Telematic currency and market strategy

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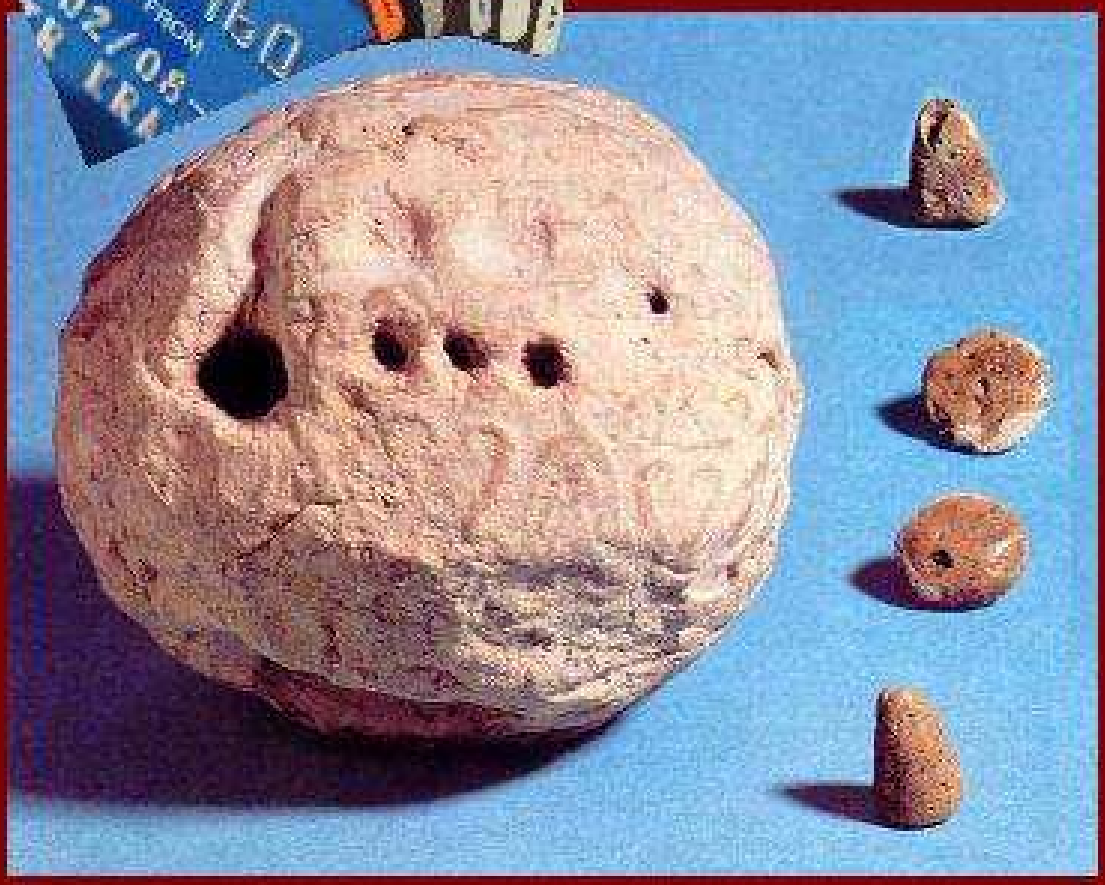

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Preface.

This essay has been written keeping in mind all those people who, being dissatisfied with social reality, are investigating and looking for new ways.

It is especially meant for specialists and social researchers wishing to find new alternatives to the eternal blind alleys.

We must however advise that this essay does not claim to be either a comprehensive or scientific work; it is rather the basis for a possible future scientific research, much more extensive and specialized.

As a matter of fact, it is not an actually scientific research on economics; it is rather a consideration on economics as a science, and on the social possibilities of an «economic technology» which at present is already technically feasible.

The ideas we submit, and the technical suggestions which will be developed, are offered as an instrument for study and dialogue. We do not mean to present here a wholly complete doctrinal body, we want rather to excite criticism and co-operation, and to promote study, research and debate.

In a further essay we will deal more deeply with the possible social effects of our suggestions. Therefore, this essay is simply the technical-instrumental part of a larger and more complex body of thoughts on the possibilities open to the human race at the end of the XX century.

Notice.

The words which in the course of this essay are printed in bold-face, are technical words or expressions which not always correspond to the current meaning. Most of them are explained as soon as they appear. However, the Centre d'Estudis Joan Bardina is preparing a Systematic guide to univocal terms (Number 7 of this collection of works) where all the terms which require a deep etymological and linguistic research are methodically studied, in order to give them an exact univocal meaning.

Introduction.

1. Information as a necessary element in any activity.
2. Present lack of information on the market.
3. Money circulation today.
4. Scope and contents of this essay.

1. Information as a necessary element in any activity.

Information is, and will be more and more, one of the basic elements in any human activity. We might even say that it is the main one, as without the right information no activity can be developed with any sort of effectiveness.

Of late some biologists have compared the genetic code to a system which accumulates, holds and transmits information: therefore information becomes a necessary element not only for the development of activities but even of life itself.

But besides the information contained in chromosomes, all living species have their own inborn systems to obtain and develop the information from their surroundings, and therefore to be able to act.

Man is an original being: besides other things he has gradually built up new information systems, not inborn or natural, but as a social and cultural creation. These systems have become more and more sophisticated and complex, and have lead to the appearance of language, at first only spoken and later -in the last 5,000 years- also written.

Writing therefore is not a new communication and information system distinct from spoken language; it is simply a technical means to make the keeping and transmission of language easier, which improves and multiplies its range. At present, a new technology can fulfill much more quickly, exactly and powerfully this function: we are talking about telecommunications in all their different forms.

Besides, at present we dispose of informatics, which allows not only obtaining, holding and transmitting data, but also their artificial-logical treatment, according to pre-established programmes, as long as such data have been rigorously codified and submitted to logical analysis.

2. Present lack of information on the market.

Even if there has been a great progress in technology for the transmission and handling of information, at present it is very difficult to have exact information with respect to any **marketing** phonemenon in reply to classical questions, such as: WHO bought or sold a given merchandise? HOW, under which conditions has the sale/purchase operation been effected? WHEN was such operation brought about? WHY, for which reason has it been effected?

Under these conditions, neither the politician, nor the judge, nor the businessman, nor the person in charge of an organization, nor the economist, the sociologist or any simple citizen have enough information to prepare and bring about a rational and effective strategy of action.

Until questions like the above, and especially the one concerning «WHO», cannot be answered exactly, Justice will not be able to establish with documents personal responsibility in face of the law. The market will not reach an actually full development, as long as it does not produce freely analytic and synthetic information, detailed and complete, of all the population. It can also be stated that theoretical and practical knowledge of the market will make no progress, and will not become experimental, as long as there is no rational **system** for documenting all the elemental facts which take place in it.

However, also within the market man has created a very specialized information system to understand all the facts which take place. The elemental facts of the market are the goods exchange and the working information system is the money system.

The idea of «money as travelling information» and of «money system as an information system» is no piece of news, and it is currently admitted by all the branch specialists. What we can say is that it has not been studied enough and, above all, that the theoretical and practical consequences of this theory have not been dealt with fully taking advantage of all the possibilities.

The scope of this essay is the study of this matter according to the present way of thinking and technical possibilities of information.

3. Money circulation today.

Money circulation -that is, circulation of news on the goods exchanges within the market- has at present two different main aspects:

1. Circulation of bank notes from hand to hand: bank notes are bearer bonds, that is anonymous. They do not leave any information on WHO has effected the operation. Therefore, because of their very nature, they are absolutely uninformative.
2. Circulation of current account notations, a consequence of «cheques», which are clearing orders. This second circulation is partially personalized, but it is not thoroughly analytic and, above all, as soon as the person involved wants, it can become a circulation of bank notes. As a matter of fact, notwithstanding its enormous present importance, money circulation through current accounts is legally subsidiary and derived from the circulation of bank notes.

This is a much simplified look on the present monetary situation, which is much more complex. But it allows to find out that to-day there is no thorough, exact and public information on the elemental facts of the market. The visual horizon offered by the present money system is therefore rather limited and narrow, and is well below what informatics might allow, or even better «tele-informatics or distance informatics», abbreviated as **telematics.**

4. Scope and contents of this essay.

As we have said previously, the social effects of the lack of information on the market are greatly negative at any level: economic, political, legal, scientific... An uninformative money system not only allows all sorts of dirty games disguised under anonymity of money, it stops the market agents from taking decisions and preparing rational strategies and finally makes the actual, **scientific** understanding of the market working difficult.

In reply to this fact, in this essay a possible and easy technological solution is submitted: the description of a new and sole money instrument, instead of those being used at present, will be the central subject. This suggestion is included in the formal statement of a global money theory -not new, but actually updated- and is followed by a consideration of the many social consequences and possibilities which the new theories offer.

In the first place an analysis and consideration of the nature and functions of the money systems will be made, both from an historical and present day point of view. The money theory which will derive from this is the starting point to establish a new money system, more rational, more adjusted to present technological possibilities, and fully informative.

In the second place, we will describe the new money system which has been suggested, based on what we call **telematic cheque invoice**. This is a fully personalized money system, limited to one only elemental market operation, and fully informative of its peculiarities. Its circulation as a sole legal **monetary instrument** will allow to completely clear up the market, and to give the information which is so vitally needed. We will also refer to the minimal political conditions which must be granted so that this money system becomes an actual

social progress, and not a regression as a monopoly of all the available trade information would be in the hands of any group.

In the third place we will study the possibilities offered by the possession of an exact and thorough information on the market. There are many advantages, in the first place concerning one only idea: the rationalization of the trade and social processes in any sort of contact with the market. Very especially we must point out that by the introduction of the cheque invoice as the sole legal money instrument, it will be possible to transform the study of the market into a matter of real scientific experimental rigour.

We will also submit a work hypothesis on the market, which -as any other hypothesis to be held on this subject- will only be experimentally tried when the telematic cheque invoice becomes a fact. This hypothesis concerns the possibility of building up a **communal money hoard** without any need to tax the people, and is narrowly connected to the **invention of money**. In the case of an experimental confirmation, politicians will have a very strong weapon to obtain a balanced market and an equitable distribution of the communal riches.

This is one of the reasons which have had more importance when writing this essay: the research for effective solutions, not only for a good knowledge and working of the market, but also for the many social problems which are present today.

A. Money systems until now.

Chapter 1. Limiting the matter being studied.

1. Goals and method of this chapter.
2. Historical context.
3. Geo-political context.
4. Conclusions.

1. Goals and method of this chapter.

The critical consideration on the **money systems** is the core of this essay. But before starting we want to use this chapter to situate the money systems within the global context where they will be studied and to fix exactly their limits.

This job will help also to give the definitions of the main technical wording which will be used in this essay. The more specialized terms will be defined every time it becomes necessary.

2. Historical context.

Money systems appear under given historical conditions which we should remember. Therefore, they must be considered as the results of a lasting evolution, or better still, of a utilitarian evolution of mankind. All living beings, among them man, need a number of commodities in order to develop and better work out their existential process. These commodities will be indicated as **utilitarian commodities**, so as to show that they are useful to satisfy the material needs of human beings. As a definition, all utilitarian commodities have a market value which is subjective, that is depending from the subject who is their user.

The word **utilitarianism** will indicate any production and distribution system of utilitarian commodities within every community under consideration.

In historic times, several sorts of utilitarianism have followed each other in mankind, which we will describe shortly.

- 1. Pre-exchange utilitarianism: it is the most primitive utilitarian system, and is determined by the fact that the production of utilitarian goods by the human group under consideration is fully distributed within the group itself, without any exchange, only a redistribution. The producer subject -who usually is not one individual, but rather all the community- is the end-user of the goods.
- 2. Exchange utilitarianism: from a given point of historical development, human communities exchange the utilitarian goods produced, both within themselves and with other communities. Therefore the goods obtain a new value: the exchange value, which is subjective twice, because it depends from the subjective evaluation of the two exchange agents. As a synonym of «exchange utilitarianism» we will use the word market, and as a synonym of «exchange utilitarian goods» we will currently say «goods» or «merchandise».
    - 2.1. Pre-currency exchange utilitarianism or non-money market:in the first place, exchange of goods is effected intuitively, according to the needs of the exchange agents, but without any reference to any objective model of the exchange value, that is without any reference to any sort of money units.
    - 2.2. Money exchange utilitarianism or **money market**: starting from a given historical moment -which probably we can locate at the beginning of what is called «neolithic transformation»- exchange of goods is effected according to some regulating conventions or standards of the exchange value of the goods, which we will call **money units**. The reference to a value standard finally transforms exchange into an objective act.

The conclusions to this might therefore be the following:

First: We will consider that money systems appear in a context of a well advanced goods exchange (probably neolithic).
Second: We will define money systems as instruments whose goal is to objectivize the exchange value of the goods. Therefore, we will consider that money units, as objective models to measure value, are the basic element that defines any money system.

3. Geo-political context.

After establishing the utilitarian-historical background to place the goal of this study, we must now consider its present conditions. We will therefore speak about the geo-political context, a frame where all money systems are developed.

At present, the words «state» and «nation» are currently used to indicate geo-strategically organized societies. However, if we analyze the etymological roots of the two words, it appears that not only their use is questionable, but that it is even completely inappropriate.

State is only a small part of the total collectivity: that where customary or written constitution has delegated political power.

Nation simply means, according to Latin etymology, «birth group, group where people are born». A nation is a natural fact, common to men and animals, which has nothing to do with political organization, which is not only specifically human, but also appears at a much later date, and is of a completely different vital order.

Instead of these words we will use the much more exact one of **geo-political society**, defined as a collective being, fixed by history on a given territory, which evolves according to the changing strategic and technical circumstances, and which is provided with political ruling organs (**State**, in historically more advanced societies) and judicial organs (**Justice).**

Any market is included within a given geo-political society, or is developed among several geo-political societies.

In any geo-political society we can separate, analytically, the utilitarian dimension and therefore talk about a utilitarian society. In this utilitarian society we can recognize two groups.

1. The **producing utilitarian society** is a part (proportionally more or less important, according to the degree of utilitarian and cultural development of every society) which has specialized, along thousands of years, in producing utilitarian goods.
2. The **consumers' utilitarian society** includes all the members of society, as without utilitarian goods nobody can survive.

When we find ourselves in front of an exchange utilitarianism we can define utilitarian society as a market; and when in a market money units are introduced, we will then talk about money market[1].

This money market -as a society specialized in the production and consumption of utilitarian goods, using a money system- will be the social and political context of money systems.

The domestic market, which is developed within a geo-political society, is extended, in the world context of geo-political societies by the so-called foreign trade. This can be bilateral or multilateral, according to a more or less uncertain **modus vivendi** or more permanent treaties.

On the domestic market rush the forces and conditionings of all legitimate authorities which have jurisdiction on it: Constitution, law, State, Justice, autonomous ethnic-territorial communities,... trade unions,... and finally the firms.

In foreign trade these influences come from the shared jurisdiction of the two or more parties to the contract.

4. Conclusions.

In this essay we will study the role that the money systems have had historically within the exchange utilitarianisms which have followed each other, and in present day within the domestic market and foreign trade of every geo-political society.

Note:

[1]We must clearly state that we call money market a market with at least one fully defined money unit. This meaning has nothing to do with today's meaning, and we will use it as a technical word only and exactly as defined herewith.

Chapter 2. Money systems: their elements, nature and functions.

1. Goals and method of this chapter.
2. Elements of the money systems.
3. People and merchandise.
4. Money units.
5. Mercantile values.
6. Money instruments.
7. Synthesis on the elements of the money systems.
8. Nature of the money systems.
9. Functions of the money systems.
10. Money system and market strategy.

1. Goals and method of this chapter.

What are they, how do they work and which is the use of money systems?.

In this chapter we will try to reply to these questions. We must warn readers that the idea we are going to explain does not correspond to those expressed in most of the textbooks or specialized books on this matter. Besides, not even our idea is enough to explain clearly the present ways of the money reality.

Therefore, we are not going to describe how present systems are working, but we will try to find the descriptive and essential character of any money system, even if they do not necessarily correspond to their present forms.

With respect to the method of explanation, we have chosen a generative process, even if not exactly historical. In fact, we will present a temporary step sequence, but without any reference to specific historical facts. We must however admit that this succession in time of steps is deducted from actual historical facts previously considered. Under this condition, perhaps it would be better to start with history and then carry on with its interpretation. However, we have decided to start the other way round for the sole reason that in this way, when we start the historical approach in the next chapter, we will have at hand all the theoretic interpretation instruments, which will be very useful to understand actual facts.

2. Elements of the money systems.

For a greater clearness and accuracy we will distinguish, within any well developed money system, several elements which make it up, and which correspond to different levels of reality which must be completely separated to avoid confusion.

1. A first set of realities is the one made up by all the people who act in a market and by all the goods exchanged in this market. Evidently we are dealing with a level of **actual** realities.
2. The second element to take into consideration are the money units: they belong to a level of completely **abstract** realities.
3. In the third place, we must consider the **mercantile values**, realities of a mixed concrete-abstract level.
4. Finally, we can distinguish what we will call money instruments: it is a level of mixed realities, but much more complex than the ones mentioned above.

All these elements will be defined in the following paragraphs; after their analysis, it will be possible to reply to the original questions: what are the money systems?. Which are their functions?.

3. People and merchandise.

As we have already said, a market is an exchange of utilitarian commodities; since there is an exchange they are called merchandise.

In the market real people work who exchange real goods. Only if the actual exchange takes place both with respect to its subjects and objects, can we talk of a money system.

Money systems are, as we will soon see, completely abstract constructions; but they can only spring from the market as facts real and alive: they have been invented by real people to make the exchange of real merchandise easier. We insist on this fact, even if it seems obvious: people or merchandise are not really a part of the money system, but they are its sine qua non condition. Market is therefore a frame to remember when we deal with money systems.

4. Money units.

Exchange of goods can be perfectly brought about without any need for a money system. Under these conditions, every elementary exchange or barter of a real merchandise «A» against a real merchandise «B» is effected simply according to the subjective needs of the two actors in the exchange. If these needs are filled through a given barter, an agreement is reached.

In these cases, the feeling of a satisfaction by the agents of the market is always qualitative, as there is no quantitative model of the value of the goods to refer to, to calculate the exact equivalence between the exchange value of any two merchandises.

For societies which have a far reaching and complex market, this subjective-qualitative barter is not enough. In these societies, human ingenuity produces money units, in order to measure quantitatively the exchage value of all and every one of the real goods existing in a given market.

Money units allow the production of quantitatively equivalent exchanges, which we will call money barters.

In the same manner as to measure actual distances we use a metre, which is a conventional and abstract lineal unit, to measure the exchange value of real goods we will use money units. Money units are completely conventional measuring units, abstract and therefore universal.

We say that money units are abstract, because they are pure formal conventions, void of a real content.

And we say that they are **universal** because they constitute an abstract common denominator, which unifies all the real and varied goods existing in the market under consideration.

In the money market, every actual merchandise is indicated by a given quantity of abstract money units: thanks to this monetary uniformity of the real goods, naturally varied and different, it is very easy to calculate numeral equivalences among different goods.

We want to point out that the introduction of money units in a market does not imply the disappearance of an elementary barter, that is of the real exchange of real goods. Money units simply make barter easier and more perfect as far as figures are concerned, and, as we have said, it becomes a money barter.

5. Mercantile values.

An immediate consequence of the introduction of money units in a market, is the determination of mercantile values, which are mixed elements, concrete-abstract in nature, and are a consequence of the uniforming comparison among different real goods and abstract uniform money units.

Direct mercantile values are those obtained from the comparison of real goods/abstract money units, that is from marking every real merchandise with a given number of money units.

We can distinguish two sorts of direct mercantile values. If we talk about **produced goods**, we have price-mercantile goods, or simply sales prices. For example: «Price for 1 kg of potatoes is 30 money units». If we talk about **producing goods** we have **salary-mercantile goods**, or simply salaries. For example: «1 day work of a peasant worker is worth 2000 money units».

There is also an inverse mercantile value, obtained by comparing «money units/real goods» which we call money. Money is defined as «purchase power of real goods by the money unit within a given market». For example, «with one money unit we can buy 1/30 kg potatoes, or 1/2.000 of a peasant worker».

6. Money instruments.

In societies with a reduced trading dynamism and socially conservative, salary and money are usually determined almost exclusively by tradition and have a very slow evolution. Under these conditions, money barter as explained above is still useful.

But in more open societies there can be a more dynamic market, and prices, salaries and money can reach a good degree of liberty fluctuating and changing continuously, not only with respect to the desire of each of the parties to possess the merchandise offered by the other, but also with respect to objective situations: war or peace, want or abundance, more or less difficulties in transport, warehousing, etc.

Under these conditions, mercantile reality is so varied and complex, that money barter becomes also insufficient, and it becomes necessary to find new ways of exchange to allow quicker and easier transactions. Then money instruments spring up.

Thanks to money instruments, joint barter or direct exchange of goods can be substituted by an elemental money exchange, which is an exchange of goods delayed in space and time. It is not necessary then to wait and find the person interested in my goods, owning besides a merchandise which I want. Now it is possible to obtain the desired merchandise without giving any other merchandise in exchange, using money instruments and thanks to accountancy, which is narrowly related.

From now on we can define a money instrument as «an accounting document, which can be **inter-compensated** in an accounting system». It is a document produced with every free elemental mercantile act, in order to record all the amounts with an accountancy interest. With these documents it is possible to build up a system of inter-compensation in personal current accounts which will allow to finally give up barter, whether with or without money.

Let us imagine a possible trade (mercantile) relationship between two merchants: merchant A supplies grain to merchant B, but this has no merchandise of interest for the first one, therefore no barter relationship can be established between them. Thanks to the money instruments they will be able to reach an agreement.

Merchant A, whom we will call supplier, provides grain to somebody whom we will call customer; the supplier will receive no merchandise in exchange, but he will prepare a document where he will indicate quantity and price of delivered grain, the date of the operation and the names of both (and of witnesses to the act, if any). The two merchants will sign the document, and this will become an avowal of debt by the customer towards the supplier for the number of money units indicated. It is only necessary then for the supplier to go to the place where both merchants have a current account (today we would say a «bank»): there, with this document as a proof, there will be a «notation of amounts», that is a transfer of the indicated money units from the customer's current account to that of the supplier.

In this way, the money or purchasing power for the number of money units involved in the operation passes to the supplier, who will be able to use it as a customer, therefore completing the cycle of barter. But his purchases may be with different traders, in other towns, in other time periods... that is why we call it a deferred barter or exchange. The original barter of real goods has been separated in two or more elemental money exchanges, which implies the elemental movement of goods in one only direction through the money instrument.

After this, the balance present in every barter because of the equivalence of the exchange values of the exchanged goods will only be reached in the global market, because the various elemental money changes in which every barter has been dissociated are not necessarily balanced in their turn.

To conclude and in short, we say that a money instrument is simply «an acceptance of a debt, exactly documented and inter-compensable through a system of personal current accounts, within the whole free market of all the elemental free money changes». In this essay we will talk both of money instruments and of money documents, depending on whether we want to put in evidence its character of technical instrument - an accounting medium which allows the realization of a new kind of mercantile change- or to put in evidence its character of a document which exactly registers every mercantile elemental exchange.

It is clear that the elemental money change is much more nimble and allows a greater dynamism than the global money barter. In fact, from now on there is nothing new to be invented as far as the money system is concerned, since all the fundamental elements are present. The money instrument we have described is flexible enough to be adapted to any situation, whichever its mercantile complexity. It is only necessary to update it, depending from the mercantile realities and the present technological possibilities.

7. Synthesis on the elements of the money systems.

As a final synthesis we can say that the money systems are complex realities where we will distinguish the following elements:

1. Real people, **market agents** exchanging real goods within a given market. Without this market it makes no sense to talk about money systems.
2. Money units which work as measure units; radically conventional-abstract and invented to meet the need to establish exactly the exchange value of each and all the real goods exchanged in a given market.
3. Mercantile values (prices, salaries and money) which are mixed items, concrete-abstract, resulting from comparison between real goods and abstract money units.
4. The previous three elements are enough for an underdeveloped market; however, in societies with a greater mercantile dynamism a new element appears: money instruments.

These are an invention of a purely instrumental-auxiliary character to make a new sort of transaction easier and at the same time to record exactly each of the operations effected.

8. Nature of the money systems.

The fundamental conclusion derived from the above is that the money systems are of an exclusively instrumental nature, conventional and abstract.

In any market the basic element, the immediate subject of all the utilitarian interests, is constituted by the real goods. They have an intrinsic value which makes them desirable. They are considered as first realities on any trade utilitarianism.

A money system, on the contrary, is an artificial construction which is placed over these first concrete realities, with the only instrumental scope of controlling them more easily and effectively.

The real goods and the real people who exchange them are the basis of the existence of the money system: we therefore will consider it a second reality derived from the first one. The second and derived money reality has no intrinsic value, only a purely instrumental value, based on its abstract structure of the metric system.

If historically some forms of money instruments have been given a very concrete intrinsic value -we are talking about coins or any other form of merchandise currency- it does not mean that their being intrinsic is the defining and essential quality of money systems, on the contrary, the essentiality and usefulness of money

systems is to be found precisely in their abstraction, conventionalism and instrumentality. This position has been defended since the times of Plato, the so-called **nominalist theory**.

9. Functions of the money systems.

A simple metaphor will explain the working of a money system such as the one described above.

We can imagine the money system as a very special mirror which shows cross-section squared pictures (second and abstract realities) of the real goods and of their movements in the market (first realities). Every time two market agents make an operation, the subject merchandise moves across a mirror where its cross-section squared picture is seen: this picture is the market value (price, salary and corresponding money). If the mirror has also a photographic device which makes a picture of the moving merchandise and of the agents involved, then the picture obtained is the money instrument-document. The image to be seen in the mirror is short lived, it disappears as soon as the operation is finished; but the photographic image remains and leaves an evidence of all the details of the operation. With respect to money units, they are the graticule in the mirror, the abstract-numeral scheme of all the previous images.

A money system such as that detailed above, whether it does exist or not at present in reality, has the following mercantile and social functions:

1. Metric funtion: money units are, in the first place, measuring units. They are conventional abstract units to measure the exchange value of the real goods exchanged in the market. A money system is therefore a metric system.
2. Instrumental function: the reference to an abstract, conventional and universal money unit, homogenizing real goods -naturally dissimilar- lets these goods be easily compared in the market. The money system therefore becomes the instrument which gives the market a larger and better agility and dynamism: it is like an oil lubricating gears.
   This function is strengthened with the invention of the monetary-accounting instrument, which on being used as a paying means, allows a new sort of exchange: the elemental monetary exchange.
3. Documentary-informative function: the first two functions are mercantile, this one has besides a great social importance. The monetary instrument-document gives an exact and complete evidence of each of the elemental mercantile acts, so becoming a very effective instrument of information on the market. This function will be analysed and studied here in the first place. The important consequences derived from its present non-fulfillment, and of its possible future fulfillment, after a simple currency reform, will be analysed in this essay.

10. Money system and market strategy.

After studying the elements, nature and functions of the money systems, we must make a last consideration to show the role played by these systems in society. There is still another fundamental function that the money systems do not fulfill directly, but of which they are the only possible instrument, at least up to now. It is the function which we might call strategic.

Markets are not, on their own, in an equilibrated situation. Equilibrium must be found from outside, by means of an action of the will, which can be called strategic action.

One of the equilibriums which must be obtained in the first place in the market is the equilibrium between total sales power and total purchase power: purchase power has a trend to be lower than sales power, and we are not going to study why, at present. This unequality, when it is very important, is called **monetary deflation**. If the deflation is long lasting and takes an important size, it can produce serious crises of contraction of the markets and a productive recession.

The applicable strategy in these cases of insufficient buying power is the so-called **money invention**: supplementary buying power can be invented by way of certain monetary mechanisms.

This strategy is essential for any society since from it depends to a great extent the well being of all its components.

If the valid money system is informative and provides the exact and complete documents for every free elemental monetary exchange effected, then the market is well known in each of its sectors and sub-sectors. The choice of a money invention adapted to the real needs of this market is made possible in the appropriate quantity and directions. This will be a good strategy of money invention which we will call **eu-strategy.**

Historically, the invention of money has been an activity brought about by very specialized people, bankers, who have acted more by **empirism** and intuition than by a complete and scientific knowledge of the market. As a consequence, the strategic action has not had actually equilibrating results, on the contrary many times it has gone to much worse opposed situations: we are talking about **money inflation**, that is an alarming excess of buying power.

At present strategic errors are so enormous, that we have at the same time a terrible inflation and a deep recession, a situation called **stagflation.**

The crisis is there worse than ever: it is urgent to find innovating strategies and technological solutions, that is on a scientific basis.

Under the circumstances, it is easy to understand the importance of reconsidering the nature and functions of the money system. If we can make the money system an abstract and fully informative instrument, we will also be able to carry out a rational strategy for the market, a really equilibrating strategy.

We will try to define the bases for this strategy in the last chapters of this essay.

Chapter 3. Monetary reality through history.

1. This chapter's goals.
2. Non-monetary barter.
3. Monetary reality among primitive peoples.
4. Money systems of incoming civilizations.
5. Introduction of real metallic money.
6. From metallic money to paper money.
7. The non-convertible bank note.
8. Bibliographic references for this chapter.

1. This chapter's goals.

In the previous chapter, when speaking of the elements of the money systems, we have exposed our arguments in such a way as to suggest somehow a succession of steps in the evolution of the market and of the money systems therein contained.

This succession of steps could be summed up as follows:

1. At the beginning the market works without any money system, by means simply of a non-monetary barter.
2. In the second step, money units appear with their mercantile value, and monetary barter starts.
3. Finally, in some dynamic and evolving markets the use of monetary instruments is introduced, which allow the elemental monetary exchange to take place.

As we have already said, this interpretation is not necessarily historic; we have therefore avoided all sorts of actually historical references all along the previous chapter, and we have stressed the more theoretical aspects of the money systems.

We have also said that the theoretical interpretation had been made on the basis of real historical facts. In order not to be limited just to a theoretical interpretation, which always simplifies excessively the complexity of real facts, and which besides would be considered as totally arbitrary, in this chapter we will give the actual references of the facts which have been the basis of our interpretation. These facts should establish an empirical basis for our interpretation.

We must warn that reconstruction of the historical development of the monetary reality is a difficult task, both among prehistoric or ancient populations and among present day primitive peoples: existing documents are few and incomplete, and their interpretation is a delicate job.

With these limitations we start.

2. Non-monetary barter.

From studies of utilitarian exchange among primitive peoples existing at present, it can be deduced that in these societies barter has not a purely utilitarian character, but it fills mainly a social function. Making an ethnographic comparison, probably we could say the same of prehistoric peoples.

In fact, in human groups with a simple social organization -the so-called hunting and food-gathering economies- the individual and familiar fare is produced within the community, therefore the utilitarian exchange is not vitally necessary. It is necessary from a social point of view, as it used to establish friendship and alliance with other groups or to strengthen existing social relations within the same group.

Because of the great importance of this social element, primitive barter is often full of formalism, of complex rites related to magic, that is to a sacral conception of man's life. Every exchange act is considered as sacred, the same as all other social relations.

3. Monetary reality among primitive peoples.

Among presently existing peoples, the knowledge and utilization of some sort of money system is to be found in three parts of the world: West and Central Africa; Melanesia and Micronesia; and the west of Northern America.

It must be stressed that the peoples of all these places have advanced utilitarian relations of neolithical type, either agricultural or pastoral. This neolithic utilitarianism is, however, still little specialized: every small social producing unit can provide itself in great measure and therefore barter still holds a strongly social character.

These peoples do not know any writing system, but they have money systems made up of what we have called money units and mercantile values.

In fact, among the primitive peoples of the above mentioned regions -not only there, but especially in those places- some objects (which of course may vary according to the people involved) have a great social importance: they are symbols of riches and give great importance to those possessing them.

Because these object are often exchanged ceremonially during some social happening, many ethonologists have compared them to a «reduced» or primitive form of metallic money which was used among all the present day **civilized** people, until it was definitely substituted by compulsory bank notes between 1914 and 1936.

Of course, a completely different interpretation can be given. These objects seem to have two clearly separate functions. The first one, essentially social, to create and keep friendship: it is developed through a real and actual exchange of the objects in well specified occasions of great social importance.

The same objects have a closely utilitarian second function, and they are standards for measuring value in the exchange of current utilitarian commodities.

In this second case, these objects are never actually exchanged, they are only an abstract reference to calculate comparison among other goods valued in them. That is exactly what we have called money unit. The values applied in money units to each merchandise are the mercantile values of such goods.

In some cases, the ethnographic documentation we have is not enough to confirm or **discard** with a sufficient empirical basis this interpretation. This depends in the first place from the prejudice of some ethnographers who lead their observation to a given reality, forgetting others more important for an overall study of primitive utilitarianism.

Notwithstanding these difficulties, we have chosen a couple of examples which seem to follow the indicated direction:

First example: in the Admiralty Islands (Papua-New Guinea) the natives can evaluate all their possessions in shells and dog's teeth. In current exchanges shells and dog's teeth are almost never used, but their use is compulsory in ritual exchanges.
Second example: among the Lele of Kasai (Zaire), the raffia cloth is the nuptial possession that every man must have if he wants to marry. But at the same time all the goods which are exchanged non ritually can be valued in units of raffia cloth. In these exchanges, the raffia cloth does not appear as a real good, but only as a value standard.
We therefore say that among these peoples there are abstract money units and not real monetary objects. To extend this interpretation to all neolithic peoples who knew some sort of monetary reality, it would be necessary to make deep studies which are reserved to ethnographers.

4. Money systems of incoming civilizations.

Archaeology has shown in the last decades how the first civilizations of south-west Asia (Mesopotamia, Elam, Near East), of the Indo valley, in Egypt, and later of the Aegean, of the Danube valley, etc. were born.

These civilizations or «city cultures» were based on an advanced neolithic utilitarianism, with extensive cultivation of cereals and with a growing division of work.

For the first time writing appears, but writing is a consequence of a previous social practice which we must mention, the current utilization of monetary instruments as the ones described in the previous chapter.

From the very beginning of the neolithic age probably these societies had such money units, almost always abstracted starting from the prototypical or more important goods. In Mesopotamia, for example, they used a barley measure and later a given weight of silver. In Egypt, the common measure of mercantile values was the «uten», a copper coil of a more or less fixed weight. In Homer's Greece, the abstract money unit was the «ox». Neither the barley or silver in Mesopotamia, nor copper in Egypt, nor oxen in Greece were actually exchanged in every market operation. As we have already said, we consider these goods as money units, simply because they were taken as a common abstract measure of the value of all other goods, or, said in other words, all other goods could be evaluated in terms of these units.

On the other hand also from the beginning of the Neolithic Age (8.500 b.C) there is in southern Asia a development of an accounting system with clay tokens[1]. Considered as a whole, this system had about 15 different sorts of tokens, with different shapes and separated in about 200 subdivisions according to sizes, marks and fractionary variations. It seems clear that every specific shape had its own significance. Some tokens perhaps show numerical values, while others represent specific objects, specially mercantile goods.

We do not know exactly the use of this token system within the most primitive neolithic societies of southwest Asia, but it seems reasonable to think that it was a system to record the various operations and exchanges effected with the produce of the harvest and herds. The idea of recording, of collecting and fixing in a document[2], is the embryo of a later development of the monetary instruments.

In fact, these communities have slowly evolved along 5000 years with their accounting and recording system almost unchanged. When they reach the Bronze Age during the second half of the fourth millennium b.C. (from 3500 to 3000 b.C.) they suffer an important economic progress: there is a rapid increase of population in what is now Iran and Iraq; the first crafts appear and also the beginning of a high scale trade. This sort of economic explosion produces important changes in the token system, because of the pressure brought to bear by the great trade development. It is now necessary to record not only production, but also stocks, freight rates, salaries and, above all, merchants need to record their operations.

The appearance of new shapes of tokens and of new sub-types is important, but still more important is the appearance of new ways of using the system. These new ways, which appeared in the last century of the fourth millennium b.C., are especially the two explained here.

In the first place, about 30 % of the tokens found have a hole. This might mean that some tokens concerning a specific operation were stringed together as a book.

But even more interesting is the appearance of «bullae» in Mesopotamia. The «bullae» were some sort of clay pots or envelopes to hold a number of cards. This is a direct evidence that the user wanted to separate the cards concerning a given operation.

The author of these researches thinks that the bullae were created to give the agents of an operation a smooth surface where the personal seals of the people implied could be stamped -according to the Syrian custom- as a way of giving legal force to the commercial act. The fact that most of the 300 bullae discovered up to now have stamps of two different seals confirm this hypothesis.

We have therefore an actual **monetary document**, which records all the specific peculiarities of every actual exchange, besides the seals (which are like signatures) of the persons involved.

Beyond what Schmandt-Besserat says, we might introduce a further hypothesis: that these monetary documents might have worked as the **monetary instruments** we have described in the previous chapter. Besides being a documentary record, bullae might have been used for an accounting inter-compensation.

This second hypothesis is more risky than the other one, as we have no real facts to sustain it empirically. However, some tokens make it indirectly plausible. We can make two verifications.

First verification: in all the Mesopotamic plain a so-called «temple trade» is developed from the end of the fourth millennium b.C. Apparently temples worked not only as a sacred institution, but had also important social and utilitarian dimensions. Within the temple, and under its protection, all sorts of agricultural, crafts and manufacturing activities are developed. It seems that the temple used the land's surplus to keep crafts, artistic and cultural activities, acting as a redistribution system. These complex activities caused the temple to develop also, little by little, complicated accounting systems for the control of all the movements of goods, personnel and salaries.
Second verification: in Ammurabi's time (about 1800 b.C.) when metallic money had started to be introduced, it is known that Assyrian merchants living in Asia Minor, who extracted copper, used a system for settling debts between accounts.
Even if the two considerations do not say anything directly on the existence of monetary instruments-documents, they do allow us to say that the necessary technical elements for the existence of such instruments were already available. Complex systems of accounting and compensation between accounts had already been developed. Therefore it is possible that during the second half of the millennium may have been developed in Mesopotamia a money system based on the monetary instruments-documents, at least among the great merchants and the temple. In this system the temple may have had a banking role.

Of course it is necessary to find more direct proofs for the suggested hypothesis. But it is also true that many a prejudice have been opposed for a long time both to the statement of this hypothesis and above all to the research of the empirical data which might sustain it. In the first place the metallist prejudice -that is the a-critic belief that the first monetary means were the real metallic means- has led research through predetermined paths and has precluded consideration of central points for a new interpretation. Among the thousands and thousands of pages written up to now on the first civilizations, there are few references to the actual way in which monetary exchanges were effected, and even less are the interpretations of the few existing data on this subject.

Finally, we must point out that the bullae became at a later date the famous tablets of cuneiform writing. As a matter of fact, the tokens which were stored within the bullae were indicated through outside marks; until they discovered that these marks were clear enough and the tokens were no longer necessary. Writing had been born.

As soon as the first monetary instruments-documents appear, the elemental barter, that is the direct exchange of goods for goods, disappears for the first time, to give way to the delayed exchange which we have called elemental monetary exchange. Probably these instruments-documents were only used by the great merchants; but even so, the simple introduction of elemental monetary exchanges in the market has as a direct result that for the first time the equilibrium of the global market is taken into consideration.

In fact, when all the market works on elemental barters, this market must necessarily be in equilibrium, because every elemental barter is self-balanced. But when elemental monetary exchanges are introduced, even only in a small proportion, the global equilibrium of the market disappears because the elemental monetary exchanges do not present a real equilibrium between two real merchandises, but only an artificial equilibrium, inter-accounts, between a real merchandise and some money units which have arbitrarily been appointed.

To re-establish the real equilibrium of the global market, we must appeal to a strategy: the strategy of equalizing the total value of the available buying power. This strategy is called invention (or **exvention** if applicable) of money or buying power.

Probably the ancient priests of Mesopotamia were aware of this problem and solved it, since they first introduced operations of loans and credits, that is professional banking operations.

5. Introduction of real metallic money.

The monetary instruments-documents were introduced as simple instruments, as a simple accounting device to avoid problems of barter. They were therefore of a radically abstract-auxiliary nature and had no intrinsic value. Their working did not imply the exchange of any real object, only the reference to an abstract money unit. Even if the money unit was represented symbolically by a real merchandise (a sack of barley, an ox...) these goods did not actually take part in the operations. They were used as an abstract reference to the value of the exchanged goods and not to be exchanged for other goods.

In Mesopotamia, probably from the middle of the third millennium b.C., appears a new type of monetary instrument: **metallic coins**.

Together with the progress in evaluating metals (weight, quality...), the custom of paying cash becomes general: we must keep in mind that one of the money units in Mesopotamia was the siclos (with its multiples and submultiples), that is a weight for a precious metal. Little by little there was a change from paying with a monetary instrument-document to paying in cash.

Even if at the beginning the practice of recording every elemental operation -through the presence of witnesses and the use of a money instrument-document- is carried on, little by little it is forgotten and cash payments are effected without any documents, completely anonymous.

The circumstances which brought about this change of direction in money history cannot be easily explained. Among them the most significant might be:

1. Quicker and easier operations, at a time when writing was a complicated art which very few knew;
2. The possibilities of concealment and therefore of corruption introduced by the new money system. The final result of this process is the introduction of a new money system well known by everybody: the metallist money system.

In this system the monetary instruments-documents, auxiliary-abstract, free from intrinsic value, become real monetary instruments with intrinsic value, without any documentary value. A real merchandise, a precious metal (gold, copper, silver...) is chosen among all others to act as a paying means in any exchange of all the others. Therefore, in this system the money unit is called merchandise money.

In Hammurabi's time (1792 to 1750 b.C.) it is a normal practice in Babilonia to use gold, silver or copper ingots. But not only in Mesopotamia this decisive change was introduced. Let us remember some of the historical civilizations which adopted sooner or later the new money system. In the Indus valley, copper bars were used; the Hittites used iron ingots; at Mycenae, bronze plates imitating animal skins; in China, bronze plates like dresses, etc.

The first metallic money instrument had very different shapes and metal qualities, even within each civilization and each **state city**. Therefore in each operation metal had to be weighed and probed.

Later, to avoid this problem, metal pieces used had a weight and quality according to norm. The guarantee was the seal of the person who stamped the pieces: these pieces are the actual coins. The first coins to be documented are from the VII century b.C. in Asia Minor.

While at the beginning anybody with sufficient authority and riches could mint his own coins, at a later date this function became an exclusive monopoly of official bodies.

It is easy to understand that when the use of metallic money becomes general, one of the basic characters of the primitive money instruments is lost: documentation.

In every mercantile operation the only function of metallic money is to be a paying means, that is an instrument which allows a good transaction to be made. By delivering some coins, any situation of market exchange can be considered as paid and settled.

6. From metallic money to paper money.

Metallic money spread quickly and was well accepted by all the civilized peoples of antiquity. However, its own nature held the seed of its obsolescence.

In fact, metallist systems have a very precise limitation to their development: the quantity of minting metal in every **geo-political society** at any given time. This limitation is so precise, that soon it became apparent that the systems of metallic and concrete money had to be discarded to go back little by little to money systems whose character was an absolute abstraction.

As we have already said several times, money systems are abstract constructions with the function of making the exchange of real goods easier, because of their evaluation. These abstract constructions are simple images of the real goods exchanges and must circulate simultaneously, evolving and being adapted to them. When this adaptation does not happen spontaneously, it becomes necessary to introduce an appropriate monetary strategy: the invention of money.

In a regime of metallic money this strategy becomes impossible. In fact the philosopher's stone which transforms any metal in gold has not yet been discovered, therefore it is not possible to increase at will the existence of monetary metal when it is insufficient for the quantity of goods on the market.

Every time a market becomes in excess dynamic and productive, the lack of minting metal causes new sorts of monetary instruments to appear, less limited in their possibility of expansion.

Historically, bankers have been originators -and main beneficiaries, even if not the only ones- of these new forms of money, more and more abstract and far from the reality and intrinsic value of metallic money.

Let us see now, very shortly, the history of this return to the necessary abstraction of the money system, which is not definitely reached until 1914.

Already in the Middle Ages, in Europe, the shortage of precious metals urged kings and other minting authorities to effect money manipulations either secretly or publicly. Since the coinage and legal circulation of money were in their hands, these authorities could make the face and legal value of the coins not to correspond to the actual value of the metal. This could be done in two different ways: by minting new coins with the same face value but with a lower contents of metal; or oficially and artificially increasing the face value of the pieces in circulation. This way, the minting authority could effect payments using a smaller quantity of metal. These proceedings were ordinary practice during the whole of the Low Middle Ages, when royal treasuries were almost permanently indebted and could solve their problems with this monetary stratagem.

But this solution was short lived, as the logic consequence of the manipulations was the increase of prices and salaries; an increase which produced a new difficulty to the treasury, which was compelled to effect new manipulations, starting an endless cycle. Of course the ones to suffer more were always the lower classes, who had not enough buying power to face the price increases, and who could not manipulate the money which was imposed on them.

With the money manipulations of the Middle Ages the gap is opened, which will begin the separation of the actual value of the concrete metallic money from the money value which is artificially applied, according to the needs of the market.

When America is discovered, with magnificent treasures to be plundered and important mines of precious metals, it seems that shortage of metals is at an end. But this period of plenty is relative, because at the end of the Middle Ages an enormous development of trade has taken place and by consequence also of the need of money.

To meet these needs the bankers of the time invented a new practice to face the metal shortage: the draft.

At the beginning, drafts are only a way to settle debts from a distance and to avoid therefore the danger of transporting metal. But later the draft implies also a notion of **credit**, that is of payment delayed in time. We must point out the fact that this new sort of monetary instrument, which we might call credit paper, was already known in Mesopotamia from the beginning of the introduction of actual metallic money.

The letter of credit in all its varied forms both historic and present, has a character and definition in the fact of originating a new **money circultation** to be added to the circulation of metallic money.

When a draft goes from hand to hand, being used as a paying means currently accepted, it is a simple promise of paying cash at a given date; but this cash does not exist yet. Therefore the draft does not substitute metallic money, it joins it. It is a new monetary instrument which, besides, has no intrinsic value, as the only element which keeps it going is the trust (however immaterial) that when the paying term becomes due, payment will actually take place.

When a bank discounts a bill and pays it in cash, this payment is also a monetary creation, as the bank, by paying in advance uses money from its clients. In this way one only quantity of metallic money appears twice: in the current account of the depositor and in the hands of the one who has cashed the bill. This situation apparently abnormal only disappears when the draft is payed at maturity.

The bank takes up the risk that the draft may not be paid, but this risk is not very important if the balance between total deposits actually made and total credits given is held within reasonable limits.

The evident limitation of credit paper is that, for a very exact length of time, it is tied to the real metallic money. A draft has not a limitless duration, and the buying power it represents disappears at maturity after it has been honoured.

This limitation disappears when the bank note is introduced. The bank note was invented in 1656 by Palmstruk, a banker of Amsterdam. It is simply an acknowledgement of debt by the bank producing it. The bank, instead of meeting its obligations towards its clients by giving them metallic money, delivers bank notes; in these documents the bank acknowledges its debt for a given quantity of metallic money. These bank notes, when the holder so wishes, can become metallic money.

Bank notes are to the bearer, that is nameless: they have not a personalized beneficiary, and they can go from hand to hand without any limitation. They have no given term of maturity, therefore they can circulate indefinitely until somebody decides to change them for metallic money.

Because of this mobility they represent a very important money circulation. Therefore there are two permanent and well differentiated money circulations. On the one hand, the circulation of real metallic money. On the other hand, the circulation of bank notes, which have no longer any intrinsic value but which hold a permanent promise of conversion into metal and therefore are based on the trust towards the emitting bank, in its ability to face conversion requirements. The circulation of bank notes has still a relationship with real money: the permanent possibility to be converted.

Thanks to the possibility of emitting bank notes, the bases were set to avoid the shortage of precious metals, which even if new mines were discovered in the XIX century, were still insufficient. The XIX century is already fully industrialized: this produces a high increase of the needs of buying power at a rythm which precious metals cannot follow.

Banks, thanks to bank notes, can issue higher amounts than the hard cash deposits. This is common practice, and, as we have already said, it causes no problems, as long as a reasonable ratio is held between metallic money and bank notes. Better still, this practice is absolutely necessary for the market, since through these mechanisms the necessary monetary instruments are produced when metallic money is insufficient.

The money system based on the parallel circulation of metallic money and bank notes is currently called «gold standard». This system is a peculiarity of all the XIX century.

7. The non-convertible bank note.

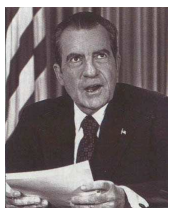
In the end, also the «gold standard» became unsuitable for the needs of a market as developed as that of the XX century. With the new evolution of the money system, monetary instruments become completely abstract, completely foreign to any real and intrinsic value.

During the XIX century, central banks of several states monopolized the emission of bank notes, which then became legal. But every time a State had political or economic problems -production crises, wars, revolutions...) and had more expenses, this State had to produce more and more bank notes, until the inevitable trust crisis arrived. Everybody wished to convert his notes in metal, and the only solution for the state was to declare a compulsory use of the notes, which meant it was impossible to convert them into precious metals. Only when the situation became normal again could convertibility be re-established.

We must point out that an important forerunner of the inconvertible bank notes is to be found in the Law system (1716-1720), and in the «assignats» of the French Revolution.

During World War I the enormous war expense almost completely emptied the chests of the participating states. Most of the gold from these states «emigrated» to the U.S.A. Banknotes were produced in great quantities and, of course, convertibility was suppressed.

Since then, the money systems of the «civilized world» were distinguished by the inconvertibility of bank notes. After the war, some countries tried to reintroduce a partial convertibility, but the 1929 crisis definitely put an end to it.



Therefore, the system born in World War I is based on the abandonment of metallic money, as far as utilitarian relations are concerned. In international relations, the role of gold is held, but only until 1971, when president Nixon untied dollar from gold, and unilaterally denounced the treaty of Bretton Woods of 1944.

The superiority of the inconvertible bank note, which we will simply call paper money, is the peculiarity of the new monetary stage. This paper money, which is still in use in our days, holds no relationship with gold nor with any metal nor real merchandise. It does not represent any quantity of gold, and it cannot be converted into it.

Which is then the nature of paper money? which is its basis? Paper money is simply based on the social agreement which has made it the necessary instrument of the mercantile exchanges and on the trust given it, as an instrument which fulfils its function adequately. Therefore its nature is radically auxiliary-abstract. Its value is that of an instrument helping us in accountancy and exchange of real goods; it has an auxiliary and abstract value, and not an intrinsic and real value: this can only be a peculiarity of real goods.The money system has finally gone back to its fundamental primitive nature.

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Notes:

[1]All the details of the development of this system of accountancy come from Denise Schmandt-Besserat. For its explanation we have used her article «The first antecedents of writing», published in Investigación y Ciencia, Number 23 (August 1978).
[2]In this case they are evidently pre-writing documents.

Chapter 4. The money system today.

1. This chapter's goals.
2. Ways of the present money system.
3. Invention of money in present money system.
4. The world diffusion of utilitarian relations.
5. Functions of the money system today.

1. This chapter's goals.

After going through the history of the money systems, we will devote this chapter to a more detailed analysis of the present money system and of the serious social problems produced by this system, both with respect to domestic market and society, and with respect to foreign trade and world society.

2. Ways of the present money system.

All along the evolution of the money systems, there has been a deeper and deeper gap between the real-intrinsic value of precious metals and the subsidiary-abstract value of the monetary instruments. With the arrival of paper money, these two realities were definitely dissociated and since then they had nothing to do with each other.

At this point of development, the money system, free from the heavy burden of metals, can evolve to forms more and more intangible, more dematerialized, more abstract, in accordance with its original nature.

And this is what has really happened and what still happens at present under our own eyes. Today paper money, completely disengaged from gold, is no longer the only monetary instrument in use. To it has been added the so-called scriptural money or bank money, which is an invention of the banks to face the shortage of paper money. Its emission is officially controlled by the State through its national bank.

Scriptural money consists in recording money units in a current account opened in a bank. A given quantity of paper money is deposited in a bank and the bank opens a current account for the same quantity, where there will be only records of movements of money units. Payments and collections will no longer be made by delivering bank notes from hand to hand, but only through a play of recordings in different current accounts: the customer's and the supplier's.

However, at any time the holder of the current account, if it is at sight, can transform the amount of his account into paper money. From this point of view, the money circulation represented by a movement of records between current accounts, must be considered a subsidiary of the circulation of paper money, as it has not a total independence.

Scriptural money circulation has become the first monetary instrument in all the countries where the development of trade and industry unite to multiply the exchages made: it is very convenient, it does not get lost and, above all, as we will see in the following paragraphs, is pre-eminently the means of the bank credit. In some countries the circulation of scriptural money can represent as much as 80% of the total money circulation.

On the other hand, the continuous technological evolution is rapidly transforming scriptural circulation into electronic circulation: some simple electric buttons and some magnetic memories are enough to do the recording; even the ordinary «cheque book» can be substituted by sophisticated systems of electronic transfer of funds.

This growing dematerialization of the monetary reality is the most evident proof of its fundamentally instrumental-abstract nature.

3. Invention of money in present money system.

At present there are two different forms of monetary instruments:

1. On the one hand, bank notes or paper money -together with coins, which have a face value much higher than their intrinsic metal value[1]-. The emission of these is a monopoly of the State Bank or national bank, and are therefore the legal means of payment.
2. On the other hand, the scriptural means of payment, produced by the non official banks in order to avoid the above mentioned monopoly. These instruments are currently accepted and used through the simple trust in the emitting banks.

Since in principle there are two parallel monetary circulations, we will have to consider two sorts of invention of money which take place at present.

A. Invention of money as paper money. This happens when new bank notes are emitted in a higher quantity than that existing at the time.

This supplementary emission of bank notes (or of coins) can be made every time the national bank effects one of the following operations:

- operations with the State: it can be an advance on the funds the State hopes to obtain through tax or credits granted to the State by buying public debt titles.
- operations with private companies -especially with the banks: it can also be an advance on titles or goods or credits to the banks by discounting trade bills.
- operations with foreign currency: purchase of foreign currency.

B. Invention of money as money units recorded in current accounts. We have already said that circulation of scriptural money is subsidiary to paper money circulation, but this does not make it less important. Certainly, the system of recording in current accounts avoids circulation of many bank notes; but it also allows the creation of a new monetary circulation. To obtain this, the bank simply opens a current account without previously depositing bank notes. This is today the most usual way of bank credit, whether it is a normal credit, discount of bills or pawning of securities.

In principle, the only limitation to the extension of this form of credit and therefore the invention of money is the fact that any sight deposit -including those which are the result of a credit- is immediately convertible into bank notes by simply asking. For this reason, it is necessary for the emitting bank to hold a prudent relationship between the total of paper money deposited in the bank by the public and the total of granted credits, in order to always secure this convertibility. Therefore, banks cannot invent boundless buying power, and must be submitted to a given proportion between invention and paper money deposits.

If we make a more exact analysis, the theory commonly accepted by specialists shows that the possibility of inventing scriptural bank money depends from three realities:

First: the emission of buying power by the national bank. We have already said that the scriptural bank instruments are subsidiary to paper money as they are based on its convertibility. Therefore, if there is no new invention of paper money -or in general, of liabilities of the national bank- there cannot be a new emission of scriptural bank money. If the national bank does not create new purchasing power, the private banks cannot do so.
Second: the relationship between cash and the deposits chosen by the public. As a matter of fact, if people prefer to keep money at home instead of taking it to the bank, deposits will be smaller and therefore also the possibility of inventing purchasing power with them will be lower. On the contrary, the more money is deposited in the bank, the more capacity has this to grant credits.
Third: the relationship between reserves and deposits held by every bank. If we call reserves the total quantity of paper money and coins there deposited by clients, plus the deposits of this bank in the national bank, we will see that they correspond to what is called «working mass». The relationship between these reserves and

the total of deposits held by its customers (whether through previous deposits in cash, or through a credit), is called cash coefficient, and we have already said that it was fundamental to insure at any time convertibility of these deposits. Therefore, the granting of deposits cannot jeopardize this relationship.
Since cash coefficient is fundamental to insure liquidity of the bank, that is its ability to transform deposits into cash, the national bank has two main instruments to insure it:

- The compulsory reserve imposition: the national bank can compel banks to deposit in it a part of their deposits, immobilizing them.
- The increase of the rediscount ratio: by this means banks are compelled to increase also their interest rates and therefore requests of credit are discouraged, especially if they are as discounts.

From what has been previously said, it appears that the national bank has a fundamental controlling role in the process of creating scriptural bank money: in the first place for its initiative as an inventor of paper money, and in the second place because of the instruments of monetary policy it has to supervise and control the action of private banks.

But this idea of reality, which is currently accepted and defined by most of the experts, can be discussed and questioned in its main aspects. In the following paragraphs we follow the article of Francisco Vergara «Les faux-fuyants du monétarisme[2]».

The first thing to be said is that the national bank itself cannot control its money emission. We have already said that the national bank creates money every time it produces bank notes for credit. Now the national bank cannot refuse the banks to rediscount paper signed by solvent companies, without jeopardizing the whole pyramid of credit, and it has no means to avoid the increase of nominal value of such paper; the increase of course elevates the value of the money mass.

In the second place, the instrument which has always been considered the best means for limiting bank credit, that is the increase of the re-discount applied by the national bank, apparently obtains results opposite to what was expected, that is a higher rise of the money mass, because the high interest rates atract capital.

Finally, it is necessary to point out that nowadays there are many other forms of liquidity, besides paper money and scriptural bank instruments, as they cannot be controlled by the national bank. The confusion of this situation can be easily observed simply by considering the difficulty existing to define what is meant by paying means. F. Vergara mentions Lord Kaldor: «There is no clear-cut separation in the interest of the total liquidity, of what is money and what is not. Whichever the definition chosen for money, it will be surrounded by a myriad of more or less liquid instruments which can act as substitutes».

Therefore, besides these legal instruments, theoretically controlled by the national bank, there are new instruments that the public accepts and uses. These instruments are born not only within the banks, but also within the companies.

It is easy to deduct from the previous considerations that at present there cannot be an effective control of creation of money.

The immediate result of this situation is that every bank, within the more or less severe conditions imposed by the national bank, acts according to its own interests. And there is no effective legal instrument in the geopolitical society to allow to study global strategies for all the market.

It is not that the market needs, sectorial excesses or shortages of liquidity are completely overlooked: proof of this is the fact that banking at present is more than ever a good business. But means to meet these needs are focused empirically, partially and not with a view to the common wellbeing, mainly in favour of higher sectors of society.

National banks have not effective instruments to control the situation. And monetary theory has not convenient conceptual solutions, since it has not been able up to now to define exactly and rigorously the idea of money system.

The antistrategy of market and of invention of money followed has the most evident proof in the present inflation-deflation crisis (stagflation) which is so worrying, and to which nobody can find a solution.

4. The world diffusion of utilitarian relations.

To the situation of monetary disorder which we have described, must be added all the problems derived from the present world diffusion of utilitarian relations.

Trade among different countries is getting wider and wider, and more far reaching, and it is necessary to point out all the advantages and all its greatly positive aspects. Work division all over the world is a fact that must be increased, as long as it is made according to an actual equilibrium of the balances of payments: this is the main strategy to be followed to insure the feasibility of foreign trade.

If the domestic money system in every geopolitical society is a cause of error and confusion, it must be considered that on a world wide basis the situation is not much better. What happens is that in the comparison of currencies, stronger countries «export» their monetary problems to the weaker ones, so that the situation of the latter worsens. Monetary problems cross the frontiers and in this game there are always winners and losers.

The main monetary question to be considered in every foreign trade operation , is the ways of payment to be used, as every geopolitical society has a currency with an exclusively domestic validity.

This problem was easily solved in the regime of intrinsic metallic money, in gold or silver, because all the payments were made in metal accepted world wide.

Under a regime of gold standard -that is of intrinsic metallic money or convertible paper money- there was still no problem, at least in theory, since convertibility of currency insured a given gold standard, and a dynamic equilibrium of balances. The equilibrium of balances is based on several mechanisms: transfer of gold from countries with a deficit to countries with a superavit; the equilibrating movement of the general level of prices, all of it reinforced by the action of the national bank on the official rate of rediscount.

With the fall of the gold standard, and therefore with the interior convertibility of money units in each country, relations with foreign trade become complicated and confused. Between 1930 and 1945, several protectionist measures -such as duties, quotas, suspension of external convertibility and of the free money market, etc...- greatly reduce world trade. During World War II contracting is very high.

In order to find an accepted system to restart world trade, in July 1944 is signed the Bretton Woods agreement, in which the USA in fact impose what is best for them.

This agreement included:

- to re-establish convertibility among the different inter-currencies;
- a compromise of all the parties to keep the fixed exchange rates within very narrow limits;
- to appoint the dollar and sterling pound as reserve currencies, that is as international paying means, accepted by all the parties to pay transactions. These two currencies had, for the sole use of foreign trade operations, a convertibility in gold which granted their strength. For this reason the system established in Bretton Woods is called gold exchange standard.

Even if its introduction after some time allowed the relaunching and prosperity of foreign trade in the western world, the system showed some problems which soon became apparent.

The first problem was the submission of the countries considered «weak» to the countries considered «strong». In fact, when a geopolitical society has a deficit in its trade balance, there are only two possibilities: to have recourse to international credit or to its currency reserve. If the deficit belongs to a geopolitical society producing reserve money, this society can actually finance its deficit by means of new monetary emissions.

This was in fact the case of USA. The USA have taken advantage of their privileged monetary position up to the limit of their possibilities, by reabsorbing enormous deficits in their balance of payments through the uncontrolled emission of dollars. It must be pointed out that the origin of this deficit was not an excess of imports, it was an export of capitals not backed up by a corresponding entry of merchandise.

The USA policy of financing their deficit originated such an inflation of dollars in Europe (export of inflation), that the convertibility of the dollar, under the point of view of official standards, established in Bretton Woods, was jeopardized. From 1967-68 inconvertibility became a fact, even if it was not officially declared until August 1971, when president Nixon denounced unilaterally the Bretton Woods agreement.

Since then, in spite of the attempts to find a readjustment according to the Washington agreement of December 1971, -also unilaterally denounced by Nixon in 1973- the gold exchange standard has been finally abandoned and, at present, the currency exchange is considered «floating», that is there are no fixed standards and they are negotiated in a money market. Therefore, there is no reference to a possible convertibility to gold.

Currency floatation is in itself no ill for foreign trade. From this point of view, the present situation would not be especially serious if it were not for a fundamental fact: as long as the domestic currencies of every geopolitical society are not rationalized, foreign trade will not be rational either, and therefore it will not reach the necessary equilibrium of balances, which should be its main goal.

It is impossible to have an equilibrated foreign trade as long as:

a. money units of the strong countries are imposed on those of the weaker countries. In spite of the crisis, the dollar has been able to bear the situation and still today it holds a pre-eminent position and privilege which allows all its domestic money problems to be exported.
b. there is still a speculative currency market. This has a capital importance. The possibility of exchanging a currency for another, without a parallel movement of goods, promotes greatly the purely speculative operations. When they are made on a great scale (erratic movements of capitals), they help to reinforce the existing money imbalance within each geopolitical society. They corner national banks and compel them to take external actions in order to keep within reasonable limits their currencies' standards. As always, the ones more injured are the weaker ones, both on a world level and in each domestic society.

5. Functions of the money system today.

We are now in a position to draw the final conclusions of the analysis we have developed on the money systems.

With respect to the nature of the money systems, their present forms show more than ever their fundamental abstraction. The historical clash between nominalism and metallism has been largely won by the first one, even if the references and the defense of metallist theories still hold an interest in many books and writings on this matter. However, most of the critics admit now that the money system is a simple auxiliary instrument without any need to have an intrinsic and concrete value. We need only remember Schumpeter and Lord Kaldor.

With respect to the mercantile and social functions of the money system, we can say, after what has been exposed in this chapter, that we must rather talk of irregularities: the functions traditionally taken up by money systems (see chapter 2) are completely deformed and defaced at present.

1. Metric malfunction: a money unit is, by nature, a measuring unit. As such it shows at present a number of faults which prevent the exact and trustworthy fulfilment of this function. In the next chapter we will specify the qualities of a rational and efficient metric system.
2. Instrumental malfunction: present day monetary instruments -paper money and scriptural instruments- act as agents in the exchange of goods but, at present, this function is marred as it is shared by a lot of other instruments on which there is no control whatsoever.
3. Documentary malfunction: this function, only partially fulfilled by scriptural instruments, is completely ignored by paper money, which is anonymous and depersonalized. In fact, we might say that present day money systems are anti-documentary. This fact has very important consequences, not only in the exclusively mercantile field, but also in the social field and still more in that of information. Thanks to its being anonymous, the present money system allows corruption with impunity, which is very injurious to society: robbery, tax evasion, capital flight, corruption of judges, politicians, state officers, etc.
4. Strategic malfunction: because of its metric and documentary faults, the present money system cannot serve as an instrument of rational and effective merchant-monetary strategy: the consequence is the terrible crisis which appears both in the domestic markets and in foreign trade.

The need for a change in present day money system is the conclusion which becomes apparent from what has been said up to now.

A rational and informative system must be reinvented, to accomplish efficiently the functions which, as we have seen, it had in the beginning.

Therefore, in the next chapters of this essay we will describe a possible new money system, more rationally adjusted to the demands of modern market. A special importance will be given to its function of documentation and information on the market.

Notes:

[1]When through an incontrollable inflation, by melting coins an interesting benefit is obtained with respect to the face value, all the coins of the sort disappear quickly from circulation.
[2]F. Vergara: «les faux-fuyants du monétarisme», le monde diplomatique, december 1983.

B Towards a rational monetary system.

Chapter 5. Premises for a rational monetary instrument.

1. This chapter's goals.
2. Documentary metric systems.
3. Measuring units.
4. The measuring proceedings.
5. The measuring documents.
6. Conclusions.

1. This chapter's goals.

In this chapter we will take an approach to the smallest indispensable bases to have a rational system, starting from the idea that it is a metric system.

The principles will be later applied to the set-up of a new monetary instrument, in a position to clear the monetary relations and to give new strength to the market.

2. Documentary metric systems.

As we have already seen in the previous chapter, the defining character of money systems is that of building up an abstract measuring system to measure the exchange value of the goods in a given market.

Therefore, we could talk about a rational money system as long as we have an authentic metric system, that is a system which gives faithful images, isolated from reality.

The minimal necessary elements for an effective metric system are the following three:

1. A measuring unit rigorously defined, of a radically conventional-abstract nature.
2. A measuring process to allow in practice the act of measuring: that is to allot a given and exact number of money units to every elemental real phenomenon.
3. A measuring document to record every elemental measuring act, in order that every qualified person can repeat this operation, control its correctness and at the same time to allow an analytical-statistical treatment at a later date of the total measurements effected.

In the case of the money system, it is necessary to have together the three mentioned elements. We will now examine them one at a time, with respect to money systems.

3. Measuring units.

The measuring units invented to measure the dimensions of any phenomenon, are completely abstract ideas and their creation is absolutely arbitrary. The only condition to be fulfilled is that the definition of units must be very exact and rigorous.

The length unit, for example, is the meter. At the beginning it was defined as «the distance of the ten millionth part of the quadrant of the earth meridian». But at present, as we advance towards a greater accuracy and abstraction of units, there is a preference to define a meter as «the length of the journey made in empty space by flat electro-magnetic waves in 1/299,792,458 seconds».

In the market science, the dimension or value which must mainly be measured is the exchange value of real goods. The unit for measuring this value is the money unit, which, because every State produces its own, has different names in different states. Let us remember that, in ancient times, every country used to define also its own units of length, weight, volume... However, money units are very special measuring units, because

they are not fixed. As a matter of fact, the exchange value of real goods is not always the same, it is not identical in different situations of time and space. The distance between Barcelona and Madrid is always the same; but the price of a liter of wine is not the same in Madrid and Barcelona, nor is it the same to-day and ten years ago, as it varies in time and space as a result of a number of very complicated causes which we are not going to analyse now.

Since the reality to be measured is variable, the money unit is also variable: there is no invariable outer constant with respect to which the value of the money unit can be defined. Therefore the definition of money unit is not fixed, as it varies according to changes in the exchange value of the real goods it measures.

As a consequence the money unit cannot be defined with respect to a given privileged merchandise, but in a given geopolitical space it must be defined according to the whole number of goods which circulate in every time period under consideration.

4. The measuring proceedings.

After accurately defining a measuring unit, a way must be found to measure in practice concrete phenomena in which a given person may have an interest.

To take a measurement is to count the number of abstract units which are conventionally attributed to any real phenomenon, in accordance with the given definition.

In the case of length units, everybody knows the «meter», the «rulers» and many other instruments and measuring techniques, which constitute the measuring proceedings.

In the case of money units, the only imaginable system to measure the exchange value of a real **merchandise** is the actual exchange, the free monetary exchange contract brought about by two market agents. The liberty of the market play produces the prices and salaries attributed to every real merchandise, in the very moment when the sale-purchase operation is brought about.

Prices and **salaries** are mixed values, concrete-abstract, which are produced by every measuring operation, every inter-comparison between the real merchandise to be measured and the abstract measuring unit.

And paradoxically it is the whole prices and salaries fixed in a given space-time which can, by an inverse operation to this fixing, define the value of the money unit -called **money**- in this space-time, since the value of the money unit can only be defined as its average ability of purchase in every given space-time.

5. The measuring documents.

The last requisite condition of every effective and scientific metric system is that every measuring act brought about must be well documented and personalized, both to verify its validity, and to be able to use elemental results to obtain statistics and analysis of the observed global sectorial whole or sub-whole.

Therefore, every measuring act of the exchange value of real goods -that is every elemental mercantile exchange- must also be fully documented.

As we have already seen in chapter 2, in a rational money system, this documentation is effected automatically thanks to the monetary instruments-documents. They are instruments because they are used to make exchange easy; but they are also documents because they are a record of every elemental mercantile operation effected through them.

There are two minimal conditions which can be demanded of an exact documentation: first, that every measuring act should produce its own document; and second, that this document should be complete, that is it should record all the relevant facts which occur in the measuring act under consideration.

Especially here the present money system is at fault: because there is a lack of the proper documentation.

In the money systems which are in force, instruments-documents are coins and scriptural instruments, as we know. But all these instruments are of a nature essentially anti-documentary. Rather than documenting, we might say they conceal reality, because of the following reasons:

1. Mobility: they do not show only one elemental mercantile operation, as they are used for lots of exchanges: they circulate in the market indefinitely, playing their instrumental role in an unknown number of elemental exchanges. Because of this permanent mobility, it is impossible to establish exactly each of the elemental exchange operations effected.
2. Uniformity: present monetary instruments, especially paper money on which all others are based, are identical to each other. Paper money changes only with respect to the number of money units represented, but gives no information with respect to special details of each elemental exchange effected. It does not say what has been exchanged, nor how, or when... This uniformity hinders any attempt to an exact analysis of the complex and flowing mercantile reality.
3. Anonymity: finally, most of present day monetary instruments are anonymous, that means they do no say who are the agents in a mercantile exchange or in a monetary act whatsoever. Therefore, they do not allow the attribution of responsibility to the monetary agents, especially if we are talking of paper money. From this point of view, paper money is not only un-statistical and un-analytical, but also and first of all a-social, as it allows to effect all sorts of monetary operations without leaving any personalizing and compelling evidence in the face of Justice.

Even if the three above-mentioned properties can be rightly applied only to paper money and coins, it must not be forgotten that scriptural bank instruments are also essentially un-documentary, even if at first sight it might not seem so.

As a matter of fact a signature on a cheque, a name, a number of account... are, to-day, identifying items. But the documentation provided is very partial, for several reasons:

a. in the first place, many cheques are «to the bearer», and therefore they only identify one of the agents of the monetary exchange.
b. in the second place, the information given is usually considered as a «bank secret» reserved to privileged groups and sectors: it is never made public.
c. finally, because of the secondary nature of the bank-scriptural documents, they can always be converted into completely anonymous bank notes, by simply asking to do so, and therefore the identifying documentary mark is lost.

Therefore, bank scriptural documents are potentially documentary; but they will not be fully such while they exist together and are subsidiary to a system of anonymous and undocumentary monetary instruments.

The money system in its whole will not be a fully documentary and informative system until an identifying instrument becomes the only legal and real monetary instrument, completed in every single elemental operation and thoroughly documentary.

6. Conclusions.

One of the minimal conclusions, necessary to any metric system, that of possessing elemental, thorough and identifying measuring documents, is not fulfilled by present day money systems.

In consequence, it cannot be a good metric system. We therefore need to create a monetary instrument in a position to be a reliable guaranty of an exact measurement, and fully documentary of the exchange value of all and each of the exchanged goods in a given market.

This new instrument will not be very different from present scriptural-bank instruments; but it will fulfill the traits which are now only potential, and will eliminate its metric-documentary

imperfections.

Chapter 6. The telematic cheque-invoice.

1. This chapter's goals.
2. What is a cheque-invoice.
3. Telematic updating of cheque-invoices.
4. Metric-documentary properties of cheque invoices.
5. The telematic market.

1. This chapter's goals.

In accordance with the conditions we have explained in the previous chapter, we should now define a possible new monetary instrument, which we will call **cheque-invoice**. On the cheque-invoice is based the construction of a rational and informative money system, without which it is impossible to develop a clear and flourishing market.

2. What is a cheque-invoice.

A cheque-invoice is the updated monetary instrument-documentof chapter 2. It is simply an inner accounting document which every well identified and responsible market agent can produce according to law, and with the only limitation of his money availability in his current account, in order to settle an elemental operation of merchantile exchange.

We call it a cheque-invoice because it actually sums up the peculiarities of an invoice and a cheque.

As an invoice, it shows the place and day of the operation, it indicates the quantity and quality of the real goods which are being sold, unit price and total amount to be paid. It also indicates the name of the seller.

As a cheque, this same document indicates the name of the customer, the name of his **accounting office**[1] and the number of his current account, besides the accounting office and current account number of the supplier. As an inter-accounting document it becomes an order of payment from customer to supplier, this payment being made by a simple scriptural transfer between the two current accounts, through the mentioned offices.

This cheque-invoice works very simply. Every mercantile exchange involves two agents, which are called customer and supplier respectively. Every customer produces a cheque-invoice in favour of the supplier. When the cheque invoice is filled with the above data, the customer-debtor-emitter will sign it. The transfer of funds which represents payment is done automatically by the accounting office against simple presentation by the supplier of the cheque-invoice duly filled and signed by the customer.

This cheque-invoice can never be endorsed to a third party: the supplier is the only legal beneficiary. After the transfer of funds has taken place, it is invalidated, microfilmed and filed for statistical and judicial purposes, and its cycle is therefore ended.

The cheque-invoice can also envisage a payment term according to law; in all cases, interest will be paid by the customer-debtor-emitter who needs to delay payment: according to custom this is a most equitable and effective system.

It can also be very simple to create an Interbank Agency to guarantee payment to the beneficiary of all the cheque-invoices made out without funds: this Interbank Agency would be the only actor in face of Justice against an insolvent emitter. By these means the system will finally be trusted.

Another advantage offered by the cheque-invoice, is an automatic fiscal collection (see chapter 11).

3. Telematic updating of cheque-invoices.

The monetary instrument which we have described can only be functional, practical, agile and convenient if it takes advantage of the possibilities of technology of transmission and distance processing of information, that is telematics.

The application of telematics to the money system is no news: everybody knows the introduction of electronic money, the electronic transfer of funds or the sales points terminals.

Since 1970 the sales points terminals started to be introduced in Europe, USA, Canada and Japan. As the name suggests, they are computer terminals which are located in the sales place. To pay, customers hand down a small magnetic card; the terminal, which is in connection with the bank computers, automatically finds out if the customer's account has enough buying power to pay. If it is so, the customer's account is immediately debited with the purchase value to the benefit of the seller.

Lately memory cards have appeared: they are cards which have a micro-processor included, in whose memory the bank can introduce a given quantity of purchasing power. When paying, the seller who has a device for reading cards, controls if it has enough buying power left, and if so credits the relevant amount to the seller with an indication of the customer's account. The money is recorded in a cassette or other auxiliary memory; when the cassette is full, the seller takes it to the bank where it is credited to his account. When there is no buying power left, its owner takes it to the bank to re-charge it.

This and other steps for electronic transfer of buying power are being introduced in the more advanced countries, and they will soon be accepted everywhere.

But it is very important to realize that these new realities do not fall within a complete theoretical consideration on the money system and its social function. It is in fact to fill this gap in theory that we submit this essay for consideration and offer as an alternative the **telematic cheque-invoice**.

Telematic cheque-invoice means simply that every cheque-invoice will be produced through a centralized telematic system in a geopolitical society. This would give way to a completeliy telematic money system, which from a technological point of view is today perfectly reasonable.

Such a money system should include the following minimal elements, interrelated among themselves:

A. Private invoicing centres: all the mercantile selling places -firms, wholesalers and retailers- however small, are invoicing centres. They must therefore have mini-computers to prepare and print cheque-invoices; one for each elemental sale-purchase operation. For the invoice to become a cheque, it must be signed by the customer, or, more simply, accepted through his electronic paying card.
B. Private accounting centres: they are accounting firms, that is commercial banks and savings banks. They honour payment orders such as cheque-invoices, that is they transfer funds from one current account to another, from that of the customer to that of the supplier. If the invoicing centres are telematically connected with the accounting centers, the transfer of funds can take place at the very moment of the operation. The accounting centres besides can do the microfilming and filing of the cheque-invoices handled by them and effect all the analysis and statistical studies requested by the community. The unending practical and political questions produced by the contents of this paragraph will be studied in the next chapter. We will say however that it will be necessary to study the necessary means to insure both the inviolability of the telematic monetary network with respect to the possibility of mishandlings, and its impenetrability of personal data, which will have to be protected by an effective Justice, independent from the **State**. Therefore the analysis and statistics prepared on the basis of the telematic monetary network will be always processed completely omitting personal references and will be considered as of public interest.
C. Geopolitical telematic centre: here will arrive the analytic statistical data of public interest worked out by the various accounting centres; they will be processed and the global centralized analyses-statistics of all the geopolitical society will be worked out.
D. Telematic geo-justicial centre: to this **geo-justicial** centre (so called because it depends from the Justice of the geo-political society) will arrive all the data of all the cheque-invoices; it will carry on the

private and corporate accounting on the basis of the accounting data transmitted by the accounting firms; it will compare the analytic-statistical details of the geo-political telematic centre with those processed by the accounting firm independently; and it will protect against any interference, under professional secret, all personal, private and professional data.

4. Metric-documentary properties of cheque invoices.

We can summarize what has been said up to now by detailing the metric and documentary properties of the cheque-invoice.

1. A cheque invoice is static: it is produced to organize and document one only elemental mercantile operation; it is completed with this only operation and it can never be used again. It must be neutralized and filed for analytical, statistical or judicial purposes only.
2. A cheque invoice is diversified: it is not uniform like bank notes, as it is produced purposely for each operation, according to its specific properties. Besides this extreme individualization of cheque invoices, it will be necessary to legally foresee some basic sub-species of cheque invoices, according to the operation involved (domestic or foreign trade, inter-corporate or consumers trade...) in order to make subsequent analyses and statistics easier.
3. A cheque-invoice is personalized: it records the name of the two agents taking part in the operation: the customer-debtor-emitter and the supplier-beneficiary.

Thanks to these peculiarities the telematic cheque-invoice can be the monetary instrument-document in a position to transform the money system into a real system for measuring and quantitatively informing on mercantile operations.

To this end it is necessary for it to become the only real and legal monetary instrument, namely, that anonymous paper money must disappear altogether. The telematic cheque-invoice we have described is not very different from the several systems of electronic payment to-day in force. It is only necessary then for electronic payment, perfectly documented, to become the only acceptable form of monetary transaction, and that the possibility to transform the documentary monetary circulation into an anonymous and impersonal circulation disappears.

5. The telematic market.

The reality arising from the radical suppression of present day monetary instruments and their substitution by a telematic monetary network such as the one described above, could be called **telematic market.**

In a telematic market every elemental transaction is fully documented: therefore there is a total clearness of the market, a complete transparency and information. As long as this informative potential is available to all the population and is not exclusively set apart for a privileged sector as at present, an enormous possibility of greater and better riches, liberty and intelligent and efficient action is opened.

It could be objected that the economic cost of such a telematic market would be too high; but this objection can be confuted if we consider the enormous social benefits which could be derived therefrom:

- availability of an exact and exhaustive market information;
- as a consequence, a better scientific knowledge of the market;
- and a much more rational and effective practice in market strategy.

The benefits reach the whole of the social body, not only a privileged minority. It is easy to compare with other expenses of geo-political range, so important and carrying so little benefit, such as armament.

On the other hand, with the telematic cheque-invoice and the telematic market, a dematerialization is obtained, which clearly shows the essential nature of any money system: the abstraction and instrumentality, void of any need of intrinsic value of the instrument filling this function.

In the suggested money system, the buying power of every person will be represented simply by an amount in his/her current account. This buying power will be exclusively activated by producing a cheque-invoice: the subsequent transfer of funds is automatically effected by a computer.

As a matter of fact, the possibilities of telematic technology allow even to renounce the actual material cheque-invoice, as a simple magnetic storage will be enough to record in a personalized way all the monetary operations carried out by each of the market agents.

Consumers cheque-invoice.

General accounting area.

Qty.	Item.	Code No.	Unit price	Total
15 kg.	Potatoes	015.24.35	50	750
10 kg.	Beans	015.49.84	120	1200
5 kg.	Oranges	015.36.75	50	250
	Total			2200
	5% Social Solidarity Tax			110
	Total to be paid			2310

Justicial Protection area

Casa Joan	IDENTITY CARD	
C/ Badalona, 35		
08018-Barcelona	CUSTOMER	Josep Coromines Andreu
Guild Number: 35.426	Personal code	ABD 380314
Banc Mediterrani	Savings Bank	Number 0246
C/A Number 359.840	Payment: cash	within 30 days
Note: Payment guaranteed by Interbank Treasury. Discount for customer's account.		

Model of a consumers' cheque-invoice: it is clearly separated in a general accounting area -whose details are necessary to prepare exact statistics and analyses available to the whole of society- and a justicial protection area -whose details are completely protected under professional secret by independent Justice-.

Note:

[1]Bank or Savings Bank.

Chapter 7. Minimal political conditions for the introduction of the telematic cheque-invoice.

1. This chapter's goals.
2. The present day alternative.
3. An independent justice, for the protection of the personalized monetary archives.
4. Socialization of the analytical-statistical information.
5. Legislative suggestions on the monetary transition.
6. Telematic teams and equipment.
7. Fiscal simplification.

1. This chapter's goals.

In this chapter we will try to establish the minimal practical conditions which are necessary, so that the introduction of the telematic cheque-invoice be not only technically possible -which has already been demonstrated- but also and above all to be politically possible in the following double meaning:

a. that its practical realization and adjustment to social reality be fully satisfactory, with as little as possible difficulties, tensions or problems of any sort;
b. it must mean a real service to all the **geo-political society**, a progress for the market and for society, and not a privilege, exclusivity or **telematic tyranny** of a few over all the population.

2. The present day alternative.

The proposal of a transparent and informative monetary instrument as the one described in the previous chapter usually produces many doubts with respect to a fundamental question: won't the cheque-invoice be the sophisticated instrument of a new totalitarism such as the one described by George Orwell in his work «1984», with a power and capacity of oppression never before seen in a state, which now will be able to know almost everything on its subjects? What will happen with personal liberty and intimity, until now founded on anonymity, and very especially on monetary anonymity?.

Before adequately replying to this objection, we would like to point out an evident fact. The telematic revolution is today an irreversible fact, which cannot be stopped, and which will influence more and more all the fields of human activity, but always in a purely instrumental-inert dimension, at the service of the ones really in power.

On the other hand, it must also be considered that telematics, as any other technology, can be used in many different ways, according to the ideals and interests behind every single action.

For these two reasons telematics -as an auxiliary instrument very powerful in the field of transmission and information processing- implies necessarily, either a great hope for all the peoples on earth (as long as it is understood and applied as an instrument accessible to everybody, at the service of liberty, dignity and information of all the **people**) or a great threat of more **despotism** and **power** on people (if it becomes a monopoly of the powerful, at the exclusive service of their interests).

The alternative we have submitted is also clear in the case of the telematic cheque-invoice.

Whether we like it or not, the **telematic market** will be a fact in a few years. In all the technologically advanced countries there are several experiments in course with electronic money which will soon spread widely.

Now, these different initiatives are not yet included within a theoretical reflexion on the global **money system** and its application in the whole society. In this way, monetics -that is, the telematic money system-

can drive us more to the absolute despotism prophesied by orwell and huxley than to a world of real liberty which we all wish.

We therefore must accept the challenge of the telematic revolution, and instead of choosing regressive solutions -which as a matter of fact are not applicable because the phenomenon is irreversible- we must try to find the real mechanisms which will protect the **actual liberties** of all the citizens.

In this chapter we will submit two of these mechanisms. They will be considered mainly from a practical point of view of technical steps to be taken, while the fundamental grounds and possible social repercussions of these mechanism will be treated in detail in another essay.

3. An independent justice, for the protection of the personalized monetary archives.

The control of population is included in the same social-technological development of monetary telematics which is being introduced, whether we like it or not.

Therefore, the problem to be solved does not depend from control but from the use which will be made of it and from the legitimate **authority** or illegitimate **power** which will determine such use.

Among the several social and political organizations which could take up this function, we choose here justicial authority, which, being actually independent from the **state**, could objectively take in charge the total monetary archives of the **geo-political society**.

Justice has no direct control on the present of people and it only punishes their documented past. And even if it is really independent from the state -from the executive and the legislative power- it cannot avoid the severe technical frame of law, from which it depends totally and solely.

For these reasons, justice can become the most adequate authority to effectively control:

1. Respect to private secret and to personal intimacy to which every **person** has a right. Private secret can only be made public in two well defined cases:
    a. when there is a written authorization of the person concerned on the document which is made public;
    b. when there is a firm sentence by the court.
2. Respect to professional secrecy, which obliges and is a right for every person, whichever his/her profession.

It would also be advisable that, on the long run, all the teams forming the telematic monetary network - whether machinery or human teams- should depend from justice.

Justice therefore will be the only institution with an access to the whole of the data recorded by the telematic monetary network. The right of access of the state and of private citizens will be constitutionally limited to the data of an analytical-statistic type, that is without reference of names nor personal identification.

The fact that justice should be the sole guardian of the telematic monetary information and the only authority to have full access to the network, does not mean that this right of access should be used indiscriminately. Law should establish that justice can only use the information it guards with reference to a real case of a process. When an instructing judge has founded reasons to peruse monetary documents related to the case he has in hand, this judge, and only he, will be allowed to examine the relevant documents. Only these documents will be made public in the corresponding court.

It is clear, however, that many will consider deceptive the possibility of a neutral, objective, unselfish justice. Cases of corruption among the members of judicial authority are not unknown.

For this reason it is necessary also to take actual technical steps to warrant the real independence of justice with respect to the state and to any sort of **power**. Only this independence can bring back trust in justice as an effective protection of all the members of the geopolitical society.

Economic independence: to obtain it, it is necessary to constitutionalize a justicial budget completely independent from that of the state, fixed as a given percentage of the general budget, which would be attributed automatically to justice, without any discussion.

Institutional independence: the justicial body must be, as an institution, completely independent from the state. This means, in the first place, the total disappearance of the department of justice. Every justice body, at its local and technical level, and the union of justice bodies at its own general level, must be the only ones with actual decision making and punishing ability within the frame of established law.

Independence of organization: based on the two former sorts of independence, justice can really become self-managed, with complete freedom of organization and decision at all the levels and phases of its specifical task: management, appointments, promotions, studies, deontology, election of superior bodies, etc.

When the government pays, appoints and watches, there cannot be a real independence, neither in personal nor in institutional grounds.

4. Socialization of the analytical-statistical information.

Another political step, necessary to ensure the democratic use of the telematic cheque-invoice, is the **socialization** of the telematic monetary network and of all the analytical-statistical information obtained through it. This step is the only effective guaranty to ensure that all this information, so important, on the monetary dimensions of the **market** and **society**, will not be monopolized by real or official power groups for their own benefit and against the population.

Information is to-day the conclusive element when we must act effectively and with intelligence.

Bankers, for example, have carried on their job effectively since very ancient times, thanks to the fact that they have a good information on the needs of the market at any time. This information allows them to draw high benefits and to offer good business to their clients. But the information at the disposal of every bank and banker has the very serious deficiency of being very partial and subjective, as it is only sectorial depending from the professional peculiarities of its clients, who are always only a few if compared with the total number of inhabitants. If the customer does a good piece of business, the bank does it extra good, since it has only contributed its intelligence and information, while the client has contributed his money -his own or lent by the bank-, his trade spirit, his work and that of his employees.

It is said that «knowledge gives power»: that who has the information can use it to obtain a benefit taking advantage of those who have got none. Almost always when a body of knowledge is held in secret -exoteric, occult, reserved to a minority- this knowledge degenerates into **power on and against people**.

The present systems of power through information are very sophisticated, because they can make use of information technologies. In many technologically advanced countries, there are telematic systems being prepared for the identification and **police** control of population. Monetary information is monopolized by the banks, even if each of them only knows information on its own customers. Electronic payment will become more and more widespread and also information on their customers' monetary activities will become more and more complete in the banks.

Under these conditions the varions possibilities of action must be kept in mind:

- we let things stay as they are, with a few having the information while the majority has none;
- we give up monetics: in face of the irreversibility of this phenomenon it is actually impossible, and besides it would imply giving up an evident **technical** progress;

- we go to the root of the situation, giving it a completely new configuration: a fully informative money system, putting at the disposal of the whole society the information obtained, excluding personal data which are protected by justice.

The last one may seem the most intelligent of the three possibilities.

Therefore, the information produced by the telematic monetary network must be guarded with respect to personal references by a justice independent from the state and from any real or legal power.

But the centralized filing of the cheque-invoices, when they have been emptied of personal references, produces sectorial analytic statistics which include all the geo-political society, and which can be easily socialized: that is, put at the disposal of all the population, in all its social classes and cultural levels.

This **socialization** of all the telematic monetary network and of all the information produced by it, implies in our proposed plan:

a. the free property and private initiative in the production of the technical team, both with respect to machines and programmes.
b. the purchase of all the necessary equipment for the installation of the network and its maintenance, besides payment of salaries to all the members of the informatic technical teams, wholly for the account of the Treasury of the geo-political society.
c. and the free access for any member of society -individual or collective- to all analytic or statistic, sectorial or global, information, produced by the telematic monetary network, always free from personal references.

In this way the telematic monetary network can become a real common wealth, at the total, free and gratuitous disposal of:

1. All the population in general: free citizens who wish to be permanently informed on the evolution of the **macro-utilitarian** magnitudes of their region, town, quarter, etc.
2. All the utilitarian agents: both producers and consumers, but very especially the former ones, who will therefore act on the market with more knowledge and therefore more effectively.
3. All the market researchers: they will have a high quality metric information, necessary to compare experimentally their models, up to now exclusively theoretical.
4. The state: which as a conductor of the geo-political society, will by this means have a privileged instrument to direct and compare its legislative and executive actions.

The democratization and popularization of all this information is easy to organize, through various means: telematic screens in public buildings, special consulting cubicles, the home television screen... The screens can show the information as graphs, synthetic images handling colours and forms in such a way to produce a popularization understandable at any cultural level and by anybody watching television.

5. Legislative suggestions on the monetary transition.

The theoretical proposal of a change in the money system, if it is to be applicable, must go together with a complete and objective study on the way to carry out this change.

This is not the place to make this study, but we can submit some suggestions on the way to go over from the present regime of anonymous money to a regime in which the telematic cheque-invoice would be the only legal monetary instrument.

The first action of any state wishing to introduce the cheque-invoice as the sole legal monetary instrument must be the radical suppression of all the monetary instruments in force. It will be necessary to give a legal term for their conversion into money units recorded in a fully personalized current account.

The next step will introduce the compulsory exclusive use of the cheque-invoice in every market operation. No merchandise will go from one owner to another without its pertinent cheque-invoice; and the other way round, nobody will be allowed to produce a cheque-invoice without the corresponding merchandise movement: this is the basic rule of all the new monetary laws. The practical consequences of this rule are many and important. For example, no illegal merchandise, not included in the tax duty list, will be in a position of being sold or bought through a cheque-invoice, since it is compulsory to indicate the tax duty number of the goods; presents of valuable objects or of money will become impossible, as the cheque-invoice identifies the real and legal owner of each of the purchased goods[1].

Now, probably this change will not be immediately possible, because there will not be enough informatic data, and because the users will not know the way to do it. Therefore the law will have to foresee a system of progressive transformation, according to the different sectors of population.

Fundamentally, two cases must be considered:

a. companies. With respect to companies from the beginning no exception will be admitted, as they are technically prepared to introduce the cheque-invoice. Any businessman -however individualist and uninformed- must be considered as a production unit, that is as a company. Therefore, when purchasing **production factors** from other companies, he will necessarily have to use the inter-company cheque-invoice.
   To solve the problems which might arise in case of companies lacking ability or very isolated, it will be necessary to organize regional legal assistance, which will be carried out by the local association of trading banks or savings banks.
b. Consumers. For consumers who, for cultural reasons or any prejudice, cannot or will not, for the time being, accept the cheque-invoice for payments, a progressive transition system can be adopted.

At the beginning there will be in force «bearer banknotes» up to, let us say, 25 money units and with a daily maximum of, for example, 1,000 money units obtained from the current account.

Simultaneously, the use of consumers' cheque invoices will be supported through:

- the introduction of a gratuitous lottery in all the geopolitical society based on the nullifying number of every consumers' cheque invoice;
- the granting of easy **credits** to all the shops and retail traders for the introduction of invoicing equipment more and more simplified and interconnected, easy to use and convenient both to seller and buyer, through simple current account cards.

As a second step, when the first one is well on its way, the «bearer banknotes» will be demonetized. Only the more stubborn will be able to buy daily and only in the town hall of the place, cheque books of, for example, 1,000 banknotes in money units, which will be valid one day only. These cheque books will be bought through a cheque invoice against the current account of the buyer; the unused banknotes will be exchanged the day after in the town hall. The used banknotes will be sent to his bank by the shop keeper or retail trader after nullifying them, according to law, with his own seal.

6. Telematic teams and equipment.

Another very interesting item when introducing the suggested money system, is that of human teams and material equipment necessary to the system.

As a matter of fact, a telematic money system requires the installation of a complete monetary network at the levels mentioned in chapter 6: invoicing centres; accounting centres; geo-political centres and geo-justicial centres. It also requires the existence of efficient specialized teams to work out and improve the analysis programmes and the monetary statistics.

Therefore, the law will have to foresee a consistent and applicable plan to prepare such technical equipment and human teams.

a. Material equipment. In the same way as the analytic-statistic information on the market, telematic equipment in the long run will have to be **socialized** as a common property of all the geopolitical society.

But the first practical problem to appear is that of the starting creation of a sufficient network to introduce the telematic money system.

An emergency solution, if there are not enough funds to establish a complete new network, would be that of hiring all the necessary telematic equipment, already present in the geopolitical society under consideration. This equipment could be leased in free periods at market prices and with an option to a final purchase.

b. Human teams. The human teams in charge of preparing and permanently improving the monetary programmes will be financed by the treasury of the geopolitical society. They will have to be reasonably well paid in order to be competitive with private enterprise as far as personal professional ability is concerned.

A very important fact which must be foreseen, is the need for a treble geo-political telematic monetary centre and geo-justicial monetary centre[2].

As a matter of fact, to warrant a trustworthy system, both justice (complete documentation) and the state (only mercantile documentation) must, each one seprately and with a possibility of comparison, effect a control of market and of society with three different telematic systems and three completely independent human teams. This goal will be gradually reached as the necessary financial means are obtained.

7. Fiscal simplification.

Even if this matter will be studied in detail in chapter 11, we would like to point out here one of the most important political possibilities offered by the telematic cheque invoice, which is that of a great fiscal reform.

As a matter of fact, fear of fisc may actually be one of the main reasons for rejecting our proposal: it is clear that with a fully informative telematic money system, tax fraud is thoroughly impossible and therefore the state can become a despotic master.

The political proposal therefore must be interestig for everybody, avoiding a rejection by the majority. From this point of view, the following option can be reasonable, and it will be detailed in chapter 11:

- Tax simplification: introduction of one single tax, made out of a fixed percentage - changing every year according to the budgetary needs- to be paid by customers on all and each of the cheque invoices produced.
- Tax reduction: a trend to a progressive reduction of the tax percentage with respect both to the impossibility of fraud (which causes a much more equitable distribution of the tax burden) and to the rise of other alternative sources of credit and community financing (see chapter 10).

Notes:

[1]It will be necessary to create a specialized institution to study the requests to bestow material or monetary values, and to grant, through a justification or not, the possibility to effect a legal donation.
[2]The treble telematic network of reciprocal selfcontrol is normal in modern ship or aircraft automatic pilotage. Network number 1, the most modern, gives orders, except cases in which there is a clear contradiction with data handled by the two other networks. In this case, network number 2 takes up action, under control of network number 3, etc. This system allows to control and repair network number 1. Since the three networks have different hardware, and their software is the result of different teams of

programming analysts, it is practically impossible for anybody, even for a super-specialist, to act simultaneously on the three processes.

This system avoids data manipulation by anybody, even by those «governing things and commanding men», who prefer not to introduce it to be able to act freely, even if this means being «deceived» by their employees.

C. Rational money system and market measurement.

Chapter 8. Mercometrics and mercologics.

1. This chapter's goals.
2. Present economics as an experimental science.
3. Conceptualization and delimitation of the subject being studied.
4. Experimental confirmation.
5. Statistic and statistics.

1. This chapter's goals.

The suggested monetary reform has very important consequences from the point of view of a scientific knowledge of the market.

In this chapter we will see how it is possible to definetly transform the monetary market in «a subject of scientific study» through the use of telematic cheque invoices as the only legal monetary instrument.

2. Present economics as an experimental science.

The scientific character of what today we call economics is certainly very debatable. Economists themselves have not been able to agree if economics is to be considered a scientific matter.

Positions are diverse; but the fundamental question is the principle chosen to establish what is science and what is not. On the one hand, those who apply a rigorous criterion, who consider that scientific matters must be submitted to a severe experimental treatment, admit that economics in the present situation is not at all scientific. On the other hand, those who have broader views say that economics is a science.

From a strict point of view, which is the one defended here, science can be defined as the empiric-phenomenologic pro-experimental knowledge. This mean that all scientific matter implies at least that following conditions should be fulfilled:

a. qualitative observation of the phenomena being studied;
b. analytic separation of pervalences (privileged values) in the phenomena being studied;
c. quantification and calculation of such privileged values;
d. preparation of work hypotheses, as a consequence of the results obtained in the previous analysis and calculations;
e. experimental comparison of the hypotheses: new real facts must prove the validity or invalidity of the proposed hypotheses to explain the empirical market reality.

If we follow this principle, the first problem to be solved is why economics is not a scientific matter.

This problem of course is to be situated in a wider context of the scientificity of «social sciences» (as it was already said in the introduction. The two main reasons of the present lack of scientific rigour in this field are the two following facts:

a. the filtered ideology, which takes advantage of the lack of precision and semantic singleness, produces confusion and misunderstandings, insoluble discrepancies between ideas without any empirical basis, and drives down blind alleys.
b. the lack of exact and trustworthy measuring instruments forbids the experimental comparison of the hypotheses and models worked out for the explanation of the phenomena.

In the following pages we will explain how this situation can be overcome.

3. Conceptualization and delimitation of the subject being studied.

«Economics» includes at present a group of approximate notions and of little studied hypotheses, without any rigorous scientific definition to unite them, and without a duly limited field of application.

The division of economics in several different branches, besides their relative importance, is a clearly ideologic matter, since it changes according to different authors and different schools. The same is applicable to the definition of elemental ideas.

To face this situation, we must define exactly and without a possibility of doubt, some basic ideas of a purely phenomenic range, without using ideologies which mix up phenomena with ideals. This is what we have tried to do in the first chapter of this essay. As we have seen, we mention there utilitarianism instead of «economics», meaning a «system for the production and distribution of utilitarian goods in the frame of a community whatsoever», and instead of dealing with an «economic» matter, we deal with utilitarian anthropobiophysics.

In the case of the utilitarian systems in force in the «civilised world», anthropobiophysics is limited to mercologics, and more specifically to «monetary mercologics», since such systems are characterized by the presence of a market conditioned by a money system.

Therefore, the subject of the mercologic science are the monetary markets, defined as «an ensemble of elemental money exchanges in a given time-space». Around this central phenomenic axis can take place the many specialized branches -sectorial, applied, institutional, macro/micro -mercantile, etc- of the matter at study.

With respect to the word «economics», which has so many meanings, here it is used especially to define a given strategy of market equilibrium, in accordance with its original meaning, that is a mercantile technology which will be dealt with in chapters 10 and 12.

4. Experimental confirmation.

The other condition necessary to any matter which aspires to be a science, is the experimental confirmation of the expressed hypotheses.

In spite of its high theoretical value, a deductivist pure reasoning -as that which has been in use for a long time and still is in mercologics- can only produce fully arbitrary explanations, if there is not an exhaustive and permanent contact with the reality of the actual phenomena it is trying to explain.

On the contrary, every matter which wants to obtain effective results and not purely speculative ones, must be realist, that is it must make reference to actual phenomena easy to observe and evaluate in their elements. The applied ideas must be operative, that is they must be easy to identify with the phenomenic reality.

Besides this matter must be able to find out if its principles correspond to actual facts: it must go back to the «battlefield» of the phenomena from where it started, to overcome experimental confirmation.

If all the above is applied to our field of study -the monetary market- we can immediately confirm that the telematic cheque invoice is at present a necessary element to make mercologics an experimental scientific matter.

As a matter of fact the money system is, as we said before, the metric system of the market. Only with an exact metric system is it possible to establish and evaluate the elemental phenomena for the experimental confirmation of any given hypothesis. Thanks to the telematic cheque invoice, the elemental market phenomena (the elemental monetary changes) can be exactly measured and documented, introducing therefore a real mercometrics, which is the necessary basis of any further experimental mercologics.

5. Statistic and statistics.

Many of the models produced to-day by economists on the market or on real trends of utilitarian life, have a quantitative form. But the lack of an adequate metric system makes their experimental confirmation impossible, therefore these models remain a simple theory.

One of the most usual instruments in present day mercologic investigation is made up by statistics[1]. Statistics is a mathematic science which allows to deduct, with a given probability degree, the value of some parameters considered in a population, starting from the deep knowledge of parameters in a reduced chosen sample of this population. Therefore statistics allows to apply sample-data to population data, within a chosen degree of probability.

Statistics are used with very good results in many sciences. But in mercologics a problem appears which must be solved. The problem does not concern the legitimity of statistics: the fact is not if a used statistics is applicable or not -since its usefulness has been demonstrated- but to find out if the sample-data used are trustworthy or not.

When we talk about monetary phenomena it must be pointed out that as long as the money system is not rationalized and transformed into a real scientific metric system, the trustworthiness of the sample values will be very doubtful and therefore the application of statistics will fail in its own basis.

The telematic cheque-invoice is therefore a necessary instrument to grant the exact recording of the monetary-merchant phenomena observed and which are to be used later for a statistic generalization.

But it must be pointed out that the existence of mercometrics -a global accountancy, such as the one obtainable by the centralization, according to appropriate programmes, of the telematic monetary network- will cause that in many cases the statistic-deductive treatment will be reserved to new problems, since the values of the monetary parameters considered in the population will become exactly known, and very trustworthy (being the only source of error the telematic system itself).

This accounting centralization of the merchant-monetary activity will be analysed with more detail in the next chapter.

Note:

[1]We must clearly distinguish statistics (a mathematical technique) from statistics (a collection of evaluated data).

Chapter 9. Global market accounting.

1. This chapter's goals.
2. The telematic cheque-invoice as an automatic multicaptor of the elemental phenomena of the market.
3. The analytic-statistic market all-accounting.
4. Levels of accounting centralization.
5. Mercantile dynamics and structure of the all-accounting.

1. This chapter's goals.

In this chapter we will try to show that the telematic cheque-invoice, through the exact and continuous statistics it provides, can produce a monetary market accounting of great scientific and political usefulness.

2. The telematic cheque-invoice as an automatic multicaptor of the elemental phenomena of the market.

The market phenomena -exchanges- are very definite. But when they are mediatized by a money system -and become therefore elemental monetary changes- they obtain a new abstract-numeral dimension. In a rational money system, this new dimension is felt automatically and exactly through what we have called the telematic cheque invoice.

In fact the cheque invoice among other things is a metric document which records an elemental mercantile operation with all its many pervalences; we call it a multicaptor.

All the details obtained represent a rich qualitative and quantitative material which can be the basis for the exact knowledge of the market.

3. The analytic-statistic market all-accounting.

The centralized automatic integration of all the information provided by each and all the cheque-invoices emitted in every time-space under consideration, produces «continuous and dynamic measurement, analysis and statistics (always according to the treatment of this information's programme) of the monetary market» which we will call mercantile all-accounting.

This all-accounting can have a high interest for all the population: politicians, tradesmen, judges, professional men and citizens in general. It is this sort of information -without personalized data- which must be socialized, according to the principles explained in chapter 7.

The accounting analysis and statistics programmes must be as complete as possible. All the existing accounting techniques must be used; if as a start this is not technologically possible, priorities can be established to include little by little all the fields and ranges of the market.

Also the accounting period under consideration can be reduced little by little according to the technological possibilities of the telematic monetary network.

4. Levels of accounting centralization.

If effective results in the economic leadership of society must be obtained, it is clear that the centralization of the telematic network must be extended to the whole society under consideration in order to obtain the macro-mercantile magnitudes.

But this accounting centralization -which is abstract and, therefore, does not mean a political or any other centralization- must be effected in successive steps which might be the following:

a. accounting enterprises[1]: every accounting enterprise, after transmitting to justice all the information contained in the cheque-invoices signed by its clients, will effect the statistics and analysis of the exclusive mercantile contents of the invoices.
b. the accounting enterprises will send the partial results to centres of a superior geographic area -towns, regions, etc.- which will integrate them at their local level.
c. finally, the global centralization in the geo-political society will be effected (see chart number 1).

5. Mercantile dynamics and structure of the all-accounting.

The job of organizing in detail the structure of the suggested all-accounting, and the telematic programmes which must carry it out, must be done by experts.

However, the general principles can be sketched here, from the simple observation of the market, since the formal analysis of it must necessarily correspond to the processes and peculiarities of the phenomena which develop every day in such a market.

In a first analytic approximation, trying to reflect the market in its dynamic and continuous reality and complexity, we can consider the monetary market -or exchange of goods through monetary conventions- as a reality where the following elements converge:

a. merchandises (produced or producers), passive subjects of the exchange.
b. market agents, active subjects of the exchange.
c. goods exchanges, very definite phenomena, but mediatized by an abstract convention which does not allow to apply to every merchandise a given mercantile value (price or salary).
d. the money system, which is the abstract convention accepted by market agents and used to make exchanges easier.

These elements are narrowly connected among them: none of them is self-standing, but each of them exists in function of all the others and therefore their distinction is simply analytical. But this analysis is absolutely necessary:

- if we want to give a scientific interpretation of the market therefore applying a system to increase effectiveness;
- and if we want to produce rational norms of mercantile action to favour and develop the market in each of its real elements and sectors.

Every different combination of goods and agents originates a kind of elemental exchange. If we make a classification of the main sorts of exchange, we will be able to distinguish in the market great cycles, very interesting for the practical interpretation of the market:

- 1. Production cycle[2].
    - 1.1. Sub-cycle of «production and wholesale trade».
    - 1.2. Sub-cycle of «production of inversion goods».
    - 1.3. Sub-cycle of «retail trade and industry».
- 2. Consumers' cycle.

In the following annex there will be a more definite explanation of all the elements and mercantile cycles, and of the practical implications of separating them.

Notes:

[1]Trading banks and savings banks.
[2]It must be kept in mind that the production of any modern enterprise is of exclusively price-mercantile values.

Annex to chapter 9.

As it has been said in item 5 of chapter 9, market is considered as a complex reality where agents and goods converge to produce exchanges, mediatized by a money system, and organized in main cycles and sub-cycles.

In the following pages we will examine in detail all these elements.

I. Merchandises.
Merchandises are utilitarian goods as they are exchanged in the market. They are therefore a passive subject of any essential exchange within the market. There are two fundamental sorts of goods:

a. Producing merchandises.
They are called «active production factors», «production agents» or «producing merchandises» and we define them as the forces which, within a company, co-operate in the production of utilitarian goods. They are certainly real merchandises -at least starting at a given historical moment- because their owners give them up against a pay which is ordinarily called salary.
In present day market, the producing merchandises which co-operate in the production process of a company -and are paid by it- can be subdivided in the following categories:

1. The company itself, as such, which pays itself and receives total residual benefits. From these, the dividends which the company usually grants its shareholders, must be deducted. The company's salary is therefore the reserve which is paid out from the benefits.
2. Work, purchased by the company through the salaries paid both to the working team and to the directors (staff).
3. The capital, acquired by the company:
   - against dividends proportional to the part of benefits which are paid to shareholders, if it is a capital participating in the company;
   - against fixed interests, if the capital does not participate in the company (debentures, bonds, credits, loans, mortgages, etc.).
4. The invention purchased by the company whether by one only payment or by paying royalties, or by a mixed contract.
   Probably, the four private factors of production which we have detailed, will not be immediately accepted as such. The classic books on economics, for example, only accept the following three: work, capital and natural resources. The list of active production factors given corresponds simply to a wish to be practical: what is paid by the company will be considered a production factor. The company, as a recipient of benefits, and the inventor, as a recipient of royalties, must therefore be considered production factors. Let us point out that they are all well defined and personalized: «production is a work of man».
   As far as natural resources are concerned, very specially the earth, they will be considered here not as active production factors, but as passive factors, goods produced which man transforms in the production of new merchandises (see chart number 2).

b. Produced merchandises.
Produced merchandises (inert objects and utilitarian services) are utilitarian goods obtained by the transforming action of new materials brought about by the producing merchandises. As far as the place occupied in the production processes is concerned, they can be classified as follows:

1. Goods socially not complete. They have not yet completed their mercantile life and must stay in the market for some of the following reasons:
   - because they are bought by a company to transform them and sell them again to another company; they are therefore goods technologically and socially incomplete, which we will call goods of current production;
   - because they are bought by a company which will use them as instruments in its production processes; they are then goods technologically complete and socially incomplete, which we will call consumers goods.

2. Socially complete goods. They are those which wear out their mercantile life because they are bought by consumers, who will not trade with them, as they will simply use them (see chart number 3).

II. Market agents.

The active exchange agents -the exchanging subjects- are also classified with respect to the exchanged goods. We may consider the following classification:

a. companies, which acquire and sell produced goods socially complete and purchase producing merchandise for a salary.
b. Producers (including companies) who exchange producing merchandises for a salary.
c. Consumers, who acquire socially complete merchandises from trading and retail companies.

III. Market cycles.

Of all the classifications considered up to now it is easy to follow a market analysis with the following cycles based on the operation effected and making reference to the goods produced:

a. production cycle, where all the exchanges of socially incomplete, produced goods are included, and which is subdivided as follows:
    1. Sub-cycle of wholesale and production trade, which includes all the exchanges of goods of current production.
    2. Sub-cycle of investment production, which includes all the exchanges of goods of utilitarian investment.
    3. Sub-cycle of retail trade and industry, which includes all the exchanges of consumers' goods.
b. Consumers' cycle, which includes all the exchanges of socially complete produced goods, that is, the exchanges effected between retail trade and industries and consumers.
    We must also consider another mercantile cycle: the foreign trade cycle, which is not explained only by the sort of exchange effected -as it includes exchanges of all sorts of goods-, but mainly by the trade addressee (buyer or seller), who in this cycle is always foreign to that geopolitical society.

IV. Practical implications.

As it has already been said in chapter 9, the analysis of the many elements and cycles of the market is based on a will for the highest phenomenological clarity, for a more rigorous scientific knowledge and for a more effective political action.

It must be remembered that the exact knowledge of each of these elements and cycles is only possible through the introduction of the telematic cheque-invoice as the sole legal and real monetary instrument. The money system is one of the key elements in the market, and if we have not mentioned it in this annex, it is because we take for granted what has been said in this respect in the previous chapters.

It is now time to consider some of the technical contingencies of the analysis effected. The clear distinction of elements, processes and mercantile realities makes actually possible a more effective technical organization of the market, according to every political option being considered.

We will now submit some of the norms where all that has been said can be given legal form. The fundamental reasons for those norms -that is, the political option in which they originate- will not be openly declared, as it will be the basis of another essay. We will therefore describe the submitted norms from an exclusively technical point of view, limited to models of cheque-invoices, statutes of mercantiles agents, types of current accounts and categories of accounting organizations.

a. Legal differentiation of types of cheque-invoices.
    The different sorts of monetary operations involved in the many mercantile cycles and the variety of agents demand, in order to attain a greater ease and simplification of the telematic programmes, that several models of telematic cheque-invoices be legalized for each kind of monetary operation.
    This differentiation will be very easy to carry on through numeral codes, colours, etc. (standard paper and forms), and will involve the following divisions:
    - 1. Cheque-invoices for sale of produced goods.
        - 1.1. Inter-company cheque-invoices, that is for the sale of goods socially incomplete, between two companies (production cycle):

        - cheque-invoices for sale of goods of current production (sub-cycle of production and wholesale trade);
        - cheque-invoices for sale of investment goods (sub-cycle of investment production);
        - cheque-invoices for sale of consumers goods (sub-cycle of consumers production, that is purchases made by retail trade and industries from wholesalers).
      - 1.2. Consumers cheque-invoices, that is of sale of goods socially completed between a retail trade or industry and a consumer (consumers cycle).
    - 2. Cheque-invoices for sale of producing goods.
      It refers to the salary cheque-invoices between a company and the producing goods acquired. These cheque-invoices will not be fixed for every merchandise, but every company will make them globally for all the producing goods purchased during a fixed period. They will therefore have the appearance of salary sheets where all the amounts to be paid by the company will be indicated. These salary cheque-invoices will be transmitted to the general association of accounting firms, which will distribute salaries among the current accounts of the beneficiaries.
      We must also add that all these sorts of cheque-invoices will be differentiated whether they are sales within the domestic trade of the geo-political society or sales abroad (see chart number 4).

b. Legal differentiation of mercantile agents statutes.
   Law will recognize only the following types of mercantile agents:
   0. Companies (mere producers): they buy producing goods and produced goods, which they combine and transform to obtain new produced goods for sale.
   1. Consumers-producers: they sell to a company their producing goods and with the salary therefrom they can participate as purchasers in the consumers cycle.
   2. Mere consumers: they have no producing goods for exchange in the production market[1]. To these agents, mere consumers, the geo-political society will grant a social solidarity salary, with which they will be able to participate in the consumers cycle as purchasers; this will be their only participation in the market.
      The social statutes of each of those mercantile agents will have to be very well defined by law, to avoid any possible ambiguousness (see chart number 5).

c. Legal differentiation of current account classes.
   For a greater mercantile and social clearness of the mentioned statutes, the different monetary operations -represented by the corresponding cheque-invoices- will also be made through clearly defined types of current accounts, and only through them. There will be three different types of current-accounts to be opened in an accounting firm:
   0. Production current accounts (only in trading banks): they are the current accounts of companies active in production. All the inter-company operations and payment of private salaries (as it has been said) will be done through one of these accounts. Every company will be allowed to open as many as necessary.
   1. Production savings current accounts: the current accounts where utilitarian professionals (that is employees, capitalists, entrepreneurs, inventors) deposit their salaries and private incomes, paid by the companies: salaries, interests, royalties and benefits, respectively. According to the number of salaries received by a utilitarian professional, there will be:
      - Savings current accounts of mono-salary production (only in savings banks);
      - Savings current accounts of multi-salary production (only in trading banks).
        In both cases[2], the operations to be made through a production savings current account will be the following two:
        - Capital investment, through a convenient contract, either with a trading bank, or directly with a company (if the investor is a mono-salary worker, when he receives interests he will become a multi-salary worker and will have to cancel his mono-salary current account and open a multi-salary one);

- To transfer a given quantity to the «consumers savings current account» hereafter detailed.

2. Consumers savings current accounts (only in savings banks): these current accounts will be fed only by:
   - Private origin buying power, coming from production savings current accounts;
   - Community origin buying power, coming from «social solidarity salaries[3]». (see chart number 6).
     With a consumers savings current account, whichever the origin -private or community- of its buying power, it will only be possible to effect sales operations of completed goods, that is consumers goods. No other operation will be possible, and no quantities will be possibly transferred from this current account to another.

d. Legal differentiation of types of accounting firms.
Finally it will be necessary to clearly distinguish two types of accounting firms, because of very different peculiarities and functions.
This distinction falls within a broader idea of the distinction between «utilitarian society» and «liberal society» (see chapter 14). Trading and savings banks will differentiate themselves clearly because of the functions and services which by law they will be allowed to offer to the utilitarian society and for the benefits they will obtain from these services.

0. Trading banks. They will be utilitarian societies as any other, specialized in offering «accounting services» to all the other non accounting utilitarian companies, but their services will be limited exclusively to the production cycle.
   As a matter of fact, as we have seen, in the trading banks only «production current accounts» will be opened (by the companies), and «multi-salary production saving current accounts» (by multi salary utilitarian professionals). This means that they will only handle buying power from the consumers cycle.
   The services offered by trading banks will be mainly the following:
   - In the first place, they will manage the above metioned current accounts, and they will receive from the treasury a commission agreed between the guild of the trading banks[4] and the monetary authorities of the state. It must be pointed out that multi-salary utilitarian professionals, in order to receive their multiple incomes, will have to organize in a company under the legal form of a joint stock company, either mono-individual or multi-individual: therefore all the clients of the trading banks will be, by law, companies.
   - In the second place, and this will be their main work and business, trading banks will be able to carry on their specific banking business of «capitalization»: that is the conversion of the savings in the current accounts into capital to be used in the production cycle. As a matter of fact banks have always provided the market with the «buying power» which in every given time-space is lacking to carry on or increase its production processes. This buying power sold to the production cycle is rightly called «capital». Banks «produce capital» through a number of banking techniques and processes: loans, draft discount, etc., which, as we have already seen in chapter 4, always mean a «money invention» on the deposits of customers. But, as we will later explain, socialization of all the positive balances of the free current accounts unables trading banks to «capitalize» such balances and «other people's resources». Therefore, banks will have to reduce their «invention of money» exclusively to their own capitals and reserves, and to the quantities from current accounts deposited on a short or long term basis, that is clearly bindingly given to the bank for capitalization. These short or long term deposits in the trading banks will not be socialized.
   - Finally, the trading banks will be charged by the state of the distribution of the «community credits for investment» (see chapter 12) and for this service they will charge for every credit granted the normal bank interest (let us point out

that the community credits for investment fetch the double of the normal bank interest).

1. Savings banks. They will also be at the service of the utilitarian society, but only in the consumers cycle. Since the consumers cycle is socially all-comprising, that is, it includes all the members of the geo-political society, the savings banks should have a liberal statute: their services will not be paid directly by their clients, they will be free and financed by the community through suitable «salaries and social solidarity budgets» (see chapter 12).
   The main service of the savings bank is the management of the «savings current accounts of mono-salary production» and of the «consumers savings current accounts».
   But besides this utilitarian service, savings banks have as a task non-utilitarian social functions, directly related to the social life of each of the persons related to them. Therefore, savings banks -locally organized by town quarters and associated in the geo-political society- will act as «census office»: every citizen will be recorded in the savings bank his quarters, where a «consumers savings current account» will be immediately opened with a telematic number which will accompany him all his life and identify him in all his social activities. Savings banks will release, keep and file all the documents necessary in a civilized world: health card, school documents, car papers, etc., all of them with the same telematic number. All the social and informative services will be completely free (see chart number 7).

Notes:

[1]For example, all professionals and liberal groups and the people put aside at present for reasons of money, and who are here considered as completely excluded from the production market.
[2]This distinction is made in order to know at any given time how many mono-salary employees there are in the geo-political society, because one of the proposed goals is the disappearance of this category of utilitarian professionals (mono-salary employees). This will be possible through the development of self-management, which implies the participation of workers in the company's incomes.
[3]Consumers savings current accounts of utilitarian professionals will be fed simultaneously by the two types of buying power, since, besides the social-private salary, they receive a social solidarity salary (sss) of a general kind (see chapter 12); on the contrary, non utilitarian people will have, on the principle of total solidarity, a consumers savings current account fed exclusively by communal purchasing power. As we will see in chapter 12, these people will be: individuals without a liberal profession nor utilitarian occupation for any reason whatsoever; families -besides the salary incomes of their members-; professionals, liberal institutions, non-profit free associations of citizens: all of them are mere consumers, as opposed to utilitarian professionals, who are producers-consumers.
[4]As it is explained in chapter 14, all utilitarian companies will be compelled to associate in guilds.

D. Rational money system and market strategy.

Chapter 10. A hypothesis on the domestic market strategy.

1. This chapter's goals.
2. General enunciation of the hypothesis.
3. Approximation to an algebraic hypothesis formulation and subsequent strategy.
4. Actual strategy of the domestic market.
5. Socialization of mercantile common good.

1. This chapter's goals.

In chapter 2 we said that the money system is the instrument of a very important function: the strategy which sets the market balance.

The market balance under consideration is that obtained when to the total volume of goods-price (produced goods mentioned by their prices) corresponds a monetary mass of active operations (real purchases of the mentioned goods) exactly the same. This means simply that all the goods produced have been sold, that there is no production surplus or deficit.

This balance is not automatically obtained, but in general, owing to the market dynamics, the available purchasing power is less than the operating capacity of the market. This imbalance must be corrected through a strategy known as «invention of money».

In this chapter we will submit a suggestion for the rationalization of this strategy, being the starting point the introduction of the telematic cheque-invoice as a sole legal monetary instrument: this sort of instrument is the only one which can provide the necessary information for this rationalization.

The project will be presented as a work hypothesis on the market. This hypothesis will have to be tried experimentally, which will be done through the introduction of the telematic cheque-invoice.

2. General enunciation of the hypothesis.

The hypothesis used as a basis for the suggested strategy will be called «hypothesis of the political invention of communal money, based on the production surpluses», or, in short, «hypothesis of the mercantile common good».

Its function is to postulate in the market:

1. A permanent lack of buying power;
2. The active presence of communal production forces not paid by the market;
3. As a consequence, the possibility to invent communal buying power to compensate the above and to balance the market.

As a matter of fact, verifying a permanent lack of buying power in the market, more than a hypothesis is a fact which any objective observer can see. It is sub-consumption and sub-investment, i.e.: unsold surpluses of consumers' goods and investment goods, actually produced and of a technological quality which makes them saleable.

This practical verification guides banks in their daily activity: granting of credits is a clever way of taking advantage of a productive excess which is lost because of the lack of buying power. The enormous profits of the banks are a good demonstration that the invention of money is absolutely necessary to the market.

This permanent lack of buying power also explains the public debt of all present day states. Public debt is the invention of money by the state, in order to face budgetary needs: this invention in principle must be based on the production capacity of all the geo-political society; if it were not so, states would have been a long time in total bankrupt.

A phenomenon which is a consequence of the lack of buying power, is the presence of very important productive forces not paid for by the historical and present day market. This phenomenon has been recently studied under the name of residual factor. Some economists realized that the total production of a technologically developed geo-political society could not be completely explained by taking into account classical production factors: work and capital. The unexplained part was then attributed to a production «residual factor», more or less unknown and unqualified, but generally consubstantial to technological and cultural progress and accumulation of every society.

The novelty shown here, with respect to the explanation of this residual factor, rests on two main principles:

1. The possibility, thanks to the telematic cheque-invoice, to reach an exact measurement of the residual factor, thanks to the analytic-statistical data continuously provided by the telematic monetary network.
2. The intensification of the communal nature of this residual factor, which we call here common good. Under a wide imaginative contemplation -and, of course, experimentally tried as soon as the telematic cheque-invoice is introduced- the residual factor can be identified with the many communal dimensions of any productive process: liberty, peace, accrued knowledge, liberty of information, technological innovation, inventions come to maturity which become public, etc. All these communal issues increase the effectiveness of the production acts in a natural, self-acting and growing way. From this fundamental identification proceeds a very important political consequence: the possibility to create buying power to compensate these communal productive forces will become also a common wealth.

We will forget for the time being the political implication of this setting, and will exclusively consider its technical side.

3. Approximation to an algebraic hypothesis formulation and subsequent strategy.

A. Subsidiary market strategy.

There is a condition prior to the formulation of any strategic market equilibrium: it is a purely logistic matter, necessary if we want to control the effectiveness of the chosen strategy and the validity of the submitted hypothesis.

This condition is called subsidiary market strategy, and it consists simply in establishing a total equilibrium between the circulating abstract monetary mass and the mass measuring the value of all the exchanged goods.

In a monetary regime based on the cheque-invoice this equilibrium is automatically established, while in the present money system it is not fulfilled in any way.

As a matter of fact, in every elemental cheque-invoice the involved money units are perfectly equivalent to the mercantile values of the exchanged goods. If this happens in every cheque-invoice, it will also be true in the overall market, when every operation is done through cheque-invoices.

In present day money system on the contrary it is never known which is the equivalent of the monetary units in circulation, as it is possible to effect void monetary movements, that is without a corresponding movement of goods; and besides in a completely undocumented way.

Only if the circulating monetary mass corresponds exactly to the value of the exchanged goods, uttered in prices (price-mercantile values) and salaries (salary-mercantile values), it is possible to consider other market

equilibriums. This first equilibrium, however formal, is necessary, as it is a guaranty that the mirror of the money system produces images which correspond to the market reality. Without exact and trustworthy images no effective strategy can be produced for the market and no result can be controlled.

B. The outgoing channels of the domestic productive market.

Before going on, we must stop to consider which are the sectors where it is strategically more suitable to place the invention of money to equilibrate the market.

We must recall here the analysis of the previous chapter, where two main market cycles are fixed: production cycle and consumption cycle. In the production cycle three sub-cycles were fixed, called: current production sub-cycle, investment production sub-cycle, and sub-cycle of retail trade and industries.

Of all these cycles and sub-cycles, the current production sub-cycle is basic and fundamental, the motor of all the market, as it feeds all the others, that is it both feeds the other two production sub-cycles and the consumption cycle (the last one in a roundabout way through the sub-cycle of retail trade and industries).

On the other hand all the price-mercantile values, produced in the sub-cycle of current production and wholesale trade, lead into the sub-cycle of investment production (in a direct way) or to the consumption cycle (indirectly).

For this reason we say that the sub-cycle of investment production and the consumption cycle are the outgoing channels of the domestic production market, that is the places where all the current production and all the wholesale trade flows and from where it goes out.

When these two outgoing channels are working and if they can absorb all the production of the sub-cycle of current production, this will also be strong and will grow and develop. Therefore, the strength of the outgoing channels is fundamental in order to allow all the market to work properly.

The object of these considerations was to circumscribe the market cycles and sub-cycles where it might be more convenient to supply the money strategically created. The conclusion of what we have said is that the supply must be made in the investment production sub-cycle and in the consumption cycle, the two outgoing channels of the domestic market: here the created buying power can be the most dynamistic of the market.

This does not mean that in other market sectors it is not necessary or that buying power cannot be invented. It simply means that the buying power invention in the other sector is not so important and therefore it is not necessary to apply a common monetary strategy, but it can be done privately through the bank system as up to now.

C. Calculation.

The calculation of the buying power which must be invented in order to strategically re-equilibrate the market of its lack of buying, investment and consumption power, is based on the mere consideration of the investment and consumption production surpluses which are on the market at any given time, which are a clear demonstration of a lost production capacity owing to a lack of buying power, and easy to find out through the introduction of the telematic cheque-invoice.

In the subcycle of the investment production we would then have:

The investment buying power to be created is equal to the investment possible sales less the investment real purchases.

The possible sales can be known through declaration of the companies producing investment goods. The actual purchases are obtained by simply adding the investment cheque-invoices which correspond to the period under consideration (active private investment money).

Where the consumption cycle is concerned we will have: the consumption buying power to be invented is equal to the possible consumptions sales minus the actual consumption purchases.

The possible sales are obtained by adding all the cheque-invoices of retail trade and industries to their suppliers, plus the low commercial margin of these shops and industries. Actual purchases are obtained, as in the previous case, by simply adding the consumption cheque-invoices (consumption active money).

4. Actual strategy of the domestic market.

In short the suggested market strategy consists in inventing, in an exactly quantified way, a buying power which with respect to the production surpluses on the market will be introduced in two key sectors, that of investment production and that of consumption.

This invention will correct the permanent lack of buying power of the market, giving it a new equilibrium and vitality.

Up to now money invention has been brought about by banks and by states. However, the fact that there is no informative money system means that neither banks nor states can work out their strategy according to an exact knowledge of mercantile reality.

As a consequence, strategy is often disestablishing, because:

a. It is not global nor integrated in all the geopolitical society;
b. It is not exact, but most of the time it is excessive or deficient, and therefore it produces the well known crises of monetary inflation or deflation;
c. The created buying power does not reach those social and mercantile sectors where it would be necessary to equilibrate the market.

The simple introduction of a telematic money system allows to amend all these problems. The telematic cheque-invoice is the basis for:

- The confirmation or experimental invalidation of the hypotheis of the possibility of inventing money according to production surpluses;
- And, in case of confirmation, for the exact knowledge of the importance of this possibility.

In this way the strategy of money invention can become, for the first time, rational and scientific.

Now, the purely metric-monetary technique of the invention of money, which is completed by simply recording figures in a current account, is at the same time a very powerful instrument of economical policy. For this reason it produces a great number of questions.

As a matter of fact this invention of money must be included consistently within the frame of a political option to establish the subjects and limitations of the monetary action; and it must be endowed with the technical means to grant that the political goals will be reached.

As we have already said in other opportunities, we will not detail here the political principles at the basis of the suggested money system. But we will give some hints, and, above all, we will mention some of the technical steps which, in order to reach the proposed goals, must be followed directly or indirectly in the organization of the money system.

Next chapter will explain these steps.

5. Socialization of mercantile common good.

According to the submitted hypothesis, the ability of inventing money depends from the existence in the market of production forces of a communal nature, communal forces which are not properly paid and which become unsaleable production surpluses.

These communal production forces hold no secret, and can be explained in several ways.

A reasonable explanation considers the production effort of past generations. For example, nobody pays royalties to build or use a wheel.

Another explanation keeps in mind the global cultural level of a community: wisdom, peace, culture, education, technical development, social, psychological, material wellbeing... are factors which indirectly but indeniably contribute greatly to raise the productivity of every human society.

Another important factor to consider is mercantile freedom. The more freely can a market be organized, with the help of all the statistical information, exact and exhaustive, the greater is it vitality, and therefore the greater is its ability to produce mercantile surpluses.

We are not going to give here a rigorous and complete explanation on the working of the communal production agents; we simply wish to point out that all these active production factors cannot be considered as a private property of anybody, as they are the property of the whole community. For this reason we defend the socialization of this common good.

Socialization of the common good does not imply by any means the socialization of production surpluses, which belong to every free producer. When we say socialization of mercantile common goods we mean that the ability to invent money with respect to investment production surpluses and of the retail industries and shops surpluses is the property of the geo-political society: this, through its administrator -the state- is the only one with the constitutional ability to invent money according to investment and consumption production surpluses.

This socialized invention however must be clearly separated from the bank invention of money, which will still exist on a parallel level with it. The key to this fundamental distinction is in the many monetary guarantees which support the different sorts of money invention.

Traditionally the banks have made an indiscriminating use of other peoples resources as a guarantee for their credits. What we suggest on the contrary is to limit the operating field of these private bodies to their own resources, or to resources contractually released to them to this end.

The abstract-monetary guarantee of communal invention of money will be made up by all the positive daily balances of all the current accounts «at sight» (non spent money or passive money). These balances will not be used by the banks, as they will be considered a communal saving which only the geo-political society will be able to use through the state as an adminsitrator. This situation can be called socialization of all the free daily positive balances of all the current accounts at sight. «Total private savings are a communal good».

The accounting firms will manage current accounts but they will not grant loans nor effect any operation by using these positive balances.

As a conclusion we may say that with respect to money invention two very different systems and techniques must be considered:

a. The so called bank loan, privately effected by trading banks according to very ancient techniques but with a guarantee limited to their own capitals and reserves, or specifically let to them to this end (term deposits). Any bank loan has a pay back clause of the fixed term capital.
b. Communal money invention, as follows:
    - Communal credits for investment, according to the investment production surpluses.

- Communal finance for consumption, according to production surpluses of retail industry and trade.

Both systems will have the subsidiary guarantee of the free positive balances of current accounts at sight. The result of socialization of these balances, which allows the invention of communal money, will be the allocation of a «communal interest» (for example, 6%), to every positive balance, always at the free disposal of its private owner.

Chapter 11. Fiscal strategy.

1. This chapter's goals.
2. A unique tax to establish a social solidarity monetary hoard.
3. Collection advantages.
4. Advantages for taxpayers.
5. Progressive tax on consumption, much easier than vat.
6. Transient fiscal policy.

1. This chapter's goals.

In the previous chapter we have described a strategy for the balance of the domestic market, on the basis of the communal invention of money according to investment and consumption production surpluses. We have called them mercantile common goods.

This strategy allows not only a market equilibrium, but also the quantification of the communal money hoard (credits and finances) which will be used to cover the government expenditure, to finance all those activities that the geo-political society takes up as its own and not of private enterprise (we called them public services).

Putting aside the invention of money -which all moden states bring about through their national banks-, the other classical system to establish a communal money hoard is that of fiscality.

During the starting period necessary to find out if the rational strategy of political invention of communal money is enough for the communal needs of the geo-political society, an extreme strategic market prudence must be shown. For this reason, and in order to overcome any possible experimental invalidation of the hypothesis or actual lack of investment and consumption production surpluses, law can foresee having recourse to fiscality.

Cheque-invoices, which allow a rational strategy for invention of money, can also become the instrument of a drastic fiscal simplification and rationalization, as we will try to demonstrate in this chapter.

2. A unique tax to establish a social solidarity monetary hoard.

Present day tax systems are frightfully complicated for the tax-payer and very expensive for the several collecting bodies, because of the great number of employees necessary for the collection and control.

This situation can be easily overcome through the cheque-invoice, which allows the application of a unique tax, by fixing a legal percentage on each of the cheque-invoices produced by the geo-political society, to be paid always by the customer.

This system allows a great simplification: there is a unique tax, the same for everybody, which is paid according to the expense made; there is one only controlling body: the geo-political society; and collection is automatibc, since every produced cheque-invoice implies automatic payment of tax, which eliminates all sorts of collecting bureaucracy.

The monetary hoard obtained through this only tax will be equitably distributed to the credit-investing sector and to the consumer-financial sector, according to the different statutes we will consider in next chapter.

3. Collection advantages.

The two main advantages for the simplification of tax collection are the following:

1. Automatic and simple calculation: we must only know the legal percentage on the total of each cheque-invoice. There is no discussion with tax collectors. This enormously reduces collecting costs, as all specialized bodies disappear.
2. Automatic collection: the legal percentage must be compulsorily indicated in each cheque-invoice, so that it will be automatically paid with it. The control that this condition is being fulfilled is effected by the telematic network, which makes deceit or fiscal fraud almost impossible. Finally, the accounting firms can discount from every invoice they handle the indicated percentage and transfer it directly to the treasury's current account. For this service accounting firms will receive a commission agreed upon by the association and the monetary authorities. This would be the only expense produced by the collection of the unique tax[1].

4. Advantages for taxpayers.

The main advantage of a unique tax as suggested, from the point of view of taxpayers, is that it makes much easier the respect of fiscal obligations. Consumers will have no further worry concerning taxes, as each signed cheque-invoice implies automatic payment of the corresponding tax percentage.

On the other hand, businessmen will be able to calculate in advance for every accounting year the whole of taxes to be paid on their purchases of rough materials, equipment goods or production factors (work, capital, staff, invention) and therefore will be in a position to apply this expense to cost prices.

Of course workers, as production agents, will pay no tax: it is the company who buys their work and therefore, being a customer, pays the corresponding tax. Workers will only pay taxes as customers-consumers.

Probably this tax will be much cheaper for the taxpayer than the whole of the many taxes he now pays.

The percentage will not be very high, if we consider that every cheque-invoice implies payment of a tax and eliminates therefore present day fiscal fraud. The compulsory cheque-invoice avoids at the root, as it can easily be understood, all underground economy: therefore the tax amount will be directly proportional to the actual total volume of the market of the geo-political society.

5. Progressive tax on consumption, much easier than vat.

As we have explained in the previous paragraph, the unique social solidarity tax is proportional to the actual volume of purchase indicated in every cheque-invoice. It is therefore progressive for those who buy more and, especially, in the consumption area: consumers spending more pay a higher amount than consumers spending less[2].

The advante of the social solidarity unique tax with respect to the value added tax (vat) is that the first one does not admit interpretations of fiscal law nor discussions on its application, while all the laws concerning vat can be interpreted and discussed, which means the existence of a bureaucracy to take up a job of inspection and arbitration.

With respect to equity between the two different taxes, it must be said that in both cases it is the customer and market in general who pay, not the company. But because of the possibility of interpretation in the application of vat, larger companies are in a better position to discuss and complicate its application, and, as a consequence, to have more advantages than ordinary companies: these are the only ones to have an interest in the free and responsible market we are suggesting.

The money amount collected through the unique social solidarity tax is in the end redistributed as finances and credits.

6. Transient fiscal policy.

The unique tax to obtain the social solidarity monetary hoard implies the suppression of all other taxes (state, regions, boroughs...). It will only be fixed, maintained and perhaps increased, reduced, suppressed or fixed again, if political convenience makes it necessary, as it has been indicated at the beginning of this chapter, or if the omniaccounting, statistically exact, of all the geo-political society demonstrates that, in practice, the political invention of solvent communal money, with respect to actual production surpluses, is not enough for the chosen democratic economical policy.

Summing up:

Political convenience suggests to «protect» the hypothesis of mercantile common good as investment-credit production surpluses and consumption-financial production through:

1. A simple and effective tax system;
2. Socialization of daily positive balances of free current accounts at sight.

If the hypothesis of common good is experimentally confirmed, in practice it will be possible to reduce a percentage of tax on the amount of every cheque-invoice.

Notes:

[1]A guild system must be studied to avoid unfair competition of vertical companies -made out of several specialized production sections for the same final product- with respect to horizontal companies much more specialized and clients to each other, a competition caused by the fact that the first ones will have lower tax burdens than the others.
[2]The accumulation of successive taxes which weighs down on final price:

- has no importance on the domestic market, as the suggested system foresees an equitable distribution of gnp.
- with respect to foreign trade, it is very easy, should it be necessary, to credit the corresponding amount in case of an excessive fiscal cost.

Chapter 12. Responsible distribution of the communal money hoard.

1. This chapter's goal.
2. Investment credits.
3. Consumption finances.

1. This chapter's goal.

Economics is the word used especially to indicate the just distibution of communal riches, whether it is obtained through the invention of money with communal solvency (credits and finances), or obtained positively.

We will not stop to consider in this chapter the principles on which this economical activity is based under an etymological point of view of the word[1].

We exclusively consider the technical bearing of this distribution, so that technicians and specialists can study it more deeply.

As we have already said, communal riches will be distributed in two well separated forms: credits and finances. We will now describe a possible political-technical organization of this distribution of credits and finances.

We must only remember that, should production surpluses not be enough to fill communal needs of credits and finances, established through democratic law by the geo-political society, it will then be necessary to use as an alternative sources, the unique tax of social solidarity, made up by a percentage calculated according to these needs.

2. Investment credits.

A. Calculation.

Investment credits are calculated, globally and sectorially, on their respective surpluses of investment production in each economic accounting period.

B. Distribution.

Investment credits will be granted:

- To all the companies wishing to effect an investment in order to increase their production effectiveness and who have not enough buying power. They will have to show technical and commercial guarantees of the feasibility of the submitted plan, but no material guarantees will be requested.
- To all the would-be businessmen submitting a project with a guarantee of success and without the necessary resources to start nor to obtain a bank loan.

Even if investment credits are granted by the geo-political society, trading banks will act as middlemen. They have the human and technical means, and it is not necessary to double them. Banks therefore will be charged by the geo-political society of the study of the investment plans for the creation of new companies submitted. They will judge their credibility and decide whether the requested credit can be granted, under their sole responsibility.

For this task the banks will charge a normal interest -therefore communal credits will pay an interest double than the free banking interest-. Banks will be fully responsible in case of insolvency of the company to which a credit was granted, through a system of joint partial corresponsibility of every employee granting each

credit, of all the employees granting credits, and of the very bank. This system is very effective in all the great trading banks with well paid qualified employees, personally responsible of every operation effected by each of them and all of them responsible when the firm directly cannot answer for the whole of its part of loss.

Summing up, conditions for a communal investment credit, completely different from a bank loan, will be the following:

1. The beneficiary will need no guarantee, neither from himself nor from third parties, on actually existing properties or capitals. His only guarantee will be the productive-technical ability of the company.
2. The granting of a credit will mean designating a trustee who will control the government of the company and the use of the credit, in the name of the bank.
3. In the first period, let us say of three years -a delay which is generally considered necessary for any new production equipment to reach a normal efficiency- no interest will be paid. After this starting period, interests will be paid at double banking interest. Half of this interest will be for the bank and the other half will be for the communitiy treasury.
4. There will be no fixed clause for the credit devolution; but until it is paid back interests will be paid double and the bank trustee will stay in the company.

The main scope of communal credits to investment is to promote the creation of private company riches, according to the principle of highest production, high quality and minimal effort and risk. For this reason, the main principle for granting these credits will be that of technical-productive effectivity shown by the company.

Through communal credits it is also possible to favour different sorts of company education, so that these credits can become very important elements of economical policy, by helping some sort of companies which the geo-political society considers more convenient or more interesting.

Therefore, after fulfilling the necessary condition of production efficiency, the preferential lines of credits for the companies filling given conditions will be established: selfmanaging companies, optimal size companies, etc.

3. Consumption finances.

A. Calculation.

Communal consumption finances are money not to be returned -that is, free- to be used exclusively in consumption.

The volume of the money hoard which can be granted to communal consumption finances will depend from the consumers production surpluses actually present in the market (production surpluses in the hands of retail trade and industry).

B. Scope.

The main scope of distributing communal finances is to cause the disappearance of poverty and social margination because of lack of money, granting to all the members of the geo-political society a dignified vital minimum.

For this reason, the principle which controls finances distribution is not productive effectiveness, nor social ability, but the objective consideration of the minimal vital needs of consumption of all the population, which must be granted on the principle of a total communal solidarity.

C. Distribution.

The consideration of the minimal vital consumption needs of the population distinguishes inside it some groups well differentiated with respect to their consumption possibilities.

In the first place we have consumers-producers: they are utilitarian professionals, who make their consumption through a double origin buying power:

a. Private salary origin, a remuneration of their active participation in the productive-utilitarian society;
b. Financial communal origin, as a consequence of the general statute and eventually of the utilitarian statute, which we will see later.

In the second place we have simple consumers, who do not belong to the utilitarian productive society, but rather to the utilitarian consumer society. Simple consumers are:

a. Professionals and liberal collectivities, who have only buying power for financial communal consumption, according to the liberal statute;
b. And people without a profession and families (with no reference to the private income of each of their members) who have also buying power for financial communal consumption according to the general statute.

The different needs of these two main groups -and of the sub-groups to be included there- will be shown by the existence of different financial statutes. These will be basically the following four:

General statute: it will be applicable to everybody without any consideration of the utilitarian-consumers' category involved, as it will grant to every individual and to every family the vital needs equal to all necessary all along their life, even more so under all sorts of unfavourable situations (illness, accidents, invalidity, inability, death, etc.).

Utilitarian statute: for producers-consumers, that is for utilitarian professionals. Because they belong to the productive salary market, they have a buying power for consumption. Therefore the utilitarian statute will only consider helping utilitarian professionals under given unfavourable circumstances: unemployment, strike and lock-out.

Liberal statute: for consumers with a liberal profession, that is those persons who have a profession in the service of society without being privately paid by the market. Because of this, liberal professionals would have no buying power, and the geo-political society will provide, through the liberal statute, salaries and social solidarity to professional budgets in order to allow a worthy living and to develop their profession with all the necessary means.

Also liberal collectivities will be maintained by liberal-financial budgets -including what today is called «social security» and «public services», education, medical assistance, health, communications, public works,... including State and justice. This means that all these services will be completely free for all the population.

Mixed statute: it is half way between utilitarian and liberal as it is meant for a very special group of professionals: craftsmen.

Unemployed utilitarian professionals who want to become craftsmen, besides actual craftsmen, will fall within the mixed statute, which will allow them to improve their craft and to sell on the market their production, besides receiving financial help from the community.

All these financial statutes will include the allocation of:

1. Monthly social solidarity salaries to all individual and family beneficiaries;
2. In the case of liberal professions, performed individually or in a team, the necessary ordinary and extraordinary social solidarity budgets;

3. In the case of groups, associations and liberal institutions, the necessary ordinary and extraordinary budgets for their normal continuity and effectiveness.

The total financial monetary hoard of the geopolitical society in each accounting year will be subdivided in two parts according to law:

1. One for the ordinary liberal budgets and social solidarity salaries, according to the statutes;
2. One for the extraordinary budgets and allowances.

To calculate the amount of the salaries and budgets of the first part a simple point system can be used. To every individual salary and ordinary budget a given number of points can be attributed, which will be fixed politically by a constitutional law. Therefore, this part of the financial monetary hoard will be divided by the total number of points representing all individual salaries and ordinary budgets. This will give the value of a point, and therefore the monetary value of the different social solidarity salaries and of ordinary budgets.

It is evident that the point value will increase only as a consequence of the increase of the financial monetary hoard of the geo political society, that is of its productive-economic prosperity. However, it might happen that this prosperity, this financial hoard, decreases. In this case, what cannot be done is to reduce the amount of the salaries and of previously granted ordinary social budgets.

This amount will be held through a temporary utilization of the accounting guarantee represented by the daily free positive balances of current accounts at sight, whose amount is socialized as a communal saving (see chapter 9).

However, the general solution of the problem of general deficit depends from the social solidarity tax in an amount vitally necessary to society.

Note:

[1]Of the many meanings attributed to the word «economics», we will take up here that of «responsible distribution».

- Nomos = just distribution.
- Oikos = «common good of the polis or geo-political society».

Xenophon adopted the meaning of «common good of the family community: the house», as this was the very restricted subject of his study.

Chapter 13. Balance strategy in foreign trade.

1. This chapter's goals.
2. The equilibrium of balances of payment.
3. The problem of currency.
4. Invention of foreign money.

1. This chapter's goals.

This chapter deals with the balance strategy in foreign trade, completing what has been said in chapter 10 concerning domestic market.

The main idea is that the balance of payments equilibrium must be granted, and to this end the introduction of the telematic cheque-invoice can become the unreplaceable tool as it provides a complete information on the situation at any given time. In this way an appropriate customs policy can be fixed in order to stop the imbalance between import and exports.

On the other hand, the use of foreign trade cheque-invoices forbids international capitals speculation activated by present day systems of currency markets, as every operation will be made in domestic money units and only the treasury will hold foreign currency. Every day the equivalence of the domestic money unit with foreign currencies will be fixed through an arbitrary «gold standard» related to the international market of gold metal.

Finally, as we said in chapter 10 with respect to domestic market, we will apply a similar strategy to invent communal money for foreign trade, according to production surpluses.

2. The equilibrium of balances of payment.

The main strategy of any foreign trade is that the whole exported goods (producing and produced) must be equilibrated with the whole of the imported goods (producing and produced), that is import and export of goods must be equilibrated.

If this equilibrium is not present, in the long run foreign trade will have to stop as the country in deficit (importing more than it exports) finds itself in an interior situation of unsustainable insolvency which harms also its creditors.

This equilibrium is rather easy to be fixed with the use of the telematic cheque-invoice, as it supplies a deep knowledge of the situation of the balance of payments at any time and with every country (bilateral treaty) or group of countries (multilateral treaty). According to this situation, variable «customs duties» can be introduced: if the balance with every foreign country is equilibrated, customs duties will be nil; import duties will increase in the case of balances in deficit, and export duties will increase in the case of superavit balances.

Customs duties, automatically fixed according to well known legal scale, will be transmitted for the asking to any domestic or foreign company, with no consideration to the goods to be imported or exported: the only point to be kept in mind is the existing equilibrium of balances with the country of origin or destination under consideration. These customs duties will be held to the interested company for a prudential period if it promises to effect the operation according to a submitted proforma invoice within the fixed period.

By this system a dynamibc and continuous equilibrium of balances is obtained, which is the best guarantee for the good working of international free trade according to the law being in force in the geo political society, but above all according to all the private solvent and free enterprises.

Foreign trade and customs authority will also consider that in every proforma invoice, submitted to know customs duties, the invoiced prices should agree with the minimal sales prices, wholesale and retail, fixed in

the domestic general duty book. Should foreign prices be lower than the minimal prices fixed by the corresponding guilds, (or by specialized economic justice), the anti-dumping customs duties will be the difference between the original price of every imported merchandise and the listed domestic price.

With respect to the export of services (freights, insurance, etc...), salaries, interests, dividends, royalties, capital repatriations, etc., concerning investments, companies or foreign inventions in the country, and export of capitals to any foreign country, the Foreign trade and customs authority will have to respect not only general legislation mentioned before, but also the contracts signed within specialized law with any private person or public institution (individual or collective).

3. The problem of currency.

As we have seen in chapter 4, foreign trade implies international monetary relations which at present are distinguished by «currency floatation»: there are no fixed exchange rates, as they float and evolve according to the price of every currency in the «exchange market».

Price rate of every currency should float in principle according to the productive and monetary situation of every geo-political society; reality demonstrates that the irrationality of the present money system allows normal fluctuations to be increased, troubled and even inverted, because of the so-called «speculative capital movements» or hot money. In this case, fixed rates do not correspond to any mercantile reality, as they correspond to a speculative will, and instead of being used for a greater and better development of domestic and foreign markets, they only trouble them and sink them into disorder and contradiction.

The first condition to be fulfilled by any rational money system, as we have seen, is that «there can be no money movement without the corresponding and correlative inverse movement of real goods (whether producing or produced goods)». The same rule must be applied to foreign trade, and therefore it is clear that the «currency market» is totally suppressed in any geo-political society introducing the telematic cheque-invoice as the only legal monetary instrument. The exchange of one currency for another will be instrumentally and completely impossible, without an actual operation with abroad. Currency exchange for trade will have to be solved by the central government, which manages all the geo-political society, as follows: any commercial operation with abroad, whether import or export of producing goods (capitals, work, inventions, staff) will imply the production of a foreign trade cheque-invoice.

Two cases may present themselves:

Case a)

1. Foreign trade telematic cheque-invoices will always be established in a foreign currency (whether that of the foreign trading state or an internationally accepted currency agreed upon by both).
2. The foreign importer or exporter will pay or receive money in such a currency, through the treasury, the only one to have foreign currencies.
3. The local importer or exporter will not have any currency: in his current account there will only be amounts (credited or debited) in domestic money units. To exchange foreign units to domestic units, a simple mechanism of «gold standard» can be used: a constitutional law will establish an aribtrary gold standard for the domestic money which will be compared daily in the international gold market[1] with every foreign currency. From the daily relationship «gold-domestic money unit» and «gold-foreign currency» (at the free market prices) it will be possible to logically deduct a relationship «domestic money unit-foreign currency», which will be used to exchange from one to the other currency.

Case b)
Another alternative -exceptional at the beginning- to effect foreign trade, will be for the foreign agent to accept to pay, or be paid in domestic money units (against delivery of the goods, if it is an exporter, or against delivery of currency, if it is an importer). Of course, the open current account will only be valid within the geo-political society. This will be quite normal when foreign tourism or foreign investment are involved.

With this system any possibility of speculation on the money unit disappears, and the floatation of the exchange value with respect to all other currencies will depend exclusiveliy from the evolution of the production market.

4. Invention of foreign money.

The same strategy for the invention of communal money which we have seen in the domestic market can apply if necessary to foreign trade with respect to existing surpluses.

When all the production cannot be absorbed by the domestic market -in spite of the granted credits and distributed finances- then «credits and finances» can be granted to foreign countries interested in the goods.

Foreign trade becomes therefore the third outgoing channel of the domestic market.

In the same way, any foreign country (bilateral treaties), group of foreign countries (multilateral treaties), any company or group of foreign companies can grant to their own country investment credits or consumption finances, within the legal contractual exercise of comparing its interests with those of the national geo-political society.

The formula for the equilibrium of foreign trade balances is therefore the following, much simplified:

$$\text{Foreign trade} = \frac{Ip + Ie + idp}{Ep + EE + ide} = 1$$

Ip = private imports
Ie = imports through credit and finances granted by a foreign country
idp = interests and devolutions of capitals, credits and finances, which of course come from abroad.
Ep = private exports
EE = exports through credit and finances granted to a foreign country
ide = interests and devolutions of capitals, credits and finances granted from abroad.

Note:

[1]The price of gold metal as fixed in London is accepted by all the countries, which allows to establish this equivalence with respect to foreign market and avoids going back to concrete money whether intrinsic or extrinsic.

Chapter 14. New market rules.

1. This chapter's goals.
2. Liberty and disorder in the market.
3. Minimal laws to protect mercantile liberties.

1. This chapter's goals.

The market is the frame within which this essay on the possibility of reforming the money system is included, on the basis of the advantages of present day information science. The hypothesis submitted is that the money system must be scientific and, therefore, fully informing on all the mercantile operations effected[1]. Besides, this information must be at the disposal of anybody needing it.

Even if the market is the reference all along this essay, we have not yet dealt explicitly with it. This chapter will be dedicated to a consideration of the new forms which might adopt a market with the submitted money system.

We will not consider now the technical effects which we have already described: scientific knowledge of the market, global analysis and statistics of the market, statement of market equilibrium strategies, etc., but we will try to go farther in order to introduce possible innovating social practices inside the market.

The so-called «free market», the object of so much enthusiasm and so many curses in historical criticism in the last two centuries, is a key element of the social framework. In fact the rules of market working -not the strictly monetary ones, but all of them- have a great importance for the development of the total geo-political society.

Definitely, therefore, in this chapter we will try to show that the suggested monetary reformation can be the basis for working out new «mercantile rules» to make possible the constitution of an actually free market, within an actually free society.

2. Liberty and disorder in the market.

«Free market», as the liberty of working in it without submitting to any discipline, of an equilibrating ruling of opposed forces and interests, has always been a fake. In practice the strongest ones have controlled the weaker ones.

Large companies sweep small companies, entrepreneurs exploit workers, advertising handles consumers..., all sorts of injustice and mercantile crimes have been brought about and still are, under protection of anonymous money, which grants complete impunity to its users. The power of anonymous money in the market, by extending its corruption to the whole of society, is called plutocracy.

In the face of this so evident reality of permanent corruption of the market, many have preferred to deny it, suggesting the introduction of a bureaucratic planning to fix what must be produced, how, when, to whom it must be sold, what must be saved..., according to the needs of the population.

But historically this system of state centralization has not completely reached the expected results and it has actually caused new rebel forms of free market and of black market inside it.

A more realistic possibility is to find and fix mechanisms to avoid market liberty to become disorder and plutocracy.

An actual market liberty means:

a. Liberty for everybody. It must be avoided that the strong one lead the weak one astray, the «larger fish to eat the smaller one». To this end, law will have to effectively protect the liberty and rights of each and all of the market agents.
b. Responsible liberty. Every market free operation must be personalized and, in consequence, made responsible in face of justice. The compulsory use of the cheque-invoice is a gurantee of this responsibility.

The key to an actually free market is responsibility. Only clearness and transparency, made possible by a documental personalizing monetary instrument, can avoid plutocracy, «the occult power of anonymous money» which transforms «liberty» into oppression.

Thanks to the telematic cheque-invoice, judges of a «justice specialized in the monetary market» will be in a position to have all the omni-personalized documentation, for every actual case and concerning monetary operations. As we have already said in chapter 7, perusal of personal files must be reserved only to justice. Any mercantile operation will allow to be known and objectively judged.

A clear market, actually free and responsible, can, without any fears or doubts, try to reach the following goals:

- maximum production of the highest quality, at the service of all the population, with the smallest effort and risk by the several private production factors;
- maximum and best investment in the production cycle, also with as little as possible effort and risk.
- maximum and best consumption by all the members of society, without surrendering to a stupid consumerism as now produced by advertising techniques.

But before going on, we must clear an important point, a basic principle which must be added to the ones already mentioned, in order to reach the right market working. It is the separation between utilitarian society and liberal society. As we know, utilitarian society is composed by all the market agents and their relations. But in every society there is another sector which, since always, shows an unselfish vocation at the service of his neighbour: it is liberal society, which, even if at present is almost completely mercantilized, as a matter of fact it should be clearly distinguished and separated from the market. Only so the market can work fully and liberal activities and professions can recover their original vocation.

3. Minimal laws to protect mercantile liberties.

A really free market for everybody must obey new rules governing a field with a maximum liberty for everybody, avoiding these liberties to become an excuse or the basis to establish new power groups.

The whole of rules and norms suggested must be far from the «laissez faire» and from the classical «bureaucratic planning».

Mercantile liberties which, since always, the market has accepted, can be summed up in the following principles:

a. Liberty of private initiative and property of all the market agents;
b. Liberty of fair competition among all the market agents;
c. The right to a new increasing communal property (following the hypothesis in chapter 10).

In order to protect these liberties we suggest the introduction of a number of steps, among them are the following:

- Free recruitment and dismissal for a better production effectiveness. As a counterpart, an automatic and indefinite unemployment social salary is established.
- Guild organization of companies: companies will unite in guilds, forming liberal bodies which will establish an interior market discipline, according to constitutional law.

- Minimal interprofessional salary: the double of the unemployment social salary. This minimal salary is the practical guarantee against the disorder of liberalism, which rests on the pressure of reserve proletariat to keep shameful working conditions and starvation salaries.
- Minimal communal interest for all the balances of current accounts at sight, to favour employees' and companies' savings.
- Minimal anti-dumping sales prices, prepared by each guild to avoid monopolies. Monopolies use the technique of lowering prices under cost to win competitors and then increase them at will.
- Guild advertising: suppression of all the company advertising and preparing a guild advertising, completely objective and free.
- Socialization of some services: only of those services that for technical reasons can be more effective if they are monopolized (water, light, telephone, informatics, etc.) at the most convenient local levels (boroughs, regions, geo-political society, etc.). This monopoly implies that the services will be free for the users. However, the liberty to create private services must be accepted, in competence with monopolized services.
- Progressive reduction of taxes as there is an increase of the «mercantile common good», represented by production surpluses. All the taxes must be reduced to one only «social solidarity tax» to be little by little eliminated.
- Social financial salaries, also related to the common riches, and established according to the different statutes (see chapter 12):
    - General statute: for all the population.
    - Utilitarian statute: for some cases of utilitarian professionals.
    - Liberal statute: for all the liberal professions.
    - Mixed statute: for crafts companies for companies to which politicians do not consider convenient to grant a technical monopoly for a completely free service and a complete liberal statute.

The technical development and political causes of these steps will be studied in another essay.

Note:

[1]Excluding, as it was said previously, personal data, whose disposal is reserved to justice.