to transfer in location and transpose in time arbitrarily indebtedness, highlights the crux of the matter. We have to do with a second order banking activity, the issue of credit *ex nihilo* [33].

*It follows that it is not credit by itself which is generally inherently unstable, and particularly expansionary: it is the possibility of increasing its volume without corresponding, and preceding, enhancement of the real economic activity in which it is naturally embedded and out of which it spontaneously is generated.* Whether it is the big landowner in early Athens who gives credit to small landholders beyond their means thus translating their compounded indebtedness to outright bondage; or whether some banker overshoots his business' real potential by underwriting excessive debt thus misjudging the actually available unspent margin of credit in the society; or whether the illogical exercise of the State's monopoly in the printing of paper money creates inflationary credit and causes the sinking of the value of money and the collapse of the financial system; the point is the same, *namely a (deliberate or unintended) false estimate of the amount of liquidity (unrealised credit or abstract utility) actually circulating in the community or in parts thereof as the case might be:* it is not a question of credit's inherent (chiefly expansionary) instability, but of structural or institutional factors that permit, if not instigate, erroneous appreciations, and consequent maladjustments regarding the real level of credit operating in an economy [34].

The amount of objective credit floating in a system reflects the nature, structure and degree of its economic activity. To a given organization of economic activity, effort consumed in it and level of technological achievement, there corresponds such a quantity of unspecified liquidity or unrealised utility which maximises the results of the economic activity going on. *Less liquidity impedes the workings of the economy leaving less room for the movement and efficiency of the solid assets; more abstract utility saturises the system with more potentialities than it can digest and turn into real, functional usefulness.* There is thus an optimum quantity of credit operational for a given intensity of economic activity. Furthermore, the correlation between these two (quantity of credit and intensity of economic activity) given the *real* parameters of the latter, is *stable* in a natural (non-interventionist, unregulated, non-protectionist, non-

obstructive) setting. For an appearance of superfluous liquidity will automatically increase proportionately the amount of abstract utility cancelled: creation of credit *ex nihilo* in these circumstances at some point of the system will be simply counterbalanced by an equal (in the appropriate run) extinction of credit *in nihilo* at the same or some other point in the form of indebtedments rendered insolvent - if the overall intensity of economic activity was to remain the same. And similarly, a reduction in the aggregate abstract utility operative in the system by means of insolvencies appearing at some points within it, will generate new, additional credit emerging necessarily elsewhere to keep the economic function steady, if the intensity of the existing economic activity continues undiminished. Thus tendencies away from the *optimum* quantity of credit in a natural economic system are self-corrective, since they spontaneously generate countertendencies working in the opposite direction. *The optimum level is stable.* It is also covariant with the intensity of economic activity.

The purchasing power of the aggregate liquidity generated in a system is equipollent to the sum of the goods and services produced, offered and accepted (actually exchanged in one way or another) under the prevailing intensity of economic activity. *The nominal amount of credit is thus equal in worth to this sum.* But because of the obtaining economic interdependencies in the production and distribution of goods and services, the same quantity of credit operates repeatedly and in different connections. Thus labour consumed in the construction of an instrument to be used in the production of a consumer commodity creates and represents an amount of credit reappearing in the sale of the instrument, in the purchase of the end product as well as in the investment that will be made by the final vendor directly or indirectly. The really active credit in the economy is thus a portion of the *nominal* liquidity flowing in it. As has been explained above, it is the sum total of the value of all *independent* transactions occurring over a specific period of time, or, what comes to the same thing, the value of all *final* goods and services produced and consumed in the system. There is then a *nominal credit* operating in the economy as well as an active one; and correspondingly an

optimum amount of nominal and an optimum amount of active liquidity or abstract utility working in it.

Now in an economy sufficiently integrated, there exists a common, coherent and stable system of exchange equivalencies among all commodities and services involved; there is, thus, a steady nexus of relative valuations, which means an implicit value-system. When the totality of fixed value-relationships between all commodities and services is reduced to an absolute system of values measured by a common unit, money is realised as a *measure of value* (the so-called *money of account*). *Money's primary function is, according to Plato, precisely this calibrating role in the realm of values*; he also emphasises again the fact that such a universal calibrator can only exist in the context of the market, with retail trade originally leading the way and then wholesale and external commerce coming into play [35]. According to what has been said above, there exists an *optimum* quantity of money for a given level of economic activity in a given economy. It can be determined in the following way.

The equation of the nominal amount of money may then be put in a mathematical form. If  $C_n$  is this amount in a given system, and  $V_i$  is the value of transaction  $i$  happening in it, then:

$$C_n = \sum V_i \quad (1)$$

the sum extending over all transactions within a definite period of time [36].

In this context, the value of the unit of value (i.e. its purchasing power expressed as the amount of goods that it can command) is theoretically arbitrary, although practically delimited within a narrower range by the requirements that the resulting absolute value system should be the simplest possible expression of the obtaining nexus of relative values.

Once the second and definitive function of money is introduced into the system, namely its role as a *means of exchange* (which according to the Platonic analysis is realised by a *token of credit* in an incomplete exchange), equation (1) assumes its monetary form in the



stricter sense. Only, the circulating amount of money in the system need not equal the nominal quantity of credit available in it as a result of the operating intensity of its real economic activity, since the same tokens of credit can perform their role as means of exchange in multiple transactions. A measure of the intensity of the economic activity is the *rapidity of transactions* occurring in the system during a certain span of time within which the economic activity remains stable. Assuming as a characteristic parameter of the ongoing real economic activity such an *index of velocity* ( $v$ ) over a period of time  $T$ , the optimum amount of money  $M_o$  required in the system when all transactions are settled by money-tokens of credit is:

$$M_o v T = \sum_T V_i \quad (2)$$

(The index of speed measures the number of exchange transactions realised on average per unit of time; multiplied by a time interval, it signifies the ratio of the (nominal) generated credit to the circulating money under a given intensity of economic activity.)

Since commodities and services are equilibrated in the system concerned with regard to their values, there is a price for each of them, steady so long as the system is stable over time. Then, with quantity of good  $Q_i$  exchanged in market transaction  $i$  at a price  $p_i$ , equation (2) becomes:

$$M_o v T = \sum_T p_i Q_i \quad (3)$$

which is the Fisher equation for the simple Platonic model examined here [37].

Money in this context represents that amount of the nominal wealth, and equivalent credit, created by the *real* economic activity which does not remain in the real system bound in its interdependencies of exchange and is not reentering the cycle of that activity as productive investment or withdrawn from it through consumption. In both latter cases, credit created in the former cycle is extinguished. *In production and consumption an amount of credit*

*disappears giving rise to new credit generated through the continuation of the economic activity in the next cycle.* Thus the aggregate of unspent purchasing power in circulation within a system, its «unspent margin» [38], is, in the case described, the amount of money, i.e. of tokens of credit and exchange, existing in it. This is the *active financial* factor of the system. The important thing is that this factor need not be full money: without it, there is no less a definite, equal quantity of credit both sustaining and stabilizing the real economic activity. It is not money as such that stabilises the economy, but the definiteness of active *credit* involved in it, and its self-corrective mechanism, to be further analysed below.

Given an economy with a stable nexus of relative values and an appropriate money of account to reduce it into an absolute system, the purchasing power of the unit of money (as measure of value) and with it the prices of all goods available in the system are fixed. Then, the optimum quantity of token-money (as means of exchange) required in the system is thereby determined under the given conditions of economy by equation (3). If a token of credit should represent, as is natural to assume, a unit of value, the value of the unit and the amount of money required for circulation are delimited within very narrow bands by considerations of convenience alone. A change in the amount of tokens available, with no alteration in the intensity of the economic activity, means simply, as also according to the classical Quantity Theory of Money, a similar change in the general level of prices and the opposite change in the value of the money-unit. The value of unit is inversely, and the general level of prices directly, proportional to the quantity of money in circulation.

The Equation of Money (3) can be given another, also, turn of physical meaning, together with the index of transaction-velocity. What the index of the velocity, that is, further addresses is the fact that there exists much overlapping in primary credit-creation. In production, the wages for labour employed as well as prices for commodities utilized (as means of production, instruments and raw materials) and rents for land occupied represent credits which reappear, together with credits resulting from transportation costs and

trading profits, within the credit emerging at the sale of the final product (ready for consumption). For the same (nominal) output, greater velocity of transactions means higher degree of interdependence: the economic nexus is more closely knit. The tighter the coimplication of factors in the economy, the less energy (*liquid utility*) is needed to keep it going at the same pace, the *higher the efficiency of active credit* operating in it, the less real credit is required for its steady working. The velocity of transactions measures therefore the ratio of nominal wealth to active liquidity under given conditions of economic performance. Since the value of the last transaction (buying for consumption) in each case, equals the sum total of the values of all transactions through which the factors involved in its production and trade (distribution) are remunerated, that ratio is at least 2. This will give the active credit defined above as equivalent to the sum value total of *final* goods and services over a specific time period. But we see now that this is an overestimate of the really *operative* credit in the economy, which has to depend on the degree of effective interdependence, as so on the level of the velocity in transactions.

The equation of Money (3) becomes then the equation of optimum operative credit  $C_o$ :

$$cC_o vT = \sum_T p_i Q_i \quad (4)$$

where  $c$  is a coefficient of adjustment. It is, however, easy to see that  $c=1$  in the simple case of a production and distribution line of a single product bought by the productive factors involved in its production with no further interference or external correlation. For the active credit sufficient to sustain such a production and distribution line is simply the nominal credit divided by the number of transactions involved in the production and distribution of the good in question over a given period of time. As the coefficient should be a constant to maintain the inverse proportionality of  $C_o$  and  $v$  for a given time and total value of transactions,  $c$  can be dropped altogether from equation (4) and:

$$C_0 vT = \sum_T p_i Q_i \quad (4^*)$$

Hence, the number of all transactions productive and distributional involved represents an estimate of how much the entire value (which amounts to twice the value of the final transaction in the simple, imaginary case) must be divided in order to get the real amount of credit created by, and actually needed in, the entire economic activity. That number is the product of the velocity of transactions occurring in connection with this activity times the temporal span within which it is completed. Projecting this reasoning onto the entire economy, we see that the velocity of transactions measures the proportion by which the nominal aggregate of the credit floating in the system (as a result of a given real economic activity functioning during a certain period of time) should be reduced in order to determine the really operative aggregate credit in the economy, that is the amount of credit sufficient to sustain it and keep it working *at the same pace*. Equations (3) and (4\* ) coincide. *The minimum amount of credit, and the really active one, required for the working of economy under given conditions, corresponds to the optimum amount of fiduciary money capable of expressing and fuelling financially the economy.*

Thus far there has been established an elementary financial model of a credit economy with token money, where new credit is created by the productive aspect of the real economic activity, while old credit is annihilated ultimately in consumption of commodities and services. Since the ultimate purpose and destination of production is consumption, or, in other words, since the object of utilities is to satisfy needs, wants and demands, there is always under conditions of equilibrium an equality of want with satisfaction, of need with utility, of supply with demand, of production with consumption, over an appropriate length of time. Demand is of course partly demand for means of new production, but this aims also at fulfilling finally

demand for consumption. The amount of new credit created through real economic activity is, therefore, equal to the amount of old credit annulled through consumption. Thus, in a stable economy, the amount of credit floating in the system is constant, and so is the optimum amount of fiduciary money circulating in it, as determined by equation (3) above. Moreover, as has been shown, the equilibrium of such a system is stable, since any tendency away from it is countered by a proportionate contrary trend which the differential destabilization itself generates. *The mechanism is self-corrective, like all natural organisms.*

Suppose that the intensity of the ongoing economic activity is raised. More wealth is then produced, more credit created, and (to the extent that the heightened intensity oversteps the concomitant sheer increase in the velocity of transactions) a greater amount of token money is necessary for the stable working of the economy. This may happen once or leapwisely, or, alternatively, in a continuous manner, whether at a constant or a variable acceleration. The adjustment in the amount of the token money required will be spontaneous in the system. Initially the quantity will remain constant; but as the intensity will tend to grow over and above the increase in frequency of transactions, prices will start to raise as the purchasing power of money will fall. The convenience of the market transactions which determined in the first place the quantity of money required for the smooth working of the economy, will augment eventually the amount in the described circumstances to a level appropriate for the same convenience, i.e. for the same general level of prices and corresponding purchasing power of money. The system is again stable, though dynamic now. And similarly with a contraction in economic activity. A state of natural equilibrium is automatically reached in the financial market, corresponding to the obtaining conditions of the real economic activity.

But this holds so long as only *primary credit* is created anew, i.e. credit out of real economic activity. Once secondary credit enters essentially into the picture, *instability* comes in with it. Secondary credit is credit created *ex nihilo*, not out of real economic activity; it

may be said that it is borne out of credit and money themselves in *lending*. Now lending can simply be means of reallocating (with the object of heightened efficiency) the available aggregate credit-resources and money-stock of an economy functioning at a given intensity: in this case lending, although a secondary activity, does not create new credit *ex nihilo*, but simply *transfers* credit from one part of the system to another in a financial transaction (i.e. without real economic transactions, real exchange of goods and services for credit and money). If this is not the case, then secondary credit is created purely *ex nihilo*, although, of course, not arbitrarily. In both cases, *interest* is generation of credit and money out of nothing real-economic: it is a *financial birth* (τόκος χρήματος).

17 The rationale behind *borrowing* at an interest-rate is, of course, *expectation of economic growth* [39]: what normally *follows* such an intensification of economic activity (that is, more money and credit), now *precedes* it, no doubt partly with a view to *incite* it. The amount of credit available in the system is increased *pending a quickening of the real economic working*. There is an estimate involved essentially in the nature of lending, deeper and beyond the mere question of the borrower's creditworthiness. The estimate may be accurate or inaccurate, the expectation rational or irrational, the financial operation successful or unsuccessful [40]. The *rate of interest*, in one of its basic components [41], measures exactly the rationality of the estimate for economic growth. A higher rate of interest means practical certainty for a growing real economy; the secondary credit created *ex nihilo* in extensive lending is as good as *anticipated* primary credit created by an enhanced economic activity to follow. Contrariwise, a significantly low rate of interest signifies disbelief in eventual growth: the secondary credit created *ex nihilo* is deemed unjustifiable in terms of the expected run in the future real economy; the returns for the particular financial operation (lending) in question must be poor, reflecting this unfavourable overall estimate.

Paradoxical as may appear at first sight, in the natural setting of an economic system left to adjust itself around normal (and normative) determinations, higher interest rate (whether the basic rate which we

are examining here, or the pure rate which measures the cost, and hence the *density*, of time [42]), is a healthy sign of a robust, vibrant and decisively growing economic activity. Under the circumstances, one is prepared to borrow, and another to lend, heavily in the full conviction that their position will be covered by the sheer growth in future economic activity.

Conversely, rational anticipation of a slackening in the economic activity tends (in a self-adjustable system) to bring down interest rates: credit is reduced by the degree of the projected drop in the intensity of the economic activity, there is, consequently, less competition for the current and forthcoming quantity of money *regarding credit* (though not less immediate demand for money *regarding the existing level of exchange*); therefore while the value of money will remain practically constant, the competition and, thus, the value of money reward, for its *use*, or, in other words its *flow of return*, will tend to be contracted [43].

The reason for this apparently paradoxical state of affairs resides on the distinction between possession and use of money. Since the *value* of money does not depend directly on the credit requirements of an economy (being determined primarily by its basic currency-function as means of exchange, and thus by its demand, against its supply, for the purposes of current exchange-levels), increased or diminished credit demand, given a certain circulating amount of the medium, will not result directly in higher or lower value, and can only be taken account of by way of a greater or lesser *premium* superadded on the value of money as a reward and recompense for its *use*. For in lending, money is not *exchanged* for utilities, is not given away: only its *use* is transferred to somebody else. Credit therefore does not involve the *value* of money, but the *flow of return*, the *quasi-rent*, for its use, i.e. *interest*. And this "rental" rate of return reflects in the nature of the case the (expected) rhythm of economic growth, or, in other words, the *rate of profit* accruing upon the efficient, productive *use* of money in *investive* exchange, that is in real capital formation. For the future intensification of the economic activity is fuelled in the present by a requirement for credit in excess of what is sufficient to maintain the

working of the economy at its present degree of intensity - that requirement being equivalent (under conditions of stable equilibrium and of a given level of knowledge) to the differential between future and present economic activity. Or, since the intensity of economic activity is measured by the amount of wealth which it creates, the basic, normative rate of interest will have to correspond to the rate of growth in the system's wealth, the rate of accumulation of capital in it. We can thus unravel the inner coherence between an economic classicist (Ricardo) and a neo-classicist (Jevons) [44].

A successful prediction as to the path of economic development does not cause destabilizing phenomena if it creates credit beyond indeed the level justified by the actual economic situation, but in line with what *will be* the intensity of economic activity in the time-perspective within which the financial framework for the credit created is set. *This congruence between present secondary borrowing and future real performance* is a necessary and sufficient condition for the stability of the economic equilibrium in a dynamic setting. The congruence is automatic if: (a) information is *openly* available, (b) decisions are *free* and (c) consequences are allowed to follow their full, *unmitigated* course in both successful and unsuccessful action. In other words, the congruence required to stabilize a dynamically evolving economy can only be entrusted to the self-corrective mechanism of a perfect market-economy *open, free and highly antagonistic* [44a]. The requisites are: open flow of, and access to, information, complete economic freedom in all levels of decision-making and exemplarily *unregulated system* which automatically secures strict correspondence between the validity of the prediction upon which a financial decision has been made and the full impact of its results. Credit created *ex nihilo* not only in excess of what the present condition of the economy in which it is constituted would justify, but also disproportionate to what comes to be its future state, must finally be allowed to lapse *in nihilo*, when an end-borrower defaults. *Thus the equilibrium is maintained in a dynamic setting with the natural cancellation of a wrong move* [45].



*Unregulation* lifts all protection from a wrong move; it also raises any *impediment* from the right one. *It leaves inability to deliver unprotected and capacity to create unimpeded.* The one receives the full shock of the failure; the other enjoys the full reward for its success [46]. And thus it is that Plato legislates in the *Laws* a *totally unregulated* financial market for his credit economy with fiat money. All financial transactions are done exclusively on trust and by sheer mutual consent, as their terms are *not enforceable* in a court of law. There is no *legal* obligation of the borrower to pay interest or indeed return the capital lent to him; there is no legal procedure to enforce the restoration even of a deposit [47]. This is indeed an extreme position on natural adjustment.

The commodity market should also be left practically unregulated according to Plato in so far as agreements struck by mutual consent are concerned. Contractual obligations are entered exclusively in good faith and based on mutual trust (*πίστις*): they are not enforceable by law. So, Republic, H 556a-b: ἐπὶ τῷ αὐτοῦ κινδύνῳ τὰ πολλά τις τῶν ἐκουσίων συμβολαίων προστάττει συμβάλλειν [«the law should be that one signs voluntary contracts at his own peril»] [48].

Selling and buying of goods is subject to legal procedures only (a) if it takes place at the appointed place in the market, that is openly and publicly, and also (b) if it is formally and really concluded on the spot (by acceptance of token money as payment in full for the commodity sold) [49]. The price of the commodity is then actually paid at the moment of the exchange, by transferring abstract purchasing power (i.e. a quantity of general liquidity or unspecified utility) from the vendor to the seller. This token quantity of credit exchanged for the commodity is no mere promise or obligation of the buyer to deliver an equivalent solid or liquid asset to the seller *in the future*, but is a *present*, valid entitlement to a corresponding piece of wealth defined at will and realisable *now* or anytime. The vendor has acquired now real power and no mere promise of the buyer for delivery of future power. The Platonic fiat money is *legal tender* for the instantaneous absolution of the debt incurred during the exchange at the very moment of the exchange. This makes the transaction amenable to

legal process (provided it has also the form required, e.g. it takes place *in foro*). The transaction is legally complete, for what is missing in the real sphere is supplemented from the financial plane within the bounds defined by their natural correlation. Operations backed up by the really active quantity of credit corresponding to the given real economic conditions are guaranteed by law, and payments by inconvertible, fiat money are secure provided the monetary sum total and the quantity of active credit in the system coincide. On the contrary, an exchange contractually concluded is not *legally* complete: it contains over and above the real-economic transaction (selling and buying of a commodity) a financial component (paying for instance under certain conditions in the future) which is non-legally enforceable since it does not possess the proof of its own validity: it is not clear at its face value whether it keeps within the limits of active credit, or on the contrary exceeds those operative credit resources and represents *creation ex nihilo* against *expectation* of future backing (by increased real economic activity). Thus, in fact, a contract is, according to the Platonic model, always a *financial instrument* of sorts, redeemable on trust, not by law as payment by money is. The buyer owes money to the seller: it is as if the former borrowed money from the latter at the moment of the exchange. The vendor transferred to the buyer a solid (commodity) asset; and he accepted from him not an equivalent liquid asset (money as active credit and legal tender) as in a properly concluded exchange, but an instrument of debt with no legal power, a title based on trust and faith (*πίστις*); it is a *credit* unsupported by the security of its *monetization*.

The financial market, and also what financial instruments (excepting money [50]) are entering into real-economy transactions, are left totally unregulated. Plato's point is to stabilise thereby his credit economy with fiat money by relying on the self-corrective mechanism of a natural adaptation of the financial to the real economy, in the way above described. The vicious circles of destabilization in a credit economy, which Hautrey assumed, are avoided: a continuously expanding (more likely) or contracting credit spiral cannot be ignited in the Platonic model, or at least they cannot

go far once incited. The *penalties* in an unregulated financial market for any persistent misfit between financial parameters and real-economic factors, are prohibitively severe.

The contractual aspect of such unregulated financial sector seems to have been actually decreed in the legislation ascribed to the Locrian Charondas [51]. Aristotle suggests a wider similar practice in various states [52]. There is ample literary and some archaeological evidence about the existence of fiat money at various places in the Archaic times: some article was taken, of little value, and instituted as token money, sometimes after deliberately extinguishing all traces of intrinsic worth in it. The iron used as Lyscurgean commodity-money in Sparta was reportedly treated first in such a way as to become brittle and, thus, entirely *useless* as commodity. Virtually pure fiduciary money appears thus to have actually existed before being adopted and subjected to analysis by Plato [53]. Historical muscle lies behind philosophical brain.

In Plato we find the first philosophical analysis of market economy as constitutive of the developed social nexus. The Platonic financial model represents a credit economy with inconvertible, fiduciary money; the money has neither intrinsic value, nor is it convertible to something possessing intrinsic as well as monetary value. The financial market is totally unregulated; credit is a question exclusively of creditworthiness (*πίστις*). The real exchange market is extremely lightly regulated: exchange must satisfy the formal conditions of being *concluded* at a specific place in the market and on a particular moment when the market is functioning. The conclusion must be complete and instantaneous: payment in full for the commodity or service bought. But, and this is the important point, such regulations are not *obligatory*. What transpires beyond them is equally valid, only the terms of such transactions are not legally enforceable. It is again a question of *πίστις*. The pure fiat money is fundamentally an instrument for the discharging of debt [54], with universal, legal or customary, validity within the State. Its primary use is as a means of exchange, where goods and services are exchanged for tokens of credit,

i.e. monetary units. Not only are, right from the beginning, money and credit inextricably interwoven in philosophical thought and economic reality; but furthermore credit is shown to possess logical and historical priority over money [55].

Over the world of real economic activity aiming at the production and distribution of concrete utilities satisfying human needs and demands, there is the realm of active credit, i.e. of abstract utility, of general purchasing power, unspecified command over the real world. The indeterminacy involved in such undifferentiated capability does not vaporise its force and efficacy. On the contrary. *In abstract utility we extract the essence of wealth: power.* Wealth loses specific quality and retains its hard core, which is a *quantity of power*. The financial world is like the world of Platonic Ideas over (but active in) the sensible World. Like the Ideal World it is also fully quantified: concrete values subserving directly particular needs become homogenised and reduced to quantities of abstract value satisfying mediately any need. An adequate analysis of this reduction is the point of Aristotle's Theory of Value, who here, also, follows the Platonic track.

## NOTES

- [1] Plato, Republic, B, 369b-c: *Γίγνεται τοίνυν, ἣν δ' ἐγὼ, πόλις, ὡς ἐγῶμαι, ἐπειδὴ τυγχάνει ἡμῶν ἕκαστος οὐκ αὐτάρκης, ἀλλὰ πολλῶν ἐνδεής· ἢ τίν' οἶει ἀρχὴν ἄλλην πόλιν οἰκίζειν; Οὐδεμίαν, ἦ δ' ὅς. Οὕτω δὴ ἄρα παραλαμβάνων ἄλλος ἄλλον ἐπ' ἄλλου, τὸν δ' ἐπ' ἄλλου χρεῖα, πολλῶν δεόμενοι, πολλοὺς εἰς μίαν οἴκησιν ἀγείραντες κοινωνοὺς τε καὶ βοηθοὺς - ταύτῃ τῇ ξυνοικίᾳ ἐθέμεθα πόλιν ὄνομα. ἦ γὰρ; πάνυ μὲν οὖν. Μεταδίδωσι δὴ ἄλλος ἄλλῳ εἴ τι μεταδίδωσιν, ἢ μεταλαμβάνει, οἰόμενος αὐτῷ ἄμεινον εἶναι; Πάνυ γε. "Ἴθι δὴ, ἣν δ' ἐγὼ, τῷ λόγῳ ἐξ ἀρχῆς ποιῶμεν πόλιν, ποιήσῃ δὲ αὐτήν, ὡς ἔοικεν, ἢ ἡμετέρα χρεῖα. [«A city, I said, is called into being, as I think, by the fact that the individual (each one of us) is not self-sufficient, but in need of many things (from others); or what other principle do you reckon is there for the institution of the city? None, he replied. Thus then one taking to himself one man for one, the other for another unitily, all standing in need of many things, assembling together many persons, associates and helpers, in one, common habitation, - this settlement we call city. True? Very much so. One then gives something (if he gives anything) to, and takes from, another, because he thinks it better for himself to do so? Indeed. Let us, then, construct in thought a city from the beginning. It seems in fact that our need will make it»].*

The mutual assistance rendered by men to each other is the reason for their coexistence and cofunctioning, is the cause of the social bond: thus the *βοηθοὶ* are *κοινωνοί*, the helpers in need are (as)sociates.

The foundation of (urban) society is need and utility. The word used, *χρεῖα*, has significantly a meaning-field covering (a) want, need, (b) business, service, function, and (c) usefulness, advantage.

- [1a] This must have been already a Socratic formulation of the common ancient Greek experience of life. For the Platonic development and the relevant passages v. A.L. Pierris, *Roads to Excellence, The Metaphysics of Education in Plato and Contemporary Reality. Is Optimal Self-realization metaphysically neutral?* in J.D.Gericke and P.J.Maritz (eds.), *Plato's Philosophy of Education and its Relevance to Contemporary Society and Education in the Ancient World*, Proceedings of the First International Conference of the South African Society of Greek Philosophy and the Humanities 29 April - 6 May 1997, 1998, vol. II, pp. 329-373; v. esp. n. 5; cf. n. 47.

Socratic rationalism must have emphasised the importance of the principle of specialization for reasons of efficiency. Thus Xenophon capitalises on the topic, epigrammatically in *Cyropaedia* II, 1, 21: οὗτοι κράτιστοι ἕκαστα γίνονται οἱ ἂν ἀφέμενοι τοῦ πολλοῖς προσέχειν τὸν νοῦν ἐπὶ ἓν ἔργον τράπωνται. [«They become best and most powerful in each field who, letting aside divided intellectual care and attention over many things, concentrate to the pursuance of a single object»]. He expands on it in VIII, 2, 5-6. All crafts and expertises reach their highest elaboration in big cities (the urbanization factor in human development analysed by Plato): ἐν μὲν γὰρ ταῖς μικραῖς πόλεσιν οἱ αὐτοὶ ποιοῦσι κλίνην, θύραν, ἄροτρον, τράπεζαν, πολλάκις δ' ὁ αὐτὸς οὗτος καὶ οἰκοδομεῖ, καὶ ἀγαπᾷ ἣν καὶ οὕτως ἱκανοὺς αὐτὸν τρέφειν ἐργοδότας λαμβάνη· ἀδύνατον οὖν πολλὰ τεχνώμενον ἄνθρωπον πάντα καλῶς ποιεῖν· ἐν δὲ ταῖς μεγάλαις πόλεσι διὰ τὸ πολλοὺς ἑκάστου δεῖσθαι ἀρκεῖ καὶ μία ἑκάστῳ τέχνῃ εἰς τὸ τρέφεσθαι· πολλάκις δὲ οὐδ' ὅλη μία· ὑποδήματα ποιεῖ ὁ μὲν ἀνδρεῖα, ὁ δὲ γυναικεῖα· ἔστι δὲ ἔνθα καὶ ὑποδήματα ὁ μὲν νευρορραφῶν μόνον τρέφεται, ὁ δὲ σχίζων, ὁ δὲ χιτῶνας μόνον συντέμνων, ὁ δὲ γε τούτων οὐδὲν ποιῶν, ἀλλὰ συντιθεὶς ταῦτα. ἀνάγκη οὖν τὸν ἐν βραχυτάτῳ διατρίβοντα τοῦτον καὶ ἄριστα διηναγκάσθαι τοῦτο ποιεῖν. [«for in small towns the same workman makes beds, doors, plows, tables, in many cases this same man builds houses, and even so he is thankful if he finds employment enough to supply his necessities of life; it is impossible under such conditions for somebody working in many crafts to do all work well. But in a large city, just because many need every kind of things, there is sufficient support for each one doing a single job - indeed not even an entire job. One may make man's shoes, another woman's; in some places one earns a living by only stitching shoes, another by cutting them out, another by sewing the uppers together, while there is another who performs none of these operations but only

assembles the parts. It is then necessary that he who devotes himself to a very highly specialised line of work is bound to do it in the best possible measure»] (cf. Xenophon, *Memorabilia*, III, 9, 3). Xenophon applies then the same reasoning to the culinary art, with particular reference to the many specialised cooks of the Great King; specialization extends down to the production of particular kinds of bread.

In this passage we meet not only specialisation of occupations, but explicitly strict division of labour, i.e. not merely devotion of some people to the production of specialised, yet entire work, but the analysis of the production of some item into distinct movements which can be performed by separate workmen. Nonetheless, it has been maintained, erroneously, that a major difference between ancient and modern specialization of labour consists in that the former aimed at an improvement in the quality, whereas the latter at the increase in the quantity of production (cf. e.g. H. Bolkestein, *Economic Life in Greece's Golden Age*, new edition revised and annotated by E.J. Jonkers, 1958, pp. 58-60). But Xenophon makes plain that it is precisely increased demand that makes possible specialization. On the other hand, once called into existence, specialization, together with a heightened production, effects also significant amelioration in the quality of the products by setting automatically to work the principle of optimal realization in each individual. Men are born with differing characters of nature and capacities of fulfilment, characters and capacities that can be heightened by education and vocation. The more complex, articulate and *diversified* the pattern of functions required in economic activity at a given state of development in society, the more close can be the match between that pattern and the distribution of faculties, aptitudes, talents, skills and expertnesses, in the various individuals, the more accomplished must issue the yield of labour, the more convergent, further, will become the ends of optimal self-realization and maximal usefulness for man, the more happiness will prevail in the human condition. The ancient viewpoint is significantly superior to outdated mentalities attached to the negative aspects of the European Industrial Revolution and its machinery - and closer to the emerging new economic structures, attitudes and thinking.

- [2] *Ibid.* B 369c: Μεταδίδωσι δὴ ἄλλος ἄλλῳ, εἴ τι μεταδίδωσιν, ἢ μεταλαμβάνει, οἰόμενος αὐτῷ ἄμεινον εἶναι; Πάνυ γε. One transfers to someone else, or receives from someone else, something, if he thinks the move to improve the state he is in, to be better for himself, to create a

situation more advantageous to him than the preceding one. 'Αγαθόν in the Ancient Greek context is defined essentially by utility; good is the useful and beneficial, just as bad is what is useless and harmful.

[3] An entirely distorted representation of ancient economic life has been repeatedly advanced in various forms, attempting to sharply differentiate it from modern economic reality. More on this misconceived idea v. *infra*, Chapter 5, n. [5]; also Chapter 6, n. [27]. Two main arguments of the theory against the market character of Ancient Greek Economy revolve around the following reputed points:

a) ancient economic activity was to a great extent self-consumptive within the house and the family, the clan or the village; production was passing into consumption without genuine exchange; it was geared to consumption directly, without the mediation of the market;

b) such exchange as it existed had to do with ritual devotions, relationships of honour or friendship ties and was essentially a gift - exchange, or even sheer offering or donation, although often creditable against an indefinite but sure future counterbenefit or answerable to some past favour.

Specific accounts, like the Platonic, of the genesis and nature of urban society, disprove by themselves such theories of (economic) primitivism regarding Ancient Greek Economy. The known facts (sometimes measurable) about esp. the most developed Athenian Economy refute conclusively the misbegotten view. Preceding attested Colonial Empires like Corinth's, Aeginetan naval and economic power far exceeding the potentialities of the little, barren island if nailed on a «primitive» setting, the immense wealth of some Ionian cities already by the middle of the sixth century, the might of Syracuse competing with Carthago for the control of sea-routes in Western Mediterranean, the early Greek emporium of Naucratis in the Egyptian Delta, these circumstances and many others great and small dispose of any reasonable queries regarding the enormous significance of trade in the Ancient Greek context and the economy's definite market orientation. The very existence and growth of the City-States testify to the abandonment of the house-, clan- or village economy long before. By the classical era only some backward parts of central Greece like, notoriously, Aetolia have remained in a «primitive» stage of political and economic development. On the other hand even in Homer, an indisputable gift-exchange in heroic honour-guesthood spirit is mocked as being too unsound on market terms; Homer, *Iliad*, Z, 234-6:



"Ενθ' αὖτε Γλαύκῳ Κρονίδης φρένας ἐξέλετο Ζεὺς,  
ὃς πρὸς Τυδείδην Διομήδεα τεύχε' ἄμειβε  
χρύσεα χαλκείων, ἑκατόμβοι' ἔννεαβοίων.

[Then Zeus the son of Cronus stole away the wits of Glaucus, who gave to Diomedes son of Tydeus golden armour in exchange for bronze, a hundred oxen's worth for nine ].

The market was already operating in full sway: the relative values of goods were well-established and definite.

The «primitivist» theories are so desperately lacking in supporting facts, coherent arguments and conformity to the general state of the Ancient Greek World in the classical era, that their persistence must be accounted for on specific motivation and pleading. In fact even the Middle Eastern great Kingdoms and Empires have developed powerful market economies with very extended commerce and credit, high urbanization and vibrant internal trade, public infrastructure works (esp. canals and roads) and fiscal policies to match them and also support the stabilizing force of the military power of the State. (Cf. for Mesopotamia J.D. Hawkins (ed.) *Trade in the Ancient Near East* (Papers presented to the XXIII Rencontre Assyriologique Internationale, University of Birmingham, 5-9 July, 1976), 1977; v. esp. M.A. Powel, *Sumerian Merchants and the Problem of Profit*, *ibid.* pp. 23-9). Prince Erishum I of Assyria (c. 1941-1902 B.C.) proclaims in an inscription unearthed in Ashur: «I established the freedom of movement of silver, gold, copper, lead, wheat, wool» and two other commodities (CAH I<sup>2</sup> p. 709).

[3a] See esp. *infra* Chapter 4 on the Aristotelian theory of value.

[4] Plato, *Republic*, B, 371b: *Τί δὲ δῆ; ἐν αὐτῇ τῇ πόλει πῶς ἀλλήλοις μεταδώσουσιν ὧν ἂν ἕκαστοι ἐργάζωνται; ὧν δὲ ἕνεκα καὶ κοινωνίαν ποιησάμενοι πόλιν ᾠκίσαμεν. Δῆλον δῆ, ἥ δ' ὅς, ὅτι πωλοῦντες καὶ ὠνούμενοι. Ἀγορὰ δὲ ἡμῖν καὶ νόμισμα ξύμβολον τῆς ἀλλαγῆς ἕνεκα γενήσεται ἐκ τούτου. Πάνυ μὲν οὖν.*

[(Socrates is talking to Adeimantus): «Well then; in the city itself how will they exchange with one another what each one of them works (what is the object of the business of each one of them)? It was, after all, for this purpose that, by creating a (true) society (community), we founded a city (an urban community). Clearly, he said, by selling and buying. And from this will come into being a market, and money (currency) as a token for the purpose of exchange. Certainly.»]

- [5] Plato, *Republic* B, 371c: "Ἄν οὖν κομίσας ὁ γεωργὸς εἰς τὴν ἀγορὰν τι ὧν ποιεῖ, ἢ τις ἄλλος τῶν δημιουργῶν, μὴ εἰς τὸν αὐτὸν χρόνον ἦκη τοῖς δεομένοις τὰ παρ' αὐτοῦ ἀλλάξασθαι ἀργήσῃ τῆς αὐτοῦ δημιουργίας καθήμενος ἐν ἀγορᾷ; Οὐδαμῶς, ἦ δ' ὅς, ἀλλὰ εἰσὶν οἱ τοῦτο ὀρώντες ἑαυτοὺς ἐπὶ τὴν διακονίαν τάττουσιν ταύτην etc. [«If then the farmer, or any other producer, having brought to the market his produce, does not come there at the same time with those in need (demand) to exchange his production for theirs, will he sit idly in the market unemployed in his line of business? Not at all, he said, but there exist those whose business is to look after that exchange (the traders)»]. For Plato this is the business of the weaker temperaments and of those that cannot do something more energetic and productive. One should constantly recall the Platonic point that every individual is ultimately fit for a particular job to which he is to fully devote all his energy. There is scanty room, e.g., for recreational gymnastics. The crucial point is the principle of the full exercise of one's powers and capacities in his work. To remain idle for a time detracts from one's maximal efficiency. Thus retail selling cannot be part of the producer's business, for this would involve periods of inactivity in his productive work.
- [6] R.G. Hawtrey saw the theoretical advantages of analysing financial and real-economic phenomena in terms primarily of credit, and secondarily of money. As he forcefully put it in his *The Gold Standard in Theory and Practice*, 1933, p. 2: «The idea of money is derived from the idea of a debt». (See also preface to that work). Money, in short, is a particular way of discharging debts. In his major work, *Currency and Credit*, 1919<sup>1</sup>, 1928<sup>3</sup> he carries on the analysis starting with the hypothesis of a complex and civilised society with highly developed economic activity, in the absence of money as instrument of exchange (v. *ibid.* p. 2). There is «money of account» in this system for measuring degree of indebtedness, but no *legal tender* in fulfilling obligations. Although Hawtrey disclaimed any historical explanatory power for his model, developed early Middle Eastern civilizations do in fact approximate to it. There is extensive manufacturing sector in their economies, brisk external commerce and internal retail trade, but no currency. Indeed, approaching the workings of those societies from this point of view is a major step towards their proper understanding; in particular it helps decisively to dispose of a supposedly necessary alternative way to conceptualise such complex yet moneyless economies on a centralised, *administrative* pattern, as against

relying on *market* structures. As this *administrative* concept of economic production and distribution of goods and services has been (mis)applied even to Ancient Greek Economy, it will be treated in Volume III. Cf. *infra*, Chapter 4, n. [45].

Hawtrey's idea is valuable in orienting properly the analysis of the Platonic position on market and fiduciary money. It is also very useful in setting aright the framework for an adequate comprehension of the origin of monetary economy in the Greek Archaic times. On the other hand his model took over simply the credit structures of a modern economy under the sole proviso of eliminating money. This, as we shall see, leads to a distorted appreciation of the behaviour of credit in a natural setting, crucially with reference to its inherent stability or instability. Or, more accurately, it obscures the real cause of credit's expansionary (principally, but also contractive as the case and circumstances might be) tendency.

- [7] V. E.L. Bennett Jr. (Ed.), *The Mycenae Tablets II*, 1958, pp. 3a-4b, 5a. One of the houses in which inscribed tablets have been discovered is referred to as the *House of the Oil Merchant* in view of eleven big storage jars (of the kind used as oil containers) found in its basement; in a corner of the room there was an inscribed tablet bearing a record of quantities of oil; at one end of the main corridor a consignment of thirty large stirrup jars (once full with oil) was lying, all stoppered and sealed, apparently ready for shipment (v. op.cit., p. 7b). - Against the private character of the three houses with the inscribed tablets, some still consider them as appendages to the royal administration; cf. e.g. M. Hudson and B.A. Levine (eds.), *Privatization in the Ancient Near East and Classical World*, 1996, pp. 24-6. Palmer (and before him Marinatos) concluded "that the 'House of the Oil Merchant' was in fact the unguent kitchen of the palace at Mycenae"; L.P. Palmer, *The Interpretation of Mycenaean Greek Texts*, 1963, p. 276. But this is simply to stick to the unproven and inherently implausible thesis that a proto-urban settlement, such as the Mycenaean centers, was not only grown round, and did not accordingly simply stand under the protection of, the local lords' residence, *but was actually in reality an expanded palace, or temple-palace*. It is safer to keep basically to the excavators' (A.J.B. Wace and E.B. Wace) original analysis.

The importance of aromatics in the Mycenaean world is well attested. Tablets from Mycenae (certainly, cf. *infra*, n. [15]) and Pylos (the Ma and the Na and Nn series) probably, record deliveries, non-deliveries, owing, and remittance of condiments and spices to individuals, sometimes called

“unguent boilers”, from various localities (cf. Palmer, *op. cit.*, pp. 269-278; 300-313). The production of perfumes and unguents appears to have been one of the most significant manufactures in the Achaeon times, broadly traded as well. Ointments served a multiple purpose, and a correspondingly widespread consumer-interest, sacral, magical, medicinal, athletic, cosmetic - even in clothing (garments were anointed to be imparted with a pleasant odour; cf. the Homeric εἴματα θυώδεα, odorous vestments). “The preparation of unguents and perfumes was among the most important activities recorded in the Linear B tablets” (Palmer, *op. cit.*, p. 312). Lorimer, *Homer and the Monuments*, 1950, p.56 comments: “Oil, however, had been a staple product of Crete in her great days and had certainly been exported... Mycenae may have had some amount of trade in it and in wine. The vast number of stirrup-vases which she sent abroad did not go empty. Specimens of small size may have contained perfume; one such is reported from Mycenae found with the clay stopper of the spout in place. When this was removed a strong though evanescent fragrance was perceived”. As Palmer says (*op. cit.*, p. 277): “The manufacture of unguents and perfumes from the olive oil of Greece may have had an economic importance analogous to that of spices in medieval Europe”. And even (*ibid.*): “It may well be that in the evidence assessed in this chapter [sc. on aromatics and unguents] we have some clue to the puzzle of the source of the wealth enjoyed by Mycenaean Greece”.

The aromatic-texts from Mycenae were found in the so-called “House of the Sphinxes”, adjacent to the “House of the Oil-Merchant” where the great number of big storage jars and stirrup jars were recovered. This adjoining, and the very fact of detailed accounts being kept *in situ* at the oil-storage and aromatics-manufacture business, shows the organizational development of private enterprise in the Mycenaean economy (*pace* Palmer *et al.*).

[8] Cambridge Ancient History (C.A.H.) I<sup>2</sup> pp. 130-1.

[9] C.A.H. I<sup>2</sup> p. 450 for the Akkadian Dynasty of Agade (put at 2371-2230 B.C.). Further pp. 620-3 for the age of the dominance of Ur (the Third Dynasty of Ur, c. 2120-1800 B.C.). From this later period there is ample documentation of private deeds in bying, selling and exchange of property in slaves and houses. There also existed by now widespread borrowing of commodities (like e.g. cattle, birds, metals, bricks, reeds,

wool), which can in no way be restricted to borrowing from temple stores. Loan at interest of grain, dates and silver is further testified.

[10] C.A.H. I<sup>2</sup> pp. 622-3.

[11] For an early example one may consider the economy of the Temple of Baba at Lagash as reconstructed by means of its preserved extensive archives. Cf. C.A.H. I<sup>2</sup> pp. 126-30.

[12] For the characteristic case of pottery production v. P. Steinkeller, *The Organization of Crafts in Third Millennium Babylonia: The Case of Potters*, Paper delivered at the Eleventh International Congress of Economic History, Milan, 1994. Cf. also e.g. C.C. Lamberg-Karlovsky, *The Archaeological Evidence for International Commerce: Public and/or Private Enterprise in Mesopotamia?*, in M. Hudson - B.A. Levine (eds.), *Privatization in the Ancient Near East and Classical World*, 1996, pp. 73-108.

Real property is always in effect a special case in early structures and Imperial systems. The sovereign may ultimately possess the absolute right to all land of the realm, without such a right *normally* infringing upon the real nexus of relationships which define ownership in *practical* terms: it is more of a possibility of breaking through the nexus in *extraordinary* circumstances (for instance, in cases of lèse-majesté) momentarily and at a particular point. Yet for the importance of private land ownership even in early Babylonia see e.g. D.O. Edzard, *Private Land Ownership and its Relation to «God» and the «State» in Sumer and Akkad*, M. Hudson - B.A. Levine (eds.) *op.cit.*, pp. 109-128, and M.P. Maidman, *«Privatization» and Private Property at Nuzi: The Limits of Evidence*, *ibid.* pp. 153-176.

[13] Cf. for the earliest times in the Old Assyrian Period (c. 2600-1816 B.C.) e.g. C.A.H. I<sup>2</sup> pp. 752 sqq., esp. p. 753, 754-5, 758-9. For the network of merchant colonies established then by Assyrians in Anatolia, cf. Tr. Bryce, *The Kingdom of the Hittites*, 1998, pp. 21-33, esp. pp. 26 sqq. The trading activity was intense and highly organised. "The Assyrian merchants kept copious accounts of their business transactions on clay tablets written in Old Assyrian cuneiform, and maintained close written contact with officials, business associates, and family connections resident in the Assyrian capital Assur" Bryce, *op. cit.*, p. 21. "Contracts and

judicial records of every kind recorded and validated a variety of legal transactions of which they served as written evidence, also in lawsuits. Many lists, notes, and memorandums enabled the traders to keep track of their goods and transactions, especially lists of outstanding claims which were used for collecting debts and for the periodic settling of accounts arranged by the organization of the traders, the *kārum*" K.R. Veenhof, *Old Assyrian ISURTUM, Akkadian ESERUM and Hittite GIŠ.HUR*, Fs Houwinkten Cate, 1995, p. 312.

- [13a] It is another matter how much from the product of economic activity was extracted by the political authority, appropriated for the purposes of State (*raisons d'État*). Even this appears to have compared very favourably to modern practices, if for nothing else, then because the surplus was not of such amounts as to allow high percentages of state expropriation. Besides, the returns thus gained were momentous. *First*, internal order and an expanding environment of stability. *Secondly*, fiscality functioned in the circumstances as (enforced) saving, necessary to finance heavy investment in big public works.

All this will be examined more closely in the second part of this work, on the origin of monetary economy.

- [14] «Borrowing of commodities is also a prominent article in these documents [i.e. inscribed tablets from the time of the Third Dynasty of Ur and the Old Babylonian age, c. 2110-1800 B.C.], and there is no proof that the borrowing was always from the temple stores. Among the objects of dealing in this form were cattle, birds, metals, bricks, reeds, and especially wool, an item in the life of the land hardly less important than cereals. Grain, dates and silver were loaned at interest, the time of due repayment, often after the harvest, being specified, guarantee of payment given, penalties fixed for non-fulfilment, an oath required by the life of the King, and the deed was concluded with names of witnesses and notary and the official date. Such tablets were produced as proof in the courts of law». C.A.H. I<sup>2</sup> p. 622.

The Assyrians, at about the same time, also exhibited an advanced system of borrowing in their extended commercial enterprises. "A loan and credit system operated widely throughout the communities of eastern Anatolia during the [Assyrian] colony period" Bryce, *op. cit.*, p. 28. The system, in the absence of money and esp. metallic money, was likely to be subject to periodical crises of overborrowing. The King could then

intervene promulgating a decree of cancellation of all indebtedness, which made possible a new start of the credit cycle. Such enactments were issued periodically, or at exogenously induced great social hardship. Instruments of debt often included clauses intending to partially protect the creditor against such royal dispensations. One debt-certificate run thus:

"Salmuh and Iskunanika, his wife, Ispunahsu and Kiri owe 21 sacks of grain, half (of which is) wheat, half (is) barley, (and) 15 shekels of silver to Peruwa. They will give (back) the silver and the grain at harvest time. They themselves will haul (the grain) to (the village) Hailawakuwa. They will measure out the grain with the (measuring) pot of Peruwa. The silver and the grain are bound to their joint guarantee, (and) that of their family. Before: Kakria: before: Idi(s)-Su'in: before: Ili-(i)ddinassu. If the king cancels the obligation to pay debt, you will pay me my grain". Bryce, op. cit., pp. 28-29, quoting from K. Balkan, *Cancellation of Debts in Cappadocian Tablets from Kültepe*, Fs. Güterbock I, 1974, p. 35.

The individuals before whom the agreement is concluded are the witnesses to it. The royal edict canceling debt affected only loans in silver, not in concrete commodities. Silver (bullion and weighted) was a sort of *proto-money*. In Sparta, a new king remitted all public and royal debt of the citizens at the beginning of his reign. And so did the Great King of the Persian Empire with regard to taxes owed to him by the constituent parts of his realm (Herodotus VI, 59). The reason being the same, credit malfunction in a nonmonetary economy.

- [15] Tablets Ge 602-608 from Mycenae are inscribed with names of persons in nominative or dative to which are associated commodities that can be identified mostly as herbs and spices. J. Chadwick (E.L. Bennett Jr., *The Mycenae Tablets II*, 1958, p. 107a) interpreted conjecturally these records as sales, sometimes on credit: «Since the amounts associated with each name are comparatively small and are not totalled, they may represent sales of these commodities; and in some cases the wording suggests that they are amounts «owing», perhaps outstanding against future payment. In the absence of any form of currency the debt can only be recorded in terms of the actual commodities sold». In fact, tablet Ge602 lists amounts of such commodities owed by various individuals to somebody with the name Psellos (*ibid.* p. 108):

«How-----owed to Psellos:		
Pu <sub>2</sub> -ke	fennel seed	0.5 l.
Phegeus	cumin	x l.
	fennel seed	2 l.
	sesame	1 l.
	boxes	6
For Ka-e-se-u	red safflower	x kg.
	sesame	2 l.
	fennel seed	2 l.
	boxes	6
ke-po	red safflower	x kg.
	--	2 l.
	mint	2 PE
	rushes	----
----	---	1 l.
	---	0.5 l.
	[rushes?]	1 bundle
	cup	1 »

(The third debt entry seems to have been incurred on behalf of Ka-e-se-u). [A different interpretation of the first line of the tablet is offered by Palmer, *op. cit.* p. 273. Pe-se-ro (perhaps equivalent to Psellos) is to be separated from the preceding words and to be taken as representing the first entry of the text, with nil owing. Despite the lesser size of the signs for that name, the former interpretation is more plausible.].

Similarly, Ge604 apparently records actual allocations of these commodities to various persons in quantities registered as indebtedment (*ibid.* p. 109b).

[16] C.A.H. I<sup>2</sup> p. 92.

[16a] For Plato instrument is whatever is defined by its employment in the production of something (*Politicus*, 287e: οὐ γὰρ ἐπὶ γενέσεως αἰτία πηγνύται, καθάπερ ὄργανον [«For it is not made (sc. a «container») with a view to coming into being (of something), as an instrument is»]. He divides property, possessions (excepting tame animals) in seven classes, basic materials, instruments, vessels, carriages, defences, diversions and nourishments. Currency he ascribes to *instruments* and, partly perhaps, diversions (the latter with regard to its aesthetic qualities). *Ibid.* 289a-b:



Σχεδὸν τοίνυν ὅσα ἔχεται κτήσεως, πλὴν τῶν ἡμέρων ζώων, ἐν τούτοις ἑπτὰ οἶμαι γένεσιν εἰρῆσθαι, σκόπει δέ· ἦν γὰρ δικαιοτάτα μὲν ἂν τεθὲν κατ' ἀρχὰς τὸ πρωτογενὲς εἶδος, μετὰ δὲ τοῦτο ὄργανον, ἀγγεῖον, ὄχημα, πρόβλημα, παίγνιον, θρέμμα... <ᾗ> παραλείπομεν δέ, εἴ τι μὴ μέγα λέληθεν, εἰς τι τούτων δυνατὸν ἀρμόττειν, οἷον ἢ τοῦ νομίσματος ἰδέα καὶ σφραγίδων καὶ παντὸς χαρακτῆρος, γένος τε γὰρ ἐν αὐτοῖς ταῦτα οὐδὲν ἔχει μέγα σύννομον, ἀλλὰ τὰ μὲν εἰς κόσμον, τὰ δὲ εἰς ὄργανα βία μὲν, ὅμως δὲ πάντως ἐλκόμενα συμφωνήσει. [«Now I think that every kind of property except tame animals has been listed under these seven headings. Think of it; the primary kind of possession, basic material, which in justice should be placed first, and after that instruments, containers, vehicles, protections, toys and nourishment. What we have left out, if nothing of great weight has escaped us, can be fitted into one of these, for instance such things as coinage and seals and engraved dies of all sorts. These do not fall under a great kind in which all coincide, but some have to be subsumed under «ornaments», some under «instruments», in a forced classification, but one in which they will fit well once they are drawn in it»].

- [17] Irving Fisher, *The Purchasing Power of Money - Its Determination and Relation to Credit, Interest and Crises*, p. 12. And similarly Hawtrey, op. cit. p. 200: «In the case of inconvertible paper money it is easy to see that its value arises from its power of discharging debts. Debts have value. As the purchase of commodities and services creates a debt, and one debt can be exchanged or set off against another, the ownership of a debt confers on the creditor that command over commodities in general which we call purchasing power. The possessor of any quantity, large or small, of wealth, prefers to retain a portion of it in an *undifferentiated* form, an option which he can exercise as he pleases when circumstances show which particular kind of wealth will meet his needs».

Hawtrey, in the passage just quoted, goes on to determine the value of paper money by the demand for such general purchasing power: «Hence there is a demand for credit or purchasing power as such, which is satisfied by the existence of the unspent margin. By this demand the value of debts is determined, and the value of paper money is derived from its interchangeability with debts. Paper money can receive its value from no other source». But as we shall see below, the analysis of the Platonic financial model helps discern more articulately the underlying realities. The value of primary credit (credit, that is, created by selling and buying,

by exchange in the commodities and services real market) is determined by the value of the exchange transactions themselves. The value of secondary credit (credit created by lending and borrowing in the financial market) in an economy of static equilibrium is determined in the same way (for it regards only reallocations of the aggregate primary credit). Here supply determines demand; the aggregate demand remains constant. In the case of a dynamic equilibrium, secondary credit reflects not only the present condition of the economy (and, thus, its total primary credit), but also its expected state in the future. Increased demand for credit now means heightened expectations for improved real economic performance in the time to come. It is again supply that determines demand in financial markets, only in this case the supply involves an anticipated component.

- [18] Plato, *Republic*, B 371b (the passage quoted in n. [4]). Transfers of what is each one's business to do, that is selling and buying, constitute a market and give rise to money as a token for the purpose of exchange: ἀγορὰ δὴ ἡμῖν καὶ νόμισμα ξύμβολον τῆς ἀλλαγῆς ἕνεκα γενήσεται ἐκ τούτου. [«And from this there will come into being a market, and currency as a token for the purpose of exchange»].

- [19] Plato has explained the necessity for overseas commerce, and the way it has to be carried, just before the above quoted passage in which he analyses the basic mode of operation for the inland trade. It is practically impossible to find such a location for a city-state which would render it self-sufficient and in no need of imports. But to carry back the required commodities from abroad one has to give something in exchange, i.e. to export goods that are produced over and above those needed for the home demand. Plato, *Republic*, B 370e-371a: Ἀλλὰ μὲν, ἣν δ' ἐγώ, κατοικίσαι γε αὐτὴν τὴν πόλιν εἰς τοιοῦτον τόπον, οὐδ' ἐπεισαγωγίμων μὴ δεήσεται, σχεδόν τι ἀδύνατον. Ἀδύνατον γάρ. Προσδεήσεται ἄρα ἔτι καὶ ἄλλων, οἳ ἐξ ἄλλης πόλεως αὐτῇ κομιούσιν ὧν δεῖται. Δεήσει. Καὶ μὲν κενὸς ἂν ἦ ὁ διάκονος, μηδὲν ἄγων ὧν ἐκεῖνοι δέονται, παρ' ὧν ἂν κομίζωνται ὧν ἂν αὐτοῖς χρεῖα, κενὸς ἄπεισιν. ἦ γάρ; Δοκεῖ μοι. Δεῖ δὴ τὰ οἴκοι μὴ μόνον ἑαυτοῖς ποιεῖν ἱκανά, ἀλλὰ καὶ οἶα καὶ ὅσα ἐκείνοις ὧν ἂν δέωνται. Δεῖ γάρ. Πλειόνων δὲ γεωργῶν τε καὶ τῶν ἄλλων δημιουργῶν δεῖ ἡμῖν τῇ πόλει. Πλειόνων γάρ. Καὶ δὲ καὶ τῶν ἄλλων διακόνων που τῶν τε εἰσαζόντων καὶ ἐξαζόντων ἕκαστα. Οὗτοι δὲ εἰσιν ἔμποροι ἦ γάρ; Ναί. Καὶ ἔμπόρων δὲ δεησόμεθα. Πάνυ γε. [«But

surely, I said, it is practically impossible to have the city settled in such a place, as there would be no need of imports. Impossible indeed. Thus she will stand in need additionally of still another group of men, who will bring to her what she needs. She will stand in need. And then, if the functionary goes empty-handed, carrying with him nothing of what is needed by those which from they themselves get what they need, he will come back empty-handed; is it not so? It seems to me. Production at home thus must be not simply sufficient for themselves, but also such, and of such a quantity, as will satisfy those also, whom they stand in need of. It must. We need therefore more farmers and more of the other producers in the city. More indeed. And further we will need other servicemen who will import and export the goods. These are the traders; is it not so? Yes. We will need then merchants. Very much so»].

External commerce has thus to be in the nature of barter as the two economies are not systematically correlated, hence, not integrated. There can be no half completed real transactions between the two, with the unrealised part securely transposed to the future. No money exchange is therefore possible in such commerce.

This situation refers to an early stage in the genetic development of social, economic and political structures. It is significant that for Plato the emergence of money is essentially associated with the deepening of systematic economic interconnexion (with the appearance of a proper, articulate market economy), and not with the necessity of overseas mass commerce. We shall see in a later chapter how this fits with the empirical evidence, how well, that is, the logicophilosophical genetic account squares with the actual historical development. But the Platonic analysis here, of course, does not contradict the view in the *Laws* that external commerce with positive trade balance heightens the market secondary capitalization by creating the conditions for the accumulation and internal circulation of silver and gold in increasing quantities. *Laws*, Δ 705b: τραχεία δὲ οὖσα δῆλον ὡς οὐκ ἂν πολύφορός τε εἴη καὶ πᾶμφορος ἅμα· τοῦτο γὰρ ἔχουσα, πολλὴν ἐξαγωγὴν ἂν παρεχομένη, νομίσματος ἀργυροῦ καὶ χρυσοῦ πάλιν ἀντεμπίπλαιτ' ἂν. [«The country being rugged, it is evident that it cannot both produce all things at home and these in great abundance. Had there obtained such a combination, there might have been a great export trade, and the country might have been filled in return by gold and silver»]. Gold and silver, whether weighted in bullion or stamped in trusted coinage functioned in foreign commerce as measure of value and means of exchange, i.e. as money commodity or

commodity money respectively. But this is sharply distinguished by *Plato* from the token-money instituted for the home market (see below in the main text). Besides common money for both internal and external transactions represents a more developed and integrated stage of the regional economy, when there exists sufficient interlocking in the markets concerned as to permit the useful adoption and circulation of a common currency. *Plato* argues in the *Laws* context (Δ 704a-705b) for the desirability of a state self-sufficient but not affluent. The type of land and the resources of the State should be such as to be adequate in covering the needs of the population, yet not so plentiful as to allow for a brisk foreign commerce; not should the location of the city provide an all too easy access to maritime facilities, as this will decisively promote external trade, given that significant commerce was at the time virtually exclusively sea-born. The reason for these restrictions has to do with the Platonic partial endorsement of the widespread negative, although qualified, sentiment of the landowning and cultured elites in Ancient Greece towards foreign commerce, and inland wholesale or retail trade. (The nature of this attitude and its real relevance will be examined in *Appendix D*).

- [20] The whole complex point is seen in the *Laws*, E 741e-742b: *Πρὸς τούτοις δ' ἔτι νόμος ἔπεται πᾶσι τούτοις, μηδ' ἐξεῖναι χρυσὸν μηδὲ ἄργυρον κεκτῆσθαι μηδένα μηδενὶ ιδιώτῃ, νόμισμα δ' ἕνεκα ἀλλαγῆς τῆς καθ' ἡμέραν ἣν δημιουργοῖς τε ἀλλάτεσθαι σχεδὸν ἀναγκαῖον, καὶ πᾶσιν ὁπόσων χρεῖα τῶν τοιούτων μισθοὺς μισθωτοῖς, δούλοις καὶ ἐποίκοις ἀποτίνειν. Ὡν ἕνεκά φαμεν τὸ νόμισμα κτητέον αὐτοῖς μὲν ἔντιμον, τοῖς δὲ ἄλλοις ἀνθρώποις ἀδόκιμον. Κοινὸν δὲ Ἑλληνικὸν νόμισμα ἕνεκά τε στρατειῶν καὶ ἀποδημιῶν εἰς τοὺς ἄλλους ἀνθρώπους, οἷον πρεσβειῶν ἢ καὶ τινος ἀναγκαίας ἄλλης τῇ πόλει κηρυκείας, ἐκπέμπειν τινὰ ἂν δέῃ, τούτων χάριν ἀνάγκη ἐκάστοτε κεκτῆσθαι τῇ πόλει νόμισμα Ἑλληνικόν· ιδιώτῃ δὲ ἂν ἄρα ποτὲ ἀνάγκη τις γίγνηται ἀποδημεῖν, παρέμενος μὲν τοὺς ἄρχοντας ἀποδημεῖτω, νόμισμα δὲ ἂν ποθεν ἔχων ξενικὸν οἴκαδε ἀφίκηται περιγενόμενον, τῇ πόλει αὐτὸ καταβαλλέτω πρὸς λόγον ἀπολαμβάνων τὸ ἐπιχώριον· ιδιούμενος δὲ ἂν τις φαίνεται, δημόσιόν τε γιγνέσθω καὶ ὁ συνειδὼς καὶ μὴ φράζων ἀρᾷ καὶ ὀνειδίει μετὰ τοῦ ἀγαγόντος ἔνοχος ἔστω, καὶ ζημίᾳ πρὸς τούτοις μὴ ἐλάττονι τοῦ ξενικοῦ κομισθέντος νομίσματος.* [«There is a further law following all these, that no private person shall be allowed to possess gold and silver, but only currency for daily exchange, which is practically necessary when making exchanges with artisans and for payments to

wage-earners, slaves and immigrants, by all those persons who require the use of them. *Wherefore our citizens, we say, must get a currency which is valuable among themselves, but not accepted and current among the rest of mankind.* As for a common Hellenic coinage, for military expeditions and travel to other peoples, such as on embassies or on such other missions as are needed by the state - for these occasions the state must also possess Hellenic money. And if a private citizen has to travel abroad, let him have the consent of the magistrates and go; but if on returning he has foreign money remaining, let him hand it to the city and get a proportional amount of local currency in return; and if anyone is discovered appropriating it, let it be confiscated, and let him who knows and does not inform be subject to curse and dishonour together with him who brought the money, and also a fine no less than the sum of the foreign money which has been brought back»].

- [21] The private citizen who wants to travel abroad, exchanges at the State Reserve an amount of the token-money with common currency, and similarly upon his return home he must hand over any remaining surplus of foreign currency in exchange for a *proportional* amount of domestic money. This is expressly stated by Plato in the above-quoted passage (n. [20]). Cf.: νόμισμα δὲ ἂν ποθεν ἔχων ξενικὸν οἴκαδε ἀφίκεται περιγενόμενον, τῇ πόλει αὐτὸ καταβαλλέτω πρὸς λόγον ἀπολαμβάνων τὸ ἐγγώριον (hand over the foreign money to the city getting in return a *proportional amount* of the local currency).

For purposes of State as well, financing actions abroad from the reserves of common Greek money held in the State Treasury, must correlate in definable ways to its fiscal policies at home. One must know how much the State's international agenda cost it in terms of its revenues. The former are accounted in units of the common currency, the latter principally in those of the domestic money.

- [22] For ancient economies with purely *fiduciary* money see Volume II of this work on the origin of monetary economy in Greece. Cf. also *infra*, Chapter 6, n. [12].

An extreme form of pure token money existed in England during the first fifteen years of the Bank Restriction Act, 1797 to 1812, when "the universal means of payment in England was the Bank of England note, which was not legal tender, and was merely the evidence of a debt due from the Bank, but a debt not payable in gold or any other medium"

(Hawtrey, op. cit., p. 14). Here not only was the Bank paper money inconvertible, but it existed side by side with a proper legal tender in *specie*. Because of this, not only the debt *had not* to be paid in (then) proper metallic money (and the instrument of debt exchanged for the legally binding means of exchange (gold money)), but it *could not* be so paid.

[23] V. *Appendix D*.

[24] V. the passage quoted in n. [19].

[25] In the *Republic*, the superior social classes (the Rulers and Guardians) are prohibited from using gold or silver currency. In fact the prohibition appears with the force of a religious taboo against coming into contact with, or in the vicinity of, gold or silver generally and in whatever form. In the attitude there is a mixture of aristocratic, ascetic and idealistic tendencies. *Republic* Γ, 416e-417a: Χρυσίον δὲ καὶ ἀργύριον εἰπεῖν αὐτοῖς ὅτι θεῖον παρὰ θεῶν αἰεὶ ἐν τῇ ψυχῇ ἔχουσι καὶ οὐδὲν προσδέονται τοῦ ἀνθρωπείου, οὐδὲ ὅσα τὴν ἐκείνου κτήσιν τῇ τοῦ θνητοῦ χρυσοῦ κτήσει συμμειγνύντας μαιίνειν, διότι πολλὰ καὶ ἀνόσια περὶ τὸ τῶν πολλῶν νόμισμα γέγονεν, τὸ παρ' ἐκείνοις δὲ ἀκήρατον· ἀλλὰ μόνοις αὐτοῖς τῶν ἐν τῇ πόλει μεταχειρίζεσθαι καὶ ἄπτεσθαι χρυσοῦ καὶ ἀργύρου οὐ θέμις, οὐδ' ὑπὸ τὸν αὐτὸν ὄροφον ἵεναι οὐδὲ περιάψασθαι οὐδὲ πίνειν ἐξ ἀργύρου ἢ χρυσοῦ. Καὶ οὕτω μὲν σώζονται τ' ἂν καὶ σώζοιεν τὴν πόλιν· ὁπότε δ' αὐτοὶ γῆν τε ἰδίαν καὶ οἰκίας καὶ νομίσματα κτήσονται, οἰκονόμοι μὲν καὶ γεωργοὶ ἀντὶ φυλάκων ἔσονται, δεσπότηαι δ' ἐχθροὶ ἀντὶ συμμάχων τῶν ἄλλων πολιτῶν γενήσονται, μισοῦντες δὲ δὴ καὶ μισούμενοι καὶ ἐπιβουλεύοντες καὶ ἐπιβουλεύόμενοι διάξουσι πάντα τὸν βίον. [«And as for gold and silver, we must tell them that they have the divine kind, coming from the gods, always in their souls, and have no need of the mortal kind, and that it is wrong to pollute what they have by mixing it with mortal gold, since there is much wickedness associated with the currency which is of the many (the people) while their own is pure. For them alone, of those in the city, it is not meet and right to handle or even to touch gold and silver, or indeed to come under the same roof with them or wear ornaments made from them or drink from vessels of silver or gold. In this way, they would be safe, and they would keep the city safe; but as soon as they get their own land or houses or money, they will become house masters or farmers first, instead

of Guardians, and harsh masters instead of allies to their fellow-citizens, and will spend their whole lives hating and being hated, and in plotting and having plots made against them in return»].

In the Platonic best State of the *Republic*, therefore, the governing and protecting class is forbidden to possess or use gold and silver, whether in bullion, in objects or in coinage. But the rest of the society, and particularly the more enterprising economic agents, may possess uncoined gold and silver, and probably coins in those noble metals as well. Since the internal market has its own fiat money, stocks of the precious metals and such commodity-currency may be used (apart from purposes of self-glorification for which golden and silver *objects* may serve as symbols of wealth or tokens of aesthetic preciousity) for external commerce, in a relatively developed phase of interrelationship in the international economy. But in the State figured in the *Laws*, the interdiction regarding possession and use of gold and silver (bullion, shaped or stamped and coined) is universal, extending to all private citizens, while the State officials, in the exercise of their public function, can dispose of stocks of such currencies from the State Reserve, and even this restrictively for military and security or foreign affairs purposes (v. n. [20]). In the *Laws* Plato appears to knit together the social nexus more homogeneously than in the *Republic*; he seems as if attempting to answer in advance Aristotle's objection that in the earlier dialogue he dismembered the State in two sub-states, substituting, we may say, for the old division between the few possessors of great wealth and the many working for an easy or laborious subsistence, his own between the few possessors of superlative excellence and the many inferior manifestations of human perfection.

[25a] The purpose of such partial regulatoriness, esp. in its sharp, apparent contrast to an otherwise totally free and unregulated, exemplarily natural environment with no significant protections or impediments was ultimately the secure constitution of an appropriate framework for the realisation of superior human excellence. Aristotle shares the same finality in his thought with Plato, but strongly disagrees as to the character of the required framework. Cf. also *Appendix D*.

[26] Hawtrey, *op.cit.* p. 15.

[27] «[T]he volume of credits in circulation and the nominal amount of wages and prices paid out of them (calculated in the conventional unit of

value) may have been enormously reduced. In other words, the wealth value of that unit may have been enormously increased. Nor is there any tendency for it automatically to return to its former value. Indeed, a new disturbance may be initiated in the form of a new curtailment of credits, and after a new period of restricted trade may end in yet a further appreciation of the unit of value». Hawtrey, *op.cit.* p. 12. (The argument is found on pp. 11-2). Of course, the process may be stopped by an opportune fall in the rate of interest, but this is less likely to happen, or less likely to happen on time (*ibid.* p. 12).

[28] Hawtrey *op.cit.* pp. 13-4. See also the recapitulation of his point in p. 192: «At the outset we adopted a purely artificial hypothesis, the existence of an economic community which used credit as a means of payment, but had no money. We assumed that there might be a «money of account» for the measurement of debts and therefore of prices, and we found that, apart from the obvious disadvantage of having no single legal medium for the discharge of debts, *the chief defect of a credit system carried on without money was its instability.* Credit, we showed, has an inherent tendency either to expand or to contract indefinitely, but especially to expand, and in doing so to alter the unit of value beyond any assignable limit. The use of money supplies the means of discharging debts, but it also plays the very important part of stabilizing the unit of value».

[29] *Ibid.* p. 16.

[30] Competition will be naturally harsher among traders (producers, merchants, retailers). Demand for consumptive credit can only be very low, if existent at all, in the high exposure and high risk economic cultures of antiquity, in particular in the exemplary case of the flourishing fifth century Athenian economy.

[31] Hawtrey, *op.cit.*, p. 4, quoting H.D. Macleod, *Theory of Credit* <sup>2</sup>, p. 606: «A bank is merely a shop for the sale of credit».

[32] It is immaterial in the present connection whether, to use Hawtrey's words, «the debts of the whole community can be settled by transfers in the banker's books or by the delivery of documents, such as bank notes, representative of the banker's obligations» (*ibid.* p. 4). The crucial question is whether the banker can create new credit, that is, to reverse the



point, whether he can back up *all* the liabilities at *any* moment by his own stock of credit or by borrowing from other bankers operating under the same condition.

- [33] This is a second, and more essential, definition of banking in Macleod's work, although it does not seem to be recognised as distinct; *op.cit.* p. 585: «A Banker is a Trader who Buys Money and Credits, Debts or Rights of Action payable at a future time by creating and issuing Credits, Debts and Rights of Action payable on Demand». When the issuance goes beyond the existing level of disponible liquidity available for credit, we have passed the borders into Hawtrey's landscape of inherent instability within a credit economy.

Creation of credit *ex nihilo* is emphasised by Hawtrey, *op.cit.* pp. 20-1: «But for the manufacturers and others who have to pay money out, credits are still created by the exchange of obligations, the banker's *immediate* obligation being given to his customer in exchange for the customer's obligation to repay *at a future date*. We shall still describe this dual operation as the creation of credit. By its means the banker creates the means of payment *out of nothing*, whereas when he receives a bag of money from his customer, one means of payment, a bank credit, is merely substituted for another, an equal amount of cash». But there are two things here to be distinguished: every borrowing, *firstly*, is in a sense creation of credit out of nothing (it is a financial transaction, not a process in real economy); but in a stricter sense, *secondly*, creation of credit out of nothing occurs when the indebtedness brought into existence augments the volume of liquidity (of the unspent margin of purchasing power in the community) without a *corresponding, and preceding*, increase in the real economic activity. This is a crucial distinction, not least for understanding fully the Platonic position.

- [34] Hawtrey himself, after having ascribed to the introduction and role of full money the control of the inherent instability of credit by means of stabilizing the unit of value (*op.cit.* p. 192), repeatedly emphasises the function of banking in the stabilization of credit, particularly through the mechanism of interest rates. Cf. e.g. *ibid.* p. 12; p. 24; pp. 214 sqq. He highlights the point of the priority of the control of credit over that of the money, and not *vice versa*: «To control the demand for money, it is necessary to influence the individual from whom the demand ultimately proceeds. His need for money is incidental to his dealings in credit; he

only needs it because money happens to be a more convenient medium for some of the transactions for which he has obtained advances of credit. *That is why the control of money can only be effected through the control of credit*» (ibid. p. 206). But the control of credit is inherent in a well-functioning credit economy, and does not need the interference of banking caution or the Reserve's vigilance. Hawtrey took the workings of the modern economy and projected them without necessary change or qualification onto his conceptual credit economy without money, or indeed onto his credit economy with paper (and token) money. Plato's system is more elementary, radical, and radically different, but it throws more light on the fundamental issues involved.

- [35] Plato, *Laws*, XI, 918a-b: καπηλεία γὰρ κατὰ πόλιν γέγονεν οὐ βλάβης ἕνεκα τό γε κατὰ φύσιν, πᾶν δὲ τοῦναντίον· πῶς γὰρ οὐκ εὐεργέτης πᾶς ὅς ἂν οὐσίαν χρημάτων ὠντινωνοῦν ἀσύμμετρον οὔσαν καὶ ἀνώμαλον, ὁμαλήν τε καὶ σύμμετρον ἀπεργάζηται; τοῦτο ἡμῖν χρή φάναι καὶ τὴν τοῦ νομίσματος ἀπεργάζεσθαι δύναμιν, καὶ τὸν ἔμπορον ἐπὶ τούτῳ τετάχθαι δεῖ λέγειν. Καὶ μισθωτὸς καὶ πανδοχεὺς καὶ ἄλλα, τὰ μὲν εὐσχημονέστερα, τὰ δὲ ἀσχημονέστερα γιγνόμενα, τοῦτό γε πάντα δύναται, πᾶσιν ἐπικουρίαν ταῖς χρείαις ἐξευπορεῖν καὶ ὁμαλότητα ταῖς οὐσίαις. [«Retail trade has come into existence universally throughout the state not for any harmful purpose in so far at least as its own nature is concerned, but for quite the opposite reason. For surely one who makes even and commensurate the essential nature and value (οὐσίαν) of goods of any kind, when it is incommensurate and anomalous, is he not a benefactor? And we must agree that this is what the power of money accomplishes, and it must be said that the merchant was put in place for this purpose. The wage-earner and the tavern-keeper, and many other occupations, some of them more and others less seemly - all alike have this object; - they seek to satisfy our needs (wants) and equalize our possessions»]. And similarly in the *Politicus*, exchange in the real or financial markets effects the equilibration of commodities; 289e-290a: Τί δέ; τῶν ἐλευθέρων ὅσοι τοῖς νυνδὴ ρηθείσιν εἰς ὑπηρετικὴν ἑκόντες αὐτοὺς τάττουσι, τά τε γεωργίας καὶ τὰ τῶν ἄλλων τεχνῶν ἔργα διακομίζοντες ἐπ' ἀλλήλους καὶ ἀνισοῦντες, οἱ μὲν κατ' ἀγορᾶς, οἱ δὲ πόλιν ἐκ πόλεως ἀλλάττοντες κατὰ θάλατταν καὶ πεζῇ, νόμισμά τε πρὸς τὰ ἄλλα καὶ αὐτὸ πρὸς αὐτὸ διαμείβοντες, οὓς ἀργυραμοιβούς τε καὶ ἐμπόρους καὶ ναυκλήρους καὶ καπήλους ἐπωνομάκαμεν, μὴν τῆς πολιτικῆς ἀμφισβητήσουσί τι; [«Well then; what of free men who freely

place themselves in the service of the various producers we have named (before), distributing and *equalising* the products of agriculture and the other crafts with each other, either in the market place or travelling from city to city overland or by sea routes, *exchanging money for other things or currency for currency*, the people whom we call money changers and merchants and venturers (ship masters) and retailers (shopkeepers) - do they have a claim to political leadership?». Real exchange (selling and buying against money) is distinguished from financial exchange (money for money and, according to Plato's construal, credit transactions as such). *Both equilibrate goods and services, rendering them commensurate in value*. Specialization of labour and multiplication of products creates the necessity for their equilibration in exchange, and thus market-integration implies the emergence of money as measure of value. Aristotle's theory of value in the *Nicomachean Ethics* and the *Politics* is a development of the Platonic conception in this passage.

It is further important to be noticed that this view constitutes the preamble to severe laws on trade. It is followed by an explanation of why, although market, trade and money are by nature fundamental advantages in the organization of human life, they can be distorted in unseemly ways detrimental to man's well-being and thus necessitating the protectionist rigidity of the relevant legislation in a well-instituted state. For the real point and significance of this outlook in the Platonic and classical context v. *Appendix D*.

[36] The value of transaction  $T_i$  is the value of the commodity or service  $G_i$  exchanged through it, since we have to do with a thorough market economy. A barter exchange within it is construed as a double market exchange, and is valued accordingly at twice the value of the exchanged goods.

[37] Two points need to be observed here.

(a) The Fisher equation normally does not contain explicit time variable (V. I. Fisher, *op.cit.* p. 26). But then Fisher's velocity of circulation of money  $V$  involves implicitly a time dimension, namely an annual period, being a rate per year: «If we divide the year's expenditures,  $E$ , by the average amount of money,  $M$ , we shall obtain what is called the average rate of turnover of money in its exchange for goods,  $E/M$ , that is, the velocity of circulation of money» (*ibid.* p. 24). Thus, under the same economic conditions, a doubling, for instance, of the time period

concerned, would double the total amount of transacted value (second part of the equation); and since the amount of money required should remain the same, that would imply the doubling of the index  $V$  - a curious implication for a *rate* of change such as velocity. By always taking yearly spans one can dispense with the necessity to take care of the minor complication needed, but theoretically it is better to always give to the mathematical symbols and magnitudes an intuitive physical meaning.

(b) In explicating the Platonic monetary model I have introduced the definitions of the key concepts by having recourse to real economic factors and situations, the idea being to understand and measure the financial structure in terms of its real-economic foundation. Thus the velocity in the equation of money has been determined as rate of market exchange transactions in commodities and services (selling and buying) rather than as rapidity of circulation of money (rate of money-transfer from person to person or rate of person-turnover as average money passing through a man's hands divided by the average amount held by him; v. Fisher, *op.cit.*, pp. 352-4; 358-64). Of course, under the conditions of the Platonic model, velocity of market-exchange and velocity of money circulation coincide, since every transaction is a selling and buying exchange of goods for money.

[38] The expressions are Hautrey's, *op.cit.* p. 34 and *passim*.

[39] This is so under normal conditions of economic health. Borrowing simply to cover old debt (and the concomitant diverse schemes of "restructuring" debt) is obviously another matter. Although, even in adverse situations of malfunctioning in the body-economic due to specific illness or general malaise, curing treatment has to be tuned, in order to be effective, to the realities of health. And the crucial factor in determining the *forward* value of money, as against its *spot* value, is (*expectation of the future intensity of economic activity*).

[40] Myrdal (of the Stockholm School) esp. emphasised the role of expectations in monetary equilibrium and the determination of prices. Hicks called later Myrdal's analysis the "*expectations method*": by means of expectations, (expected) future economic activity produces effects on present economic activity, before it actually occurs. Investment decisions reflect the entrepreneurs' expectations in regard to the forthcoming rate of return of invested capital. These decisions constitute the demand for

money on credit. On the other hand, the supply of credit is realised by the decisions of the individuals to refrain from consuming part of their income; the extent of such offer depends on the amount of the income-part saved from consumption, and this again has to do with expectations regarding the intensity of future economic activity. In equilibrium, investment and saving decisions match each other - and this is achieved at a given interest rate (Cf. Appendix A). The dynamics of an economic system is governed by the schedule of entrepreneurial decisions to invest, and, hence, by the business expectations regarding future economic performance. For it is the change of expectations which sets in motion a series of changes abutting in a restoration of equilibrium, albeit a different one. The change in expectations causes change in the investment schedules, and, consequently, in aggregate production, thus in incomes earned and in prices set: this changes in its turn the savings ratio; and so the changes effected by the initial change in expectations regarding future economic activity have saving adjust automatically to the new environment created by the change and the consequent change in investment pattern.

[41] This is what I have called the normative rate of interest. For another fundamental component (the *pure* rate of interest), measuring the cost of time as such (and the loss incurred by the idling of an asset), v. *Appendix G*. The normative rate on the other hand, reflects the enticement required for someone in order to refrain from the immediate consumption of utilities (and so in some sense to defer satisfaction and inflict partial privation on himself) and thus to save, v. *Appendix A*.

[42] V. *Appendix G*.

[43] The seemingly paradoxical correlation of higher (lower) interest rates with positive (negative) rational expectations of economic growth in a natural-economy setting, is supported by the empirical findings in (all too frequent) unnatural economic conditions. Thus in an unhealthy economy (protectionist, corrupt, overregulated) with a bleak outlook for the future, even *artificially high* interest rates will not disincline people from heavy consumerist spending. The explanation for this apparent anomaly lies in the fact that the proper, basic rate of interest in such environment is really very low; individuals behave accordingly. If they borrow, they borrow predominantly to consume. The credit system hangs in the air; or is

suspended on supranational entities attempting to regulate markets for political reasons, and thus prepared to support decrepit economies for equally political reasons. (To political reasons, I subsume pseudo-economic causes operating on behalf of vested interests and against the interests of free competition in an open and transparent market). An example of such a type of situation is provided by the current state of Greek Economy at the threshold of its incorporation into the Euro-zone.

- [44] V. *Appendix A*. Interest is the work of money as such. It is precisely called *ἔργον χρημάτων* by Isocrates, 11.42 (cf. Demosthenes, 27.10). The offspring (*τόκος*) of money, is what is effected by its use, and thus it also is the remuneration for its use, the return upon its use. In equilibrium there can be no distinction between the normative rate of interest and the rate of return on capital invested.

- [44a] In the context of a modern economy, with a central Monetary State Authority, the ancient classical principle of total noninterference in money and credit formation (something that automatically ensures the correspondence between money, credit and real economic activity) becomes one of minimal regulation, and that following strictly the natural contours. Such is the practical position of, e.g., Friedman's Monetarism: the best thing to do, for the monetary authorities, would be to increase the money supply at the rhythm required by long-run real growth and to leave the market with the job of dealing with short-term adjustments.

- [45] It was a deep-rooted experience in the Ancient Greek world-view that harmony is always a dynamic reality even in static contexts, and consists in the particular determination of an amorphous indeterminacy (or in the measuring of indefiniteness) *and in the balancing of opposing movements*.

The former aspect of this fundamental attitude found its philosophical expression in the Pythagorean doctrine of reality as constituted by the duality of principles Finitude - Indefiniteness (*πέρας-ἄπειρον*), a view which soon assumed its classical, mathematical formulation: being is number as numerical determination of an indeterminate continuum; the principles of being are thus the principles of mathematics. [For the archaic Pythagorean conception and its religious precedents, see A.L. Pierri, *Origin and Nature of Early Pythagorean Cosmogony*, in K. Boudouris (ed.) *Pythagorean Philosophy*, 1992, pp. 126-162 (esp. pp. 133 sqq. with

notes). For the development towards the classical Pythagoreanism, see A.L. Pierris, *Hellenistic Philosophy: Continuity and Reaction in an Oecumenical Age*, Excursus IA, *Symbolic and Mathematical Pythagoreanism: Early History*, in K. Boudouris (ed.), *Hellenistic Philosophy*, vol. I, 1993, pp. 133-155, esp. pp. 145-7. For the transformations of the Pythagorean Dualism of Principles, see A.L. Pierris, *op.cit.* Excursus IC, *Transformations of Dualism*, pp. 150-2. Finally, for Platonic Pythagoreanism, see my study: *The Metaphysics of Politics in the Politeia, Politikos and Nomoi Dialogue Groups* in A. Havlicek and F. Karfik (eds.), *The Republic and the Laws of Plato*, Proceedings of the First Symposium Platonicum Pragense, 1998, pp. 117-145. See also A.Λ. Πιερρής, *Περὶ Τέλους*, 1996, Κεφ. III, Παράρτημα Β', 'Η Θέσις τοῦ Πλατωνικοῦ Τιμαίου στὴν Ἱστορία τοῦ Ἑλληνικοῦ Δυϊσμοῦ, pp. 193-214].

The Aristotelian opposition in first principles between form and matter attempts to capture the same fundamental understanding under a different aspect.

But the most powerful expression of the experience of harmony as sharp resonance in balance between opposing factors has been given by Heracleitus. The World is characterised and constituted by a fierce antagonism on all levels of existence; B53 DK: *Πόλεμος πάντων μὲν πατήρ ἐστι, πάντων δὲ βασιλεύς, καὶ τοὺς μὲν θεοὺς ἔδειξε τοὺς δὲ ἀνθρώπους, τοὺς μὲν δούλους ἐποίησε τοὺς δὲ ἐλευθέρους*. [«War is father of all (beings) and king of all, and some he renders gods, others men, some he makes slaves, others free»]. And B80 DK: *εἰδέναι χρὴ τὸν πόλεμον ἔόντα ξυνὸν καὶ δίκην ἔριν καὶ γινόμενα πάντα κατ' ἔριν καὶ χρεῶν*. [«One must know that war is common and justice (right) is strife and that all things come to pass by strife and necessity»]. This all-pervading antagonism is however the cosmic principle of coherence, the universal Logos (Reason); B1 DK: *...γινομένων γὰρ πάντων κατὰ τὸν λόγον τόνδε...* [«For although all things come to pass according to this Logos (Reason)...»]. So there is unity in the opposites, just as there is differentiation and contrariety in wholeness; B10 DK: *συνλάψεις ὅλα καὶ οὐχ ὅλα, συμφερόμενον διαφερόμενον, συνᾶδον διᾶδον, ἐκ πάντων ἓν καὶ ἐξ ἑνὸς πάντα*. [«Syntheses (associations, things going together) are wholes and not wholes, something which is being brought together and something that is being brought apart, something which is in tune and something which is out of tune: out of all things there is formed a unity, and out of a unity there are formed all things»]. The unity of opposites is

something which Heracleitus loves to expatiate upon (cf. e.g. B67; 61; 60; 111; 88). Antagonism and opposition thus constitute the *harmony* of being, *the fitting together* of existence (the root of harmony, *ἁρμονία* is the same with that of fitting, *ἀρμόζειν*); B51 DK: οὐ ξυνιᾶσιν ὅκως διαφερόμενον ἐωυτῷ ξυμφέρεται· παλίντονος ἁρμονίη ὅκωσπερ τόξου καὶ λύρης. [«They (men) do not apprehend how being at variance it agrees with itself (*literally*: how going apart it comes together with itself): there is a counter-streched harmony like that of the bow and of the lyre»]. Such is the hidden harmony operating in the World, much more potent than any apparent one (B54; 123).

A natural system is so constituted (and so generated) as to take care of itself: its parts need, and can, effectively, not trouble themselves with its maintainance and well-being as a whole. By *doing one's own* each member helps indirectly preserve the existence and raise the perfection of the whole. Doing one's own means bringing its existence into optimal realization: lead oneself to the perfection of being one is capable of, strengthen accordingly one's power to its highest peak, and act to the maximum of one's corresponding capacity. Then automatically the system reaches its maximal state of attainment. Such is the Platonic elaboration of the Heracleitean dynamism. Comparison is being thus called upon with Gossen's view on Egoism as the natural force that holds society together and unerringly promotes man's welfare to its supremest levels. V. H.H. Gossen, *The Laws of Human Relations and the Rules of Human Action Derived Therefrom*, (Engl. Tr. by R.C. Blitz), 1983, pp. 207-8: «The moralists did not succeed in discovering the force that will induce man to act in his relations with others in a manner that is absolutely necessary for the existence of society... We no longer need the explanations of the moralist. We have learned to recognise the force whose strength we have occasion to admire daily and in innumerable instances, namely, the *egoism* of the human race, which is completely sufficient for its requisite task». And p. 299, at the very end: «He (sc. the Creator) made egoism the sole and irresistible force by which humanity may progress in the arts and science for both its material and intellectual welfare». But the manner in which sacred egoism effects its mighty task of preserving society and improving its condition appears different in Plato and Gossen. For Gossen, the Law of Satiety, or, rather, the Principle of Diminishing Intensity of Satisfaction with Increasing Amount of Utilities, suffices to turn universally holding individual antagonism into an (unintended) societal co-operative with maximal efficiency. Although Plato



discovered and articulated that foundational tenet of marginalism, he ascribed societal cohesion to the individual striving for maximal excellence and perfection (for optimal self-realisation), given human nature and the fact that its highest faculty is reason, the principle of intellectual understanding of reality and of the intelligibility of reality, simultaneously.

However, in Plato, too, the way of stabilizing and developing human society as a result of the inexorable working of natural egoism is objectivistic and «technocratic», being done through *virtue (excellence), which is essentially knowledge and skill, rather than moral character of the person in the modern sense*. V. for this crucial topic in Platonic interpretation, my essay referred to supra, n. [1a]. (Cf. there esp. n. 48 and also n. 42).

- [46] Interfering regulation as protectionism shields the incompetent from the consequences of his errors and failures; it simultaneously, as rules of curtailed competition, hinders the function of the best, thus attenuating their optimal performance and reducing their maximal results. *Both distortions institute unnatural counter-motivation to excellence, creativity and responsibility; they lower standards of both individual achievement and collective welfare; human well-being suffers grievously as a result of their meddlesome good-willingness.*

- [47] According to the polity delineated in the *Laws*, the law totally unregulating the financial market enjoins (742c): *μηδὲ νόμισμα παρακατατίθεσθαι ὅτῳ μὴ τις πιστεύει, μηδὲ δανείζειν ἐπὶ τόκῳ, ὥς ἔξὸν μὴ ἀποδιδόναι τὸ παρὰπαν τῷ δανεισαμένῳ μήτε τόκον μήτε κεφάλαιον*. [«and no one shall deposit money with another whom he does not trust (whom he has no faith in), nor shall he lend money upon interest (unless on conditions of sheer trust), as being possible for the borrower not to repay either interest or capital»].

Zaleucus, the famed law-giver of the Epizephyrial Locrians (in Southern Italy), is said to have inderdicted certificates of debt (Zenobius, *Proverbs*, V, 4). All lending and borrowing was a question of verbal agreement: Credit was left unprotected, and *thus* rendered absolute: trustworthiness was the crucial matter in all transactions (cf. *infra* n. [51]). Simultaneously, Zaleucus simplified procedures regarding the rights of property, *thus* strengthening them. In general, Strabo, VI, 260C: (Ζάλευκος) ἀπλουστέρως περὶ τῶν συμβολαίων διατάξαι [“Zaleucus

ordained in a straightforward way the law of contracts”]. The spirit of such enactments and law-codes was to create a framework for human activity light but strong, something that permitted *rapid and clear-cut resolution* of disputes. As to their directive drive, it laid (virtually) unconditional jurisdiction and responsibility of dispensation to the agent at his own absolute risk. In some city-states the law forbade the actionability regarding any voluntarily entered contract: the point being, as Aristotle observes, that trust and creditworthiness is of the essence of a compactual agreement. *NE*, I, 1164b13-15: ἐνιαχοῦ τ’ εἰς νόμοι τῶν ἐκουσίων συμβολαίων δίκας μὴ εἶναι, ὥς δέον, ᾧ ἐπίστευσε, διαλυθῆναι πρὸς τοῦτον καθάπερ ἐκοινώνησεν. [“in some places there is legislation to the effect that causes relating to voluntary contracts are not actionable before the law, as being appropriate that one must resolve his affairs with somebody to whom he put faith (with whom he entered into a credit agreement, a pact of trust) on the same terms upon which one associated with him”]. V. the Platonic passage quoted *infra*, n. [49]. Cf. next note for the Platonic explicit formulation of this principle, described as second-best, when the ideally best arrangement of a perfect order was for various reasons unrealisable and unenforceable.

- [48] The reason for this measure is that it stabilizes supply and demand and avoids accumulation of excessive borrowing (555e-556a). V. *Appendix D* for Plato’s general point: if the *best order* cannot be *prescribed* by divine wisdom conjoined with supreme power, then the second best approach is to totally lift all restrictive regulation, entirely free the field from all *necessarily* artificialising interference, and leave it to the *self-adjustable* mechanisms of *natural* workings to effect and sustain that order. All intermediate courses are mere ineffectual *meddling*.

- [49] *Laws*, IA, 915d-e: ὅσα δὲ διὰ τίνος ὦνῆς ἢ καὶ πράσεως ἀλλάττηται τις ἕτερος ἄλλῳ, διδόντα ἐν χώρᾳ τῇ τεταγμένῃ ἐκάστοις κατ’ ἀγορὰν καὶ δεχόμενον ἐν τῷ παραχρήμα τιμὴν, οὕτως ἀλλάττεσθαι, ἄλλοθι δὲ μηδαμοῦ, μηδ’ ἐπὶ ἀναβολῇ πράσιν μηδὲ ὦνῆν ποιεῖσθαι μηδενός· ἐὰν δὲ ἄλλως ἢ ἐν ἄλλοις τόποις ὅτιοῦν ἀνθ’ ὅτουοῦν διαμείβηται ἕτερος ἄλλῳ, πιστεύων πρὸν ὃν ἂν ἀλλάττηται ποιείτω ταῦτα ὥς οὐκ οὐσῶν δικῶν κατὰ νόμον περὶ τῶν μὴ πραθέντων κατὰ τὰ νῦν λεγόμενα. [«When goods are exchanged by selling and buying, a man shall deliver them, and receive immediately the price of them, at a fixed place in the market, and have done with the matter; but he shall not buy or sell

anywhere else, nor buy or sell on credit (*literally*, on deferment, by deferred payment). And if in any other manner or in any other place there be an exchange of one thing for another, let him do that in faith (on trust, on credit, *πιστεύων*) towards the other man with whom he enters into exchange, on the understanding that there are no legal procedures before courts of justice (that the law gives no protection) in cases of things sold not in accordance with these regulations». Cf. the Aristotelian passage quoted in n. [47].

Similarly and clearly in the *Laws*, Θ, 849a sqq. Plato, after imposing restrictions on internal retail trade among citizens for ulterior motives (v. *Appendix D*), decrees that particular places will be determined in the common market for particular commodities and there (849e) ἐν τούτοις ἀλλάττεσθαι νόμισμά τε χρημάτων καὶ χρήματα νομίματος, μὴ προϊέμενον ἄλλον ἑτέρῳ τὴν ἀλλαγὴν· ὁ δὲ προέμενος ὡς πιστεύων, ἕαντε κομισῇται καὶ ἂν μὴ, στεργέτω ὡς οὐκέτι δίκης οὔσης τῶν τοιούτων περί συναλλάξεων. [«At such places they shall exchange money for goods and goods for money, neither party giving up a commodity to the other without immediate payment received (neither party in the transaction giving credit to the other); and he who gives up without instant payment (who gives credit) must be satisfied, whether he obtain his money or not, for in such exchanges there is no protection by law»].

The expressions used by Plato in these passages to signify the future element or the incompleteness of a real market transaction not immediately settled by full payment of the price of the article exchanged is ἐπ' ἀναβολῇ (on deferment) or προϊέσθαι (give up). The completion of the transaction is deferred; or the commodity exchanged is not in fact instantaneously exchanged, but rather given up, pending its future payment. Translations employ standardly the phrase «give credit», and this is all right so long as one keeps to its *ordinary* sense. For, strictly and technically speaking, in the Platonic Credit Economy every exchange is a selling and buying on credit testified by token money *inconvertible* to gold or silver or foreign currency (commodity money). *Goods (and services) are exchanged for tokens of credit*. And, furthermore, every such exchange is incomplete in the sense that a *solid utility* is exchanged for an *unspecified, abstract liquidity*, a power, that is, capable of being realised in the future as some solid utility or other at will. What is left unprotected in the cases of the passages above quoted, is credit in excess of the optimal and active credit functioning in the given state of the real economy, i.e. in excess of the optimum amount of money circulating in it, as has been

shown above. The important difference is not between exchange by money and exchange on credit (for Platonic money *is* token of credit); but rather between exchange on real (active) credit and exchange on fictitious (nominal) credit. In the former case, the buyer hands over immediately operative credit to the vendor, a portion of the active abstract utility flowing in the system as liquidity. In the latter, the seller gives to the buyer «credit» in the sense that he allows the buyer to postpone granting him such an amount of unspecified utility as is equivalent to the value of the commodity sold. In fact, the *former is real and present credit, the other promissory and future one.*

[50] Not even money's guarantee in payment is always full-proof. It is so in a static economy in equilibrium. But in a dynamic setting there may occur disproportionalities between amount of operating credit, quantity of money and level of real economic activity, esp. in so far as the function of time for these magnitudes is concerned. Erroneous projections of economic activity in the future cause (temporary) disarray; even correct predictions take time to filter down in to the corresponding justified amount of money. In this way and to this extent the monetarization of the economy is unregulated, its determination being left to the free play of the market forces, as above stated.

[51] So Theophrastus testified in his treatise *On Contracts*. A long extract from this work is preserved in Stobaeus, *Florilegium*, MΔ', 22. At its end we read (II p. 168.15-19 Meineke): ἡ ὥσπερ Χαρώνδας καὶ Πλάτων; οὗτοι γὰρ παραχρῆμα κελεύουσι διδόναι καὶ λαμβάνειν, ἐὰν δέ τις πιστεύσῃ, μὴ εἶναι δίκην, αὐτὸν γὰρ αἴτιον εἶναι τῆς ἀδικίας. [«Or (the law on selling and buying) shall be as Charondas and Plato have it? For they enact that the exchange must be fully completed instantaneously, or alternatively, if it is done on trust and by giving credit, there is to be no question and recourse to justice, for the party (that may be) wronged is himself responsible for the injustice done to him»]. Cf. n. [47] *supra*.

[52] Aristotle, *Nicomachean Ethics*, Θ, 1162b 21 sqq., distinguishes two kinds of utilitarian friendship (ἡ κατὰ τὸ χρήσιμον φιλία), according as the justice of the relationship which constitutes it is on the pattern of the written law or the customary rightness; the former he calls «legal» (νομικῇ), the latter «moral» (ἠθικῇ). He then subdivides «legal» friendship into two sorts depending on whether the mutual utilities involved are explicitly specified (quid pro quo) and their exchange simultaneous, or whether

there is liberal relaxation in the time allowed for the recompense to be offered, if not for the definiteness and specificity of that recompense. The relevant passage runs thus, 1162b 25-31: ἔστι δ' ἡ νομικὴ μὲν ἢ ἐπὶ ρητοῖς, ἢ μὲν πάμπαν ἀγοραία ἐκ χειρὸς εἰς χεῖρα, ἢ δὲ ἐλευθεριωτέρα εἰς χρόνον, καθ' ὁμολογίαν δὲ τί ἀντὶ τίνος. δῆλον δ' ἐν ταύτῃ τὸ ὀφείλημα κοῦκ ἀμφίλογον, φιλικὸν δὲ τὴν ἀναβολὴν ἔχει· διόπερ ἐνίοις οὐκ εἰσὶ τούτων δίκαι, ἀλλ' οἴονται δεῖν στέργειν τοὺς κατὰ πίστιν συναλλάξαντας. [«That one which is on stated conditions then is legal (friendship). One sort of it is wholly commercial (market-like) implying payment on the spot (full and complete exchange); another is more liberal, allowing time, but still on the understanding of a specified return. In this then the debt is plain and undoubted, but the delay which it admits of is friendly. Hence in some states no suits are allowed in cases of this kind, but men think that those who have contracted on faith should abide (by the issue however it turns)»]. Ἀναβολή (deferment) in exchange answers to «credit» given in the above defined sense (n. [49]). It is the same word as that used in one of the relevant Platonic passages. There were thus various actual states (ἐνίοις) where no legal action was possible with respect to contractual obligations in selling and buying, just as in the Platonic philosophical model.

- [53] This will be examined in Volume II of this work, on the *Origin of Ancient Greek Monetary Economy*.
- [54] Hawtrey, *op.cit.* p. 17: «We have now arrived then at a revised definition of money. It is the means established by law (or custom) for the payment of debts. Consequential upon this characteristic are both the functions by which we sought to define it at the outset, that of a medium of exchange and that of a standard of value».
- [55] Hawtrey, *op.cit.* p. 16: «But legally money is the means of discharging a debt, and this is really the more general conception. *It is used as a medium of exchange because a purchase creates a debt, and money provides the means of paying the debt. When payment is made in ready money this merely means that the debt is immediately discharged.* A purchase for money can always be analysed into the creation and discharge of a debt. The discharge of a debt in money cannot always be identified as the completion of a purchase or exchange». *The Platonic construal revived.*