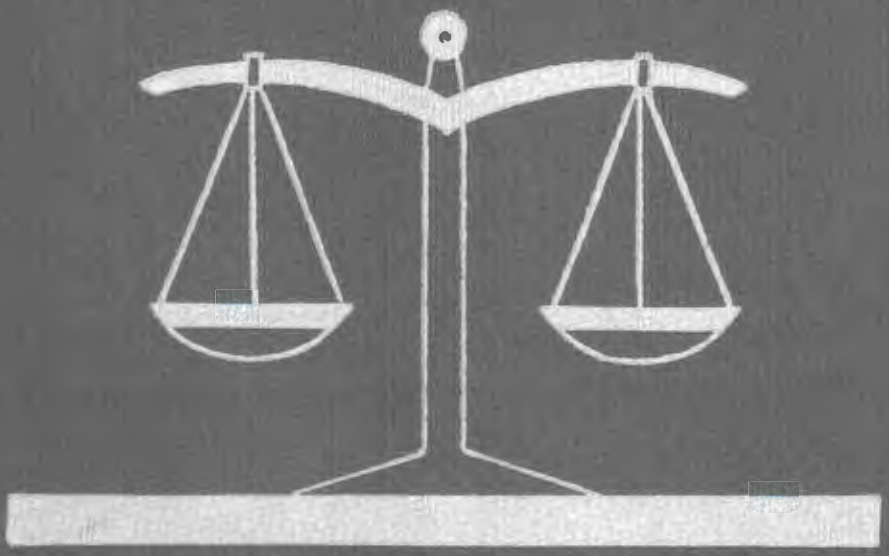
Nelson Jacovini

# Money and the Social Question



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Mr. Nelson Jacovini
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Dear Mr. Jacovini:

Your manuscript "The Monetary Situation Following Dollar - Gold Inconvertibility" addressed to President Nixon has been forwarded to this office.

Your analysis parallels in several respects the thinking of academic monetary theorists and provides a useful introduction to the issues involved in the current monetary debate. I thank you on behalf of the President for providing us with a copy of your manuscript.

Sincerely,

Lawrence J. Kennon
Director
Office of Monetary Affairs

NELSON JACOVINI, M.S.

# *Money and the Social Question*

Translated from the Italian
by Michael J. Jolliffe, M.A.

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CONTENTS

*desired to use every new-found scientific truth of the earlier theory for a political end, clearly stated and explained. The writer has always accepted this criticism, and has recognised above all the need to make explicit what was implicit, practical what was theoretical, and effective what was merely potential. However, several years were to pass before the birth of this present volume, and we should attempt to justify this delay to the reader.*

*He should consider that to speak of politics means to speak of action, just as to speak of science means to speak of thought. The two terms, action and thought, are in the same relationship to each other as the concrete and the abstract; hence the common saying that talk is one thing, action another. Obviously, when it is a question of taking important decisions or of making important judgements, we are being practical and not theoretical. Certainly, taking a decision is a very practical action of ethical man; and taking a serious decision implies a considerable responsibility to ourselves and to others. Let us now ask if we are capable of taking such a serious decision, which necessarily includes a responsible judgement of great problems, if we do not have all the strength which is necessary and which can come only from the clear conscience of being right and correct. It is an ethical question for whoever writes or offers information to others, after arriving at his own conclusions; we must, first of all, be satisfied that what we think is true and correct. It is only after this that we may spread and extend our ideas and judgements to others.*

*The scientific theory of money gave rise to social and political questions which were, and still are, questions of great importance, and which were tackled in quite a new*

*manner. A certain number of years had to pass in order to allow the writer and the reader time to understand better, as a result of the experience of certain events, the profoundly new ideas which, as theoretic thought, were and are the basis of our theory. Without this necessary process of growing maturity, one could not progress from theory to practice, from the abstract to the concrete, and from a textbook of scientific economics to a political and social work. It is the latter that we have attempted to elaborate, dividing it into seven chapters as the contents indicate.*

*Having put forward the preceding arguments, we feel that we have sufficiently justified the delay with which the present volume — with its social and political rather than economic ideas — has been produced. We hope that these ideas may reach a wide range of readers, and it is precisely for this reason that we have felt the necessity to publish our new work in English, the most widely-used language on this planet of ours. The writer and the reader must therefore thank the translator for his invaluable assistance, which has rendered possible the accessibility of the work to a wider public.*

*Finally, we should like to think that our not inconsiderable labour may serve to encourage a greater awareness and an apposite political collaboration, inasmuch as they are necessary, for a final introduction of a concrete policy for the solution of the social problem, inside and outside every nation. This is the ardent hope of whoever reflects upon the facts and the progress of our society; and this hope ought not to be disappointed.*

NELSON JACOVINI

*Naples, March 1971*

## Chapter I

### Introductory remarks on Political Economy

This is not really a book about political economy; it is a book which wishes to use political economy, or rather its fundamental ideas, in order to postulate and resolve social questions. Indeed it is clear that every particular social problem and the social question in general exist as a result of economic disequilibrium or, more exactly, disparity of income. As a result, investigation in the economic field becomes the base on which the formulation and resolution of the social question must be constructed.

In this book, therefore, political economy is treated purely as a means, and a preliminary discussion of political economy becomes necessary as an introduction to the social question. The fundamental categories or concepts of economics must be discussed, and in particular the concept which the writer considers of primary importance, the concept of the value of goods. But prior to this we need to consider in this first chapter the characteristics of political economy, considered as a science or else as an economic policy or practice of government, public or private as the case may be. More exactly, with regard to economic science which does not properly form part of the natural or precise sciences, we must make clear the conditions and terms with which we may consider this particular discipline a precise science; this will be discussed in the first section of the chapter. Subsequently,

in the second section, we shall discuss the characteristics of economic policy as practice of management. Then, in the third section, we shall try to grasp the fundamental link which connects the principal sectors of the economy, the production, circulation and distribution of goods; this will lead to an overall picture of the subject as a whole, a picture indeed necessary for the subsequent analysis of the social problem. Finally, in the last section of the chapter, we shall outline the method adopted by the writer in his research; it will be necessary in fact to consider at some length this problem of method.

Indeed the question of method in economic research is of prime importance due to the extreme complexity of the analysis of economic data. Such an analysis consists in fact of three orders of relationship: between things, between things and men, and between men. It is therefore clear that such a complex system of relationships may be correctly evaluated in a balanced manner only if one applies a correct method of research, the one most consistent with the material. The finding of a correct method in economic research is the necessary condition, perhaps the sufficient condition, for economic and social progress. It is precisely for this reason that the fundamental elements of the method have been included in the appropriate section of this opening chapter. This was necessary, and still is, since a discussion of method in economic research is an essential pre-requisite; once the correct method has been found and adopted, the continuing progress of economic science will be assured, permanent because many disagreements will disappear, and widespread because the margins of disagreement will be reduced. In short, on the basis of a correct method of research, economic in-

vestigation will proceed safely and continuously, and the immediate consequence will be the assurance of social progress.

## 1 - SCIENTIFIC ECONOMICS

We must now pose and answer if possible the following question: what value has political economy as a science? More precisely, we must clarify the conditions and terms with which we may speak of scientific economics or economic science. Only after a consideration in depth of this problem may we answer the other question as to the existence of economic laws similar to the laws of the precise sciences; if the answer is affirmative, we may then determine the direction in which we must turn our research in order to discover such laws.

Let us begin by saying that many economic laws, accepted as such in all academic and scientific writing, are not in fact scientific laws in the sense of quantitatively determined relationships. In most cases we find, not scientific laws, but qualitative and guiding principles, in the sense that such principles indicate tendencies or else offer relationships between concepts and quantities, for which the unit of measurement and the measurement itself are lacking. Such is the case, if one may give a few examples, with the law of supply and demand, the theory of marginal utility, the theory of compared costs in international trade, the theory of plus-value as overwork in the Marxist school, the differential theory that gives rise to capital gains, and Gresham's monetary law. One could cite many more examples but it is enough to demonstrate the essential fact that economics —

the science of the production, circulation and distribution of goods — is normally ruled by laws of tendency and qualitative principles; it is precisely this notable fact which prevents the inclusion of economics in the wider field of the precise sciences.

Recent years have seen the spreading and continuing development of the « mathematical » school which aims in fact at treating economics as a branch of mathematics. It is clear that such a definition implies the consideration of economics as a precise science, but one is obliged to establish in what sense, within what limits, and up to what point we may correctly speak of mathematical economics and mathematical laws in economics.

It is immediately obvious that we may speak of mathematical economics only if there exist economic categories which may be expressed quantitatively, that is in numbers, such that even the relationships between these categories, which are then the laws, are the expression of numerically determined quantities. If this is not the case it is not permissible to speak of mathematical economics and of strictly scientific laws. All research aimed at discovering mathematical laws will therefore be fruitless in all those cases in which the relevant economic quantities cannot be expressed numerically, even with the possibility of establishing the unit of measurement for every quantity taken into account.

The question therefore presents itself as follows: we must ascertain above all the possible existence of some economic concept which may be expressed numerically; given that such a concept exists, it is to this basic concept that we must direct and concentrate our research, taking this quantity as the focus of the relationships. It is only in this

way that we may arrive at an economic law of a mathematical type, equivalent to the laws of the natural sciences in general and to those of the precise sciences in particular.

Having thus defined the problem, let us state immediately that there does exist an economic category, perhaps the only one, of a strictly quantitative type and expressible numerically; it is that of value expressed in monetary terms, that is the circulation value of goods in a monetary economy. By monetary economy we mean the system in which the exchange of goods and services is effected by means of a quantitative and numeric agent called money or, less specifically, means of payment. On reflection one finds that the sole quantitative parameter that economics offers is in fact money which, independent of its real value, enjoys a nominal or face value which is exclusively numerary and which is the differential characteristic between money and all forms of goods. It is pertinent at this point to consider the difference between money and goods.

A given article of merchandise has value only if it has a specific technological characteristic, only if it possesses an intrinsic quality which renders it useful. If the article has no such quality, it is valueless. Therefore the value of merchandise is essentially qualitative and as such is incapable of being reduced to number. Quite the opposite is the case with money: a metal coin, a banknote, or a bank cheque, with a value of a 100 or 1000 units of currency, does not express this or that article of merchandise in particular but expresses instead any article whose price is 100 or 1000 monetary units, with an indefinite and unlimited qualitative range, while only the numerary value of the money is defined. Thus we may say that money has value fundamentally in

as far as it expresses number. If money does not express number, that is face value, it is valueless as money and has value only as an article of merchandise. In this case it expresses only itself, namely its own intrinsic value. To sum up, we have ascertained that there exists a numerical quantity in economics and that it is value in terms of money. If we wish to discover numerically determined mathematical laws in economics, it is precisely on monetary value that we must concentrate all our research. If we follow this line it is highly probable that our aims will not be disappointed.

Let us now move to a conclusion, considering again the questions posed at the outset. We asked if there existed, and within what limits, precise laws in economics, and now we are in a position to answer this question.

The obvious concern of economics is the production, exchange and distribution of useful objects and services. We must however draw a clear distinction between the production, exchange and distribution of goods, qualitatively distinguished on the one hand, and the production, exchange and distribution of money or means of payment, distinguished quantitatively on the other. In the first case, confronted with categories which are absolutely qualitative, we must admit that mathematical or precise laws cannot exist and that there exist only qualitative laws and principles which indicate tendencies without the possibility of numerical expression. When we consider the second case of means of payment, however, we are faced with strictly defined quantities, and in this case there is no doubt that mathematical laws exist and that their discovery depends only on research and economic progress.

Finally the above discussion leads to one last consideration on the social value of monetary economics.

It is clear in fact that the production and circulation of merchandise, being qualitative, cannot have a single objective interpretation accepted by all as a logical truth. The production and exchange of goods will always remain a debatable subject. On the other hand the manufacture and circulation of money can and must be absolutely objective and indisputable; there must be no margins of disagreement; there must be universal acceptance of the logical truths of the facts. Such is the case with all the precise sciences; no-one disputes the theorem of Pythagoras or the chemical law of Avogadro. Hence monetary and financial economics, apart from being strictly scientific, is also strictly social. It is social because only this form of economics can be reduced to a precise science leading to mathematical laws and logical truths which can and must be generally accepted. We shall find, inevitably, that social grievances hinder the propagation, acceptance and application of the monetary laws discovered through research in scientific economics. In this case it becomes one of the many tasks of institutional economics to pursue the elimination of these grievances. With this aim institutional economics will make use of appropriate and useful factors considered in the light of cultural and economic policies. However, we shall discuss institutional economics in the next section.

## 2 - INSTITUTIONAL ECONOMICS

While the task of scientific or logical economics is to ascertain and define economic concepts and their relationships, institutional economics has the other role of integrating abstract concepts, culled from scientific economics, in an

institutional context which is geographically and historically defined. We must, in other words, pass from the theory to its application, taking note of the inevitable approximations, and we must establish the basic criteria and canons of economic policy for the best management of public and private goods. Moreover, in the concrete cases of this or that country, the national institutions will be distinguished, possibly among those already in existence, which may be utilised as supporting structures for the ideas and criteria which have been established for political reasons.

It is clear that the criteria of economic policy to be adopted will be an inevitable approximation of the principles derived from logical economics, but they cannot contradict the scientific principles. This leads to the first and perhaps most important answer to be given by political economics, that of the alternative choice between an economy privately or publicly controlled. At present the question is formulated, not altogether correctly, in this way. Should the State interfere or not in the process of production and exchange of goods; and if so what form should this public intervention take?

At this point let us recall the basic finding of scientific economics, namely that the value of goods is a qualitative value which is variable and not objectively quantifiable in the majority of cases appertaining to a given institutional context. Here we have the first immediate answer given by political economics, which is, that dogmatic planning of the production and exchange of goods, understood as state control through a central office, has no objective validity in a scientific sense. With such planning in fact one would arrive at a binding obligation on each and everyone to accept an economic value which has no common measurement; on the

contrary, it has a measurement which varies from person to person, from place to place, and from business to business. The best that we may expect from such state interference in the production and exchange of goods is that, once under way, it will have to be permanently enforced because it can never be accepted. We must admit finally that the market value, precisely because it is qualitative and variable, can be arrived at only through a free assessment of costs, conditioned by true economic factors, by the factor of location, and by the human factor with its level of specifically determined technological capability. For this purpose, therefore, there must be an indefinite and unlimited number of decision-making centres for the production and exchange of goods. This is equivalent to saying that we must accept a market-exchange economy, that is, an economy based on marketing, with the sole concern of making the market as big as possible, for this is the only way to reduce to a minimum differential capital gains which result from conditions of privilege.

A completely different case may be made for the manufacture and circulation of means of payment, which have an absolutely quantitative value with a common measure for all cases in a given institutional context. As before, it is logical economics which tells us that here public intervention is possible, is useful, and as we shall see is also necessary, in the interests of society. It therefore becomes the prime objective of political planning to ensure the public control of the agencies which manufacture and exchange money or its substitutes, that is, to control the machinery of banking and monetary circulation which creates liquid assets in the form of money or banker's credit. This control will be stronger and more effective if enforced first by international

and then by national institutions, for in this way one may face the problem of social inequalities in the light of the largest possible market, to the interest and advantage of the extensive underdeveloped areas of the intercontinental market. In the final analysis one may conclude by stating that the international and national public control of the means of payment, or liquid assets, becomes the basic criterion of the economic policy which every country must follow; all this is in accordance with the findings of scientific economics.

With regard to the machinery of financial credit, that is, those institutions that offer medium and long-term credit, it is essential to note that as a general rule such bodies exercise credit without however creating new means of payment; their function is limited to the re-circulation of liquid assets already created by other agencies. In this case, therefore, the institutions of medium and long-term credit are not to be regarded as managing values which are purely quantitative. However, here too in certain cases there arises a kind of secondary liquidity, which is created when the redemption periods of capital loans are too short. In other words, in the practice of medium and long-term credit, the lending body re-establishes monetary liquidity by means of loan repayment by business concerns. Now, if the period of redemption is sufficiently long, the annual or half-yearly repayment is modest, and the liquid assets re-established by this repayment cannot be greater than the assets which existed at the moment of the initial loan. If, on the other hand, the period of redemption is too short, the repayment rate becomes notable, with an extra repayment which is converted into a secondary and additional liquidity with respect to that which existed before. The resultant disadvantage, particularly in the case of

short-term loans, is the initiation of the vertical accumulation of capital, with the result that industrial devolopment in the capitalist economy occurs in restricted areas. This is to say that capital accumulates where it originated, without the possibility of flowing from industrially developed areas to those which are underdeveloped; thus depressed areas are formed beside areas which are over-developed, with the consequent disequilibrium of production, employment and income. It is precisely the short-term financing of industry which is responsible for these disadvantages, and this will become more evident from what follows. Here it is necessary to mention the question of industrial financing, in order to say that public control of credit institutions becomes particularly useful in the medium and the long-term when there exists, in the institutional context, the problem of areas which are underdeveloped due to the lack of local capital. It is for this reason that, in certain cases, it is necessary to control industrial credit institutions, but this control is to be regarded not as permanent but as limited in time. One must in fact complete, or at least initiate, a levelling or balancing process in areas of differing capital and industrial resources, this process being achieved by a policy of correct redemption periods in medium and long-term financing. Once this objective has been reached, the control of the institutions which finance industry will cease to be necessary.

In conclusion there remains the general and permanent control of primary liquidity, that is, of money and banking credit which are the sole quantitative values in the complex system of economic and financial relations. Similarly, on the other hand, one must exclude in a general and permanent way all control of the machinery of production and exchange

of goods, for these are solely qualitative values which do not admit control or planning. In the course of the pages which follow we shall arrive at a more concrete understanding of the links which inter-relate the three types of management, monetary-banking, financial, and economic proper. At this point it has been enough to clarify the distinctions, in order to set economic policy on the right path when faced with the alternative choice of a public or private economy.

Finally, it will be useful to mention institutions and structures, in particular with regard to their functions. It is clear that in this respect every institutional context will require a specific examination, nonetheless a general and common criterion may be of use. It usually happens that the particular development of a given country gives rise to certain institutions which function according to the manner and the time in which the development has occurred. Hence it is true that all, or nearly all, of the institutional structures in any given state have some link or connection, be it remote or recent, with the overriding necessity of economic development. For this reason it is very often not a matter of suppressing old structures unconnected with development, but rather that the functions of certain structures have lost meaning or value in the light of new methods and new eras of development. This latter fact is less apparent but almost always true. Thus, in the majority of cases, the problem is that of conserving the existing structures while seeking to change their functions. It is precisely on this functioning of structures that we must concentrate our attention in order to further development. Correct re-programming can inject vigorous new life into an old institution which had seemed irrevocably doomed. All this in fact conforms to the following general principle:

structures must constitute a « minimum » of essentiality, in that they may not be eliminated, and their functions a « maximum » of utility, in that they must not be outdated. It is only by the constant application of this law that the processes of bureaucracy will not grow old, and the problems which such processes inevitably cause for social and economic development will become tolerable, tolerated, and finally accepted as being for the general good.

Thus we have traced the central and most important ideas of economic policy and the institutional channels by which these ideas circulate. We have at the same time formulated and to a certain extent discussed the basic argument of institutional economics; the general picture of economic activity will be completed with an analysis of the relating links between the production, circulation and distribution of wealth. This will be the subject of the next section.

### 3 - THE ECONOMY - COMMERCE - FINANCE RELATIONSHIP

Let us stress above all that the object of the economy, taken in a strict sense, is the production and distribution of goods, that is, the creation of a qualitative utility which is, as we have noted above, a technological utility characterised by the peculiar chemical or physical properties that have been conferred on the goods. The consequent task of commerce or trade is the exchange of the utilities created by the economy, in the sense of substituting one quality by another. This substitution is necessary because, at a certain point in the growth of production, a manufactured utility exhausts its capacity of immediately and directly satisfying needs,

hence its production may continue only on condition that it be exchanged with a new and different utility.

One could in fact note that the production of goods, understood as the transformation of materials, is also subject to the substitution of one quality by another. Therefore it is necessary to draw the following more profound distinction between economy and commerce. In the economic or industrial transformation, between the initial and final utility in the transformation process there exists a utility which is additional to that which existed at the outset; this added utility exists in an absolute sense, in its own right, and in a way which is quite independent of any other with which the produced utility may or may not be exchanged. An additional utility does not exist however in any absolute sense with regard to the commercial transformation. The result is that commerce can never be more than the substitution of goods and utilities, so that, in theory at least, we should always have an equivalence of utility between the exchanged goods. If, as happens in everyday practice, there is a difference of utility between exchanged goods, it is necessary to point out that we have here a differential and relative utility, which does not exist *per se* as a utility acquired in a permanent and continuing sense, but only in relation to another economic utility which is usually uncertain and undefined. In other words, one must not speak of additional utility in the case of commerce, but rather of a differential margin of utility between exchanged values. This margin is constantly variable, changing according to circumstance, and could be reduced in theory even to zero. In the case of industry, however, there is an additional utility, because this utility is permanent, definite and assured between the beginning and the end of the

technological transformation. It is evident then that both economic and commercial activity have the common aim of increasing the utility of goods in the qualitative sense.

Let us now consider the fact that for centuries the exchange of goods has been generally carried out with the help of an intermediary agent, a banker's order or money itself. The exchange of two commodities is therefore a two-part act of buying and selling; thus the sole primitive relationship is replaced by a two-part relationship, the reciprocal links of money-commodity and commodity-money. And so we have at this point the intervention of financial economics, understood however, at this preliminary stage, as banking or credit activity which has the specific purpose of circulating means of payment. These are placed at the disposition of commerce by a particular commercial undertaking which collects deposits and offers credit facilities, obtaining its own particular differential utility from the difference of credit and debit rates. The introduction of banking has the advantage of greatly widening the whole system of earlier commercial relationships. The exchange economy undergoes the following basic change: the exchange of goods against goods is replaced by that of goods against means of payment, which now assume the important function of expressing in numerical terms the value of the marketable goods. This of course was impossible before. It is clear then that a banking economy is a step beyond the economy of barter, for there is a development from the qualitative to the quantitative exchange value. It is in this way that the historical progress of economics in the modern form of financial economics takes place. Let us note immediately, however, that this step — from a barter to a banking

economy — is not the only one nor the final one, and therefore there is a deeper and more important consideration to be made.

There is no doubt that money has a quantitative function in the system of exchange considered in the preceding paragraph. But this function always remains that of a means of exchange, even if the monetary value, in virtue of its numerical face value, can express an enormous number of marketable goods which before had only a qualitative value. We must realise that, even with the development of a banking economy, we always remain within the limits of an exchange economy, because the means of payment remain tied in every case to the commodity-money link, in which the term «money» assumes the meaning of acquisition or rather consumption of a certain commodity. To put it otherwise, even with a banking economy money cannot be disassociated from its relationship with the commodity, and the numerical value of money remains tied to an expression of consumption of a certain commodity, even if this expression is quite general and abstract. We shall see shortly that this exchange value of money also constitutes a limit in the institutional field, but for the moment we must accept that the exchange value of money is a value of consumption. This is not its most general value but only a first restricted value, which we have to qualify as « internal » due to a conceptual and institutional limit in its interpretation. There exists a second value of money, which we may qualify as « external », and which we shall now attempt to define.

First let us recall the fact that economics, beyond the production, transformation and substitution of goods, has another fundamental aim, the social task, that is, of the distribution of goods. Clearly, from a social point of view, the total wealth of a community is less important than its distribution.

The logical extreme of this strictly social point of view is that one may say, in cases where wealth is lacking, that the distribution of poverty is also important. Distribution is the true social task of political economy, and the problem of distribution can be posed in the simplest of terms: given a certain quantity of goods, whether large or small, how must we divide this common produce or income among all those who are competing to receive it? In the problem of distribution there now arises a new concept, which is that of the distribution of the social income, and the division of the common fund, with a sum-total as great as possible under the circumstances. It is for this reason that distribution and income, by which the former is expressed, are purely social matters. We arrive at the immediate consideration that, with the existence of means of payment already developed by the banking economy, this distribution of the social income cannot be effected except in terms of money, being thus expressed numerically. Precisely at this point the unit of money begins to take on a new meaning, that of the unit of social income to be distributed, with the expression of this income in nominal terms. This is the concept of money-income, which is very different from the earlier analysis of money as exchange or money-consumption. Let us now define more accurately this important difference.

Above all we must state that the money-consumption concept is a more restricted concept than that of money-income. In fact, money-consumption is always connected with some article of merchandise or some particular service, for it is money at the moment in which it is spent, or at least in the moment in which it is assigned for expenditure; it has a specific destination, so that the abstract monetary value

can readily be transformed into a concrete market value which is specified and defined. But money-income is neither money spent nor money assigned for expenditure; it is money-savings, with a social importance which is quite general because it has yet to be assigned for expenditure. This expenditure can be of general utility, considered even in the most general sense possible. We may say that money-consumption is actual or current utility, while money-income is utility projected into the future. Likewise, we may say that money-consumption involves a particular interest, because consumption is inconceivable without a specific end, while money-income is of social interest, since its utility exists only in abstract and quite general terms. Consequently we deduce from these essential and differing characteristics that with the introduction of money-income, which is the external value of money, we take a second step in the change from qualitative to quantitative value. This time the step is final. In effect, with the introduction of banking or consumption money, we have had a first change and a first value of quantity, the internal value of money, and we have arrived in this way at a restricted system of finance, which has also an institutional limit which we shall shortly define. On the other hand, with the introduction of the new unit of income, we finally overcome this conceptual and institutional limit, we are brought decisively into the sector of finance in the proper sense of the word, without limits of any sort, and we are brought decisively into the social sector. This sector is also effectively quantitative in an unconditional manner, and so it will be useful to concentrate our research here if we wish to discover precise laws in economics.

Since we have both an internal consumption value and

an external income value of money, there will undoubtedly exist a money-money relationship. This is the characteristic relationship of financial economics. We have here, obviously, a third basic relationship, to follow the other two previously examined, that of goods-money, which is typical of a banking economy, and that of goods-goods, typical of the earliest barter economies. Once these three relationships have been established, we may go on to specify some institutional limits, which are very closely connected to the concepts examined above. Finally, on a theoretical and practical basis, we shall be able to establish a relationship between economy, commerce and finance.

The first institutional sector to be considered, that connected with the production and transformation of goods, is naturally the first in historical order, but it is the most restricted in a geographical sense. It is the sector of businesses, whose area of operations may assume regional dimensions, or at the most national dimensions in the case of several concerns associated in a horizontal or vertical sense; but this sector of production cannot overcome the customs barrier which is the result of the commercial policy adopted by the nation's government. In other words, the production of goods, due to the complexity of the factors involved, is always considered as firmly bound to a territory, with a code of national positive law, so that the characteristic of an economy of production is that it is a business or regional economy, or at the most a national economy, since an international economy does not exist. It is rather different for commerce which carries out the international exchange of goods and can, as such, assume wider international dimensions. But in practice free commercial activity is a mere abstraction, since

the various nations insist on this or that control, direct or indirect, over international commerce. It is to be noticed that international trade, wherever it is subject to some customs control or other, resolves the problem by interchanging goods against goods. This is evident enough in exchange-goods trading where clearing is involved, but it is also true in duty trading. In fact, in the latter case, the duty paid in national currency on the goods which we have imported will have to be balanced, sooner or later, by another payment of duty in a foreign currency on goods which we have exported. Therefore, even duty trading is a form of clearing trade, since the two sums paid in duty must be equivalent when considered as two specifically defined units of import and export. If international trade is subject to certain controls, it thus evolves inevitably in terms of goods and not monetary values. This leads to the first limit in the exchange of utilities, that of commodity utilities, coinciding institutionally with a common customs barrier. This barrier may be national, but it can also be international in the case of an area of several states with a single customs tariff for all members, as is the case with the Common Market countries. But whatever the case, every common customs barrier determines commercially its own goods value, with a geographical limit defined in relation to the countries or regions which subscribe to it.

We have seen then that, beyond the goods utility of quality, there is a banking utility of quantity, with a quantitative value restricted to money. So there is to be distinguished, here too, an institutional limit, with a new area of exchange relationships, naturally wider than that of a common market.

It is to be noted, with regard to this, that the value of

money has been regarded as a money-goods relationship or as money of consumption; therefore, here too, the limit we are seeking arises from a certain type of policy in international exchange. On the other hand, if one excludes a common customs tariff, there remains the other method of regulating international trade, which is that of considering, with or without treaties, a reciprocal system of conditions of privilege. Precisely in this way one creates an area of free trade, given that there is no common tariff. And, on the other hand, an area of preferential relationships is created, inside which money remains permanently fixed to the commodity, without this commodity assuming however a specific definition. If one wishes to give an example of an area of free trade, rather than refer to EFTA (European Free Trade Association), it is better to refer to the old British Commonwealth. Here, in fact, we see put into practice a system of definite preferential relations in the trading between member countries with different currencies and different customs tariffs. The British Commonwealth, even if it is reduced in size today, offers an example of the institutional limit which coincides with the value of money-consumption or means of payment. Inside this area the value of exchange is expressed in the currency of one of the member countries, and not necessarily in sterling. This currency, which possesses its own restricted quantitative value, expresses a maximum limit attainable in an area of preferential trade relations. There is no further limit beyond such a limit of currency. Beyond this point there is a free or open market, characterised by money-income, the social unit of distribution or savings unit in nominal terms in the widest international market. This unit characterises financial economics in the proper sense of the

term; it is absolutely quantitative and of unlimited extent. A deeper analysis of this branch of economics must lead to laws which are both scientific and social. The solving of the social problem will depend, ultimately, on the discovery and diffusion of these laws. We shall now close this section with a final definition of the relationship between economics, commerce and finance.

We followed the historical evolution of economics and commerce, from a goods or barter exchange system to a banking and then a financial system. In this evolution, along with the advance of technological progress, exchange relationships have gradually widened, with the creation of ever larger markets. Finally, when the last decisive limit imposed by banking had been overcome, we reached the widest possible market, the single world market. Here the social problem arose and presented its true question, the distribution of income. The solution of this question then leads to an investigation of money-income, the monetary unit which is quite different from the old money of exchange or consumption. Following the course of the centuries, we laboriously arrived at the concept which is the widest and the most scientifically correct for an understanding of economic and social facts. Having reached this concept with the introduction of the economics of distribution, the supreme form of social economics, we are obliged to retrace our steps, turning back from the general to the particular, from the widest to a restricted market. But we are guided here by a single thread which connects finance, marketing and banking trade, and production. Once we have grasped an overall picture of economics and its development, we are bound to reach the private manufacturing concern, seen as a constituent

element of the whole complex social-economic system of relationships between things, between things and men, and between men. Such an understanding of economics as social facts will succeed, one is sure, in freeing man from the conditioning of economic necessity, and will allow him the free play of all creative activity, until now stifled by the urgent necessity of producing.

In summary, we believe that the introduction and greater use of the social economics of distribution must indicate, if it has not already done so, a new path of economic and social progress for individuals and for nations. On the old path we had four basic economic categories, in the following order of age: possession of goods, trading of goods, consumption of goods, and lastly, when and where it existed, social income for social necessities. Now, once the unit of social income has been acquired in the widest possible market, which is that which includes everyone, it will be possible to upset the order of seniority of the four concepts mentioned above. In fact, it will be enough to reach a single unit of income, understood as a unit of everyone or of absolute saving, in order to be able to re-invest this unit in the interests of all. Therefore, the attainment of the social income unit should be followed by particular consumption for everyone, hence the exchange of the extra utilities of business concerns, hence the ownership of the productive machinery of business, as a source of the new income. In this way an uninterrupted cycle of progress, simultaneously economic and social, will be established, and man will be free from want. A sole condition is needed, we believe, for the operation of this process, which begins with income, without solution of continuity; the condition is that the money-income unit or

savings unit, with which one begins, must be a true unit of absolute saving in the one world market, and must be a unit of income which is effectively social in the sense that it belongs to all. At the present stage of development the above condition has, in our opinion, already been fulfilled, and we therefore believe in this new social path to be followed. On the other hand, leaving aside any expression of faith or distrust, our general course is that of discussing and resolving the social question as an exclusively scientific question. It only remains for us, therefore, to move ahead in this direction. The next section will deal with method in order to equip the reader for this task.

## 4 - THE METHOD OF RESEARCH

A pre-requisite of research, wherever it has to be conducted in a systematic manner, is the acquisition of a method which has been discussed and established beforehand. This is not to say that research cannot be done without method; one could go ahead with no particular method, but this would be a case of quite fortuitous research, incapable of leading to scientific results arrived at through a continuous period of work sufficiently long for what is required. Certainly, in view of the complexity of the material, this period must be long, very long, in the case of economic and financial research.

If we look at the precise sciences, at least with regard to method, it is enough to consider mathematics and physics. Each of these sciences possesses uniquely a certain method: deductive and logical for mathematics, inductive and experimental for physics. Every scientific treatise on method is

therefore bound to lie between the two poles of logical deduction and empirical induction. Let us now briefly outline the characteristics of the two methods.

The origins of the mathematical or deductive method are found in the rationalist philosophies, those of Descartes and Leibnitz for example. Fundamentally the method consists of positing according to reason and logic principles which are self-evident and of the most general validity. These principles, once stated, are assumed to be universal truths, from which one deduces from the general to the particular, arriving gradually at more restricted truths, until one reaches the goal of the research. The physical or inductive method has instead quite different characteristics. This method has its origins in the empirical philosophies of Bacon, Newton and Galileo, which, instead of positing abstract principles, consider a certain number, in fact the largest possible, of phenomena and facts. These phenomena are compared in an ever growing series of reciprocal relationships and their common characteristics are noted. In proportion to the increasing number of relationships which are considered, these characteristics will gradually have a more general significance. Thus, if we proceed inductively from the particular to the general, we should arrive at truths of a universal validity, those truths which the deductive method posited right at the beginning. Those in brief are the two methods. However, it is necessary to note in criticism that both methods are found wanting for quite a definite reason, so that a pure and simple choice between one or the other cannot be made. This is true of all research, and particularly of economic research which we wish to be logical and at the same time to be based on a

complex and vast range of facts varying from place to place and from age to age.

Note, in fact, that the deductive method would succeed admirably, but on the sole condition that the universal truths, posited at the outset, were in fact universal and absolutely correct. It is realistic to suppose that such truths would be only partially correct, in which case successive deductions, necessary to reach the concrete reality, would lead to more and more general approximations. The errors would become greater as we drew nearer to reality, so that, at the end of the research, we should have a set of conclusions, certainly logical, but quite often very different from factual reality. It is for this reason that the mathematical method is found wanting at a certain point in the process of deduction; results are given which are no longer acceptable because they are not close enough to the reality of the facts.

Similarly, the inductive method would also succeed admirably, but on the sole condition that the phenomena and facts which we catalogued and analysed constituted the totality of existing facts and phenomena. Here it would be realistic to suppose that the facts considered would not be the totality of existing facts, but only a part, even if a very large part, of the totality. As we proceeded inductively from the particular to the general, certain phenomena, perhaps important, would be excluded from the synthesis and we should not arrive at general truths valid for a total understanding of reality. We should arrive instead at relative truths, limited in space and above all in time, and bound to be challenged as soon as those phenomena occurred which had not been considered at the beginning of the research.

In summary, a critical look at the two methods leads us

to the conclusion that neither can completely satisfy the needs of long-term and wide-ranging research because, at a certain moment or point in the investigation, one or other method is found wanting. This is particularly true of economic research, which aims to arrive at truths which are logical in an objective sense and which at same time are in harmony with the total complexity of economic facts. The writer was therefore faced with the necessity of establishing and following a third method, somewhat different from the above classical methods. It may be called the « method of successive approximations » or the « engineer's method », to distinguish it from the mathematical or physical method. We shall now turn to a consideration of this third method.

Note that any research which aims at objective truths, accepted by all in the light of reason and logic, must needs establish from the outset criteria on which to base reasoning and deductions. Should we fail to do this, as happens in the inductive method, we should be deprived of the only valid means of co-ordinating the facts according to logical relationships and with a view to scientific truths. Should we fail to follow the line of deduction from a more general to a more particular concept, we should not be scientific, and we should be following exclusively the physical method, which is nothing more than empiricism, which always yields contingent truths, definitely limited in time and space. Moreover, the discovery of infinitesimal calculus has finally confirmed the effective superiority of mathematics over physics. In fact, this method of mathematical calculus permits the following simple process: starting with any real entity expressed quantitatively by a definite number, we can divide this finite entity into minute parts, until we reach an infinitesimally small part of it; then,

and this is the more important part of the process, it is possible to re-create the total of all these infinitesimal parts in order to arrive again at the original finite number. It follows from this process that mathematical analysis leads to a comprehension of the infinitesimal, and this infinitesimally small part is not understood only as a conceptual entity, but also in a physical sense, or as an entity which does in fact exist. If it did not exist, it would not be possible to return to a finite entity in the process of re-creation. This much comes from mathematics, while physics does not give us the means of reaching the infinitesimal which nevertheless exists. It appears clear that physics will always give us relative truth, of limited duration and range. We are therefore forced to adopt deduction by reason and logic, if we hope to arrive at a scientific truth which is both long-term and wide-ranging. On the other hand, as we have just seen, the deductive method is found wanting when faced with concrete reality. In this case there is no other solution but to correct the mathematical method precisely at that point where it fails. If we adopt this solution, we shall arrive at the third method, that of successive approximations.

We have noted that the mathematical method fails because it starts from certain principles, which are assumed as universal when in fact they cannot be. This means that the principles outlined at the beginning of the deduction cannot be regarded as universal postulates, but rather as logical hypotheses, the most logical to the best of our knowledge when we begin research. They must be called « hypotheses » and not « postulates », because we have to expect that a certain point in the line of deduction will reveal some concrete fact which will not be explained by the premises we have stated, and

which will be in direct contradiction to these premises. Since there will certainly be some discrepancy, it is wrong to say that the point of departure of deductive reasoning is a postulate; we must say instead that it is a logical hypothesis, necessary to initiate and develop the proposed reasoning. When our hypothesis is proved unsound by some discrepancy, our task is then to modify it and to improve it, in order to render it more general and in order to comprehend and to explain the discrepancy which has challenged it. In this manner we posit a second hypothesis, in place of and better than the first, and we begin again the deductive process in order to reach new conclusions. It is by these means, with the establishing of the method of successive approximations, that by degrees and approximations we reach our goal. The method may be summarised thus: on the basis of what is known, certain premises are stated and regarded as logical hypotheses; from these hypotheses, certain deductions are made which lead to certain conclusions; when we come up against some fact which refutes the initial hypotheses, we must establish new hypotheses to resolve the discrepancy; on the basis of the new premises, the investigation is continued, arriving at wider and more certain conclusions as the process is repeated; finally, the investigation will be considered completed when we arrive at results which are held to be sufficiently approximate, that is, when the divergence between the premises and the conclusions, between the theory and the facts, becomes tolerable and acceptable with relation to the subject of research.

In other words, the method of successive approximations consists in the application and repetition, for as long as it is necessary, of the deductive method. This repeated application is absolutely essential, for the initial premises are not totally

and sufficiently correct. With such a method we shall succeed in conducting our research according to a logical pattern, and hence we shall arrive at logical truths. At the same time, by virtue of the continuous check which the opposition of theory and facts gives us, we are guaranteed that these truths, besides being logical, will also be consistent with reality. The tempering of these two demands, of the truth of reason and the truth of facts, is to be regarded as an absolute and irrevocable necessity for all scientific research, whatever the discipline, but particularly for economics where precise economic laws are sought. The writer has used this method to postulate and resolve the theory of money, which will be the subject of the third chapter. This will be merely a first application of the method, for it has to be widely used and systematically applied by all who undertake research in political economy. In our opinion, this is the path to be followed in order to free economics from all those margins of disagreement, which make it an unsure subject of study, controversial, and not at all scientific. There are still many who believe that the study of economics involves mere conjuncture, the study of chance effects which are unforeseeable and which cannot be ordered. It is precisely this position, among the many which are taken up with regard to economics, that is to be regarded as the most backward and retrograde; it is this position which must be defeated once and for all if we wish to solve the social problem. Unless we reduce to a science at least that part of political economy which permits a rigorous and scientific ordering, we shall fail to solve the social problem. Convinced of this, we were led to the method of research and its discussion. Equipped and strengthened by this method, we shall proceed with our analysis.

## Chapter II

# Value

Until this point we have restricted ourselves, almost entirely, to discussing utility, which has been understood as that property of objects which satisfies needs. This, however, was clearly only a first step, a first approximation, in the formulation of our economic and social research. Nevertheless, in the course of the preceding pages, we have already indicated the importance of the concept of value, and it is now our task to deal in greater depth with this great problem.

The problem of value has in fact interested economists for generations, because it is precisely the central question of all economic study. In more recent times this study has shifted, due principally to the work of the new Cambridge school, from value to income, but the arguments aroused by the basic problem of value have not led to any solution of the problem itself. Far from being exhausted, the subject has been merely put aside.

The aim of this book is research, leading to a statement of the social question on economic bases. With this in mind, a deeper analysis of the problem of value became necessary. We have had to tackle the subject directly, and in the course of the pages which follow we shall discuss it, defining first of all our point of view, and then comparing our position with that of other notable commentators. This comparison will have the dual aim of clarifying the historical development

of the problem and also of explaining better our own position.

If the starting point of our discussion is the utility of things, the problem of value arises immediately, as soon as we wish to specify this utility, graduating or measuring it in some way. The problem can be stated thus: what is the measure of utility, and how does one arrive at such a measure? This gives us the first and most general definition of value, that it is the measure of utility. But this is in fact only a first definition, because the question becomes much more difficult when we ask how this utility is measured or, better still, when we pass to the second stage of analysis which poses the question in a more concrete manner: if value is the measure of utility, what is the measure of value? When we have asked this, we may consider that the question of value has been definitively stated.

It is commonly maintained, in the first place, that nature places at man's disposal certain benefits, even if few in number, which may be considered non-economic or freely available. In this case we should need a preliminary distinction between the value of use, referring to free benefits, and the value of exchange, referring to economic benefits. We feel, however, that this distinction may be resolved, because nature places nothing at man's disposal, or almost nothing, that may be regarded as already acquired utility. On the other hand, nature provides a great deal which may be regarded as acquirable utility, a potential utility which with greater or less facility may be realised by man. In other words, nature does not provide ready-made utilities, waiting to be used; it provides instead material to be transformed into utilities effectively acquired. These utilities may be attained by establishing a relationship, which cannot be eliminated,

between things and men. In this sense we may even say that man must work to acquire the air he breathes, because he must make sure that he has it in sufficient quantities, that it is not impure, and he must transfer it to where it is lacking in the very moment in which it is lacking. The whole economic problem is to be found here in effect: how to render useful, or more useful, all the possibilities, the things and the elements, which are offered by nature and by other men. It is senseless to speak of the existence or non-existence of free and natural benefits. It is we, and we alone, who render useful things which have no utility and who render more useful things which already have some utility. The potential utility before man is immense and unlimited, but it is all to be acquired. That is briefly our point of view.

More concrete, however, is the consideration of the value of the use of goods, taken in a more precise sense to be the value of consumption, that is, a direct and immediate utility for the satisfaction of needs. In virtue of this, it follows that it will be the subjective value of a given commodity, in effect its consumption, which determines its value. We shall have occasion to return to this subjective theory of value when we deal in particular with the value of consumption. Here, however, it is necessary to make at once certain preliminary and general observations, keeping in mind our earlier definition of the problem of value.

To be sure, every subjective theory of value can indeed give an explanation of it, when it is always understood as a value of consumption. But every subjective theory finds itself in great difficulties when it has to supply a measure of value. Should it succeed, however, in providing such a measure, the theory ought to echo the affirmation of the sophist, Protha-

goras: « Man is the measure of all things ». This may even be true, but only for one man, considered at the particular moment in which he consumes for the satisfaction of his own needs. It cannot be true, however, for several men who are producers and consumers at the same time and who must, even if they do not want to, engage in a mutual exchange of utilities. But long before exchange, and beginning with production which usually is also a combined undertaking, men must enter into reciprocal social relationships for the exchange of goods and services, and hence they must agree, equally and simultaneously, on an objective measure of value, that is, on one or more quantitative units by which value and its measure may be considered. To put it otherwise, every subjective theory can give a measure of value, always of consumption, only for those goods which are regarded as completed goods and at the moment in which they are consumed, which is precisely when the subject can measure their value. The same subject, however, would deny, or at least not know, the measure of the value of goods in all the transitory stages which precede consumption and which can be summed up in an unlimited creation of utilities for the ever growing needs of society. But all this is absurd, because at the moment in which men exchange goods and services, at that very moment there is established between them a common evaluation of both what is given and what is received; therefore there exists without doubt a common and objective evaluation, which the individual cannot ignore. This common evaluation gives rise, even if it follows the exchange, to an element of common measure for value. But even before the act of exchange, production itself is a combination of factors, with relationships between things and between men, and all

these relationships impose common elements of the measure of value, objective elements of which men are fully aware. Eventually, at a certain point in the expansion of the relationships of production and exchange, the introduction of money becomes necessary as a common institutional element, with the aim of rendering these relationships totally objective. We shall see next how the introduction of money limits even more the validity of the subjective theories of value. Here, at the initial stage, we have wished only to point out that it is not possible to solve the problem, stated above, of the measure of value, without the introduction of some objective element to which value can be linked. This must lead us to the conclusion that the measure of value is to be found in cost. Thus cost becomes the objective element in the measure of value, just as value becomes the measure of utility, a utility which is, we repeat, always considered as utility to be acquired with ever growing and unlimited expansion. Beyond cost there exist, as we have also pointed out, subjective evaluations which can give reasons for the value of goods, without succeeding in giving the measure of their value in social relationships. These subjective evaluations have effective validity only with regard to the individual consumption of goods. Due to the lack of an objective foundation, however, this validity is gradually limited and restricted by the introduction of institutional elements, which allow the continuous widening of markets for the increasing satisfaction of needs. It is precisely these institutional elements which progressively restrict the sphere of validity of subjective theories.

Having said all this, we must not think that the complex problem of value has been solved. It is still necessary to examine the concept of value in respect of the basic pillars

of political economy, that is, in relationship to the production, exchange, consumption and distribution of goods. We have therefore to discuss, in the pages which follow, four significant aspects of value: the value of production, the value of exchange, the value of consumption, and the value of distribution of goods. The first two values regard qualitative utilities, which, although they are distinct, are often associated within the same sphere of management; in this case, solely for the purpose of a more complete and systematic treatment, we shall deal with them together in the next section.

## 1 - VALUE OF PRODUCTION AND VALUE OF EXCHANGE

We shall start by saying what the production of goods is in fact. Then we shall see how one arrives at a definition of the value of production.

The first observation to be made is that production is not possible with a sole element, that is, with a sole economic factor. In fact, production consists of the acquisition of a new or greater qualitative utility, but we are bound to start with a preceding utility. We start in fact, during the productive process, with a primary or raw material which has its own degree of initial utility. This initial degree of use is never zero, but is always positive because, even if it is apparently zero, it always expresses a potential utility which is capable of transformation into actual or real utility. With the inherent starting utility fixed, one arrives by means of production at a utility acquired at the end of this same production. Naturally, there are intermediary utilities, also in the sense of the introduction of other materials used during the process of production, but it is clear that the intermediary materials can

all be directed to and assimilated with either the starting or with the end material. Therefore the material factors necessary and sufficient in a productive process are two: a starting utility and an end utility.

But even when these two characteristic elements of production have been ascertained, our anlysis is still not complete, for there exists a third constituent element. It is to be noted, in fact, that the starting utility and the end utility cannot exist simultaneously, otherwise they would be reduced to one sole utility. Hence there is bound to be a certain period of time between the starting utility and the end utility; and time is in fact the third, and non-material, constituent element of production. An initial analysis of production shows apparently that time is generally considered to be a period of work, or paid labour. But paid labour does not account for all the characteristics and dimensions of productive time in general We mean by this that the period of work in the productive process, a time which always exists, has to be considered as time so generalised as to include physical time, be it absolute as in Newton's law, or relative as in Einstein's theory of relativity. Let us call productive time, therefore, the time necessary during a productive process. The distinction between productive time and the time of work is not a captious quibble; apart from the important deductions which we shall see next, this distinction finds an exact and concrete verification in the process of production, a process which is understood as the difference between a starting utility and an end utility. There are in fact, apart from the utilities acquired during a period of paid labour, other utilities which are derived from physical phenomena or, even more, from less apparent chemical phenomena. As a result of these

phenomena, material is transformed and acquires new and useful technological characteristics. This occurs independently of any period of paid labour during production, even if it does not occur independently with respect to the human element in general, which is indeed required to discover, to understand and to control the physical-chemical phenomenon, if an economic utility is sought. The constituent time in the process of production is therefore the productive time of man, understood in the most general sense possible of time employed for the purpose of acquiring utility; in other words, it is like work time and study time, like time which has a definite remuneration and also like time which has a remuneration which is uncertain but which is hoped for, because probable.

Finally, after the analysis of these necessary but adequate elements which characterise the productive process, the two material elements or factors and the third temporal element explained above, we are now in a position to define the value of production: it is the measure of qualitative utility, acquired through the combination of two material factors, in addition to the productive time necessary for this production. We can now go on to the value of exchange.

Exchange consists of the permutation or substitution of qualitative utilities which have already been acquired during production. The essential observation to be made is that exchange presupposes the existence of two producers, just as production presupposes a combination of factors. The difference between production and exchange may be stated thus: production is a useful transformation by man of two material elements, hence it is a relationship between men and things; exchange, on the other hand, is a relationship between men. This exchange relationship presupposes two producers

who exchange their different utilities, but the two producers must be considered as two different concerns or undertakings, so that the value of their products may be considered different. If, however, we remain within the sphere of a single undertaking, even if it produces many different utilities, we must always consider it as one productive undertaking or unit of production. In this case there is no exchange, because the different utilities can be reduced to two single material factors within the concern. Consequently, exchange requires two different measures of qualitative value, which are expressed by costs. Is is precisely for this reason that exchange presupposes two producers of different utilities, but also with different costs. With exchange, we pass from the measure of utility to the measure of value, from the value of production which is absolute, to the value of exchange which is relative. This relativity consists of the relationship between two concerns with the formation of different costs for different goods. It is possible in the case of a single producing concern to imagine, at least in an abstract form, a measure of value independent of cost; where, however, there are two producing concerns, the measure of value is bound to be linked to cost. If this conjunction of value and cost does not occur, it is senseless to consider exchange differently from production.

We have yet to add that the measure of exchange value must be expressed in real terms and not monetary terms, in qualitative and not quantitative terms. The utilities of two producing concerns must therefore be compared in a direct bilateral relationship, without the intermediary of money as in multilateral relationships. This bilateral comparison is necessary in order that the cost-value of a utility may be

expressed in terms of cost-value of the other utility. Where, however, money is introduced as an intermediary means of exchange, the qualitative relationship of commodity against commodity can exist no longer, because it divides into two relationships of commodity-money, and the bilateral value of exchange becomes the multilateral relationship of the value of consumption. This we shall look at in due course.

We may now summarise our definition of the value of exchange. In the simplest terms, we may say that the value of exchange is the relationship between two different utilities, produced by different concerns, and measured by their compared cost of production expressed in real terms of qualitative utility.

Let us now compare our definitions of the value of production and the value of exchange with the positions assumed by two English economists who have approached the problem of value, and whose theories, we feel, are of some importance. We refer to the nineteenth-century writer, David Ricardo, and in more modern times, to Alfred Marshall.

In Ricardo's writings we find the whole of classical economic thought in England. He analysed all the major problems of economic science, among these the problem of value, on which his whole system is based. In our opinion, Ricardo's great merit is to have established in precise terms the value of exchange as the comparative cost of two commodities, with reference to internal and to international trade. Naturally, Ricardo arrived at this analysis when the development of the modern industrial economy was still in the future, and when the wide markets of today had not been formed. In this case his theories on the value of exchange as comparative cost may be regarded as notable anticipations. The fault in Ri-

cardo's theory, however, is his failure to analyse and to clarify sufficiently the cost of production. As a result of this fault, Ricardo tends to resolve the cost of production in work, which is then considered to be the determining or indeed unique element in the formation of cost, but he fails to explain what we must take as the meaning of work. This leads not as much to an error as to an ambiguity, which was to exercise a great influence on the ideas of Marx on value. But this we shall see later. Here it has been our intention to point out our agreement on the value of exchange with the position assumed by Ricardo two centuries ago. Our analysis, however, aims to eliminate the gap in Ricardo's theory caused by his failure to examine the value of production. It has been our task, then, to analyse sufficiently the value of production, as well as the value of exchange; this has allowed us to draw a distinction between the two equivalents of value = cost and cost = work, which in Ricardo remain indistinct. The first equivalent is true and valid even today and constitutes, as Ricardo explained, the basis of the measure of value in the exchange relationship. But in our opinion the second equivalent of cost = work is not true or valid. In other words, we agree with Ricardo on exchange, but disagree with him on production. Let us now explain this.

The position of work in production, as we have seen above, is much more complex, general and finalistic than one could deduce from Ricardo's theory. We maintain that productive cost is always understood as a combination of factors, the combination of which is always observed and held in check by the work element. This means that productive work is always explained in the light of a utility, but this utility is not always expressed in terms of cost or even in

terms of effort or sacrifice. In the productive process man is very often like the mountaineer who struggles to reach the top: the pain and the difficulties to be endured do not matter, but what matters is the desire to dominate the surroundings from a point which is higher than these surroundings, and from which they can be seen as a whole. Productive man always strives for the useful, but, as long as we remain in the productive process, this cannot be expressed in terms of cost, and sometimes not even in terms of effort. Recalling our definition of the value of production, we see that work, which is always present in production, is placed in a particular position, which allows it to dominate the two material factors beside it. In this way there is dissolved every relationship of equality or subordination of producing man in respect of the means of production, and these are understood, controlled and placed at the service of man for his own utility.

It is clear that such a position of man with regard to production could be derived only from a deeper analysis of the value of production, considered outside the value of exchange. This analysis was not made by Ricardo, and his theory of work-value consequently gave rise to certain ambiguities. His failure to make this analysis explains why we disagree with him on certain points.

Throughout the nineteenth century Ricardo's theory of cost-value was forced to undergo severe criticisms, above all from subjective theories of value. In particular, the economist Stanley Jevons, again in England, denied all validity of the theory of cost-value, and maintained instead that the value of a commodity is given by the utility which it procures, and precisely from the utility of the last quantity of the utility

itself. As we can see, this is merely one of many subjective theories of value; however, we have already expressed our point of view with regard to these in the general part of this chapter. We have mentioned Jevons merely as the intermediary stage on the way to another English economist, who may be considered as the founder of the modern neo-classical English school, the Cambridge school. We refer to the renowned economist, Alfred Marshall, author of « Principles of Economics », which has been greatly used as a basic text by students.

Marshall, coming after the powerful criticism of Ricardo by Jevons, attempts a reconciliation between the objective theory of value of the former and the subjective theory of the latter. Briefly, Marshall's attempted reconciliation is as follows. Both sides of an exchange must be considered, that of those who need a certain commodity and constitute the « demand », and the other of those who produce a certain commodity and constitute the « supply ». Hence we have an explanation of the cause of value only if we consider each term, supply and demand, as a function of the other. Those who seek a commodity, and every commodity in general, control demand on the basis of a subjective evaluation, attributing to commodities a value which is determined only by the utility derived from them. Those, on the other hand, who produce commodities, control supply of these same commodities so that their values tend to coincide with the costs which have been incurred. Thus value is the result of a meeting or agreement between the consumer, with a subjective evaluation, and the supplier, with an objective evaluation related to costs. In short, the measure of value is held in balance between the forces which explain demand

and those which determine supply. This is the reconciliation attempted by Marshall, and we say « attempted » because we feel that it was unsuccessful and indeed could not be successful, due to reasons which we shall go on to explain.

Above all, Marshall analyses the value of exchange in the sense of a complex supply of goods in response to a demand which is equally complex, as well as being varied and multiple, with the result that exchange between the supplier and the consumer, seen in terms of overall supply and demand, must be held possible only with the intermediary of a means of payment. It follows that the relationship between the supplier and the consumer must be realised as supply expressed in goods and demand expressed in money. This is different from the value of exchange, which we have pointed out several times to be a bilateral relationship between two producers who exchange goods for goods, and not as a multilateral relationship between producers and consumers who exchange goods for money. Therefore the meeting of supply and demand considered by Marshall must be regarded as an agreement not on the value of exchange, but on that which we call the value of consumption. These two values do not mean the same thing. As we shall see shortly, they could be considered the same thing on two conditions, firstly that money remained constant in its buying power, and secondly that money itself did not have a cost, characterised particularly as « interest » on loans. The value of Ricardo and the value of Marshall are therefore not the same thing. On the other hand, Marshall is forced to limit the scope of his attempted reconciliation, because he states explicitly that in the short run it is the consumer's demand which prevails, influencing the interpretation of value in the

subjective sense; however, in the long run, it is the producer's supply which prevails, and it is the producer who influences the value in an objective sense, shifting it towards the cost of production. It is in this way that the cost of production, as Marshall admits, comes to constitute the measure of value in the long run. But then, using Marshall himself, we can easily explain the impossibility of his attempted reconciliation. In fact, if in the long run, it should happen that the value of a commodity tend to its cost of production, we can undoubtedly discount at the present moment this future value of the goods, anticipating in present terms of value those which will be the future values of all the goods. Consequently the « short run » will be absorbed by the « long run »; the subjective value of the goods will be absorbed by the wider and more lasting cost-value of the goods themselves; and the laudable work of Marshall cannot fail but confirm the exchange value of Ricardo. Obviously there remains the fact, which cannot be overlooked, that we must consider a value of consumption or of actual utility, to be expressed in terms which are not of barter but of banking. We shall discuss this value, Marshall's value of demand, in the next section. Here we wish only to make a last historical observation on the evolution of economic progress, with the statement that the « Principles » of Marshall, published for the first time in 1890, mark the passage from the economics of exchange to the economics of consumption, in close relation to the development of banking after the preceding industrial expansion. With Marshall, therefore, we see the beginning of the modern economics of consumption, with a particular value of consumption which we must carefully examine.

## 2 - VALUE OF CONSUMPTION

As we have done before, we wish to reach, by means of certain lines of reasoning, a definition of this particular value, the value of consumption, which is of great importance in the present phase of economic development.

With this in mind, the first observation to be made is that the consumption of goods must occur now, in the present moment. If it refers to the past it is a value which has yet to be produced, or a value of exchange; if it refers to the future it takes on a different name, which is that of saving and not of consumption. Therefore consumption has to take place now, at the present moment. The second consideration is that value of consumption in the modern monetary economy is expressed in money. Whoever needs a commodity spends money or else promises to pay in money. We need, therefore, to pause for a while on this complex problem of money, many aspects of which remain mysterious and uncertain in their interpretation.

Money was invented to overcome the difficulty of the restricted bilateral exchange of bartering, that is, the exchange of one article for another. But gradually money became more important and expanded in order to overcome an even greater difficulty, that of the exchange of goods for services, for the evaluation of the latter is much more difficult than that of the former. It is for this reason that, once it appeared, money became quickly institutionalised and was recognised as a value objectively valid for all the members of a geographical and political area. The conventionally established characteristics of money are now two in number. Its first conventional value, understood as intrinsic or specific, consists of the value of its

material component, a value which has to be expressed in well defined units of measure, usually grammes. It is to be noted that this numerical measure, in grammes or some other material unit, is a basic question for the real value of money. If we do not have this measure in a certain number of grammes or other real units, we do not have a real monetary value, or value in conventionally established units. We have, instead, an undefined trading value, or an unmeasured value of exchange which is to be measured by a certain number of grammes, litres, metres, and in any case by means of a certain number of material units. It is precisely this number, conventionally established, in grammes for example, which expresses the first value of money, its real or intrinsic value.

There is a second value of money, which is its nominal or face value, also expressed by a conventional numerical value. But this second number is different from the first, and expresses not material units of a certain article, but expresses instead other units different from, although related to, trading units. We shall see better later that this nominal value represents services and not goods, whose units of measure can be expressed only as units of productive time or, more generally, of economic time directed towards the production of a utility. Here it is enough to have made clear the distinction that money is necessarily characterised by two numbers. One is real value, a number of material units, and the other is nominal value, a certain number of non-material units. Since consumption, as we have already said, must occur in the present moment, independent of past or future time, and since it must be also material, as a demand for goods in money, it follows that consumption must be expressed in monetary units according to the real value of money.

We should add that, when we say « money », we include also the banks' means of payment, as well as treasury issue. It therefore becomes evident that a money order or a cheque is always characterised by two values or two numbers. The first and more obvious is the amount of the order, which may be spent at that moment on consumable goods; this is the real numerical value of the banker's order. The second number, the nominal value of the order, also exists because the cheque has its own cost in the interest of credit or debit rates, in proportion to the period of use. This cost becomes the representation of the unit of measure or of the overall measure of the nominal value of the banker's order. It is therefore clear that the means of banking credit are a creation of liquidity, being substitutes in effect of legal tender. The only difference is that the denomination varies from time to time on cheques, but there always exist the two essential numerical values, the material and the temporal number of the means of payment. Banking liquidity therefore gradually exceeds in quantity and extent liquidity in legal tender, leading to the obvious consideration that it is useless to control treasury issue without a simultaneous control of the commercial banks. But we shall deal with this point in greater detail later. For the moment we shall move on to our definition of the value of consumption; we may define it as the measure of the value of exchange of goods, considered at the present moment and expressed by the real numerical value of a banker's order or legal tender.

Notice that the definition incorporates the fact which we consider fundamental, that is, that the value of consumption constitutes a present value of the goods, related to the present moment, while their value of exchange must pre-

exist in past time, even if it is the very recent past. Obviously one can only consume what already exists, so that the value of consumption must be the present one of the value of exchange which has been available for some time. Moreover, the definition which we have given requires the expression of consumption in real money, and we therefore arrive at the important consequence that all incomes, apart from banking incomes, are discounted at the moment of consumption. It results that non-banking incomes, be they wages or profits, considered in the same way as real incomes in real commodity and not monetary values, are bound to be discounted and transformed into values of consumption which are values in real money. The discounting of incomes becomes gradually more widespread and inevitable in proportion to the increasing use of banker's orders and cheques, and this discounting marks the passage from a barter-exchange economy to the monetary economy of consumption, an important step in economic development, as we have elsewhere remarked. The analysis of the value of consumption now leads us to this important consideration: if all incomes are bound to be discounted, all these incomes will pay interest which constitutes the quite different banking income. Thus the management of all banks becomes a matter of general interest, of public concern, and a social question. We shall have to deal with this later.

In the meantime, just as we did in our analysis of the values of production and exchange, similarly for the value of consumption we wish to compare our definition with other theories. We shall compare our analysis with the positions of every subjective theory of value, and then with the well-known theory of value of Karl Marx, who for more than a

century has occupied an important place, with agreement and disagreement, in all discussions which have dealt with the social problem according to economic criteria.

The subjective theories of value, where consumption is involved, claim to be better, because they maintain that it is precisely consumption which determines the value of goods according to a subjective yardstick. But we believe that, even in the case of the consumption of goods, things are different. We are of the opinion that even in consumption there is an objective value of goods, a value which in brief imposes itself on the single subjective values. The definition which we have given is totally objective, and is a definition in which the value of consumption becomes the completion and prolongation of the value of exchange, like net discount in respect of the value of exchange, which is gross discount. This is the only way, in our opinion, to render at the present moment and in money all non-banking incomes. Hence, even in the value of consumption, there remains the real cost-value of production and exchange, with this single difference, that while as value of exchange we have a value, let us say, of 100 trading units, as a corresponding value of consumption we have 92 real monetary units, because the difference between the gross and net discount, eight units in money, becomes the bank's interest. This interest then constitutes a value on its own, without remaining included in the value of net discount which is 92. Banking interest therefore influences the value of consumption in a very indirect way, as one less in respect to the original value of exchange and not as one more. This indirect effect of interest on the value of consumption is then resolved precisely as an increase in unit cost. In fact, while before the discount we had a unit

cost 100 : 100 = 1, afterwards we have an increase in unit cost according to monetary measure, because the new cost becomes 100 : 92 = 1.087. The interest of eight units follows its own path, with an interpretation and a destination which we shall examine later, but for the moment it has been necessary to point out the indirect effect of interest on the value of net discount, that is, on the value of consumption. The result is that the value of exchange, which is particular and not conventional, is transformed on payment of a price to the commercial banks into a second value, more general and conventional, but the close connection between value and cost remains unchanged, be it in the one case of the value of exchange or the other of the value of consumption. In fact, the second case, that of the value of consumption, is even more general and objective in respect to the first, to the point that producers agree to pay a price for the realisation of this transformation of values. If there had not been this greater utility for everyone, exchanges in money would have been limited and would not have grown to the stage of being prevalent, if not exclusive, in the social system. What has previously been stated about the value of exchange continues, therefore, to be valid. The individual makes his subjective evaluations of the utility of goods, measured as the satisfaction of his needs, and on the basis of these evaluations he chooses what he will purchase in one sense or the other; but when it comes to the act of purchase, the objective value of the purchased article is not and cannot be left out of consideration. If it is not considered, this will certainly be an exceptional case, or perhaps a non-economic case, because we have to qualify as economic all those acts which lead to a utility. Consequently, our position

on the interpretation of value, in an objective sense and connected to cost, remains firm, whether for the value of production and exchange or for the value of consumption. Whenever and wherever there exists a subjective interpretation of value, we may say that such an interpretation cannot be called economic, far less social, and therefore cannot be of interest for our purpose.

Let us now compare our definition of the value of consumption with the theories of value discussed and analysed by Marx in « Das Kapital », the first volume of which appeared in 1867.

Marx, as far as the value of exchange is concerned, follows the same lines as Ricardo, but his particular merit is that of having analysed in detail for the first time the goods-money relationship, that is, what we have called the value of consumption. We may go as far as to say that whereas Ricardo bases his whole theory on the value of exchange of goods for goods, Marx, for his part, develops his theories from the value of consumption, the money-goods relationship. According to the Marxist analysis, two values must be distinguished: the first is value expressed in goods or « created value », and is in effect the value of exchange already discussed by Ricardo and here in the preceding section; the second value is called « consumed value », expressed in money, and is to be compared with the value of consumption which we have just analysed. Marx states that the value of exchange is superior to consumed value, hence there is a difference between the two values which we must call plus-value, and which obviously it is of general interest to consider. The value of exchange or created value, Marx continues, is a value in goods owned by the capitalist who

controls production; it is a cost-value and, in short, a work-value, as Ricardo had stated. The consumed value in money, on the other hand, is the concern of the worker who has received from the capitalist a salary in money. Given all this, it is necessary to draw this immediate conclusion: if plus-value exists and if value is equal to work, then plus-value is nothing but overwork, that is, excessive work or unpaid labour, which passes from the consumed value in money of the worker to the created value in goods-profit of the capitalist. This plus-value, concludes Marx, amasses and is crystallised in goods, creating the accumulation of capital.

Let us now compare our theory of the value of consumption with the Marxist theories outlined above. First of all it has to be said that, apart from the terms used, we agree with Marx when he says that there is a created value of exchange superior to consumed value, and hence there is a social plus-value expressed by the difference. We do not agree, however, with the explanation of the origins of this plus-value, and therefore of its place and manner of expression in social relations. We shall explain in detail where we agree and disagree.

According to our definition, the value of consumption is the discount of trading incomes, the discount of the value of exchange transformed into real money, thus undergoing a reduction. Referring again to the example which we gave, we had 100 as the value of exchange of gross discount, 92 as the value of consumption of net discount in real money, and eight as the difference which went as banking income. Therefore we can agree with the Marxist theory and say that the created value 100 is greater than the consumed value 92, so that there exists a difference which will be understood as

social plus-value. But, having said this, we no longer agree with Marx when we have to consider where this plus-value comes from and where it can be found.

The opinion of the writer is that Marx committed two important errors, due probably to these two circumstances. Above all, a century ago, the modern banking economy had not sufficiently developed to enable a more correct analysis of the goods-money relationship. Secondly, under the strong influence of Ricardo's theory on the value of exchange, Marx also adopts his error, that of holding as valid the cost = work equivalent. More exactly, we may say that the first error of Marx was to consider value of goods exclusively as profit, and monetary value always as salary. In fact, the economic and social reality, at least in the manner in which it results from the complex and multiple relations of exchange in the banking economy, is very different. Indeed, a salary in money is of little use if it cannot buy sufficient goods, and all the modern social struggles have shown that salaries, in addition to profits, are constantly linked to values of exchange, and to the values created by the business concern, with a connection which also extends to the capital outlay on equipment as well as to real incomes. This is because there is established a permanent link between salaries and both the business article and the particular kind of technology involved in its production. On the other hand, in the present banking economy, profits too are effective and valid not only with regard to their existence as goods in the warehouse, but also with regard to their easy translation into monetary liquidity. Note that the liquidity of profits is necessary, not so much for the needs of the entrepreneur's private consumption, but above all for the necessity of meeting, in the general interest, all the

financial burdens carried by a business concern. In fact, the real state of affairs of the modern business is the following: either profits, provided they exist, are transformed into liquidity, or else, if this is not the case, the business fails and the profits, even if they exist as goods in the warehouse, are no use to anyone, neither to the entrepreneurs nor to the workers. Therefore it is the social relations which exist in the monetary economy which impose the liquidity of all non-banking incomes, be they profits or salaries. At the same time, until this liquidity has been achieved, that is, until the sale has taken place, all the incomes of a given undertaking must be considered as values of exchange in terms of goods, values which can be expressed only as stock exchange shares or bills of exchange of gross discount, all of which must be discounted in order to be transformed into money. To sum up, the opinion of the writer is that the demarcation line between created and consumed value does not pass between entrepreneurs on the one hand and paid workers on the other, but between all non-banking and banking incomes. The difference between the two is that the latter are liquid right from the start.

The second error of the Marxist analysis is that which derives from Ricardo's equation that cost equals work. We have already pointed out in the preceding section the error of this equation, because cost, if it is of production, is the combination of three factors, of which only one can be considered work in the general sense of productive time. But if the cost is of exchange, it is resolved in that of a second producer who enters into an exchange relationship with the first. In this way plus-value is not always and only overwork, but can be overwork in a particular case, often of a business

nature and with limits of resolution in the sphere of one business. Plus-value is, instead, something more general, something which invests the relationships of exchange-consumption much more than those of production, and something which has to be sought in a social cost or extra-cost to which all incomes are liable due to the powerful exigencies of liquidity. If this is the origin of plus-value, it cannot be expressed by goods in the warehouse, but must be changed always into terms of liquidity, as cheques or legal tender. Of this money, which has two values, we have examined only the real value in its relationship with exchange; we still have to examine the second aspect of money, its nominal value, which we propose to look at in the next section. In the meantime, we have ascertained that plus-value is to be placed not within the sphere of the productive and exchange undertakings, but in the undertakings which issue and circulate cheques and legal tender.

We shall now conclude this section with a general consideration. If the position of plus-value is that which we have just indicated, all economic research with social aims must be directed towards the deepest possible analysis both of means of payment and of the total social income. At the same time however, by means of economic policy, the knot of social contradiction to be untied must be found in monetary and banking policies, above all with regard to the creation of saving in nominal terms and to the management of this saving.

Furthermore, we have to arrive at the conclusion that one has to go beyond the consumer economy, and this confirms what we have stated from the outset in this work, that the value of consumption as a goods-money relationship

has a scientific and institutional limit. This limit is that of money in its numerical expression of material units, in its intrinsic value. This value has to be overcome, without being denied, since it is obvious that every money must have a permanent link with goods which are produced and exchanged. It is quite clear, according to the analysis made, that the real value of money in its present material expression acts as one of the terms of a permanent exchange-consumption relationship, and from this relationship there is born plus-value, obviously of general interest and which it would be necessary to eliminate or distribute. But money as it exists at present does not and cannot help us in this distribution. It does not help us in this because, as it is today, it is real value only and always when it is a value of consumption, which is a conventional aspect of the value of exchange, while distribution is a different thing from consumption. Distribution does not signify consumption, but means giving the possibility of consumption to someone who already consumes and to someone who does not have this possibility. This is the important difference between distribution and consumption. The following dilemma is therefore inevitable: either one succeeds in overcoming the present institutional limit of money-consumption, by means of a new interpretation of the means of payment, or else the social problem, which is that of distribution, cannot be solved.

We are therefore forced to consider a fourth and last value, that of distribution, and with this fourth value it is necessary to pass from an economy of consumption to one of distribution. This should finally reveal something definitive for the solution of the social problem.

## 3 - VALUE OF DISTRIBUTION

We have just seen that plus-value, whose existence we have proved, is derived from the exchange-consumption relationship and is to be found within the sphere of the circulation of means of payment. From this it follows that plus-value is inherent and permanent in an economy of exchange and consumption, where the latter follows and is closely connected with the former. Now, if plus-value is a structural fact of the exchange economy, it is clear that while our study of value remains formulated and conducted from the business point of view, and while the values of production, exchange and consumption of a particular article are considered independently of innumerable other articles produced in fact or potentially, it is clear, we repeat, and without any doubt, that within the field of this research there will be no possibility at all of solving the contradiction of plus-value. The best that we shall be able to obtain from such investigation is to reach the limit, already discussed, of the economy of consumption. We shall reach, in other words, the limit of that economy which is capable of distributing within the sphere of one business, but which is totally incapable of evaluating the relationships between businesses, and therefore of solving the tremendous problems of distribution between business and business, between one sector and another of the economy, between industrialised and underdeveloped areas, between the employed and the unemployed, and in short between those who have and those who haven't. If we are hoping for an economy of distribution, for a social economy, we are forced to change our standpoint and our starting point in our research on value. It is precisely with this alteration of ap-

proach that the present writer has conducted his research on value.

In order to support more conclusively the validity of this research, we should state that the method followed is similar to that of an absolutely precise science, that of rational mechanics for the theoretical analysis of the movement of fluids, liquids or gases. Here, in fact, there are two different ways of treating the phenomenon. One is to consider the fluid current as a composition of infinite particules and to analyse initially the movement of one single particule, and then to derive from this the movement of the whole fluid stream as a sum of infinite elementary movements; the second way, however, is to consider from the beginning the whole current as a single movement of particules, so that in this way the overall movement of the whole fluid stream may be considered. It is for this reason that the second way is called the « overall or total » method, while the first is called the «local » method. Using this analogy, the writer has formulated and conducted his research on the value of distribution by adopting the total method. This is different from the traditional manner of research, beginning with Ricardo's theory of the exchange economy, and which may be considered analogous to the local method of rational mechanics. It is our sincere opinion that only a new method in the formulation of research on value, and precisely the total method, could overcome the unavoidable limit of the consumption economy with its inherent plus-value. This limit is the limit of distribution which exhausts itself at the single business level, and which is the broadest distributive level which one could arrive at if one adopted a local formulation for the analysis of value. We had, instead, to overcome this limit of distribution

at the business level, and to arrive at an understanding of distribution in its true social meaning, in its meaning of reciprocal distribution between innumerable businesses which produce and exchange their products within a social area. With this aim, it was absolutely essential to change the whole formulation of our research on value. It became essential to introduce the value of distribution, which we can now qualify, in its first and most general meaning, as total or overall value, the social and general value of inter-business utility. For this value, the important value for social purposes, we shall now try to give a complete and concrete definition, but beforehand we shall make certain observations which are necessary and which lead us back to money and to consumption.

We have already had occasion to say that money, which even today has a complex interpretation, often confused and sometimes obscure, has two distinct and characteristic values. One is its real value, already exhaustively discussed in the preceding section, and the other is its nominal value, which beforehand we mentioned only in passing and which we must now analyse thoroughly.

What is the correct interpretation, that is, the most consistent with reality, of the nominal or face value of money? It is a matter of extreme importance to answer this question with severely logical reasoning. As we have already established, the real value of money, be it of the banks or of the treasury, is a numerical value in conventional, material units, generally grammes, which replace other innumerable material values which are the values of exchange expressed in unconventional units, for example metres, litres, calories or even kilowatts, so that an unconventional material expression is translated into a conventional one in real money, which never-

theless remains a material expression. From this it inevitably follows that the nominal value of money must express a quantity which is definitely not material; if the nominal value expressed any material quantity, it would eventually be identified with the real value, and there would therefore not exist any nominal value of money distinct from the real value. Thus the nominal value of money is bound to be expressed by a non-material quantity, and moreover, if we are in the field of economics, we must introduce exclusively quantities which are useful or of potential utility. The certain consequence of this is that a quantity which is non-material and useful at the same time must express and constitute the nominal value of money. But this quantity cannot be different from time. Time is the only non-material and useful quantity which exists in economics, and it is worth remembering that right from the beginning of this chapter, when we began to speak of value, and precisely of the value of production, we discovered that time was the third economic and constituent element, the non-material element, of the value of production; it is the sole and inescapable element for the acquisition of added utility, for the passage from an initial utility to an end utility in the process of production. On the other hand, the non-material utilities in economics are called « services » and expressed in temporal units, while useful objects are called « goods » and are measured in material units. From this it is clear that the nominal value of money means the utility and the exchange of services, while the real value of money expresses the utility and exchange of goods.

It is helpful to add, in explicit terms, that the temporal interpretation of the nominal value of money is valid and holds firm for any means of payment, whether we are dealing

with bank cheques or with treasury money, in coin or in banknotes. In every means of payment time is present alongside the real value; we shall now mention briefly the particular interpretations involved. In the case of banks money, which is money loaned to businesses, time and the nominal value are connected with the interest paid by the business concern to the bank; in the case of treasury money, we find that the money of the issuing bank, which is equivalent to that which finances businesses, is employed by the treasury instead of by the commercial sector, while for money which is issued directly by the treasury, time and the nominal value have to be connected with the temporal utility of particular state services. We can therefore summarise the interpretation of the nominal value of every means of payment as the value of every service, private or public, expressed in units of time.

Let us now consider distribution, always understood as the relationships between businesses, with regard to consumption. Here we have to make the following observation, that distribution between businesses is definitely a social category and concerns an overall social product, in the widest sense of the terms. Precisely because of this, however, it has to consist of incomes to be distributed and which have not already been distributed, of potential utilities to be obtained and which have not already been obtained. In fact, wherever we understand distribution as utility already distributed, in this case it will not be social or inter-business utility, but it will be that single and particular business utility already considered by traditional economics, and consequently the value of distribution will coincide with the classical value of exchange. Further, wherever we understand distribution as

utility already obtained, it will have the particular qualification for the present moment. We have already seen that the « present moment » is characteristic of consumption, so that in this case distribution will already be consumption, and the value of inter-business distribution will be identified with the value of business consumption. It is exactly for these reasons that our distribution, the social distribution, must be understood as estimated collective utility, that is, as the possible and probable utility of all, projected into a future moment with regard to the present moment of material consumption, and therefore understood as a future social income. On the other hand, we exclude consumption from this social income and therefore it will have to be a « net social income », foreseen from the moment of production and to be utilised as the saving of all in the interest of the widest community.

We have now established above the position of distribution with respect to consumption and exchange. Having also defined the nominal value of money, we are now in a position to formulate a definition of the value of distribution: it is the measure of the utility foreseen as net social return expressed in terms of nominal money or in units of productive time.

At this point one could comment that the value of distribution, as defined in the sense of social return, could be made to coincide with the current expression of gross national product as it is drawn up in each country. But such an observation has no validity whatsoever, because the value which we have defined has no connection with national product. There are at least three reasons for this which we shall explain. The first, and perhaps the most important, is that the gross national product is merely a statistical result of the addition of

incomes which have already been obtained, so that it is no more than a survey after the event of economic facts, which have already occurred and have been discounted in their effects. Our value of distribution, however, is basically an estimate, a piece of data which has been conceived as a logical and not a statistical class, and which has to refer to the coming year and not to the past year. The second point of disagreement is that while the gross national product is relevant to this or that state, and hence to a particular institutional system, our value of distribution will refer to the whole international community, in other words to the largest possible community one may imagine. In effect, this value claims to be, and in fact is, an exclusively scientific datum, a natural quantity and a physical quantity like so many others which exist in nature, for example the speed of light, the rotation and revolution times of a planet, and other natural constants. Finally, there is a third reason for disagreement: while gross national product includes every consumption, indeed it is basically a consumption, the value of distribution on the other hand, has been understood and defined as net income, because it refers to a future moment and does not include consumption which has to be referred to a moment already in the past.

So, the differences we have pointed out are essential facts and will have been useful in clarifying even more what we mean by value of distribution. Indeed, we are dealing here with a new class of logical economics, which can and which must allow us to move beyond the present economy of consumption. With this aim, it is helpful to remark again that the economy of consumption is no more than the completion of the economy of exchange, with a single primary

formulation based on the cost-value of production, which is then transformed into cost-value of consumption if the exchange is expressed in real money; and we always remain bound by cost, without being able to arrive at the social return, with an unsurmountable limit consisting of the plus-value of circulation which we are powerless to acquire and distribute in the interests of society. In effect, we are aware of all the harm done by plus-value but are unable to offer any valid remedy in the economic field, precisely because there is a mistake in the first formulation, right from the beginning of traditional research on value. As we have seen, this research is based on the analysis of business cost, but treats each concern separately, from an atomistic or local standpoint. In this way it is impossible, without changing the formulation and analysis of value, to grasp the crux of the exchange relations between businesses, or of the plurilateral relations of exchange-consumption, from which plus-value derives. As long as we remain within the limits of the traditional ideas on value, the most we can hope for is to verify the ruin caused by plus-value, that is, the depreciation through the centuries of money and savings, the unsurmountable obstacles for the transfer of capital and income, the unequal and disordered development of the industrial economy, and the subordination of every industrial expansion to the exigencies of banking and financial monopoly. We shall become aware of these ills, but we shall not be able to cure them.

It is for all these reasons that the present writer has for a long time urged the absolute need of tackling the analysis of value on quite new bases, without however neglecting to deepen the themes of the old analyses which had been as useful and as valid as they could be in their own time. Our re-

search has therefore been postulated « ex novo » and according to a total or overall point of view. This is the only point of view that can lead us, according to a logical method and in a scientific manner, to the measure, not of business profit, but of the maximum social profit. Obviously, it is only on this measure that the social distribution of wealth can be founded, and therefore this measure is determinant and decisive for the solving of the social problem. It was thus necessary to direct and to employ every effort of research in this direction.

It was in this way that the writer, on the basis of a new formulation of value, arrived at the mathematical theory of money and income. This theory, published for the first time in Italy in 1962, will be summarised in the next chapter. At the time of writing, after eight years of comparing this theory with the social facts, we may say that it has been not only confirmed but widened in its interpretation and its application to the social facts. This theory has, indeed, led the writer to the critical analyses made on the various qualifications of value, and has led him finally, in this section, to the introduction and definition of a new qualification that of the value of distribution. We believe that this new concept of value is capable of going beyond the limit of the economy of consumption, and can allow us to take the first step on the path to the social economy of distribution. This economy, we may add, will not be based on some or other statistical data on what has been, but will be founded on a scientific principle, known beforehand, of how much one can and must distribute socially. This economy will tell us the paths to be taken in order to bring about such a distribution, and will give an effective content to an economic policy of planning.

We should note now that the new economic category of

the value of distribution, the predicted net social income, must also include the plus-value of circulation.

Indeed, this plus-value is nothing else but uninvested, and even harmful, money which is taken from producers as productive time, to remain a prisoner of the circulation of the means of payment as unproductive time. It is thus money deprived of a goods equivalent and therefore cause of its own depreciation, and in this case becomes an « overprice » paid by all producers, whether entrepreneurs or workers, in consequence of the pressing exigency of the liquidity of incomes. Thus, the new value of distribution — which is the greatest possible social income, predicted from the outset of production and expressed not in money of consumption but in nominal money or predicted productive time — must include totally the plus-value of circulation, that is, any extra banking profit. Once the plus-value has been acquired as part of the general social return, it is clear that any planning policy will be capable of eliminating it or of distributing it in the social interest.

However, we shall discuss planning policy in detail in the second part of this book. Our first step in its discussion is to reach a numerical definition of the value of distribution, which so far we have only introduced and outlined theoretically. We shall in fact reach this as we develop the mathematical theory of money and income, which we shall outline in the next chapter. After this we believe that any discussion of plus-value and planning policy will be a simple and concrete matter.

## Chapter III

## The mathematical theory of money

The basic aim of this chapter is to translate into numerical terms what until now we have discussed on always logical bases, but nevertheless in non-numerical terms. With this in mind, our programme will be as follows: we begin by finding the speed of circulation of the means of payment, which is certain, unchanging, and numerically defined, like the other great constants of nature. With this fundamental measure we shall formulate all our mathematical reasoning, and we shall arrive in order at three equations which we shall discuss singly. We may, however, define them immediately as an equation of production, an equation of exchange-consumption, and an equation of distribution. The three equations, all based on the natural speed of circulation, will constitute a system which we may undoubtedly define as a monetary system. The solution of this system will give us the variables we are seeking, the numerical quantities which for the most part summarise the laws of the circulation of means of payment. These laws will obviously be strictly scientific in the sense made clear from the outset of this work; they will be laws which, thanks to numerically defined quantities, will link in cause and effect the phenomena of the circulation of every means of payment.

After this preliminary statement, we naturally go on to develop in the succeeding sections the mathematical theory

of money, summarised from the writer's work published in Italian, « A New General Theory of Income and Financial Planning ».

## 1 - THE NATURAL SPEED OF CIRCULATION

We notice that financial science is very young with respect to the older science of economics, and we may say that it departed from economics as a separate science following the work of the American economist and onetime Professor of Mathematics at Yale University, Irving Fisher, who lived at the turn of the present century. Fisher in fact examines more deeply and then applies the concept of the speed of the circulation of money, already noted among other things by Ricardo, and finally establishes a first qualitative relationship. This may be expressed simply as follows: a certain quantity of means of payment, multiplied by a certain number or multiplier, which we call in fact speed of circulation, gives us a certain income expressed as the sum of goods at a certain price. Fisher's work is followed by the work of John Maynard Keynes of Cambridge, who adopts the formulation of Fisher in the monetary analysis with certain extensions, always of a qualitative nature, relative to the means of payment in circulation, but without substantially changing Fisher's previous theory on the speed of the circulation of money. For both Keynes and Fisher this always remains a purely literal quantity without any numerical definition in a logical manner. Thus, if we wanted to give a number to their speed, we could do it only statistically, by arriving at the numerical expression of this speed through the quotient of the gross national product and the total

means of payment. It is obvious, however, that both sets of data apply to a particular country and to a year already past. In this way we arrive at a number which is of little international use, considering the restricted geographical area to which it applies, and of no use at all for planning policy and for the forecast of economic events, considering the fact that this statistical number refers to past events whose effects are already discounted. It is clear then that this is not the problem where scientific economics is concerned. The truly scientific question is to know whether there exists and whether we can define a speed of circulation of the means of payment, considered as a logical estimate arrived at theoretically beforehand and not statistically. We are looking for a quantity whose measure will be valid in all countries and in all times as a given constant of the future economy, and which in brief will be the optimum figure to which we should move by means of an opportune planning policy. This policy should control liquidity in the context of the international and national financial market, anticipating the economic facts, and without a servile alignment to these facts after they have been verified.

And so, the basic question is precisely that of asking whether there exists such a quantity and what is the number which expresses it. This is the decisive point for the whole of financial science as a precise science. If this quantity exists and we are capable of defining it, we may then hope to control finance and economics according to reason and to direct them to the best goals. If instead this natural speed does not exist, then finance, as well as economics, will be reduced to a mere conjunctural fact, to a passive survey of what has gone before, and to a permanent subjection to

economic facts, even those which we condemn, because both finance and economics will be unable to influence them. In the final analysis, if there does not exist a speed of the circulation of money in a logical, certain and objective sense, any planning policy, and in particular financial planning, is doomed to failure. If, on the other hand, such a speed does exist, once we have discovered it, not only shall we be able to establish a concrete and planned financial policy, but we shall also, by means of this policy, be able to control the whole economy.

We now come to a statement of the existence of a natural speed of the circulation of every means of payment, and it is towards this that we have directed our research. We shall now follow the reasoning which defines it.

We find that money in every form, once it has been used for economic ends, becomes multiplied by a certain coefficient so as to give an income; in short, we may say that money is nothing else but a potential unit of income. But how is this income obtained? Obviously the income is obtained by means of an unlimited series of purchases and sales, of a transformation of money into goods and vice-versa, like a continuous succession of costs and returns, if we are referring to services, or of credits and debits, if we are referring to a balance-sheet. All this in fact constitutes circulation in an economic sense, as a change and growth of utility. We may therefore define circulation as the continuous redemption and reconstitution of values, sometimes of capital and sometimes of income, according to a continuous temporal process which can have no break of continuity in the alternation of costs and returns. In fact, the characteristic of money in circulation is precisely that of continuity, for money is the conventional nu-

merical value in the action of exchange, while the commodity is qualitative and non-conventional value, and as such, discontinuous. Therefore, money has to be understood as the supreme unitary value of quantity, which is destroyed and re-created without any interruption. Wherever a break occurs, money loses meaning because it loses the capacity of expressing goods and services in numerical terms. Money, once circulation is interrupted, falls to the level of a commodity, representing only itself. It is clear then, that the practical case of the break in circulation is of no interest here. Now, precisely on the basic criterion of the absolute continuity of exchange in money, we may arrive at a definite and unequivocal determination of the quantity which interests us.

Let us consider in fact an economic commodity $C$, which circulates with a primary and conventional value $C=1$, and which has a fixed physical duration of $n$ conventional units of time. Given that commodity $C$ wears out in $n$ units of time, we must reconstitute it in the same $n$ units; therefore its value must increase by $1/n$ for every conventional unit of time, say one year, and beginning from the original value 1. Thus, at the end of the first year the gross value must be $V'=1+1/n$; at the end of the second year the same value must reach $V''=1+1/n+1/n\,(1+1/n)=(1+1/n)^2$; after three years it will be $V'''=(1+1/n)^3$; and so on, until after $n$ years, which is the duration of the commodity, the final gross value must be what is called the total, and will be expressed by $V=(1+1/n)^n$.

Now, it is clear that if circulation consists of a continuous and perennial redemption, the number $n$, which expresses duration, must be very large, with a consumption, $1/n$, very small; therefore our value $V$ becomes the limit to which the

quantity $(1+1/n)^n$ tends when $n$ becomes infinite. If this limit exists as a finite and definite number, it can be taken to be the logical speed of monetary circulation which we are seeking.

On the other hand it is well known, even to modest mathematicians, that the quantity $(1+1/n)^n$ increases as the number $n$ increases; as $n$ tends to infinity, an unconceivably large number, this quantity moves towards a maximum finite value which, in mathematics, is called « number $e$ ». This number falls between 2 and 3, and is exactly $e = 2.71828$, with a never-ending series of figures, rather like the well known Greek *pi*, used to find the area of a circle, and which equals 3.1416, once again with a never-ending list of figures.

We have therefore discovered the « natural and logical » speed in the circulation of money, arrived at as a definite and unequivocal number equalling 2.71828. We shall now discuss the interpretation of this number in economic terms.

Obviously, due to its manner of discovery, our speed expresses the maximum and total gross return, obtainable in the circulation of a primary and unitary economic commodity, considered as real value of money, which is a substitute for other goods by accepted convention. We note that the primary and unitary value is and must be understood as imperishable economic value for the complete duration of the cycle, as real value of money, conforming in every way to a commodity of unlimited use and which always remains imperishable until it has replaced itself. We have chosen this commodity as a unitary primary resource, called money in real value, and we have placed it in continuous circulation in order to obtain an income, expecting the maximum gross product which could derive from the circulation of this primary resource.

Indeed, it was to be expected that there would be a maximum in the result, because if the gross product of the circulation were increased without any limit, certainly we should all have become rich. It was also to be expected that it would be more than a minimum, at least in order to repay the cost of the undertaking. In fact, we have assumed the real unitary commodity to be imperishable for the whole duration of the productive cycle, but once the product of circulation has been obtained, it is clear that the unit of employment has to be considered as a cost to be reintegrated, and as a value to be totally substituted with an equivalent real unitary value, so that we may initiate a new cycle. We had to expect, therefore, a gross product with a result larger than two units, one unit with which we began and which is to be substituted at the end of the cycle because it is considered worn out, and a second unit which is necessary in order to give life to a new productive cycle. Thus, the result of 2.718 agrees fully with the economic expectations, being greater than the indispensable minimum of two, which is the limit below which the speed of circulation, meaning the gross product of the monetary unit, cannot fall for the continuation of the productive process. What, instead, we did not know at all was the maximum gross return, even if we guessed that a maximum must exist. In fact this maximum return, specific in size, is revealed by the mathematical investigation of the circulation of the means of payment. Mathematics has given us the result of 2.718, which is in fact the maximum gross return obtainable by the circulation of a monetary unit.

We must observe finally that the gross product 2.718 is a final utility, while the starting value $C=1$ is a starting utility. Between these two utilities, apart from the inter-

mediary utilities which are summarised in other exchange units, a certain time must intervene. This problem of time is very important, and we shall return to it in the next section. In the meantime, it is immediately useful to observe that the final product 2.718 must include this productive time, according to the definition which we gave with regard to the value of production in the previous chapter on value. If we recall also the fact that the temporal element was distinguished as the basic characteristic of the nominal value of money, we shall have to say that the gross product 2.718 is expressed in terms of real money and nominal money together, in material and temporal units at the same time. However, the starting unit and its equivalent intermediary unit, that is, the redemption of the first, meaning in fact the minimum value 2, must be expressed in the exclusive terms of real money. Recalling therefore the definitions of value already given, we may say that the gross product 2.718 includes every value, of production, of exchange-consumption, and of consumption, and all are derived from a primary and unitary value of production which is real and imperishable.

We have thus obtained and explained the logical and natural value, general and permanent, of the speed of circulation of all means of payment, wherever and however employed in productive processes. We are dealing with a measure of the speed of monetary circulation in the widest international market, and ultimately in the one world market. We are dealing with what would be the effective institutional speed, in the hypothetical case that there existed a single international market with a single institutional system of means of payment. It is evident that this logical value of the speed of circulation, permanently valid in the widest market, is outside every

conjuncture; it is the sole definite quantity for the formulation and resolution of a financial planning policy. It is precisely on the basis of the gross product which we have just established, that it is possible to formulate in exclusively financial terms either the production, exchange-consumption or distribution of goods with a foreseen and overall evaluation of the whole economic sphere. This, in fact, is what we shall go on to do in the next section with the introduction of three equations, reciprocally and systematically linked, and which summarise all the laws of monetary circulation.

## 2 - THE MONETARY SYSTEM

Let us consider the formulation of the monetary system based on the natural speed of circulation which we have just discovered. This we shall do, as logically as ever, by ascertaining the effective destination of the gross product returned by the means of payment unit.

It is clear, and moreover we have already mentioned it, that a first part must be destined for the reproduction of the primary economic commodity employed as money; and since we have established this primary commodity in one unit, its reproduction or substitution implies an availability of two units of gross product destined exclusively for a productive end. It has already been stated that these must be two units measured in terms of real money, but now we have to add a quite new and important consideration. If these two units are obtained in a productive cycle, and precisely in the time of $n$ years, they must result as a progressive accumulation of annual product quotas, or annual depreciation quotas, which will be indicated by the symbol $a$. These quotas $a$

will accumulate on the primary and unitary value, as real constituent economic units of real saving absolutely bound by the necessity of reproduction. If at the beginning we have a bound unit in the productive process, after a year we shall have the quantity $q' = 1 + a$, where $a$ is in fact the annual depreciation instalment set aside in real money. It is essential to notice that $a$, in a banking economy, is expressed in money and not in goods, that is, it is real, but quantitative and not qualitative. As a result, the various annual instalments, although they remain bound, are transformed and substituted one after the other, and give rise to an accumulation which is dynamic and not static. We shall explain better this process.

Take for example the case of the depreciation paid by a business $A$ which produces certain goods. This depreciation payment passes to the finance company which controls means of payment, and this company in turn uses the payment to finance business $B$ for the production of other goods. In this way the depreciation payment $a$ is dynamic, because it travels from one producing concern to another via the financial company which controls liquidity. This latter company, precisely by means of its intermediary function, makes the quantity $a$ accumulated in the first year productive of further utility in the second and successive years.

But there remains another important observation to be made. In a financial economy of free enterprise, in a pluralistic system of financing companies, there exist many centres of finance, and two at the very least, which control independently of each other the primary liquidity created by the banking system. This means that we have various financial groups which administer, each on its own account, a primary unit of real money, and in this way each financial group creates a given

group of financed economic concerns. On the other hand, due to the generality of the system under examination, we have to consider a single primary unit of real money, and hence this typical payment unit will have to be considered as freely available to two or more autonomous financing systems. In order that this may be possible, it is essential that from year to year the primary unit passes from one financing system to another, just as within the single system the allowance $a$ passes from one economic concern to another. The result of all this is that both the primitive unit of real money and the subsequent depreciation allowance $a$ must from year to year yield an added utility. The whole of the binomial $1+a$ obtained after the first year passes into production in the second year, and we must then consider the depreciation of this whole binomial. Thus, at the end of the second year, we shall have an added depreciation expressed in fact by the quantity $a(1+a)$. We can now establish the gross products at the end of each year. After the first year we shall schedule for reproduction the quantity $q' = 1+a$; after two years we shall have to set aside the quantity $q'' = 1+a+a(1+a) = (1+a)^2$; at the end of the third year we shall have a further quantity $q''' = (1+a)^3$; finally it is clear that at the end of $n$ years, which is the duration of a complete cycle of reproduction, the final quantity $Q = (1+a)^n$ ought to be accumulated. We have already explained for another reason that the gross product to be employed for reproduction must be of two units, therefore we can at last formulate the first equation of the monetary system, the equation of reproduction: $(1+a)^n = 2$. Let us now pass on to the second equation, that of distribution.

It is obvious that until now we have been concerned only with setting aside what was necessary for reproduction, the

two units of gross product in real money. Now we turn to consumption; what can be consumed in the productive cycle? However, before we consider consumption, we must look at distribution which is not quite the same thing. It is precisely for this reason that we made it our task in the second chapter to distinguish the value of distribution from the value of consumption, as well as from the other value of production and exchange. It is pertinent at this point to recall that distribution is return to be distributed, and that it is the value of collective and overall availability. This value of distribution is transformed into value of consumption only after it has been distributed. It is therefore important to consider distribution before consumption, with the aim of ascertaining the total quantity of gross product that may be distributed for consumption.

Obviously, if the whole gross product of a monetary unit is given by $e = 2.71828$, and if two units of the product are bound by the necessity of reproduction, then the amount to be distributed is to be found in the difference, 2.71828—2 = 0.71828. This is the value of distribution which we discussed at the proper time. It is in fact a value of net return because reproduction has already been deducted and set aside, it is a value of overall availability, because it is still to be divided, and finally it is a value expressed in nominal money because it is the result of all the social and productive work during the course of $n$ years, the time of the cycle under consideration. So we now have the overall net return, and if we indicate with $i$ the annual income or profit rate, this rate $i$ when multiplied by the $n$ years of the cycle's duration must equal the total return. We thus arrive at the second equation in our system, the equation of distribution: $ni = e—2 = 0.71828$.

We now see the essential difference between $a$ and $i$. The

former, real money, grows by compound accumulation, while the latter, nominal money, or non-material productive time, is a value which remains constant throughout the duration of the cycle, with a final and total result *ni*, which is a simple accumulation, a simple summing of the annual results.

We now turn to the third equation of our system, the one which we may call the equation of circulation, in the sense however of exchange between goods and services. We notice in fact that the exchange of goods with other goods has already been dealt with in the first equation, that of reproduction, where the depreciation *a*, real money, represents in fact an equivalent commodity or value of exchange which is added to the primary commodity or value of production. We have already introduced into the system the value *a*, which is continuously renewed as it is exchanged with other goods, undergoing a change which is only of quality without changing its quantity in material units, since it always has physical dimension of weight or, less commonly, of space. Thus the reciprocal exchange of capital goods has already been included in the equation of reproduction. We may further add that the best definition of capital is, in our opinion, that of a sum of goods susceptible to depreciation, that is, an exchange resource that is destroyed and renewed continuously. Income or profit has to be considered in quite a different way; we may in fact define it as net return which is surplus with respect to capital, and which is a return which cannot be derived from any other source than productive time in general and work in particular. Therefore income becomes expressed as services, in temporal units, quite differently from capital, which is a sum of goods expressed in material units, as we have explained several times. But this income in units

of productive time has also been considered in the equation of distribution, where it was indicated by $i$, the annual rate of net return, or else by $ni$, the overall value of net return over a period of several years spent in production. To sum up, we may say that we have considered two values in the two equations so far formulated. The first value $a$ is of capital or of continuous exchange of goods for goods and is expressed in real money; the second value $i$ is of profit or of distribution for productive services and is expressed in nominal money. At this point it is necessary to formulate the third equation in order to link these two entities, capital and income or profit, real value and nominal value of money, goods in material units and services in temporal units. We are clearly dealing with two entities which have a reciprocal relationship, and this relationship we must now define in mathematical terms.

With this aim, we observe first that the annual rate of depreciation $a$ is in effect the economic cost of the capital itself. It is the minimum effective cost of reproduction because its amount assures the substitution of the primary capital. In short, $a$ is the dynamic rate of the whole capital amount $(1+a)^n$, and it is the rate which runs through time, year by year. This running product quota is certainly renewed continuously, passing from one qualitative form to another form, but this renewal and change of form do not occur unless a certain form of capital is destroyed and then reappears under another form. This means that $a$ must always pass through consumption in order to be renewed; it must be consumed in order to be renewed and to flow through time. On the other hand, $i$ is the annual amount of the whole profit-income $ni$; it is the amount of profit-income which circulates con-

tinuously year after year and which is renewed in the form of continuously changing services. But here, too, the case is that the rendering of services can be renewed in a concrete fashion only on condition that the suppliers of these services consume a certain quantity of goods. There therefore exists a certain and continuous parallelism between $a$ and $i$. Both circulate simultaneously in time and during the productive cycle of $n$ years; both co-exist in the same time and, in actual fact, in the same place at the moment and spot of consumption. There exists a complementary relationship between $a$ and $i$, because the first value must be consumed in order to be able to be reproduced, and the second must consume in order to be permanent. A certain link between the two values is therefore inevitable. Between $a$ and $i$ there is bound to be a relationship which is an essential condition for the continuation of the productive process. It is a relationship of reciprocal consumption between the two values. We may add that the relationship between $a$ and $i$ must be an equal one. If it is not, it soon becomes so. We shall now explain the reason for this.

We must remember that $a$ and $i$ are two social values, valid for a very large and enduring market. Thus the whole value $a$, and not merely part of it, and equally the whole value $i$, have to enter into a reciprocal relationship of real value on the one hand, and nominal value on the other, both of which are consumed. In a single market of goods and services, as we are considering, the capital amount $a$, continually circulating capital, always re-enters the productive cycle either to be used by its original producer or by another producer to whom it has been transferred. Otherwise it happens that $a$ is lost to some extent for accidental reasons which are not

economic. It is clear that in the productive reinvestment, no matter who reintroduces *a* in the productive cycle, this quantity always remains equal to itself, because we are dealing with an overall quantity of the single market of capital goods. In the case, however, that *a* is destroyed wholly or in part by some disaster or other non-economic cause, it will nevertheless have to be reintegrated in its circulating measure, because by definition it represents the indispensable amount of continuous capital which is the minimum for the continuation of the productive process. We can finally complete our analysis by considering the case in which *a* is greater than its circulating value. Here we must say that this may occur, and in fact does occur, when we consider two or more distinct markets of capital goods. In this case it happens that in one of these restricted markets *a* exceeds its natural circulating value, increasing by an amount which we have previously called plus-value, and as a result of the short periods of repayment applied by the financing companies of the particular restricted market. We shall return to this problem in the succeeding chapter. Here we observe only that « supercapitalisation », equivalent to the excess of *a*, is possible and occurs only in a limited capital market distinct from other markets, where this distinction consists in fact of the different repayment periods applied in the various markets. In this way we may have two markets, one with shorter repayment periods and an excess of *a*, and the other with longer periods and lacking a quota of circulating capital. But when we consider a single market of capital goods, the single world market, we of course do not have different times of capital accumulation, and the single period of repayment is that of our productive cycle, indicated by *n* years. It is therefore

obvious that in a single capital market every excess of *a*, granted that it may occur, loses every economic significance of capital. We are dealing here with an excess that leaves the cycle and becomes simply « hoarding », and for productive purposes it has to be considered as non-existent. If it then re-enters the cycle at a given moment, since we have a single market of goods and services, every excess of circulating capital is eliminated and changed into services, that is, into profit-income. The conclusion is that in the single capital and profit market, the circulating capital amount must always be equal to itself.

Let us now go on to consider the analogous situation of *i*, in the sense that this rate of profit-income also remains equal to itself during the period of the productive cycle. In fact *i* is not a particular profit of this or that class, of this or that supplier of services, that is, of temporal services. It is, instead, the ideal income-profit of each and everyone in a single and common market. The result is that even when a partial amount of *i* is saved by someone without being directly consumed, this same partial amount re-enters consumption by means of someone else to whom it has been transferred. In the case where a part of *i* is neither spent nor transferred by its possessor by means of saving or in another form, and where it is simply hoarded, it results that this money-income loses every meaning and every value for whoever has hoarded it. In fact *i* is not real money, but is only an expression of productive time, which has a significance of value only if it is time employed in an economic way, meaning a useful way. Thus we see that every nominal value which is hoarded means only lost time for the holder of the security, while this unproductive security is substituted by another issued by

whoever has entered production. We may therefore reach a conclusion on the effective meaning of the two values, capital and income, in the sense that, in a single market of goods and services, $i$ is the social income to be consumed completely, just as $a$ is the circulating amount of capital which is totally and continuously consumed for the needs of production.

From all this preceding analysis we may derive the third equation of the monetary system. We have here a necessary relationship between $a$ and $i$, values which co-exist and coincide in time and place, always reintegrated and exchangeable one with the other. Therefore, in order to balance consumed capital and income to be consumed, this relationship must be equal. We now have the third equation: $a=i$. We may call it the equation of consumption, in preference to the other possible definition as the equation of circulation. We must state, however, that it expresses the continuous exchange between goods consumed in real money on the one hand, and services paid for in nominal money on the other.

We have now completed our formulation of the monetary system, composed of the following three equations:

1) Equation of reproduction: $(1+a)^n=2$

2) Equation of distribution: $ni=e—2=0.71828$

3) Equation of consumption: $a=i$

It is a system of three equations with three unknowns to be found: $a$, the depreciation rate of all social capital, or the circulating amount of capital in a single market of goods; $i$, the rate of social income, or the circulating amount of income in a single market of services; $n$, the minimum period of repayment of social capital, and at the same time, the mini-

mum period for the obtaining of the maximum rate of social income in a single market of goods and services.

We must not neglect to explain why we have described as minimum the time cycle of $n$ years. In effect, the net income and the same depreciation are derived from the gross product of the unit of money inserted in a quite general productive process. The product coincides with the natural speed of circulation $V=(1+1/n)^n$, whose last expression grows with the increase of time $n$. All this means that if a minimum number of $n$ years do not pass, the maximum gross return which a unit of real money can give will not be reached. Consequently, the maximum net income and the total substitution of the monetary unit will also not be obtained until $n$ years have passed. Obviously, we should wish this period to be as short as possible, in order to reach as soon as possible our social aims, and for this reason we have defined $n$ as the minimum time with regard to our expectations. In reality $n$ is neither a minimum nor a maximum, it is a single time which is that which it is. It is precisely a natural time for the cyclical reproduction of the unit of real money and for obtaining the maximum rate of social income in the single market of goods and services. Like the natural speed of circulation which we have discussed, $n$ too is a constant of nature. In fact, this constant $n$ expresses what we may consider to be the first law, let us call it the financial law, which controls in a strictly scientific manner the circulation of means of payment.

Finally, we observe that alongside $n$, the natural time of circulation, there co-exist the other two quantities closely linked to it, $a$ and $i$. These, too, are physical quantities, existing in a scientific sense and expressing two other laws

of circulation. The first, which we may call economic, gives us the natural rate of accumulation for the substitution of social capital; and the second law, of exclusively social interest, gives us the maximum rate of increment of the social product, maximum because it is reached but never exceeded.

It only remains for us now to consider the resolution of this system we have formulated. We shall do this in the next section, arriving thus at a numerical definition of the three variables $n$, $a$ and $i$, and at three laws which are connected with these three quantities.

## 3 - THE MATHEMATICAL LAWS OF CIRCULATION

The monetary system formulated in the previous section consists of three equations with three variables: $n$, $a$ and $i$. It allows one real solution, and only one, for all three unknowns, even if this solution cannot be arrived at by a direct method. In fact, the presence of one of the unknowns, precisely $n$, as an exponential value in one equation, prevents the solution of the system in a direct and immediate manner. We reach a solution instead by an indirect manner, in fact with the method of successive approximations, well known in mathematics and which consists simply of the following. We suppose a possible and probable value for $n$, substitute this value in the first two equations where $n$ is present, and obtain the other two variables $a$ and $i$, which according to the third equation must be equal. It turns out however that, where the supposed value of $n$ is not correct, $a$ and $i$ do not prove equal. It will therefore be necessary to repeat the procedure with a new value of $n$ more approximate than before. In this way, with repeated attempts, one arrives at values

of $a$ and $i$ which are less and less divergent and which have a greater and greater number of exact figures. At length we arrive at the following solution of the system, which is the only solution, and which has been defined with ten precise figures for $a=i$ and with nine precise figures for $n$. The solution is as follows:

$$i=a=0.073389757 \text{ and } n=9.78722228$$

This signifies that the natural time of cyclical reproduction is nine years and 287 days, while the rates of maximum profit and of redemption, which are equal to one another, are about 7.34% for each of the units of $n$, that is for each year, as this is the unit used for the check and verification of the profit.

In the writer's « General Theory of Income », previously mentioned and to which we now return, it is demonstrated in a mathematical manner that the rate of income or profit can fluctuate around the natural balancing value of 7.34% through a range of 0.16% more or less. It therefore fluctuates between 7.18% and 7.5%, with the result that an annual 7.5% is the maximum conventional and practical rate. We can thus assume that this final value represents the maximum rate practically possible for the increase of income. Obviously, if one takes $i$ as 7.5%, the time $n$ is shortened and becomes in fact precisely 9.577, or nine years and 210 days, while the rate of redemption $a$ slightly differs from $i$, becoming 7.508%, a difference of 0.008% which in practical terms may be disregarded. And so we can formulate the three laws of monetary circulation in the following way.

The first law, relative to the minimum time of reproduction of the real money unit may be formulated thus.

There exists a natural cyclical time for the reproduction of the unit of money in real value. This time is precisely nine years and 287 days, which can be reduced in a practical and convenient way to a minimum time of nine years and 210 days. The conclusion of a monetary cycle with value unchanged for the unit of money and with the acquirement of maximum income is impossible in less than this minimum length of time.

The second law, relative to the accumulation of capital, may be summarised in the following manner. There exists a natural rate for the accumulation of capital in real money, and this is 7.34% per year. This rate, in a single market of means of payment, may reach a maximum of 7.5%, while beyond this maximum the aforesaid single market breaks down with the formation of capital plus-value in a restricted market and with the consequent « under-increase » of income in another market.

Finally, the third law concerns the maximum development rate of income. There exists a natural and optimum of income increment in nominal monetary values or in units of time. This rate is 7.34% per year, and may in practical terms reach a maximum of 7.5%. Beyond this maximum, however, the new income is bound to reveal inflation due to the lack of a corresponding equivalent in real money.

Stated in the simplest way, these are the mathematical laws which govern the circulation of means of payment. It is now necessary to comment on them, in order to arrive at their economic and social significance.

The first observation to be made is that there exist very precise conditions of balance in monetary circulation. These conditions govern both the accumulation of capital and the

formation and distribution of income. We are dealing here with conditions which are quite objective, with scientific value and validity. In virtue of these conditions, any unit of money is reproduced with its starting value within a natural and mathematically defined period of time; meanwhile capital accumulates according to a definite single rate which, in short, is the rate of consumption in present and actual income, already distributed, and in the sense which we have earlier clarified as value of consumption in real money. We shall see as we proceed that it is precisely to this rate of capital accumulation that we must turn our attention in order to remedy the errors of plus-value. But here we must halt for a moment while we make clear what is expressed in fact by the rate *a*.

We notice first of all that *a* is a totally dynamic value, continuously renewed, moment by moment, in an unceasing circulation in the exchange of goods for money and vice-versa. But this continuous money-goods interchange is obviously brought about by producers already inserted in a business circle, and it occurs in such a way that the rate *a* is greater and faster as the circle of exchange between producers and consumers becomes wider and more dynamic. Therefore *a* is a rate of consumption, permanent and present, with all the characteristics previously analysed with regard to the value of consumption. It is worth repeating that *a* is income already distributed and consumed, it is real and present, and it is to be attributed to whoever is already inserted in the circle of consumption, and in greater amount to whoever is invested, for whatever reasons, with a greater power of consumption. This is the important economic interpretation of the rate *a* of capital accumulation. Precisely

from this interpretation there arises quite clearly the social importance of maintaining $a$ within the limits of natural accumulation and in accordance with the rate of maximum accumulation defined by the second monetary law.

The second observation to be made concerns the economic and social interpretation of the rate $i$. Whereas $a$ is the income of those who have earned and spent, $i$ is income which has yet to be earned and spent. Just as $a$ is equivalent to the value of consumption, so $i$ is equivalent to the value of distribution as we have defined it in the past. While $a$ is in effect a rate of consumption in real and present money, $i$ is a rate of development in nominal money, projected into the future, so that $i$ is to be attributed to those who have not yet consumed or to those who have little power of consumption, no matter what the cause for such lack of consumption. It is in fact for this reason that $i$ is the social parameter of the monetary system just formulated and resolved. It is from the acquirement of $i$, as the maximum rate of the development of income, that the effective solution of the social problem must come.

We notice next that the acquirement or otherwise of the rate $i$, at its fullest extent, is not definitely independent of the size of the rate $a$. Here we must recall and repeat what was stated in the second monetary law, that of the accumulation of capital, where it was noted that if this capital accumulation exceeds the maximum annual rate of 7.5%, the single market of means of payment inevitably breaks down, with the formation of a restricted market characterised by « super-capitalisation » to the detriment of other economic areas which consequently lack an increase in income. All this means that there is an indissoluble and indestructible link between the rate of capital accumulation or rate of present consumption $a$, and

the rate of development or distribution *i*. It is in this link that is to be found the essence of the whole social problem, which in the final analysis is that of the disparity and disequilibrium between industrialised and underdeveloped areas, between economic sectors which are ultra-dynamic and over-remunerated on the one hand and stagnant and under-remunerated on the other, between businesses in expansion and in recession; in short it is the disparity between those who have great and little power of consumption.

It is quite clear then, in the interests of the whole national and international community, that the rate of accumulation *a* cannot and must not exceed the annual maximum of 7.5%. If this happens, as it does in fact happen in some areas, the result is the formation of plus-value and the over-accumulation of capital in these restricted areas, with super-consumption for certain productive sectors, for certain privileged concerns, and, in short, for certain individuals. Simultaneously there arises the inevitable contrary problem, that of the lack of income, the problem of social injustice for certain other zones, for certain other concerns, and for certain other individuals. We have now arrived at the point of stating with calm certainty that the first cause, the radical cause, of every social injustice is determined by super-capitalisation forced beyond the natural and necessary rate of accumulation, which derives from the rapid times of reproduction, that is from the rapid times in the repayment of invested capital.

Finally, the third and last observation which has to be made on the monetary laws outlined above concerns the connection between the social relationships in general and these laws. In other words, what is the position of man, regarded in all his social activities of an extra-economic nature — whe-

ther they be political or cultural activities, artistic or scientific — with reference and in relation to the scientific laws of monetary circulation? It is obvious that with this query we have posed the social problem in the widest possible manner, far beyond the narrowly economic problem, and precisely in the widest sense of the problem of relations between one man and another, where both are working together and to the same end. Sometimes these ends are economic but they may also be of an extra-economic nature, even if they are always concerned with ends of general utility. With regard to this, we feel obliged to say whether we believe there exists a link, and exactly what link, between social relations in general and the monetary laws having a natural value and validity. We must therefore pause for a while on this question.

Let us say first of all that the laws dealing with monetary circulation are, at least in our opinion, the only scientific and exact laws which exist in political and logical economics. We have here precise laws, numerically defined, with a verification in physical reality, and which are objectively valid for all, like all other physical and natural laws. It is for this reason that we do not hesitate to affirm that these laws, the monetary laws, are valid and operate in social relationships even without man's wishing it. We repeat again that we are dealing with laws like those which control the movements of the heavenly bodies, of the planets and their satellites. Just as no man can claim to be able to alter the rotation period of the Earth around the Sun, or the length of a lunar cycle, similarly no man will be capable of altering the times of the natural circulation of means of payment. Monetary circulation, in all its forms of permanent and continuous current value, is subject to natural cycles which man cannot change. If we

happen to alter the cyclical period of reproduction with its constant value, and if in effect changes occur which are brought about by man, generally aimed at shortening the minimum cyclical period, in this case we shall find as we return that our money has a different value than it had at the beginning, usually a lower value than that of the original issue. With this depreciated value our money begins the next cycle, and gives rise to what we may call the slow but irrevocable « secular devaluation » of money. Now, men in different times and places have changed and are changing the natural times of circulation, but with the negative and certainly antisocial result of changing the value itself of money. The result is that the money of the original issue, regarded as a permanent and indestructible means of expressing value in time and space, loses these characteristics of the moment of issue, and degenerates, at the same time perverting the economic relationships between men and creating pockets of wealth and poverty, and hence social injustice. Stated briefly, this injustice is nothing more than the consequence of believing it possible and opportune to violate the natural times, which are also the correct times, of monetary circulation. This violation of economic times, a violation which we may say is of historical origin, has brought about the creation of restricted markets, or even closed markets, with the consequent disparity between those who have and those who haven't, and with the consequent deterioration of all the social relations between men, even the extra-economic relations.

However, having arrived at this point in our reasoning, we ought to clear up an important misunderstanding. At some time and place, in fact, someone recognised money as the cause and culprit of the terrible problems of social relations,

both economic and extra-economic. He concluded that the elimination of money itself would lead to the elimination of social injustice. But this is a grave misunderstanding, which has to be immediately clarified.

We realise indeed that it is not money *per se* which is responsible for social disparity, because money, far more than a means of exchange, has to be regarded as a bearer of values, a unitary means or value of distribution. In this second interpretation money is a highly social implement, useful, and which cannot be suppressed if one wants to resolve social injustices. In order to prove this beyond doubt, we have only to consider the fact that we can claim that it is possible, even if not useful, to eliminate money as a means of exchange and revert to the primitive exchange of goods for goods; on the contrary, we cannot eliminate money as a means which carries value, for it is indispensable for the sub-division and sharing of goods in time and space. In other words, if we have a certain commodity, considered only as a single and indivisible whole, we can of course exchange it for another commodity, and so we have no need of money. But if we have to divide it among several people, or at different times, then we must have a unitary value which represents a divisional amount of the common commodity to be divided. This unitary value is in fact the distribution value of money, its social value, and that value which is essential in order to bring about social justice, or distributive justice. The misunderstanding to be cleared up, therefore, is that social money is money interpreted as value of distribution and not as value of exchange-consumption. This distributive money, carrying value in time and space, carries out in a concrete manner its social function of dividing

resources, only if it remains money always equal to itself, that is, as an indestructible value throughout the time and space where the distribution of the goods has to occur. If, instead, the social money depreciates along the cyclical curve of its distribution, it is quite clear that the monetary means loses all significance as general and social value of distribution, and is debased to particular and non-social value of exchange-consumption, according to the traditional utilitarian interpretation.

These considerations permit us to affirm that the monetary means, understood as carrying value through time and space, is the valid implement for bringing about the distribution of goods, with the consequent elimination of social injustices. But it is necessary to control the means of payment in such a way that each remains equal to itself, characterised by indestructibility, and maintaining the same value from the moment of issue or payment until the moment of return or encashment. On the other hand, in order to realise this constant value, it is necessary to respect the natural times of circulation, for these are the result of scientifically valid and precise laws. Any alteration of these times, whether carried out by governments, businesses or individuals, has therefore to be considered as an act of anti-social economic policy, to be strongly challenged in the interests of all society.

At this point, having made the necessary classifications, we may return to the question posed earlier on the relationship which we believe links man's extra-economic activities and the laws of monetary circulation which we have formulated.

Obviously, since we are dealing with natural laws which are objectively valid, we have yet again to repeat what we

have already stated, that all men, whether consciously or unconsciously, are in some way conditioned by these laws, no matter the economic or extra-economic activity which may be carried out. However, once we have established this inevitable conditioning, we have to divide and separate men into two quite distinct groups; those who accept the existence of economic laws which limit human activity in some way, and those who deny such a limitation imposed by economic circumstances which are objectively valid and which we cannot contradict. We point out the difference between the two groups, because it is relevant to examine where one or the other leads, with the inevitable reciprocal interference in social relationships.

Truly, whoever recognises the fact that he is conditioned by certain economic laws is already on the right path to free himself from such a limitation and to become, in this way, a truly free man. It must be made clear, in fact, that to admit economic laws influence and impose limits on every human activity does not at all mean that we should accept the situation as a permanent fact, an eternal verity, of social relations. On the contrary, the admission of certain natural laws, which society has been wrong in violating, signifies a willingness to re-establish a just social balance according to the laws which have been violated. This is undoubtedly the sole method for effectively freeing all social relationships from the influence of economic laws. These economic laws tell us that the just and natural balance of social relationships has been altered by the wrongful use of institutional systems, the monetary means for example, which could and can be used to strengthen and develop solidarity among men. It is without doubt an indispensable task to re-establish a just social bal-

ance as a condition and a necessary road for the effective freeing of men and their social relationships. If men become aware of the necessity and of the possibility of resolving the social injustices and if, once they have admitted this, they undertake to manipulate the social institutions in this direction, then, and only then, will they set out on the true road towards freedom.

The case is quite different, however, with all those who obstinately refuse to see the conditioning and limitations imposed by irrefutable economic laws. Their position does not lead them to freedom, neither for the individual nor for all. It is to be supposed that the sceptical in social questions lack the basic understanding of the fact that the relationships between men, whatever the nature of the relationship, are always a single whole, valid or non-valid in its complex interrelations. Every social relationship is undeniably a relationship of solidarity, no matter how or why such a relationship is established; a « differential » solidarity can therefore never exist, valid for certain sectors, political or cultural for example, and not valid for others, for example economics. It is for this reason that we cannot aspire to freedom for everyone without desiring, at the same time, a just social balance for everyone. As far as we are concerned, there is no doubt that freedom and social justice go together, with an indissoluble relationship between the two terms. Whoever strives for freedom must also strive, and in fact does strive, for social justice, and the opposite is also true. In this way freedom and social justice exist or do not exist together.

However, apart from these quite obvious considerations, there always exists the position of those who obstinately deny the validity and the permanence of the relationship between

economics and every other human activity. Therefore, leaving aside every political philosophy, we are led to conclude that the contrast between the two positions is a result of history; it has existed for a long time, and certainly since man began to talk of economics as a science. Moreover, we believe that such a contrast is destined to remain for a long time in the future, and that its solving will never occur on theoretical grounds. The sceptical, in fact, will never yield ground on reasoning and demonstration, however obvious they may be. We believe, instead, that the contrast will be resolved on factual grounds, along the course of history. Whoever believes in scientific solutions of social questions must take the first step of imposing, by the facts, his own ideas. What we wish to say is that whoever believes in a solution of social problems must urge forward, on political and cultural grounds at the same time, the correct planning policy directed and aimed at the elimination of all economic disparity, starting from the large international areas of underdevelopment, through national areas, down even to the business level. It is with this end in mind that we shall develop, in the second part of this book, themes which are more appropriate to economic policy, in particular where it concerns planning policy. We shall do this on the basis of all the analyses and conclusions which we have made until now with regard to logical and political economics.

## Chapter IV

# Economic policy and the social question

Let us state immediately that any economic policy, aimed at tackling and solving the social question, must start from social plus-value. In more exact terms, we may say that it is of crucial importance to know the origin and position of plus-value, which is a focal point of social policy. It is therefore true that it is only after a sufficiently detailed analysis of the growth and appearance of social plus-value, that one may go on to discuss policies appropriate for the social ends in mind.

In the previous chapter we exhaustively explained the natural laws which govern the circulation of money. It is our precise tenet now that social plus-value is created by the breach in exchange relationships of the second and third monetary laws, which established maximum values for the rate of capital accumulation and for the rate of development or increase of income. We are dealing, in fact, with two limits which cannot be exceeded: should this occur, the sole possible cause is the exercise of credit and financing over periods of time which are too short and with a high rate of interest. It is quite clear, that only as a result of short periods of repayment and high banking and financing profits, may we have excessive values for $a$ and $i$. This leads to privileged areas of capital concentration and of high, inflated incomes, which co-exist alongside other underdeveloped areas lacking capital and

income. The obvious result of this is the collapse of the single market for means of payment and the creation of closed and restricted markets, each of which will have its own particular circulation speed for these means of payment. In more exact terms, this speed exceeds its natural value (2.718) in areas of super-capitalisation, while remaining way below this value in areas of industrial recession or low income. The harmful consequences of all this are facts known to everyone as social evils. However, it is very clear that the central knot of the problem is not to bemoan the existence of these evils, but to discover their origin. Unless this is done, no solution will ever be found.

It is therefore necessary to establish, as a starting point, that social plus-value is created as a result of the mistaken management of the credit and financing agencies, whose constant aim is the swift return of capital with the maximum absolute profit. However, the aim of these financing companies ought to be to offer their credit facilities according to the natural repayment times and according to a profit which has a well defined limit and which has, therefore, to be considered as a maximum which is relative and not at all absolute. The third law of monetary circulation gives us the rate of 7,5% as the income or profit limit which cannot be exceeded; beyond this figure there is an inflated profit.

Having clarified the origin of plus-value, we can now go on to establish its precise position. Plus-value, we have seen, is created by short-term credit at a high rate of interest, and it cannot be found anywhere else but within the system of credit companies, in the two forms of financing (long-term) and banking (short-term) companies. This allows us to exclude the treasury from the total group of concerns which cover

the plus-value of circulation. The treasury, in fact, is to be considered as a simple handler of money which is paid in and paid out with no form at all of credit, and since this is the case, no treasury can be a source of plus-value which is created only through credit relationships. The treasury is thus excluded, and social plus-value must be found among the concerns which offer banking and financing credit. And let us make clear, once and for all, that by banking credit we mean short-term, or commercial, credit; by financing credit, long-term or industrial credit. In practice, a clear differentiation between these two types of credit, banking and financing, is not always possible. For this reason we have to say, for the moment, that plus-value is found within the banking and financing system, and that the companies of both types in this system constitute a joint monopoly of the circulation of means of payment, with an excess of unused liquidity in the sphere of their operations and the creation of closed financial markets.

Having arrived at this point, we continue with our analysis in order to answer another question. How is this plus-value revealed? We have already said that plus-value consists of an excess of liquidity; we then excluded the treasury as a source of plus-value, because it does not offer credit and has to be considered as controlling what is properly and truly legal tender and not money for credit; and so plus-value can only reveal itself as money of the banking or financing company. But here the position of plus-value is restricted even more, because in effect, as we have already seen in another section, the long-term (financing) company does not create liquidity. By means of the credit offered to industry according to periods of repayment which are different from

those of commercial credit, the financing company puts back into circulation, with longer periods of reproduction, the liquidity which was originally created by the banking company by means of short-term, in fact very short-term, credit. Therefore the plus-value of circulation, which began with the shortest term credit, is bound to be revealed as banking and not as financing money. The prime and original source of plus-value is the banking company. In short, it is this concern which forms the monopoly of the circulation of means of payment, with an excess of liquidity in money issuing from the banks, and with the creation of the closed market of capital concentration starting from short-term credit. This explanation of the initial source of plus-value is of great importance for an industrialisation policy in areas of recession. It is clear, in fact, that a policy of facilitated industrial financing, in favour of depressed areas, is of itself not enough to solve the problem of industrial underdevelopment. Before we come to the question of industrial financing, we have to solve the other question of banking, or short-term credit, monopoly. If such a monopoly continues, the result is that the new businesses in the depressed areas, financed in the long-term, very soon run into difficulties caused by the lack of circulating capital, or liquidity. If the banking monopoly, firmly anchored in the super-capitalised area, continues as such, liquidity migrates from the depressed area to that of capital concentration, and the problem of the territorial disequilibrium of capital and income remains unsolved.

But let us return to our analysis of plus-value and its expression as banking money, in order to make some observations on the structure itself of banking money. In fact, such money has different forms according to the institutional

systems of different countries, but in general terms, we may divide the specie of banking money into two groups. A first group is that of cheques, drawn on current accounts, and used for the most part by commercial and industrial undertakings as a means of payment drawn on one banking establishment or branch. A second group, on the other hand, is that of the money orders and cheques issued directly by bankers, and which can usually be presented at any branch of the bank, wherever it is situated, and which are therefore known as « free » cheques, to differentiate them from cheques which are drawn on one particular bank. An immediate result of this important difference is that, while cheques drawn on one bank have to be considered as payments from one business to another via a banker, free cheques are, in effect, payments between banks.

Given this, we consider the essential fact that plus-value is such because it lacks a real equivalent in industrial or commercial goods, while cheques, means of exchange between operators in the economic field, must indeed always have such an equivalent from the very start, and must be covered by natural values from the moment of their issue. In brief, therefore, plus-value will be expressed in the form of free cheques, and more exactly, as a cheque issued by a banker to be paid by another banker in a relationship of continuous circulation between banks. Through this relationship the banker's cheque, carrying plus-value, is continually nullified and re-created, transferring the plus-value from place to place as unused money with no equivalent or cover in natural industrial or commercial values. If we agree to define free cheques and orders as money moving between banks, we may arrive at a simple conclusion, to which we have been moving

with regard to the origin, position and expression of plus-value. In fact, plus-value is created by banking concerns, is to be found there, and is expressed as money moving between banks.

Now that we have established the above point, which is a central one for the social problem, we can go on to discuss and evaluate the various economic policies with regard to the social question. We shall have to consider thoroughly certain criteria, both old and new, in order to arrive at an elimination of the plus-value of circulation or at its use for social purposes. This is precisely what we shall do in the following sections. We shall begin with the policies of free exchange, move on to the principles of collectivism, and conclude with a final section on new criteria of economic policy which are directly drawn from our theories on value and plus-value.

## 1 - FREE EXCHANGE

When one speaks of free exchange, it is necessary to make an initial distinction between free exchange in international trade and free exchange in internal trade. These two aspects have to be dealt with in a different manner, because the implications and effects of a particular principle of economic policy differ, according to its application as foreign or internal policy.

By free exchange in international trade, we mean the free circulation of goods and services by means of exchange between country and country, as opposed to the protectionist policies aimed at safeguarding by means of tariff barriers, as well as with particular international treaties, national products or those of a restricted group of countries which unite for this precise purpose. When the problem is stated in this

manner, it is easy to see that, according to the analyses we have made, no concession may be made to the protectionist theories. At the same time, we witness the complete confirmation of the utility, and indeed the necessity, of an international policy of free exchange for the good of social progress, as well as for that of economic and technological progress.

Indeed, we have already said that the plus-value of circulation leads to the collapse of the single market of means of payment and to the creation of restricted markets. We now add that the complementary fact is also true, that a policy aimed at creating closed, or at least restricted, markets cannot fail to consolidate and increase the existing positions of plus-value in monetary circulation. In fact, we know very well that plus-value is created as a result of the high rate of capital accumulation and as a result of banking monopoly or short-term credit. It is quite obvious that every restricted market is bound to lead to a consolidation of such a monopoly and the plus-value which co-exists alongside it. Therefore every policy of free exchange has to be regarded as meaning a truly social policy, in contrast with every protectionist policy. Moreover, it has to be noted that the arguments adopted in support of protectionism, on a national or industrial scale, have to be considered arguments which regard general policy, rather than strictly economic policy. According to protectionist thinking, it is a question of defending national production, or a given sector of production, and of safeguarding the existence and importance of the state in general, as a political and military reality supported by a strong industrial machine even, if need be, in the face of every economic principle. So, in effect, every protectionist policy is not properly an economic policy in international trade, but is a particular

aspect of the « power politics » adopted by a state for general political purposes. Of quite a different nature, however, is the policy of international free exchange, which is a basically economic policy, formulated and carried through in accordance with economic laws. These laws, we may now add, are also social laws, provided that we mean by society, not a single state or national community, or even a restricted international association, but, as one ought to, the whole international community.

A rather different argument has to be followed, however, when we have to apply or otherwise a policy of free exchange inside a state, or at least within an organisation using a common currency. This is because the exchange relationships inside an area with the same currency are quite different from the relationships outside this area. The essential difference between the two types of exchange is as follows. International exchange, in a direct or an indirect way, is an interchange, that is, an exchange of goods for goods, where money either does not enter at all, as in exchange by clearing, or else it enters only as a means which is exclusively intermediary and temporary, and whose value depends very closely on the inter-change registered by the balance of trade. Internal exchange, on the other hand, is first of all an exchange of goods for money, and in this exchange money takes on its own particular value, which we have defined earlier as value of consumption, a particular internal value which in foreign trade does not exist. In other words, while the relationship of international exchange is resolved in an effective exchange of goods or services, with an equivalence of the values exchanged, the relationship of internal exchange becomes predominantly and principally a credit and financing rela-

tionship between a banking and financing company, on the one hand, and a commercial or industrial concern, on the other. We notice that in this second case, the internal exchange of goods for money, the contractual powers of the two parties are not at all equal. As a result of the oft-cited theory of the commanding exigency of liquidity, it is the banking or financing company, holder of the liquid assets, which imposes its demands and its policy on the commercial or industrial concern. The latter have no choice but to align themselves with the former. Therefore, in the relationship of internal exchange, in the goods-money relationship, which may be regarded as the most important of the social relationships inside a given monetary area, the two terms of the relationship are not at all balanced and equivalent in their causes and effects. There exists instead, in these relationships of internal exchange, an obvious lack of balance, to the advantage of all those concerns which create, or at least control, liquidity, and to the disadvantage of all the other concerns which control various goods and services. This lack of balance is, in fact, the permanent factor which conditions and hinders the whole productive development of a given monetary community.

At this point in our analysis we may arrive at a very important conclusion. If we refer to international exchange, we can happily advocate free exchange and be certain that, in doing this, we are following a policy which is truly social and helping social progress. If, on the other hand, we have to apply the criteria of international free exchange, in the economic policy inside an institutional community with a single currency and the same system for the management of liquidity, in this case we cannot advocate free exchange, for by doing this, we shall certainly advocate an anti-social policy.

In this way we arrive at a basic and undeniable principle for every economic policy aimed at a solution of the social problem. This principle has two main points: firstly, that free exchange, valid and socially useful in the sphere of international relations, becomes a conservative policy if applied to the exchange relationships inside a given monetary area, because of the existence there of plus-value and banking monopoly; secondly, an economic policy for the social question requires, therefore, measures of control for the system which manages the liquidity of the institutional area in question.

We shall see, as we go on, the manner and terms by which one may best explain this necessary interference. Here we had only to stress its necessity, together with a statement of the social utility of free exchange in international relations, while establishing how and why the two statements are not in any mutual contradiction.

Let us go on now to consider the relationships of exchange of services inside a sector of production or business concern. We shall attempt, that is, to evaluate the relationships of internal exchange in the light of work relations. This evaluation has obviously to be made in accordance with our theories on value and on the plus-value of circulation. It is here in fact, alongside a consideration of free exchange, that one may introduce a brief analysis of the trade union relationship. It was a result of new ideas on free exchange that the old corporative unit in the factory disappeared, to be replaced by ever larger and more influential organisations and associations of workers and employers. Encouraged by the ideas of free exchange, powerful but parallel and opposed organisations of entrepreneurs and workers were formed, with resulting conflicts, often bitter, over work relations. We must now attempt to evaluate these conflicts.

The starting point of our reasoning is still that of the origin and position of plus-value, and we must recall what we said before in the second chapter, when we analysed the value of consumption: social plus-value is not created by the relationship between the employer and worker within this or that business. We said, and here we repeat it, that plus-value, at least where the major social disparities are concerned, is created by a relationship which is much more complex and more important. It is a relationship which exists between businesses and not within a single business, and is precisely that relationship which exists between the banking and financing concern, on the one hand, and the commercial and industrial concern, on the other. Therefore, with regard to a single concern, or even to a single sector of production, matters are such that employers and workers, apart from whatever their conflict may be within the company, are conditioned together by a plus-value of monetary circulation, which remains external with respect to the productive concern and has to be placed within the sphere of banking monopoly. The powerful exigency of liquidity, as we have stressed since the second chapter, imposes its law on both the profits and the wages of trade and industry. In this way, it is only after these profits have been made liquid, and after the company liquidity has been realised, that one may discuss, and perhaps contest, distribution within the productive concern.

If, instead, the company liquidity is not realised, and as long as it is not realised, the profits which are in the warehouse and not the till, are quite useless. It is therefore clear that, since there exists a plus-value outside the industrial concern, and since the concern is conditioned by this plus-

value, there certainly exists a limit for the conflict in work relations within the firm. We are dealing, of course, with a limit which cannot be exceeded, because otherwise it is the whole concern, as a place of work, which ceases due to the impossibility of facing the conditions of operating and, consequently, the financial burdens of wages and repayment of credit. If we ask what the real limit for business distribution is, there can only be one answer. The limit in question is to be found in the particular balance sheet of every productive concern, correctly evaluated in terms of liquidity and availability of assets, with the relative countervalues in sales potentiality.

Therefore, the trade union conflict cannot go beyond the limit permitted by the liquid potentiality of the company balance sheet, because in the interest of wages themselves, apart from profits, the company's existence must be assured as a place and source of work. But on this side of the limit, the trade dispute for distribution within the firm is justified and finds an ethical and legal basis, as well as social, in the principle that each should be paid according to his worth and needs within the sphere of the company's potentiality.

At this point, we may also establish the most valid position which the state may assume, in the name of the national society, with regard to trade disputes. Obviously trade union organisations must be free to carry out their struggle for distribution; but as soon as there has been ascertained the existence of a limit, beyond which the whole business risks financial ruin, while a more general social interest desires the conservation and continuation of production, at this point the state cannot ignore the conflict. The state will mediate in the dispute, and possibly solve the problem by arbi-

iration when it is about to exceed the breaking-point which we have discussed. This is the positive role to be assumed, in trade union policy, as it evolves from our analyses of value, money, and the plus-value of circulation. However, we must conclude this section with a final observation, stressing once again the fundamental notion that the effective solution of the social problem does not depend on this or that policy of the trade unions, nor even on the disputes over distribution within a business. Such conflicts are always striking and stimulating, but they are not decisive for the elimination of the great social disparities. Trade union relations are always relations of a certain sector, which have always to be placed in a much wider and more complex context, that of social relations seen as relationships between businesses. There exists a plus-value of monetary circulation: this is the focal point of the social problem, and this plus-value is created outside the productive concern, in a commercial relationship between companies, and arising in fact from the faulty management of credit and investment. This mistaken management is carried out in such a way that it contradicts the natural laws of monetary circulation, which impose the acceptance of two well defined maxima, the rate of capital accumulation and the rate of income or profit development.

When all this has been ascertained, the positive and decisive role of the state with regard to the social problem is that of following the correct policy for the control of banking credit and industrial investment, where the first is much more important and vital than the second. We shall go on to discuss this in the third section of this chapter, after a discussion, in the next section, of those policies which may be grouped under the heading of collectivism and nationalisation.

## 2 - COLLECTIVISM AND NATIONALISATION

We begin by saying that by collectivism, in the general sense, is meant that particular economic policy which affirms the need for public control of the means of production and exchange. These means, in the general interest, have to be controlled by the state, by minor public concerns, or by other organisations of a public nature which are not always well defined in their constitution. When we say means of production and exchange, we mean every concern whose purpose is the production or supply of goods or services, every concern which controls the exchange of values of a qualitative or quantitative use.

Quite obviously, this kind of economic policy is in distinct contrast with that other policy which affirms the need for free enterprise, promoted and undertaken by individuals or by private organisations with autonomous powers of decision with regard to public authority, be it the state or minor public concerns. In opposition to all those who maintain the need for free and private initiative, collectivism advocates public control in the name of a more general interest. This interest is precisely that of resolving social injustices, the disparity of social conditions, the disequilibrium of production and income, and unemployment and under-employment. It is clear then that collectivism is always understood as being instrumental and as being a necessary policy for the attainment of a society which is more advanced in technical means, more evolved in its way of life, and, in short, more just in its social relations. We are dealing, obviously, with aims with which the present writer is in complete agreement, so that the discussion moves from the aims to the means by which one may reach these desired ends. In other words, we must

consider carefully whether collectivism is a valid policy for the successful resolution of the social problem, or whether it is valid only up to a certain point. Once we are quite agreed on the aims, we can deal with this particular difficult question.

Above all, we observe that an evaluation concerning the method in question, if it intends to be logical as it must be, cannot leave aside the theoretical analyses of logical economics on value and plus-value. In virtue of these, we may say that the principal cause of social injustice is plus-value, and the advocates of collectivism support us in this. For this reason we shift our investigation to the origin and place of plus-value in order to arrive at the evaluations towards which we are moving. It is not by chance that we have paused for some time on this question. From the start of this chapter we have considered and discussed in depth social plus-value, the central point of the problem, precisely because we knew that from such an analysis could be derived important and decisive evaluations with regard to every policy for the social question, including that of collectivism now under discussion. But we must go even further back in our treatise, to that point where we dealt with the interpretation and explanation which Marx gave of plus-value and its position. Only by doing this may we arrive at a correct evaluation of the collectivist policy.

According to Marx, as we have seen in the second chapter, plus-value is created by the relationship between employer and employee, in the form of overwork, that is, excess work which is not paid. It is overwork which passes from the value consumed in money-salary by the worker to the value created in money-profit by the capitalist. Therefore, Marx goes on, plus-value is created within every single concern, and it is precisely within this single business sphere that it is to be

found, expressed in warehouse profit, or goods. Once this analysis of plus-value has been accepted, it is clear that the only economic policy to be followed for social ends is the public control of the means of production and exchange. Indeed, when the existence of plus-value as goods within the heart of the producing concern has been ascertained, a correct social balance can be re-established only if the state or various public concerns acquire this plus-value in order to distribute it for the benefit of society. It is clear then that to obtain such plus-value in goods, there is no other method but to establish the public control of the means of production and exchange. Here we arrive at a first important conclusion. If the explanation of plus-value is that given by Marx, the correct method of solving the social problem is an economic policy of collectivism. If, however, Marx's analysis and explanation are incorrect, in that case things will be different, and it may well be that, even beyond every original intention, a collectivist policy may not lead to social justice. It may lead instead to a partial and limited shift of balance in social relations, of no final value at all for the purposes of a true and genuine social justice. Therefore, the social question is fundamentally a question of method. It is in fact, as Marx asserted, a scientific problem rather than a political one. We shall now give our evaluation of collectivism with regard to method, as it follows from our ideas on the plus-value of circulation.

Beginning with our theory of value, we have always maintained and attempted to demonstrate our fundamental theory, which is that social plus-value is not created by a work relationship within the sphere of this or that business concern. Plus-value of this kind, as we have said before and now repeat, can in fact exist, but it is qualitative and local-

ised, and may easily be eliminated by a transfer of values in goods inside the business. If this were the only end to be attained, the efforts of the trade unions for distribution, carried out within the concern or, at most, within the particular productive sector, would be enough in themselves. On the contrary, however, social plus-value, (by which we mean the overall plus-value which concerns a whole monetary area, and precisely that plus-value which matters for the purposes of the great social injustices), is in fact created by an inter-business relationship. It is a relationship between the financial or banking concern on the one hand, and the industrial or commercial concern on the other. We are dealing with two quite distinct types of concern, and each has to be considered a single and total concern. The first controls means of payment or quantitative values, while the second controls goods or qualitative values. Our firmly held opinion is that it is from the relationship between these two types of concern that plus-value is created.

Now, if this opinion is correct, the important consequence is that collectivism will not lead us to social justice. Provided that such a policy is correctly applied, we shall be able to reach a better social balance in an area which is not industrialised, but this new balance is to be considered neither final nor decisive for the purposes of social justice. In fact, with public control we shall resolve problems of greater production with regard to a pre-existing condition of recession, and the greatest social target which we may attain will be full employment. However, we shall not be able to resolve the general problem of distribution, which is the truly decisive problem for social purposes, and which consists of the elimination of the disequilibrium between the financial and eco-

nomic sectors, where the law of the first is imposed on the second. It is the first sector which hinders and stifles the second in its productive development. It allows development up to and not beyond a certain limit, which is in fact that limit which allows the continuance of the financial plus-value of circulation.

If this is the true state of affairs, even if we pursue a policy of total collectivism, we shall not eliminate financial monopoly, in its particular banking form. This is the monopoly which prevents productive development beyond the limit of full employment, and which prevents that development which is essential for attaining distribution according to needs rather than according to work. We realise that distribution according to needs is effective social distribution, which goes beyond the possibilities of this or that state, this or that monetary area, and which embraces international relations between rich and poor countries. This allows the transfer of income from the former to the latter, independently of whoever takes part in the creation of this income. Even after collectivism has been introduced, social justice cannot in our opinion be attained, because collectivism does not eliminate social plus-value, which continues to exist even within a system of complete public control. We shall always have an excess of idle liquidity, as productive time unduly drawn from productive sectors by non-productive ones, as a useless and unsocial element which depreciates money between the beginning and the end of the productive process. In this way money cannot fulfil its function, which is distributive and not of exchange, of unitary value of resources to be transferred, equal to itself, in time and space. Collectivism, in fact, misses its social target, because it is fundamentally a policy for pro-

duction and not for distribution. Public control is useful for increasing resources, but not for eliminating plus-value, which is not the goods in this or that industrial warehouse, but idle inter-banking money. It is expressed by different paper signs according to the means of payment institutionally employed in a given monetary area.

In short, collectivism reaches its maximum social target, which is that of increasing the level of production in a single country, by reaching a level of full employment. But once this point has been reached, a point which is really of economic development and not of social distribution, collectivism can go no farther, for it comes up against problems which are exclusively social. Faced with these problems of distribution, collectivism fails due to the lack of a previously prepared and correct theoretical analysis for the interpretation and solution of the origin and elimination of the social plus-value of circulation.

We are at last in a position to give an evaluation of the economic policy of collectivism. In our opinion, it is a valid policy for attaining objectives of industrial development, of particular interest for areas which are depressed and historically lagging in industrial growth. But it is not valid for solving the problems of the distribution of resources. It follows that, once we have reached that level of production and consumption which accompanies full employment, and which may be called national or regional, collectivism at this point comes face to face with significant contradictions in production and exchange relations, both inside and outside the area involved. These contradictions exist inside because plus-value has not been eliminated; and outside because resources cannot be transferred from one monetary area to another.

Inevitably collectivism is faced with a period of crisis, which can only be overcome in one of two ways. The first is to find a way to move from collectivism, which is socialism of production, to a new planning policy, which may be called for now socialism of distribution, and which will be discussed in the coming pages. The second method, if one fails to understand the contradictions in the exchange relations, is to insist in the old policy of production, with the inevitable consequence that one has to impose theories no longer accepted and gradually withdraw to positions of protectionism, with the predominance of the political elements of prestige with respect to those concerned with simultaneous economic and social progress.

From some sides, a tempering of collectivism is suggested by means of distinct public undertakings spread through a given national territory, with powers of decision, in the economic field, conferred on regional and even local public organisations. Or else one attempts to reduce the influence of the bureaucratic element in the productive process, handing over the control of the means of production to bodies composed of representatives of the workers and of the public organisations. A brief examination of these alternatives with regard to collectivism as state control is therefore necessary.

As far as public control spread through regional or local bodies is concerned, we observe that there is a very slight difference with respect to state control, at least where the social plus-value to be eliminated is concerned. The excess of liquidity will always remain in the heart of the financial sector, while the productive sectors will have the advantage of following programmes of production which are more concrete and more consistent with the existing conditions. In

short, a regional division of the powers of economic decision will lead to different formations in the cost of a product according to the region in which it is produced. One will therefore move towards an economy of costs, which is certainly an advantage of a productive nature, but nevertheless there still exists unchanged the plus-value of circulation, which is what makes development impossible beyond a certain limit.

A somewhat more noticeable difference with regard to state control exists with the system of autonomous control by each undertaking, realised and carried out by representatives of the factory together with representatives of public bodies or of organisations of a public nature. With autonomous control we reach the effective formation of company cost, which is at the basis of the value of exchange, and the system is to be regarded as the final form of divided public control. But nonetheless, even in this case, the central problem of plus-value remains unchanged and unsolved unless one provides for a planning policy for inter-business relations, and particularly for the financial relations between the company which controls liquidity and that which controls any type of production. It is in fact from this financial relationship, and more precisely from the times and means of the repayment of the capital, that the plus-value of circulation is derived.

Finally, still keeping in mind the social purposes of distribution, we may say that it is quite useless to sub-divide public control to the final stage of autonomous control by each undertaking. At the same time, such a sub-division is useful for economic reasons, because it brings about an economy of costs. We can therefore conclude on autonomous control by saying that the system realises in the correct manner the formation of company cost which, in the concrete sense, dif-

fers according to the geographical position of the company. However, for the purposes of social distribution and the maximum development, the system has to be accompanied by a plan aimed at controlling the relations between financial and industrial concerns.

Having thus examined the collectivist policy, we still have to look at a final type of economic policy. Although it rejects collectivism as a system, it still resorts to nationalisation by sectors, that is, to public control of certain branches of production, considered in isolation as a public service which, precisely because it is such a service, is assumed under the control of the state.

Obviously, if it is a matter of nationalising a productive sector, the same observations we have made up to this point hold good. Nationalisation of a sector of production is justified as a policy for production and not as a policy for the social question. In other words, it may happen that it is necessary to inject new life into a certain productive sector, when this impulse does not or cannot come from various private undertakings which are disjointed and poorly endowed with technical and financial means. The intervention of the state is then justified, if the consequent nationalisation is aimed at giving a strong impulse to the production of a specific technological sector.

However, with regard to nationalisation carried out in a certain isolated sector, we have to consider another very important observation, and one which is of great relevance for the purposes of social policy. If plus-value is created by the financial relationship and is found within the system which controls liquidity, and in particular within the banking system, is not the nationalisation of the banks the decisive solution

for social purposes? We now go on to answer this important question.

Nationalisation of the banks is to be regarded without doubt as a way of eventually distinguishing and acquiring social plus-value, which, as our analysis has shown, is a plus-value of circulation, placed within the sphere of the banking system and expressed as an excess of liquidity. However, we must not forget that it is liquidity in excess, and this extra-liquidity, once it has been acquired, must be eliminated and not returned to circulation, for otherwise plus-value continues to exist and circulate within the system, even after nationalisation of the banks. In other words, we must use the public control of the banking system only to ascertain in what guise and in what particular institutional means of payment the plus-value of circulation is revealed. This must be done with the sole aim of eliminating these excess monetary signs in the complex of banking money. This in fact must be the first and most important aim of the public control of the banks. This first objective is followed by others concerning the control of liquidity, as we shall explain later. Meanwhile, we shall give here a complete answer to the question posed with regard to the public control of all the banks.

In the policy of the separate nationalisations of different sectors, the nationalisation of the banks is the only one which is of interest and importance for the purposes of solving the social problem. Nevertheless, such a nationalisation is not to be considered of itself decisive for the solution of the problem. It becomes decisive only if correctly understood as an instrument of planning policy, aimed specifically at the two following objectives: the elimination of the plus-value of cir-

culation and the control of liquidity in order to obtain the maximum development in terms of capital and income.

We shall deal in particular with all this in the following chapters.

### 3 - THE NEW CRITERIA FOR SOCIAL POLICY

We shall now rapidly draw the conclusions, quite clear and final to us, with regard to the argument of this chapter.

Above all, let us say that the old and classical dispute between the advocates of economic liberty on the one hand, and the supporters of state intervention in economics on the other, must be considered superseded after the theories offered here on value and plus-value, and after the natural laws on monetary circulation. The supersession of this dispute consists in fact of the following.

Free exchange remains the fundamental basis of every international economic policy which hopes to be a social policy. Without international free exchange one ends up, in one way or another, with national protectionism, or limited international agreements. In virtue of this there is an internal consolidation of positions of privilege, historically created, deriving from banking and financial monopoly, and arrived at to the disadvantage of the sectors which are directly productive. The freedom of economic enterprise also becomes the rule for the control of the production and trade of goods within a country. Every public intervention in the productive sectors has to be considered as exceptional and temporary, aimed only at substituting private initiative where it is lacking and not where it already exists. The increase of production by means of private, or exceptionally, public undertaking, is

changed however into economic and technological progress. But for the purposes of social distribution, provided a disequilibrium is discovered within the sphere of a single concern, this disequilibrium is easily eliminated by the contractual power of the organised workers, in factory councils or trade unions, for the control of their interests. Therefore, having ascertained all this, we can clearly see that every supporter of the policy of public intervention must admit that, in the general interest and above all in the interest of the workers, international free exchange and the private control of the productive means provide, as a rule, the best political choice both for economic and for social purposes.

A different argument holds good, however, for the control of liquidity within a given monetary area. Here, in fact, the social policy demands measures of intervention with regard to the concerns which control the means of payment, and the policy of public intervention is to be considered the rule and not the exception. For social purposes, the state must predispose and follow a planning policy for the control of liquidity. The objectives and the means of this planning policy may be varied and are to be defined, even in relation to the institutional context of each country or group of countries, but the fundamental principle is always that of the need to follow a policy of intervention and control with regard to the banking-financial sector. Without such a financial planning policy it will never be possible to solve the great questions which have arisen in the social field, the problems of the disparity between rich and poor countries, the difference in capital and income between industrialised and underdeveloped areas of the same country, the social, economic and technological disparity between the two primary sectors

of industry and agriculture, and finally, the lack of resources in relation to the rate of population increase. It is precisely for these reasons then, that every supporter of free exchange, unless he wishes deliberately to adopt a conservative position, must admit that the freedom of exchange and enterprise, valid for the exchange of goods for goods within or without a country, is not however acceptable in the goods-money relationship, which is the relationship of financing and of credit. This particular relationship demands, for social purposes, a policy based on public intervention.

Once we have overcome the classical and historical differences between the camps of collectivism and free exchange — an action which we believe has been made possible by the natural laws of monetary circulation — we may sum up the whole argument, formulating the basic criteria for the social policy, as it evolves from our theories. These criteria can be listed, in their simplest form, under four headings: 1) free exchange in international relations for the continuous widening of markets and in order to aid the exchange of goods and services; 2) unrestricted initiative for private enterprise in the production and exchange of qualitative goods or values, with the intervention of public control only where such private initiative is lacking; 3) unrestricted organisation of workers for distribution in the single business sphere, with the intervention of the state in trade disputes in order to mediate and arbitrate in extreme cases; 4) planning policy in the banking and financial sector, aimed at eliminating the plus-value of circulation and attaining maximum development, this policy being put into effect in ways and terms which are to be institutionally defined.

Now that we have arrived at this point in our analysis,

it has to be completed with a particular examination of the planning policy indicated under the fourth heading. In order to do this, however, it would be necessary to differentiate and consider thoroughly the institutional conditions of every country, which is obviously an impossible task. For this reason we shall group countries according to only two basic institutional types. These are the so-called capitalist or neo-capitalist type, which we prefer to call more generally the western type, and the collectivist or socialist type, which we shall call eastern. We shall therefore discuss in the following two chapters planning policy in the West and planning method in the East.

Finally, after a thorough consideration of conditions and possibilities in East and West, according to which there evolves or may evolve an economic path to a better society, we shall, in the final chapter of this book, tackle the most important economic and social problem of the current age, that of a single international monetary system, accepted by East and West alike. As a result of such a World Monetary Union, the present division of the world into two large and separate areas, often in opposition, would be overcome. Within visible range we should see the single world market for the exchange of goods and services; we should see the goal which today appears only as a dream to those who believe in progress and its laws, but which ought to be a social reality, the great social reality of the era in which we live.

## Chapter V

# Planning policy in the West

Our primary task here is to establish the objectives to be attained by a planning policy, in relation to the institutional conditions in the western countries. In these countries we have a market economy, with multiple and autonomous centres of decision in the economic field, and with the exchange of products on the basis of the production cost and exchange value, of which we have already spoken earlier. This system, we have already pointed out, is a socially valid one. Nevertheless, in the course of its development, this type of economy reaches a state of crisis and serious contradiction as a result of the faulty and anti-social management of the banking and financial concerns. In their financing relations with commerce and industry, these concerns impose their own norms and criteria, which do not agree in any way with the economic aims of maximum productive development or with the social aims of a better distribution of the available resources. It is precisely for this reason that the countries of the West, if they wish to maintain the advantages and benefits which derive from a market economy, must perforce adopt a planning policy, a policy of public control, where the companies controlling the means of monetary circulation are concerned.

We should hasten to add that the aim of this necessary

control is not to limit in any way the initiative of individuals or groups, as long as this is directed towards the increase of the available goods and services in a given country. Indeed, public control aims at effectively freeing this initiative from the conditions imposed from without by the financial companies, with totally negative consequences both for the development and distribution of resources. A control formulated on the basis of a planning policy has, instead, to limit the initiative of individuals and groups when this occurs specifically in the management of companies which control the means of payment. It is a question, therefore, of controlling only one sector, and in particular the credit sector. The chief aim of this control is to allow the free growth of productive forces and the unrestricted expansion of their exchange relations, according to the principle of maximum development, both permanent and without social contradictions.

If one accepts this as the general principle of planning policy, the particular objectives of the policy can be listed as follows: 1) elimination of the social plus-value of monetary circulation; 2) control of the system's liquidity, in its creation and growth; 3) the particular policy to be adopted in the complex problem of industrial financing. These are in fact the three fundamental points of a planning policy, suited to the western countries, which aims to guide towards an optimum economic and social goal the whole system of the production and the exchange of goods. At the same time the public concern must remain outside this system, in order to maintain all the advantages of the freedom of economic and commercial enterprise.

When these three objectives have been determined, one

has then to bring into action the appropriate means, which are the instruments of planning policy. We shall discuss these in detail in the three sections of this chapter.

## 1 - THE ELIMINATION OF SOCIAL PLUS-VALUE

This is without doubt the first preliminary objective to be attained, in order of time and importance, by the planning policy.

Social plus-value is the prime and decisive cause of the social question, that is, of social injustices and of the contradictions in the unrestricted development of the production and exchange of goods. In fact, all the theoretical analyses which have been made in the preceding chapters, from the principles of institutional and logical economics to the laws of monetary circulation, have been necessary solely in order to arrive at a diagnosis, in the light of logic and according to a practical verification, of the origin, position and expression of plus-value. This, therefore, is the starting point for every social policy. We shall arrive at the practical conclusions of this chapter, only after we have set out in a theoretical manner our interpretation of social plus-value, correcting, where we judge it necessary, the earlier interpretation of Marx. We should add once again that, if by chance it is not our theory but that of Marx which is correct with regard to plus-value, in that case the policy to be adopted ought to be only that which derives from the Marxist interpretation of plus-value, and which consists precisely in the public control of the means of production and exchange of goods.

In our opinion, also with regard to the course followed

by the development of capitalism in the last century, we have been correct to interpret plus-value as an excess of liquidity situated within the banking system and expressed as money circulating between banks. We have arrived at this conclusion after an exhaustive research, conducted according to cast-iron logic. We began with the factors which lead to the useful, considered the creation of value and the exchange of values, and established finally the natural laws which govern exchange relationships and condition social relations. It is precisely these laws which have permitted us to arrive at the interpretation of plus-value as the excess of liquidity in the circulation of means of payment.

Once we have ascertained all this, the problem is to establish how and by what means one may arrive at the suppression of this plus-value, which action is planning policy's first objective for the resolution of the social problem. We believe that this may be achieved by three methods: 1) nationalisation of the banks, with the consequent public control of the short-term credit sector; 2) appropriate fiscal measures for the super-taxation of plus-value; 3) direct suppression, by means of the law, of that part of the money controlled by the banks which is the expression of the plus-value of monetary circulation. These three possibilities do not, in fact, always mutually exclude each other, and one may follow the other. For this reason we shall bear in mind their reciprocal links as we consider each of them.

The nationalisation of the means of short-term credit is certainly the method to be adopted, and perhaps the only method, if we have no idea of the concrete banking values by which the plus-value of circulation is revealed. The banking systems of various countries are, quite obviously, different

from each other, especially with regard to the degree of development and the rhythm of accumulation of capital, and also with regard to the exchange relations in force. Every country thus has its own particular liquidity, structured in a particular manner, as a complex of certain means of payment employed for the circulation and distribution of goods. This complex of values is definitely more developed, and above all more singular in its specific functions, in the industrialised countries, whereas in developing countries it is uniform and more indistinct in its functions. In other words, the result is that in countries with a high accumulation of capital, banking techniques have developed and improved alongside the development of industry, and new means of payment have been constantly introduced and given particular functions. Consequently, in the face of this situation, an analysis of the structure of banking money will permit the singling out of those particular means of payment in excess which constitute the plus-value of circulation. On the other hand, in countries with a low accumulation of capital, banking money, as distinct from the money of the treasury, is hardly developed and is less differentiated in its expression. Therefore, an analysis of the constituents of banking money becomes, in this case, quite impossible. For this reason, in countries at the initial stages of development, we shall not be able to distinguish in any way the banking money which is socially useful and necessary from that which is negative and superfluous. In this case, there is no other means of political planning by which to arrive at the elimination of plus-value except the nationalisation of the banks.

Having said this, however, we must immediately repeat the principle that nationalisation will be and is only a means

for the elimination of plus-value in the forms in which it is revealed or will be revealed in the future course of management. The first objective of nationalisation remains, therefore, the differentiation of means of payment, along with their expansion. In fact, it is only a differentiated use of banking money which can and will lead to the singling out of the concrete and specific elements which constitute plus-value. When these elements have been ascertained, it will be possible to eliminate excess liquidity, and to leave behind nationalisation which was only a means and not an end of planning policy.

The second method for the elimination of plus-value, the super-taxation of the excess money, presupposes a banking technique which is reasonably advanced in an area of partly developed capitalism. In such exchange relations, banking money is differentiated according to the uses or to the times of payment, but it never reaches the maximum and final differentiation of banking capitalism at its most advanced level. We have here capitalism at an intermediary phase of development, and here also we have the possibility of removing excess liquidity by means of fiscal action, to be adopted, in a particular manner, with regard to some parts of banking money more than others. Super-taxation will be imposed on those means of payment which are considered to be a probable expression of excess liquidity, while one must bear in mind from the outset that they are probable and not certain elements of plus-value. Precisely these probable elements will be extinguished, after being acquired by means of the fiscal levy, and one must not forget that in this, as in every other case, the excess liquidity has to be extinguished and not replaced in circulation. Considering that we are

dealing with a value of circulation, we shall have preferably to adopt a course of action which involves an exchange surtax or a stamp duty to be applied to the money circulating between the banks.

Finally, we come to the third method of suppressing the excess means of payment, which is the direct suppression, enforced by law, of certain means of payment circulating within the banking system. Naturally, if this method is regarded as the sole way in which to achieve our purpose, it presupposes a banking technique which is extremely advanced. There is the maximum differentiation in the use of the means of payment, which permits the clear distinction between banking money which is useful and necessary for exchanges between economic agents, and the banking money which is idle and socially passive, diminishing the productive time of concerns involved in the production and exchange of goods. Such a clear distinction will not always be possible, and will remain limited to a few countries at an advanced stage of banking. However, provided that we can single out plus-value as certain and specific means of payment, the shortest and easiest method for the elimination of excess liquidity is without doubt the suppression, by means of the law, of the issue and circulation of the banking means of payment which express this plus-value. If it is not possible, on the other hand, to single out with certainty the means of payment which express plus-value, it will be useful to adopt direct suppression alongside fiscal action. Firstly, fiscal action will be taken on the probable elements of excess liquidity, and then direct suppression, legally enforced, will deal with those elements which are definite.

From the concise indications so far given for the elimin-

ation of the excess means of payment, we may deduce the common principle that one must always intervene in the banking system which controls liquidity by means of the exercise of short-term credit, and that this intervention has to be carried out according to the institutional conditions operating in a given country, and on the basis of which commercial banking has developed and is conducted. The purpose of any and every intervention, however it is carried out, is always the singling out and suppression of excess banking money. For this purpose, one will adopt the method of nationalising the short-term credit sector, or else the other method of the super-taxation and suppression of the plus-value elements, according to whether action has to be taken, respectively, in a developing country or in a country which is already industrialised and which has an advanced system of commercial banking and large amounts of available capital.

When this initial objective of planning policy has been attained, the preliminary and necessary, although not yet sufficient, condition has been created for the purposes of this policy, which must seek maximum development in the interests of society. Thus we must go on to the permanent objective of the required planning policy, which is in fact the control of liquidity in order to guide the whole system of production and exchange towards the goal of maximum development, with the possibility of diffusing and distributing every economic and technological advance.

We shall therefore consider, in the following section, the exact meaning of the control of liquidity.

## 2 - THE CONTROL OF LIQUIDITY

The starting point for the control of liquidity is a census of the means of payment which exist at a given moment in a particular country. One must define, however, what the effective constituents of this liquidity are, and therefore we define it as the total means of payment, legal and fiduciary, which are employed for short or for very short-term credit. We should notice that the definition of the means of payments as a sign expressing credit, even credit for a very short time, is necessary and very important, for otherwise one runs the risk of making a bad mistake. We shall elucidate this point immediately.

Let us suppose that we have a bank-book for a deposit account, or even a cheque-book for a current account. These are forms of security which we can cash on sight at any moment, for all or part of their total value. Having supposed this, if we do not define the means of payment as a credit symbol, we make the grave mistake of including in liquidity these deposits which are available on demand and at sight. In fact, we have here a mistake which is derived from the ambiguity and confusion between value and counter-value. A deposit or current account is qualitative counter-value; that is, it is the symbol of a hypothetical commodity which one could acquire or which has been acquired by others, while the quantitative value, the effective means of payment by which the commodity has been acquired, is given by banknotes or by money-orders deposited in the bank account. These banknotes are then considered in another manner as constituents of liquidity, and therefore the inclusion of demand deposits among means of payment is the equivalent of

considering the same means of payment twice. The census of liquidity therefore turns out to be completely false. It is thus necessary to adhere closely to the definition of the means of payment as a sign of very short-term credit. Means of credit are, in fact, banknotes or money-orders issued in correspondance with discounts or banking loans. Other means of credit are cheques issued as a result of the opening of credit or of corresponding current accounts, where the latter, differently from deposit accounts, are assets for the bank and liabilities for the holder of the current account.

Now that we have clarified and defined above the basic idea of the means of payment, we can obtain quite easily a precise census of liquidity. We find that it is constituted by the following: treasury bills, coin, postal and telegraphic orders, banknotes, banking orders, current account cheques of credit, and finally current account cheques temporarily overdrawn, which are accounts that, for a time, become credit accounts. All these symbols of credit can be grouped in two homogeneous classes which form the two basic constituents of liquidity, means of payment which are legal tender and those which are fiduciary tender. The meaning of this is that the former are accepted by law within the national market, while the latter are accepted on trust. We see, however, that this distinction holds good only for the national market, because, in the international market, every means of payment is accepted as a result of a fiduciary relationship. This in fact confirms our basic principle, outlined above, that every means of payment is a very short-term credit symbol. We observe next that, as a general rule, every national treasury effects inward and outward transactions in legal tender. In effect, all legal tender comes originally from the treasury, either

by direct issue in the case of coin or treasury bills, or by indirect issue as a result of loans and discounts made to the treasury by the central issuing bank. Therefore, we may well define all legal tender as treasury money, while every other means of payment can be called banking money. In short, we can establish all the current liquidity in a given country at a given time. We shall indicate this liquidity by the symbol $M$, and differentiate its two constituents, treasury and banking money, by the symbols $T$ and $B$. Thus we have the equation: $M = T + B$.

We shall now go on to speak of the planning and control of liquidity, using the above symbols with the meanings we have given to them.

At a certain moment in its development every country will have a liquidity $M$ which travels at a certain speed $v$, in such a way that, by means of the circulation of $M$, a certain national product is obtained, whose value expressed in money we shall call $P$, where this refers to a past time, because we have it as a statistical fact. We shall have, then, a condition of development, to be defined as an unplanned condition, and which is given in fact by the equation $M \times v = P$. We have to point out again that this is a condition which is unplanned and only statistical. Indeed, the equation we have formulated signifies that at some time in the past, last year or last month, we have had a national product $P$, discovered after the event, or when we can do absolutely nothing to influence its development. On the other hand, a planned condition always requires an estimate beforehand of the product relative to a future time, in order that one may be able to influence and control this product. If one continues in the unplanned condition, we shall also be able to discover statistically the

liquidity $M$, always relative to a time past, and eventually discover also the speed $v$ as a quotient of $P$ and $M$; this speed of circulation $v$ will vary from country to country and will change statistically from year to year, even within the one country.

Now, the conditions and circumstances set out above are precisely those analysed and established by the American, Irving Fisher, who was the first, from about the year 1930, to propose a system of controlled money. We shall therefore give the unplanned condition outlined above the name of « Fisher's condition », and proceed to criticise it in the light of our earlier theories.

It is a condition, as we have already pointed out, which does not permit any estimate or forecast of development, and which permits only a statistical summary of this development, arrived at afterwards by a researcher who always remains on the outside, incapable of modifying it because it is always already too late. As a result of Fisher's condition, the researcher will have to limit his work to the consideration and study of the situation, without being able to influence it. In fact, all the economic variables of the system, including also its development, will follow a necessarily fluctuating course from year to year, with periodic movements between a maximum and a minimum which we shall be able merely to note without being able to modify them. Moreover, there is a very precise geographic limit in the validity of Fisher's condition, and this limit is given by the national monetary area beyond which, in the international market, every movement of capital in money remains excluded from Fisher's formula. We shall briefly outline this point.

A new unit of money, which is an increment of $M$, can

only result from an increase of product, that is, in close connection with an increase in *P*. But this quantity *P*, according to Fisher's condition, grows or diminishes to a degree which varies notably from country to country. Therefore, Fisher's money, if it is considered in the dynamic sense of development and not in the static sense, is only a national money, of limited validity for the expression of capital movement within a country, but not at all suited to deal with the important movement of liquidity from one country to another, which is that movement formed by the debit and credit of the balance of payments.

We may notice, in passing, that this brief illustration is of great importance for the purposes of international money, and we shall take it up again in the final chapter of this book. At this point, in the meantime, it was necessary to allude to it, in order to demonstrate the limited validity of Fisher's condition, together with the insufficiencies of the unplanned condition of development. We may conclude finally with regard to this question by stating that, in the absence of a control of liquidity based on the natural monetary laws valid in every country and in every age, the most we may hope to achieve will be the objective of a fluctuating development within each country, taking place more or less independently of development in any other country. If, on the other hand, we hope for a steady and optimum growth of resources, considered together with a similar growth in other countries, and above all in those countries which lack capital, then a qualitative leap will become inevitable in order to pass from an unplanned to a planned condition of development. We now go on to discuss this new planned condition.

The first observation to be made is that the planning

condition, if it is to be called thus, must express an estimate or forecast, and must therefore refer from the moment of its formulation to the national product of the coming year, and not to that of the past year. Let us now indicate the national product by the symbol $P'$, instead of by $P$, in order to show that it refers to a product relative to the near future within a year. We already know, as a result of the laws of monetary circulation, that the optimum rate of increase of income is 7.5% per annum. Once this rate is established and $P$, the product of the preceding year, is known, we can easily forecast a year ahead that the new product will be $P' = P + 7/100 \times P = P(1.075)$. We also know, due again to the mathematical theory of circulation expounded in the third chapter, that there exists a natural time of reproduction to which there is a corresponding natural speed of circulation, and this in fact is $v = 2.718$. This time we are dealing with a quantity which is permanently valid for every country and every age, a speed which is not subject to any trend or situation, but which is the speed necessary in order to have the maximum development alongside the constant value of every monetary means. Therefore, this quantity $v = 2.718$ is the circulation speed to be attributed to liquidity in planned development, beginning from the following year. Finally, if we indicate the liquidity of the system for the coming year by $M'$, if 2.718 is the speed of circulation, and if $P$ (1.075) is the predicted product to be obtained for maximum development, in that case the planned condition will agree with the formula: $M'(2.718) = P(1.075)$; which gives in turn:

$$M' = P(1.075/2.718) = P(0.3955).$$

It is precisely this formula which allows us to know the amount of liquidity $M'$ which will have to circulate in the system during the course of the coming year, in order to give us the maximum increase of income, in real terms, of 7.5%. If, for example, we had in the preceding year a national product of 100 billion dollars, we shall have to have in the following year a total liquidity of 39.55 billion dollars, equal to about 40% of the product of the year immediately past. If this liquidity is available, we shall consequently obtain the maximum development compatible with the maintenance of value of the monetary means and with the index of prices of the system in question. Thus, the fundamental and permanent task of planning policy will be to ensure that liquidity, in the case we have cited, will in fact be 39.55 billion dollars in the future cycle of one year.

It seems quite clear to us that with our planning condition the limits and the insufficiencies which we met with the unplanned condition of development will be decisively overcome. In fact, with the new condition, we shall have a permanent constant, from one year to another, both for the circulation speed $v$ and the product growth. No favourable or unfavourable trend or situation will be possible any longer within any country, and the development of every nation, considered from a given starting condition which is that which is, will in the future be steady, permanent and optimum. Likewise, the limit of national money is also finally overcome by means of the new condition of development. In fact, the unit of new money, which is the unit of $M'$, remains linked to a unit of product $P$ by means of a multiplying factor, precisely 0.3955, which is a single and permanent constant for every country which adopts the planning condition.

In this case, the unit $M'$ becomes without doubt a unit of international money, valid in every country which accedes to the planning policy, while international relations, including trade between the rich and the poor countries, continue to be included within the formula. Obviously, the above condition fixes the basis for a new conception of international money, and this question, which is so clearly of great importance, will be reconsidered in a later chapter. Here we must bring to an end our discussion of the control of liquidity, with certain final observations on the two constituents of monetary circulation, treasury money to be called $T'$, and banking money, $B'$.

From the moment that we have discovered the total liquidity $M'$ of the system, given $M' \quad T' - B'$, we can discover the treasury liquidity, and then the control of this constituent which regards the whole of public expediture, with a separate value, even if not independent with regard to banking money. In fact, it is an immediately clear observation that treasury money $T'$ must be the difference between the total liquidity $M'$ and banking money $B'$. Since we already know $M'$, from the outset of the planning formulation, and since we discover $B'$ as the year unfolds, month by month if the control of banking money is effected monthly, then we shall learn, month by month, the amount of treasury money, or legal tender, which has to circulate, in each monthly period, within the system.

In fact, the knowledge of $T'$, distinct from $B'$, is important because it permits the programming of public expenditure, not only according to the total amount assigned, revealed in the published accounts of the public concerns, but also according to the rhythm of expenditure during the course of

the financial year. Public expenditure can thus adjust to the rhythm of the expenditure in banking money, which, for the sake of simplicity, we may define private expenditure. In precise terms, while the total amount of public funds which have been assigned remains steady, the rhythm of public expenditure will increase when expenditure in banking money, or private expenditure, is behind with regard to the needs of the plan. Conversely, public expenditure will slow down if private expenditure is in advance of the plan. Obviously, the total liquidity remains unchanged, since it is determined solely by the general formula of planification.

In conclusion, our planned condition of development allows us to direct the whole economy, be it private or public, towards the most fruitful goals and according to a steady and permanent growth in income. What is more, all national development remains within the frame of international trading relationships, which in turn are always in agreement with the relationships within each country. This is so because every country is subject to the same laws on the basis of which we have elaborated the planned condition of development. As a result, the increase of all the factors involved will be equal, the distribution of resources will be equal, without national barriers applied for any reason, and finally the diffusion and co-ordination of productive factors will also be equal, along with the territorial spread of technological progress.

It is our opinion, therefore, that the planned condition of development which we have outlined has to be regarded as a condition which is fully social.

## 3 - INDUSTRIAL FINANCING

We must first define the difference between industrial financing and self-financing on the part of industry.

Industrial financing, in fact, is to be understood as a particular form of credit, by which the undertaking which has been financed is obliged to repay capital and interest charges within a fixed period in pre-established instalments. In this case, as is the case with banking credit, there are two basic characteristics of every industrial financing: the period of repayment and the interest rate. Briefly, if industrial financing is carried out as indicated above, it is nothing but a particular form of credit differing from ordinary credit of discount and loan, only in that it is carried out over much longer periods of time than for ordinary credit which is always short-term.

The self-financing of industry, however, is quite different. It is of decisive importance for a whole group of industries and for the productive development of a given region. In this case, industry obtains capital by giving in return for the money it receives that particular security which is called the industrial share. This is not in any way an expression of credit, like a credit bond; it is, instead, an expression of industrial ownership, or of part ownership. Therefore, a relationship of management or control, and not of credit, is established between shareholder and industry. In virtue of this relationship no shareholder has the right to withdraw his capital, but he can claim a part of the benefits of management, if and when these benefits occur.

Having made this clear, we may now turn to consider what particular policy we should follow with regard to the

financing and self-financing of industry. With this aim, we shall consider first credit financing, and then self-financing by means of co-operation in the industrial undertaking.

We recall, first of all, an observation which we made earlier, that financial credit to industry stands in a certain relationship with banking credit. If there is an excess of liquidity within the banking system, this excess extends also to the financing system, which is linked to the first in the control of means of payment. In actual fact, all the liquidity is made up of means of payment, created only by the banking system, by means of short-term credit. The system of financing, on the other hand, which controls medium and long-term credit, does not create directly any form of liquidity but merely administers a certain part of the liquidity previously created by the banking system. This means that, if there exists a plus-value of circulation in the precise form of excess banking means of payment, in the end also the financial concerns of industrial credit share in this plus-value. The financing monopoly remains bound in this way to the banking monopoly, as a direct consequence of the latter. We shall now explain, in detail, how this financing monopoly is revealed.

Obviously, financial control of credit does not give rise to excess liquidity, which is entirely created by the banks. It follows from this that financial monopoly is indirectly expressed as a contribution to the increase in the circulation speed of the excess liquid means, and this speed rises way above the natural rate of 2.718. In other words, the fault of the financial system is precisely that it finances industry at a rapid rate, more rapid than the natural rate which is, of course, the correct one. The socially harmful result of this is the accumulation of capital at an excessive speed, in areas

of advanced development, with the creation of a restricted, medium-term capital market as a result of the other restricted, short-term market. The first barrier is a result of the second, and not viceversa, as we have explained.

If we therefore adopt a planning policy which, by controlling liquidity right from the banking system, can eliminate all the excess means of payment, then both the banking monopoly and, as a result, the financial monopoly of medium and long-term credit, will collapse. The decisive factor thus remains the control of liquidity, which is also the essential condition for the purposes of industrial credit and consequent development. It must be quite clear that a policy of facilitated financing, to the advantage of depressed areas, will never produce the results we hope for, unless we have previously taken pains to introduce a planning policy, valid for the elimination of plus-value and for the control of liquidity, in accordance with what we have outlined in the preceding two sections.

If we accept and carry out the necessary planned control of liquidity, the way will be open for an equal development of industry spread throughout the monetary area concerned. After this initial premise, the policy of industrial financing becomes an important means for productive development, brought about according to the correct times of repayment. These times have already been established and explained in the author's « General Theory of Income and Financial Planning » which we cited earlier. Here, however, it is not necessary to repeat the mathematical calculations of that work, as we shall explain in the next paragraph.

The elimination of every excess in means of payment and the continuous census of liquidity which the system requires

are, in fact, the two necessary and sufficient factors for the establishment of a just and equal relationship between the financing and the industrial concerns. Once this contractual parity has been established, the repayment periods will be the correct ones, long enough for their purposes. In real terms, they will be the periods which the producing concern considers indispensable in order to repay the loan which has been negotiated, in full accordance with the particular technological process which is used. The industrial concern, having made certain of the minimum time in which it can pay off its debts, will certainly not consider it convenient to go beyond this minimum, because this would entail paying more interest, which is of course in proportion to the period of repayment. Thus, once the minimum time of repayment has been ascertained, according to technological needs, this time will also be the correct time for financing. In this way, planning policy for industrial financing can be easily carried out, for it is sufficient to note the conditions, the manners, and the times with which financing is carried out in the various sectors of industry. There is no need to impose any principle which, in any case, in order to be general and extraneous, would turn out to be abstract and far from the concrete conditions of place, time and technological progress, according to which every particular productive process evolves. We may sum up by saying that a policy of incentives and facilitated credit for the purposes of industrial development in depressed areas will remain valid, provided one realises the limits of such a policy of industrial credit. These are limits which are structurally co-existent with every type of financing, however it is carried out. The explanation of this will appear quite clear, once we have considered below the

other method by which industry obtains capital, the method of self-financing.

We should note, by the way, that a loan to industry does not mean the creation of industry, but rather the reinforcing and the consolidation, with greater financial means, of an industrial concern which already exists. Industrial financing, however it is carried out, even if according to a plan, is of no use for the initial creation of industrial undertakings. For this purpose, self-financing is useful and indeed necessary, for there is no other method. The development of shareholding co-ownership, the ownership of easily transferable lots, is the mandatory path to be followed for the creation of new industries, if we find ourselves in an underdeveloped area. There is no-one, certainly, who wishes to doubt that it is due precisely to the share system that the West has enjoyed the modern development of medium and large industries. Yet very often, as a result of bias and prejudice, shares are wrongly considered to be securities for speculation. The result of this is a completely mistaken policy for the industrial development of depressed areas.

For this reason, we feel that it is necessary to overcome all prejudice against limited share companies. Shares, in our opinion, are not securites for speculation, but are, instead, the only securites by which one may create an industrial concern which previously did not exist, at least in any country where the system is not one of total collectivism. On the other hand, it is clear that every policy of industrial credit is only subsidiary with regard to the first and basic fact that, before being financed, an industrial undertaking must exist in the form of management of property. In our opinion, therefore, there exists only the following alternative for a development

policy in the depressed countries of the West: either follow a policy aimed at promoting and facilitating the setting up of limited share companies, with ease of circulation for the shares themselves, or else adopt a policy of state-instituted industry. Our choice is the first system, carried out within the frame of a planning policy capable of forecasting and controlling the total liquidity of the system. We make this choice because, as we have demonstrated, the barriers to development do not come from industrial trusts, nor even from financial holdings. The fault of the western system is, instead, that of circulation, found in the management of liquidity and starting from the banking monopolies. Once this fault and these monopolies have been eliminated, industrial development, carried out by means of self-financing through shares (which is, in any case, the only possible method in a market economy), will be without doubt a development which is economic and social at the same time. Any eventual deviation by such a system, with regard to its social aims, will be effectively corrected by the workers' associations and by struggle for distribution within the concern. What is important is that, long before one arrives at this particular distribution, the correct planning policy removes all plus-value from the financing factor in its relationship with industrial concerns.

Consequently, when the planned condition has been brought about as described above, planning policy in the West has then to be completed by the promotion and encouragement of all forms of self-financing through shares, from industrial concerns to shareholding financial concerns, and to the investment funds. This form of self-financing, which can give life to new undertakings in depressed areas, will be followed by a policy of incentives and facilitated credit, capable of

consolidating the new industries and inserting them in the market. In conclusion, we may affirm that a policy which controls liquidity and which promotes the financing and the self-financing of industry, realises the necessary and sufficient conditions in order to be a truly social policy.

We must make a final observation on those undertakings which are called « public services », a definition which is always vague, and often inappropriate, with regard to the services it describes. When one says « public services », one often refers, among other things, to transport and telecommunications, to distinguish them from industries proper, such as the mechanical, chemical and electricity industries. However, this distinction is not quite correct in our opinion, because undertakings of transport and communication, which perform transformations of material in a mechanical, chemical and electrical manner, have also to be regarded as industries, at least in the technical sense of the word, which defines any productive process which occurs through the transformation of material. It is believed by some that the difference between public and industrial services ought to be sought in the manner in which the management of the undertaking is carried out and financed. In other words, a transport undertaking will be an industy only if it follows the principles of private management, with the creation of a cost which remains the basis of the product's selling price, in such a way that financing is derived, through the market, from exchange values proportional to costs which are borne. On the other hand, it will be a public service if the value of whatever is sold does not include this cost, and therefore the necessary balancing of the budget, in order to avoid the collapse of the undertaking in question, is carried out by means of the general

expenditure of a public body, that is, by means of taxes. Nevertheless, even this difference has only a temporary validity, due to the fact that every undertaking, even if it is undergoing temporary difficulties in balancing its budget, will attempt to even out costs and returns, in order to become autonomous in its own financing. In this case, there is in our opinion no difference between public services and industrial undertakings, if the former carry out a productive process with transformation of material, as is the case with transport and telecommunications. But the two indispensable rules of every industry will have to be applied to these services: 1) self-financing through shares, as the primary factor; 2) financing through bonds, as the secondary factor.

A different case, however, has to be made for those services which do not transform material, as happens with the purely commercial services, with no productive improvement, which transfer values from buying to selling without any transformation. These services are, in particular, the postal services for the transfer of correspondance and money, and the services of exchange, credit and insurance. Here, in fact, we find purely intermediary functions, whose added value is decided on the basis of the time involved, and not on the basis of the other two material factors of production. It is here that the definition of service, and not of industry, holds good. It follows then that self-financing through shares is not necessary for these effective services, unlike industrial undertakings. The secondary form of financing, through bonds, will be enough. Secondary, or credit, financing can be easily obtained by means of a tax in money, which is a security of credit and not of property. Therefore, to sum up, public control can be considered quite justified and correct

for those services which are effectively such, in the sense we have explained, at least where the correct method of financing is concerned.

By means of a precise distinction between industries and services, with a clear understanding of their respective values, we discover that the correct planning policy is that which intervenes in the sphere of services which deal with the pure and simple transfer of values. Among these, the outstanding service is that of credit, transferring means of payment, the most general values, for the purposes of profit. Therefore, planning policy based on the control of liquidity is fully confirmed as the sole method by which the community of a given monetary area may be freed from the original speculative barriers.

In fact, the fault in the whole system of the management of goods and services, as it occurs in the West, is quite clear to us. The only solution is to remedy it, if we wish to move in the right direction for a social policy which, in a complete and overall manner, will work for the economic and civic improvement of the whole community in question.

## Chapter VI

### Planning policy in the East

If we wish to arrive at an understanding of the economic reality of the eastern countries which have adopted collectivism, we must first of all realise by what method and means the liquidity of the system is controlled in these countries. There can be no doubt of the existence of such liquidity, from the moment that exchange relationships occur through the intermediary of monetary means. Indeed, the control of liquidity is always the decisive factor which characterises and distinguishes a given system of production and exchange; if one ignores this basic criterion, one is guilty of gross errors of evaluation and judgement on the institutional economy of a given country, be it in the East or the West.

The collectivism of the East has been defined in some quarters as « state capitalism ». We feel, however, that this definition is quite wrong, because the use of the term « capitalism » is completely unsuitable when the liquidity of the system is not controlled by private enterprises or by bodies with certain powers of decision in matters of credit, financing and self-financing of industry, where these powers are autonomous with respect to the central political power. In other words, if the liquidity of the system is controlled not only by the state but also by banks and financial institutes, which are institutionally and functionally autonomous with regard to government power, in that case we may

speak of capitalism; otherwise no. The reason is that by capitalism we mean a pluralistic system of financing bodies and credit concerns with an independent capability of investment and withdrawal of liquidity, and with their own capability of creating and extinguishing certain means of payment as a result of short and very short-term credit. Therefore, if all this is to be considered capitalism, it is quite clear that such a term cannot be applied to a system of collectivism; nor is it of any use to alter the meaning of the term with the subsidiary definition of state capitalism, because the term « state » does not clarify but contradicts the principle part of the definition, leading to a complete contradiction in terms.

Furthermore, if we go back to what we have already expounded earlier, particularly with regard to an economic policy of collectivism and nationalisation, we see that every collectivist system ensures growth in the production of goods but fails in the distribution of resources. A limit and contradiction is met precisely at that point of productive expansion where distribution is most essential and important. Naturally the system reaches this state of crisis when the needs of distribution become all important with regard to those of production. This occurs, of course, when a common minimum level of consumption has been attained for everyone, by means of full employment, and at the moment when the important problem is not to produce as the fundamental aim, but is to produce more in order to distribute more, inside and outside the system. At this point in expansion, therefore, the fundamental social aim which faces the institutional economic system is undoubtedly the distribution of goods, above all outside the system of production. Therefore collectivism,

socially valid as long as it works to ensure production for social needs, fails precisely because, from this point onwards, the problem is to ensure the social distribution of every productive increase.

This is the reasoning at which we arrive on the basis of the whole theory of logical economics which has been followed to this point, and it results from an interpretation of economic reality according to the natural laws of monetary circulation and according to the validity of these laws compared with that of theoretical Marxism. On the basis of all this we feel in a position to express a judgement on the economic institutional system employed in the Soviet Union, in China, and in every other country which has adopted collectivism as an economic policy for the solution of social problems. The collectivism of these countries cannot, in our opinion, be defined as state capitalism because there does not exist, in a collectivist system, any private control of liquidity, while there exists a particular state control of means of payment, which we shall clarify and define in the next section. This state control has been introduced and applied for the purpose of expanding production, an aim which is certainly social, above all when production is not sufficient to ensure full employment and a minimum necessary level of consumption for everyone. We believe, therefore, that collectivism should be defined as a « socialism of production ». However, we must immediately add that this socialism is valid up to a certain point which is, as we have explained, for the purposes of social needs. Beyond this point, when the exigencies of distribution have developed, and above all the exigencies of the international distribution of goods, collectivism is no longer valid as socialism, because it is not founded on a social

theory of distribution between concerns, but on a social theory of production, with well defined limits in distribution marked by the sphere of a single concern, or at most, by the sphere of a single industry. It is for this reason that, once one has arrived at this point in the development of social relationships of exchange, collectivism is faced by crisis as a social doctrine and as an institutional system for social needs. When this occurs socialism of production has only two alternatives: either cease to be socialism, or else find the way to be transformed into socialism of distribution.

Such a transformation could not and cannot of course occur by empirical means, that is, without a social theory of distribution, because there always exists some risk of falling into the social evils of capitalism. It is precisely for this reason that the present writer has had to face the question in its most basic theoretical sense, for this is the sole means of arriving at a knowledge and understanding of the dynamic of social relations, in a capitalist or a collectivist system. This understanding is acquired on the basis of the monetary laws of circulation, which are natural social laws, common to both systems and common to all systems. In virtue of these laws, we have been able to formulate a social theory of distribution and, with this, a socialism of distribution. The laws of circulation have allowed us to see the anti-social faults of capitalism, and now these same laws will allow us, in this chapter, to see the conditions under which planning policy is carried out in countries which have a collectivist system, to recognise the impasse at which this policy has arrived, and finally to devine the method by which this impasse may be overcome after one has arrived at the knowledge and understanding of the force of development of social relations.

## 1 - LIQUIDITY IN THE COLLECTIVIST SYSTEM

The control of liquidity is always the fundamental element which characterises and distinguishes the institutional systems of production and exchange of goods. We must therefore start from the different method by which this control is carried out, in the capitalist and collectivist systems, if we wish to understand the procedure of social relationships of exchange in Russia, in China, and in other countries which have a similar institutional system.

Throughout our treatise, when referring to countries in the West, we have always considered the liquidity of such a system as a liquidity between concerns. In more precise terms, we say that the liquidity of the market economies is a banking and financial liquidity, divided and shared among multiple and independent centres of financing. A particular relationship is established between the financing and financed concern, whereby the latter has an obligation towards the former for every amount borrowed and becomes bankrupt should the repayment not be made. This particular relationship constitutes the essential characteristic of capitalism and conditions every other relationship of production and exchange. The result, in brief, is that all the liquidity of the capitalist system has to be considered correctly as liquidity between concerns. The two types of concern, the economic and the financial, enter into a reciprocal relationship to constitute, in fact, a market economy, that is an economic-financial market which is then a single market of goods and services.

Things are quite different on the other hand in the collectivist system. Here, in fact, multiple and independent centres of financing do not exist, nor does the particular

relationship between the financing and the financed concern; there is no obligation on the part of the latter concern with regard to the former; there is no single economic-financial market. In short, therefore, there is no liquidity between concerns in the collectivist system, and it is senseless to speak of such liquidity as a complex whole of means of payment, in the hands of bankers and financiers, destined to be loaned to the other complex of commercial and industrial concerns. Nevertheless, a liquidity also exists in the collectivist system, because here too relationships of production and exchange are carried out by means of liquidity in money. The immediate conclusion of all this is that in collectivist countries there exists a particular liquidity, to be called internal business liquidity, quite different in its form and function from the inter-business liquidity of the capitalist countries.

Now, it is precisely this particular business liquidity of the nationalised system which we have to explain, and possibly define, if we wish to understand and to control the system itself, its method and its development.

As we approach this question initially, let us first of all explain, in non-numerical terms, what we mean by internal business liquidity, with reference to an industrial concern of production. Let us consider, for this purpose, that every concern of this kind is composed of a complex whole of goods, which can be grouped in three distinct and quite particular categories: fixed assets, which can be utilised but not reproduced; semi-fixed assets, which can be reproduced; and consumable goods, which are destroyed after first use. More exactly, we may say that fixed assets are those goods or property attributed to the concern once and for all, that is, the goods which may be substituted completely by other

goods. It is precisely in this sense that they may be utilised, but they cannot be reproduced by instalments, in single units. The result is that the substitution of these goods cannot occur in a continuous manner. For example, the value of the land on which the industrial plant is constructed is a fixed asset, because this land may be totally replaced by other land by changing the site of the factory, but naturally this land cannot be reproduced by instalments on the same site. Other fixed assets in an industrial concern are certain technological values of the factory, as, for example, the patents on which a chemical industry is founded, or the capital values which are conceded for the exploitation of hydraulic and mining resources. We are always dealing with goods which may be utilised during one period of time, but which cannot be reproduced by instalments and, therefore, by continuous accumulation. The second category of goods or property, however, which we have defined as semi-fixed assets, is composed of goods which can be reproduced by instalments, with an accumulatory process, while the technological process of production and the site of the factory remain fixed. These assets are the buildings, the machinery, and the various materials supplied to the concern. Finally, the third group of values covers the goods which are destined for consumption. These are the goods which are destroyed and which are not reproduced, such as wages and salaries, and which, in short, constitute the income of industry, that is, the increase in production which is aimed at social needs and at the remuneration of business services. These, then, are the three economic factors of the industrial concern. They are factors which, in any case, we have already specified at the moment when we defined the value of production at the beginning of this book. Once

these three capital factors have been clearly established and explained, it is clear that each of them imposes a permanent and continuous cost, the sum of which is, in fact, to be considered as internal business liquidity.

Let us now go on to specify, in numerical terms, the three components of business liquidity as we have explained them. With regard to this, a thorough analytical calculation has already been carried out in the « General Theory of Income » which we have mentioned before. We should ask the reader to look at this work for a closer mathematical examination of this point. Here we shall arrive at the required result by a short method, which will be explained in the following paragraph.

In order to establish the numerical value of the three components of business liquidity, we have to establish first of all the continuous and permanent costs of the three capital factors listed above. The sum of these three costs will be the liquidity which we are seeking. Beginning with the third factor, the consumable goods, we find that this factor is destroyed without being reproduced, and therefore its cost must be totally included in liquidity, as a permanent and continuous rate of income, or as a rate of productive increase. We already know that such a parameter, according to the natural law of circulation, is about 7.5% of the annual gross product. We shall establish it at, say, 7.4% and indicate it by $i$. We then come to the second factor, the cost of assets which may be reproduced; obviously, this cost is given by the rate of continuous depreciation of these assets, and we know, in fact, due to the second monetary law, that this rate also has a natural value $a$ around 7.5% of the annual product, since it is equal to $i$. Therefore, we may without

doubt also assume the value $a = 7.4\%$ of the annual product. There remains to be considered the cost of the third factor, which is the cost of those assets which, according to our definition, may be replaced but not reproduced. This is the characteristic cost of the productive concern, and therefore we may define it with the name of productivity and indicate it by the symbol $p$. In order to discover its numerical value we must follow a certain reasoning, as we shall explain.

The productivity factor $p$ expresses the continuous and permanent cost of all the instrumental assets which cannot be reproduced by instalments and which must be exchanged as a whole. Once these assets have been acquired, generally at the outset of the undertaking, they do not give rise to depreciation for they cannot be reproduced in single parts. However, these assets require a cost, which has to be defined as a cost of maintenance and care of the fixed assets. This cost is continuously present as a constituent part of business liquidity, and co-exists with the depreciation $a$ of the reproducible assets. Consequently productivity $p$ runs parallel and analogous to depreciation $a$. Thus we can discover the value of the cost $p$ by analogy with the cost $a$. Let us assume, that is, a transformation of the fixed non-reproducible assets into assets which are semi-fixed and reproducible; we can then calculate the depreciation of the latter in order to find $p$.

We see, therefore, how a fixed asset, giving rise to a cost of maintenance, may be transformed into a semi-fixed asset, which gives rise to a cost of depreciation. We notice, in fact, that a fixed asset, once it has been established, cannot by definition be reproduced. However, such an asset may always be reproduced, and continuously, if there is an internal exchange. A concrete example will explain this immediately.

Suppose we have established a factory on an area of 10,000 square metres; once this area has been acquired it constitutes a fixed asset for the concern. It is an asset which cannot be reproduced on the same site, as is the case, for example, with a building or a machine. However, if we remain within the area of the 10,000 square metres, and if we divide it into two lots of 5,000 square metres, the result will be two lots which may be exchanged with each other continuously and permanently. Each of these lots may in fact be regarded as reproducible property liable to continuous depreciation. The important result, therefore, is that 10,000 square metres are a fixed and non-reproducible asset, while 5,000 square metres are a semi-fixed and reproducible asset. This means that all fixed assets can be regarded as semi-fixed capital goods of depreciation, solely by reducing their value to half. Briefly, therefore, in order to find the cost of maintenance $p$ of the 10,000 square metres, we must calculate the depreciation $a$ of 5,000 square metres, since the two costs must be the same. Therefore the equation is: $10{,}000 \times p = 5{,}000 \times a$; and from this one easily deduces that $p = a/2$. In other words, since we have shown that non-reproducible assets may be regarded as reproducible assets of half the value, the cost of maintenance of the former is equivalent to half the cost of depreciation. In virtue of the second monetary law we have already established that $a = 7.4\%$, therefore $p = 3.7\%$. Business productivity, defined as the cost of maintenance of the fixed assets, is thus given by 3.7% of the gross annual product.

We have thus arrived at the costs of the three factors, which we have early indicated by $i$, $a$ and $p$. The sum of these gives us the business liquidity, which we may indicate by $L$, expressed as a percentage of the gross annual product,

indicated by $P$. Our equation becomes: $L=i+a+p=7.4\%+$ $+7.4\%+3.7\%=18.5\%$, where the percent refers to the gross annual product $P$. In short, the formula of business liquidity is: $L=P\times 18.5/100$. This formula shows us that, as is the case with the laws of monetary circulation in a market economy, there also exists a natural, constant and optimum relationship for the circulation of liquidity within a single business concern. We have, therefore, yet another law which controls the economic circulation of goods by the acquirement of the optimum income of the industrial concern and by the reproduction of all the capital goods of the same concern. This law tells us that the liquidity circulating continuously and permanently in the productive concern is 18.5% of the gross annual product which the concern can give, including the reproduction of its capital assets.

But independently of the above reasoning, if we move further ahead with our deductions, we find that there exists a natural speed for the circulation of liquidity within a single concern, just as there is a natural speed in relations between concerns, where $v=2.718$ has served as a basis for the development of the mathematical theory of money.

In fact, we notice that the formula we have discovered, $L=P\times 18.5/100$, is equivalent to $L\times 100/18.5=P$; therefore $L(5.4)=P$, where the parameter 5.4 is the multiplier which it is necessary to apply to the liquidity of an industrial concern in order to find its gross product. In other words, the parameter 5.4, which we indicate by $v'$, like $v$ in inter-business relations, expresses the speed of circulation within a single productive concern. This being so, $v'$ is valid for a definition of liquidity in the collectivist system, which is internal business liquidity and not liquidity between businesses, which is the case in the

capitalist system. We observe next that the speed $v'$ is approximately double that of $v$. This is, in effect, the best proof of all the reasoning and calculation which we have carried out so far, because it was to be expected, as we demonstrate, that the speed of circulation in the collectivist system would be double that in the capitalist system.

We notice indeed, that in the western system, based on credit relations between the financial and productive concerns, we have a single market of goods and services, where the financial concerns supply the services and the industrial concerns are the producers of goods. The separation of the two markets, which does exist, cannot be seen in the exchange relations. In the capitalist system there is, in effect, a liquidity which originally and structurally is outside the system of production, but in a functional manner it enters the productive concerns, to leave immediately afterwards in virtue of the continuous relationship of financing and depreciation of capital. It is for this reason that it is not possible to speak of a productive liquidity of industrial concerns, separate from an unproductive liquidity of the financial concerns. We must therefore consider, as far as capitalism is concerned, a global or overall liquidity which is also, precisely because it is global, an inter-business liquidity. This liquidity, indicated by $M$ in the planning formulae, has to be totally considered as productive, even if in effect it is not.

Things are completely different in the collectivist system. Here autonomous financing does not exist, and the pluralistic complex of banking and financial concerns is lacking. The important fact here is that all the services of finance and credit are carried out by the state, and this changes completely the definition of these services. Financial services, once they

have been taken over by the state, have to be defined as administrative services, absorbed by the general cost of the system, as for example occurs in the case of military expenditure or the cost of maintaining law and order. This means that the services of industrial financing and credit are transformed from particular divided services into undivided general services, without the least possibility of financing a particular undertaking, rather than another, with a specific reason of financing and another equally specific of repayment. On the other hand, business concerns control production using monetary means, and thus there has to be in the collectivist system a balance which is characterised in this way. The industrial undertakings are endowed with their own business liquidity, and this liquidity remains, even in a functional manner, always within the productive system. Outside this system we have only the state services, which are general and undivided administrative services, to be regarded only as services of consumption. The financial services, as they are understood in the West and which are divided and intermediary services between production on the one side and the state administrative services on the other, in this way disappear.

Within this framework, therefore, it is clear that we must consider two liquidities and not only one, as is the case in a market economy. We have to consider, in other words, a productive liquidity within the system of production and an unproductive liquidity, which is administrative or of mere consumption, and which remains outside the productive concerns. These two liquidities form two separate markets, one of goods and one of services, and between these two balanced liquidities there is an exchange of goods for services.

In short, the overall liquidity of the system, which is indicated by $M$ in the capitalist system, is split into two equal parts. Productive liquidity, which is that of the concern in the collectivist system, and which we have indicated by $L$, has about half the value of $M$. However, if the concern's money, that which circulates for production, is half of the total money, then in order to have the same product, the speed of circulation within the single productive concern must be twice that which prevails in the inter-business system of financing and production.

To sum up, all the reasoning which we have set out permits us, above all, to grasp the exact interpretation of the economic reality which exists in countries with a system of nationalisation. It permits us to understand how and within what limits exchange takes place in these countries. Furthermore, the same arguments confirm, in another way, that the speed of circulation within a concern discovered by an analytical process, is effectively 5.4. Our formula for business liquidity, $L(5.4)=P$, becomes the basic formula for expressing the exchange relations in every collectivist system and for developing, therefore, a planning policy which conforms to the conditions of development in the countries of the East. Obviously, it will be the concern of these countries to verify, experimentally and with statistical proofs, the correctness of this formula. Meanwhile, it is our concern to develop our theoretical analysis of planning policy in countries with a system of nationalised production and exchange.

This we shall do in the next section, with a discussion of the best method of effecting and developing a planning policy within the framework of institutional collectivist systems.

## 2 - THE CONTROL OF INTERNAL BUSINESS LIQUIDITY

The formula of internal business liquidity, which we have just discovered, equals in form Fisher's formula applied to the economic system of free exchange, where there is a single market of goods and services and an inter-business liquidity. However, in collectivist economies, the substance and meaning of the symbols are changed in the sense that we shall explain immediately.

The formula $L(5.4)=P$ means that in a given nationalised system there circulates in the complex of productive concerns a liquid business capital whose amount is $L$. This sum is reproduced, during the productive course of the concerns, a certain number of times, between five and six in every year, and in fact precisely 5.4 times. This means that business capital is destroyed and renewed approximately every 68 days. From the repetitive reproduction of this sum grows an annual product expressed in money, which we indicate by $P$. This product $P$ is the result of multiplying business liquidity $L$ by the number of times it is reproduced in a year, that is by 5.4.

We notice that the basic formula $P=L(5.4)$ contains the two quantities $P$ and $L$, which refer to the year already passed and which can be discovered statistically. It is in this manner that we can verify the formula, using the following simple procedure. Let us consider a certain number of years already passed, say 10, and establish their average values for each year both for product $P$ and liquidity $L$. With these average values we can go on to verify whether the ratio between them is about 5.4. As a result of this check we shall obtain a useful proof of the formula discovered theoretically, but

of course this check does not yet provide any form of prediction for the development of the plan since the formula refers to circumstances in the past. We must therefore define this formula as a statistical and not as a planned state of development, and then go on to discover in precise terms the effective planned condition of economic development.

Whereas $L$ indicates the circulating business capital of the preceding year, $L'$ will be used to indicate the liquidity of the year which immediately follows. Similarly, we shall indicate by $P'$ the product in money of the coming year. We know, as a result of the third law of monetary circulation, that the product must grow at the maximum and optimum rate of 7.5% per year. Our equation therefore becomes: $P' = (1.075)P$. We know, too, that the speed of business circulation, that is, the multiplier 5.4, is also a natural and optimum number, and since this is the case it must remain constant throughout the cycle of the plan. Our planned condition, referring to the coming year, is therefore expressed by the following equation: $L'(5.4) = P'$. But since $P' = (1.075)P$, our equation can also read: $L'(5.4) = (1.075)P$. This gives us a final equation: $L' = P \times 1.075/5.4 = P \times 19.9/100$. For the sake of simplicity we can approximate this to:

$$L' = P \times 20/100.$$

This, in fact, is the planned condition of development for countries which have adopted the collectivist system. In virtue of this condition, we find that internal business liquidity, or the equivalent circulating capital of industry, when one or the other refers to the coming year, must be 20% of the gross national product of the preceding year. Suppose, for

example, that the gross product of a given country in a given year is 100 billion dollars; in order to achieve the maximum productive development in the following year, a liquidity of 20 billion dollars would be required as the total circulating capital in the complex of productive concerns. If this liquidity is available, the following year will give us the optimum productive increase of 7.5% of the product of the preceding year.

It is therefore the task of the central planning office to control the liquidity of the various concerns, in order to bring about this planned condition of development. With such control, the central planning body will eventually assume complete power of control over the exchange relations and their evolution. It will realise the preliminary and necessary conditions for the carrying out of those modifications, in the system of planning, which will also be necessary, as the next section will reveal. At this point we have still to complete our line of reasoning on planning formula. We have still to look at two important problems which occupy the countries with a collectivist system. The first is the difficult question of the relationship between goods involved in production and consumable goods, and the second is the important problem of a single currency in the countries of that system.

Above all, we notice that our formula for business liquidity decisively overcomes the first problem. This was necessary because, in fact, with the terms of instrumental goods (or goods involved in production) and consumable goods, we referred to something very imprecise in inappropriate terms. Indeed, if by instrumental goods we intend assets by means of which one can produce other goods, it is clear that every economic value, while it remains unconsumed,

is to be included under the heading of instrumental goods. Nor is this an appropriate heading, for it makes one think of a restricted category of goods, beside which there exist others for other purposes. In effect, therefore, all goods, while they remain unconsumed, are instrumental goods; and so, if one wishes to be more precise, the complex of all these unconsumed goods must be defined as the gross product, whether of the country or of the individual concern. On the other hand, in a system where exchange relations are carried out in money, consumable goods are only those which are expressed in money which has been spent. Briefly, therefore, one may say that the question of the relationship between instrumental goods and consumable goods has been badly formulated in terms which are imprecise.

We should say, instead, that the task is to establish the relationship which exists, or which ought to exist, between the total national or single business product and the portion of it which is reproduced several times as circulating capital or capital of consumption. This latter part, if monetary relations of exchange are being applied, must be expressed in money. Therefore, taking the correct interpretation, the relationship in question is that between $P$ and $L$, between the product and the business liquidity of the system. In short, our formula gives us precisely that relationship which we were discussing, and solves the question in the sense that there exists a natural, constant and optimum relationship between the instrumental value of the whole product and the portion of it which is to be found in the system, in a monetary form, being reproduced several times in the course of the year. Obviously, the knowledge of this structural parameter is essential for the right formulation and carrying

out of the plan. In fact, it is only after establishing this parameter, by means of the first statistical formula, that we could discover our planned condition of development in the collectivist economy.

The other point which we must consider in this section is the important question of a single currency for countries which have a nationalised economic system. We have already mentioned, when speaking of the inter-business liquidity of the capitalist system, the fact that the monetary unit is an element of liquidity, that is, it is an element of the national product which is continuously circulating. This will also be true of the collectivist system. But obviously, since liquidity changes in this latter system, both in its form and in its interpretation, consequently the interpretation of money will also change.

Indeed, one must consider the essential fact that, in market economies, the unit of money has a financial characteristic, as an expression of an inter-business relationship, therefore it is a market value. In nationalised economies, on the other hand, the monetary unit has an economic value of production, and is therefore an internal business value and not a market value. In this second case money moves with a natural speed of 5.4, which is the ratio between the national product and the circulating capital employed in the productive concerns. This parameter is the same for all the countries which adhere to the system of nationalisation, so that if all these countries recognise the validity of the formula and adopt it, the creation and institution of a single currency for the members of the system is an automatic fact. For each state the unit of money is defined as about 18.5% of the unit of national product, and it expresses the unit of consumption of

a virtual productive concern, which is the average of the concerns in the system. We notice, however, that the currency defined in this way is statistical and static, because it refers to a product achieved in the past year, and also because it is the element of a liquidity which has already operated within the system, with effects which have already been discounted. For a more precise definition of the element of liquidity, the liquidity has to refer to a year which is still to come.

Let us now look at the monetary means which will operate within the system in the course of the coming year. If we do this, we shall arrive at a definition of a currency which is dynamic and which is predicted. What is more, in this second case we find that, in both systems, there exists a common element which is represented by the natural rate of maximum development of 7.5% per year. This element is an essential factor in the planning formula, whatever the system under consideration. In other words, even if the speed of circulation, which in the collectivist system is double its value in the capitalist system, varies from system to system, there nevertheless remains common to both systems the important and natural parameter of the maximum rate of development, which, after all, is the essential aim of the plan. We find, then, that in the nationalised system the dynamic unit of money is 20% of the unit of production, whereas, in the market system, the same monetary unit is worth about 40% of the unit product. However, apart from this difference which has a relative value, if the western system adopts the planning condition as we have shown above, it is clear that, in both systems, one will achieve the common aim of guiding the economy in accordance with the same optimum rate of

development of 7.5%, the parameter which is common to every type of economic system.

This last consideration which we have made is very important, because it gives us the means of establishing that the two different economic systems can, in short, move towards the same goal, provided that the correct planning policy is applied on both sides. It would certainly have been discouraging, if we had had to admit that there was a permanent and unchangeable incompatibility between the two systems of economic relations, and therefore of social relations, without the possibility of any agreement, either now or in the future. But in fact such a pessimistic prospective does not exist. In the flow of economic development, beyond static inertia, there exist elements which are common to the two systems, and to every system. These are indeed the elements which have been discovered through the natural laws of circulation. These laws, precisely because they are natural, dominate every type of social relationship, whether inside each state, in the relations between states, or, finally, in the relations between groups of states which have a different social system with a different formulation and ordering of economic relations. As a result of the natural laws of circulation, the pessimistic vision of a permanently divided world must give way to a careful consideration of the means and stages of a possible and gradual convergence. This is not to be considered impossible, if we look at the flow of development in both systems. It is on the basis of these logical considerations that we are led, at this point, to the following section on the possible method of evolution for the collectivist economic system.

## 3 - THE POSSIBILITIES AND CONDITIONS FOR A NEW LINE IN THE EAST

Our preceding analysis has revealed the conditions in which exchange relationships operate in the East and the formula which expresses them. But having come this far, we must now say quite explicitly whether the present line of collectivism works or not. Eventually it will be necessary to point out its essential failing, and to indicate at least a possible method of overcoming it.

In our opinion the system clearly fails because of a fault of distribution. This distributive failing is but the consequence of the fact that the financing of production occurs as a general expenditure, that is, as a general and undivided service provided by the state without the possibility of dividing, concern by concern, the cost of this service. In fact, the financing of production should be done in a divided and not in an undivided manner, with the specific allocation of its financing share to every particular concern which, individually considered, must retain responsibility for the cost of this service. This is the crux of the question we are discussing. If financing occurs in a divided manner, with the specific responsibility to repay on the part of the productive concern which has been financed, it follows that the amount which has entered the concern as a result of its being financed returns, after the industrial transformation, outside the concern because of the specific repayment to which the concern is bound. In other words, this specific repayment is the sole factor which causes the return outside the concern of the amount which has entered in order to be transformed. On the other hand, the external flow of what has been produced is the necessary condition to enable the distribution of production

according to a choice on the part of the consumer. We shall have to explain in more detail this important statement.

Every concern has its particular productivity which is destined, in part, for the repayment of the costs of the productive factors which have combined to determine such productivity. In another part, which is the value added in the transformation process, this productivity is destined to be placed in circulation and to be distributed for social needs, in such a way that this added part is consumed by whoever desires it for his own use or purpose. Now, once the internal factors of a given industrial undertaking have been satisfied, its added value can leave the concern, in order to be distributed, only by means of the repayment, expressed in money, of the economic factors of plant and machinery. Where such specific and financial repayment does not occur, we have a productivity which satisfies the internal factors to saturation point, but the added value cannot pass to the outside for the satisfaction of social needs, in other words, for inter-business distribution. We shall have in this case two possible situations: either this added value is not created at all, or else, once it has been created, it is destroyed within the same productive process after saturation of the internal factors of production. There is no doubt, therefore, about what we pointed out earlier, that collectivism is a system of production with quite definite limits of distribution, and that this distribution remains irrevocably within the limits of those who have produced. It follows that the system is socially valid as long as it has to ensure the saturation of the factors, which is achieved by full employment. However, once the system arrives at this saturation, it fails socially, because at this point

it becomes incapable of distributing externally the productivity which is in excess with regard to costs.

As a result of the above reasoning, our definition of collectivism as socialism of production will become quite clear. This system, if it wishes to continue to be defined as socialism, must at a certain point in its expansion take a qualitative jump towards a socialism of distribution. All this we have stated earlier, but now, due to the cogent logic of the theories and their numerical formulation, we have made quite obvious and concrete those statements which possibly seemed vague before.

The collectivist system, once it has reached the essentially economic goal of the complete use of all factors, must be transformed, and for this purpose it must modify its planning policy. Unless this is done, it will cease to be a system which is valid for social needs. The system, in its present form, is only a form of control of internal business liquidity, which is the circulating capital of production. But once production has been saturated, planning must be changed because the control of the circulating capital of industry is no longer of any use. It is necessary instead, at this point, to realise what inter-business liquidity is, and it is necessary to modify planning so that this may control the inter-business liquidity. This is the form of liquidity which assures the circulation and distribution of every productive increase far beyond the confines of the single concern. Briefly, therefore, collectivism has to realise that a new planning policy is required with this definite aim, and that there is no other alternative. The financing of industry must be carried out, in the course of time, in a more and more divided, more particular, and more specific manner, At the same time the

concerns which are financed have to remain responsible for the repayment of the amount which is attributed singly to each productive concern. After establishing this definite aim of the new planning policy, we must now consider the method, the ways and the stages, by which this aim may be reached, maintaining all the while a firm control both of the transformation and of the new liquidity which, in any case, will regulate the new exchange relations. With regard to this, we shall outline a transformation plan in four stages, without claiming, however, that this is the only possible plan for bringing about the necessary transformation. Our plan serves only as an example, in order to indicate one of the possible methods for the changes in collectivist planning which are necessary to transform the system into one of socialism of distribution.

The first of the four transformation stages is the division of the financing service into smaller units divided by territory and sector. Liquidity will continue to be controlled as internal business liquidity, according to the development condition which we have set forth. Obviously, this first stage is to be considered merely preparatory, because its sole purpose is to transform the present system of financing from a single administrative service to a divided economic and financial service. This, however, does not change the essence of the actual business liquidity, which remains controlled as the circulating capital of the industrial concerns. The second stage consists in the separation of industrial financing into the two essential components: short-term banking credit and financial credit in the true sense, which is medium and long-term credit. For this purpose, the various financing centres will have to be separated into bodies with banking functions

to supply the expenditure for salaries and movable goods, and financial institutes to supply the expenditure for the renewal of the fixed industrial assets. In this way, by dividing the particular credit functions, a network of publicly controlled banks and financial bodies is created. This network of bodies will constitute the necessary intermediary structure between the industrial concerns, on the one hand, and the state administration, on the other. Such a structure, in virtue of its intermediary position, will be capable of ensuring the division of every service which offers industrial credit, while the banks, in particular, will have the task of spreading and increasing the use of the means of payment, with the extension of the use of crossed cheques as well as of legal tender. When this intermediary structure of credit and financing has been sufficiently developed, with the simultaneous extension of the adjustment of accounts for payments, the conditions will have been created for the step to the third stage of the transformation, which is the decisive one for the qualitative change of the system.

In fact, in this third phase, one will have to abandon the old principle of single business liquidity, based on the control of the circulating capital of industry and on the speed of circulation within the concern of 5.4, and it will be necessary to move on to the principle of inter-business liquidity, based on the control of the means of payment circulating outside the system of production and circulating, in fact, in the banking and financing system, which has been prepared beforehand in order to make possible the circulation and the distribution of every productive increase. At this point in the transformation, therefore, we shall have to deal with an external liquidity, circulating with a speed of 2.7 instead of

5.4, and with a single market of goods and services. In this case the formulation of the plan will have to be changed and one will have to move on to a control of liquidity and development, according to the formula which we expounded and discussed in the fifth chapter, and to a census of liquidity, also analysed in that chapter. In this way, the new planning policy will be based on the control of the system's total liquidity and its increase, with the realisation of the previsional condition of development. The new system will thus fully deserve its title as socialism of distribution.

Finally, when a sufficient control of this new liquidity has been attained, the conditions will be right for the step to the fourth and final phase of transformation. Here it will be a matter of giving autonomous powers of decision for self-financing and for the financing of production to the business concerns and to the medium-term finance bodies. When we have achieved this autonomy of financing, we shall have the effective formation of the business cost of production on the one hand, and the provision of the financing service in a divided and specific way, concern by concern, on the other. The total liquidity of the system, constituted by legal tender and the money in account with the banks, remains under the control of the central planning office, along with the state control of the banks themselves. In short, the transformation which we regarded as necessary for social distribution can be considered complete, to the great advantage, we believe, of all society.

We shall conclude this section with a last consideration of the correct position of the capitalist countries with regard to an eventual transformation of collectivism. Indeed, the plan which has been outlined above, while admitting

numerous alternatives in the methods and the stages of its fulfilment, does not however admit any alternative with regard to its aim, because there exists an objective necessity for changing the nationalised system of production and exchange. This has to be remembered by the countries with a market economy, so that they can take up a correct political position in internal relations and in relations with the countries of the other system.

From the moment that one realises the objective need for change in planning of the eastern type, in the way that we have explained above, all this will in fact confirm the other need, for the western countries, to conduct their planning policy according to what was outlined in the previous chapter. There we indicated the only way to give direction and a social aim to an economy of free exchange. The countries of the West must adopt and develop the planning policy which we indicated, also because it is quite probable that the countries of the East will converge, due to force of circumstances, towards a similar policy. At the present moment the countries of the two systems are governed according to economic and social relations which are completely different. However, although we emphasised this difference, we discovered that there exist logical probabilities by which the collectivist type of planning may have to be modified, after it has reached a point of crisis due to a failure in distribution. Should this occur, this constitutes yet another reason why the countries with a market economy ought to introduce, on their part, the correct planning policy for the solution of the social problem. If they do not do this, the western countries will run the risk of being overtaken by the countries of the other system when the latter have

completed the transformations, necessary and logical as we have seen, and take the right path for the solution of the social problem. To sum up, therefore, there exists also the competitive need for the countries of the West to introduce and promote, as a result of independent choice, the correct planning policy.

In this case, we believe that the following political position is the correct one for every western country: introduce and effect, in each of these countries, the right policy for the attainment of the social goal of the distribution of resources, and when this has been achieved, wait for the countries of the other system to converge there, if and when they wish to. The goal has been quite clearly defined in this work, and it is a matter of moving towards it with the suitable and appropriate political means. On the other hand, the policy of the relationship of one system with another is bound to be a waiting policy, one of experiment and of reciprocal tolerance. The result will be that international political relations, if considered over a sufficiently long period of time, will lose importance with regard to social relations. It will be the latter which will become more and more urgent as they move towards the social goal of the correct distribution of resources, which is the single goal of both systems. The first to reach this objective will leave the others behind along the path of history. Those who come second will have to remember that very often history does not wait for the laggards, because the time for waiting has already passed.

## Chapter VII

# The single world market

We are now moving towards the end of the arguments put forward in this work, and we are approaching the important question of the formation of a single world market of means of payment. This, in our opinion, is the most important economic and social question which faces us today, for it is only through the formation of such a market that an international distribution of resources can be made possible. The result of this will be economic and social progress for those large areas of underdevelopment where hundreds of millions of human beings wait on the edge, or even right outside, of modern industrial progress. Within every country we may find depressed areas, giving rise to problems of internal distribution of resources, but this problem, which we have already discussed exhaustively, can be solved with the correct planning policy, as has been shown in the two preceding chapters. However, here we should add that the correction of economic instability within a country cannot be considered independently from the international distribution of resources. This is true because geographical disparities, from area to area, often coincide with the disparities between different sectors of the economy, for example between industry and agriculture. In this case, the sectors develop separately, according to exchange relations established also outside the

country. For this reason particular internal depressions are not always independent of the great international depressions. Quite often there is a single cause of distributive injustice, coming from the disparities between sectors and not from those between geographical areas, as appears at first sight. To sum up therefore, the problem of distributive injustice is to be solved by removing the same obstacles, whether in national or international relations. Naturally the problem has to be tackled from the starting-point of the widest market, from the starting-point of the international distribution of resources.

On the other hand, we notice that our treatise to this point has shown that the question of social distribution is, in effect, the problem of the control of the means of payment. This is obviously true both inside the various countries and in their relations of international exchange. The massive movement of capital in transactions from one state to another reveals that there exists an international liquidity, just as there exists a national liquidity.

From this it is clear that every control of internal liquidity cannot leave out of consideration the method of effecting payments between states. It is certainly very important for every country to have a clear idea of the meaning of liquidity in foreign relations, in order to establish whether such an interpretation can, at the present time, ensure the circulation and distribution of resources from country to country, since this, in short, must be the essential function of international money.

Therefore it is a basic essential, for the economic development of each and everyone, to interpret and control for distributive purposes the means of payment in international

relations. Indeed, should this money, in its present interpretation, not answer the needs of distribution, the spread of technological and economic progress becomes inevitably blocked in relations between countries, and it is likewise conditioned in the exchange relations within a given country. It is here, we believe, that we find the first and most important knot to untie, in order to achieve the international distribution of resources. The spread of economic progress from the rich to the poor countries is held up at present because the system in force, by which international money is interpreted and managed, is without doubt impotent to distribute resources. Such a system has to be altered radically, according to an interpretation which is quite different from the present one.

For these reasons, and with the continual aim of moving towards the social objective of distribution, we shall firmly challenge, in the first section of this chapter, the present system of payment between states, the so-called « gold exchange standard ». We shall show, moreover, that this system has no validity for the social purposes of the international distribution of resources. Once we have accepted the urgency of this necessary radical alteration, we shall go on to see how international money must be interpreted and, finally, how it must be controlled. This, indeed, will be the subject of the second section. The third and last subject, and the conclusion of all our ideas, will be the distribution of resources between different countries. This is the social end to which we have been moving from the outset of this work, and it is the end which every policy operating in favour of the needs of all society must strive to attain.

## 1 - THE CRISIS OF THE GOLD EXCHANGE STANDARD

The present international monetary system, known as the gold exchange standard, was born at the end of the Second World War, on the initiative of the United Nations and as a result of the Bretton Woods agreement. It is institutionally managed by the International Monetary Fund of Washington. We ought here to explain briefly the present system of payments between countries.

In its simplest interpretation and in its practical application, the system functions in the sense that transactions between states are carried out in gold or in United States dollars. The dollar expresses a certain amount in grammes of pure gold, since the United States guarantees the price of gold in ingots on the international market at a pre-established rate. The result is that the currency of every country which subscribes to the Monetary Fund of Washington is fixed at a certain rate of exchange with the dollar. Every central bank involved then controls this parity of exchange with the dollar, allowing a certain variation which, according to the rule of the Fund, cannot exceed one percent more or less than the fixed rate. Generally, the various issuing banks intervene in the exchange of their currency with the dollar by buying or selling dollars when the exchange rate in question is revalued or devalued, with regard to parity, by an amount not superior to 0.75% more or less. It follows that every currency of the Fund is backed by the dollar which, in turn, expresses a certain number of grammes of pure gold. In actual fact, this signifies that the currency of every member of the Fund is indirectly backed by gold (in ingots), that is, through the intermediary agent of the dollar. With the system of the

gold exchange standard one agreed to abandon the former gold standard, by permitting the liquidation of international payments not only in gold, as was the case with the gold standard, but also with exchange currency as well as with gold. This is the reason for the new name to explain the mixed system; gold and currency are both in use for payments between states. However, since the dollar, the key currency of the exchange system, continues to be linked to pure gold, of which it expresses a certain number of grammes, it is quite obvious that in practice international currency is still an expression of gold, even if it is through the intermediary of the dollar. Even in the new system gold in ingots, or gold bullion, represents the countervalue and the real backing of currency in banknotes, to whatever country it may belong. Consequently the precise name of the present system ought to be «gold bullion standard ». In effect, therefore, the gold standard has not been abandoned but still persists, since the currency of every country is interpreted as a certain number of grammes of pure gold at a unit price expressed in United States dollars.

Despite the intervention of the dollar the old structural arrangement, founded on gold as a basic element for international payments, has still remained. The introduction of an exchange system in dollars, has served only in a functional manner, and only up to a certain point. The intervention of the dollar has made the reciprocal convertibility of exchange currencies easier to manage; gradually they have become unified on the basis of a single currency of account, to the benefit of international trade which to a certain extent has been helped in its expansion. However, with regard to what money expresses and therefore with regard to the factors

which determine both the entity and the speed of circulating currency, its structural and essential significance has in no way been altered as regards the traditional interpretation of money as gold. It is this interpretation of money which is quite false and harmful to society, as we shall now set out to demonstrate.

Above all, we must carefully separate the two elements of the present system, gold and the dollar, and realise, as has been suggested already, that the system is failing not because of the dollar, that is, as a result of the budget expenditure of the United States, or as a result of a mistaken general policy on the part of that country. Rather, the introduction of the dollar has served, with the unification of the exchange rate system, to encourage in some ways the continuous widening of international markets. What has, instead, led to the crisis of the gold exchange standard is, in fact, the other part of the current monetary binomial, gold, which has remained the basis of the system even after the corrective move of the mixed system. In the new system gold has continued to represent the counter-value and the real backing of every currency, including the dollar. It is our firm belief that the interpretation of money as the equivalent value of a counter-value, or backing, in gold, is a completely wrong interpretation, and totally inconsistent with the reality of international relations, especially when the expansion of such relations has reached certain limits. The interpretation of money as a value of gold could scarcely be tolerated in an archaic system, founded on localised and predominantly qualitative exchange relations; in present-day relations, founded on the massive movement of capital and a very widespread exchange of services between continent and continent, the interpretation

of money as gold is completely unacceptable in the light of logical economics, and intolerable as an institutional fact. Gold-money, and not dollar-money, is the true and single cause of the present crisis in the system of international payments, with all the consequent and quite negative social results. It is gold which has to be accused, and not the dollar; and it is gold which has to be outlawed as currency, in the interest of every country. We must now explain these assertions.

First of all, we must answer this question. what is gold-money? Obviously, if we make a payment in gold or in an equivalent form which represents it, we are making a transfer from one balance-sheet to another of a certain number of ingots or of the transport bond which represents them. We are dealing, quite clearly, with a transfer which is analogous to that of any other commodity. In other words, with the transfer of gold we carry out a transfer of purely qualitative values, a barter transfer, since the gold ingots do not have the essential characteristic of money. This characteristic is precisely that of possessing a denomination, a nominal value as well as a real value. Denomination is the essential characteristic of money because it signifies that money, during the transfer act, does not transfer only its intrinsic qualitative weight, but also something much more important, a purchase power which is quite indefinite in quality but well defined in quantity. As a result of its nominal value, or denomination, money during the transfer process, once it has reached its destination, succeeds in transferring a specific amount of value. If the nominal value is not present, we cannot speak of money but only of goods; if it is not present, money represents only itself, and it is not able to represent other

goods in general, and much less able to represent the value of services; finally, if the nominal value is lacking, money cannot carry out a quantitative and multilateral transfer of values, according to the choice of a new consumer. Now, the transfer of gold ingots, or of the bond which represents them, is obviously a transfer of goods, qualitative and not monetary. At most this transfer will serve to counterbalance, in a purely bilateral relationship, an exchange entry in the balance of trade, but it will not serve at all to express, in multilateral terms, an entry in the balance of payments, whether this entry be a movement of capital for international loans or whether it be a payment for services supplied by one country to another. We have therefore shown clearly that gold ingots cannot operate as money. Let us now proceed with our analysis.

If the reader will recall for a moment our theory of value, he will realise how gold-money, which is goods-money, operates as a value of exchange-consumption, but not as a value of distribution. Indeed, we learned in the chapter on value that the value of distribution is a nominal value, characterised by a productive time. If a nominal value is not present in money, it cannot express a value of distribution. This is the crux of the whole matter; with the result that it must now be obvious that international payment in gold expresses, at its widest limit, an exchange-consumption relationship, in which distribution, or the effective transfer of value, does not play any part. If, therefore, gold-money, which is in fact non-money, has this structural limit, as a result of which its use is restricted to the bilateral exchange-consumption relationship, the immediate consequence is that the transfer of gold serves only to express an exchange of goods for goods;

and as we have seen when discussing the value of consumption, this is a restricted and limited exchange between those who already produce and sufficiently consume. These, then, are the quite obvious structural limits of gold as a means of international payment. As a result of these limits, gold is quite incapable of expressing the exchange between goods and services, and much less capable of expressing the reciprocal exchange of services. Both of these are required, however, by the two components of the balance of payments: the movement of quantitative capital and the invisible entries.

Moreover, it is useful to consider that the international distribution of resources cannot take place without a monetary means to transfer values in quantitative terms. In fact, consumption, understood qualitatively as goods, reaches a saturation point for each individual or for each given area of high productivity. The result is that in areas of advanced industrial development one is faced with a productive excess, and this excess may be transferred to other people and to other areas with a depressed economy, only if one has at one's disposal a distributive currency, a quantitative value free from the restricted relationship of bilateral exchange. And for the international exchange of services, an effective currency, with a nominal as well as a real value, becomes even more essential. In practice the exchange of services is the exchange of work, understood as productive time, and naturally such an exchange cannot occur without a monetary means which expresses also a temporal value, as happens with the face value of money. It is clear that gold-money does not answer in any way these distributive needs. Gold remains bound forever in its ancient role of static money, as powerless today as it was yesterday

to seize the dynamic characteristics of money, in its formation, in its speed of circulation, and in its growth.

We may sum up by saying that the conclusion is quite clear: in answer to social needs gold must no longer be used as money. The monetary use of gold restricts both the movement of capital and the clearing of services in international relations. This is equivalent to saying that the use of gold as money forms the decisive obstacle both for the transfer of capital from the rich to the poor countries and for the distribution of income. For these reasons it is the writer's opinion that the most urgent social need of the present age is the final and complete abolition of gold as a means of international payment. This should be done in the interests of every country and of every currency; and above all, in the interest of dollar-money.

In fact, if one suppresses the monetary use of gold, the dollar will be quite able to continue as the reserve currency and the basis for the ordering of international payments, without losing in any way its function as a determining (or backing) currency for exchange rates. We shall see the reasons for this more clearly in the next section. Here, however, we have ascertained the urgent need to eliminate the monetary use of gold. If this is not done, it is easy to foresee, as a result of the present gold-dollar coupling in the current system of gold exchange standard, that the patent inability of gold to solve the pressing problems of international distribution will eventually drag the dollar into the crisis, and with it the whole enormous structure of American finance and economy, to which the economies of the other western countries are linked in so many ways. We believe, with regard to this, that the political leaders of the United States must take a coura-

geous step in monetary policy; they must take the timely initiative of disengaging the dollar from gold, and they must propose a reform of the Bretton Woods agreement, no longer of use for the control of international liquidity. A new ordering of payments is urgent, besides being necessary, because the crisis of the present gold exchange standard has now continued for many years. It is therefore up to the United States to prepare, in the shortest possible time, reports and proposals for a radical reform of the present international monetary system.

Naturally, after we have stated the urgent necessity of disengaging the dollar from gold and eliminating the use of the latter as money, we are then obliged to say what the dollar must be linked to, as a reserve and backing currency for the other countries. We shall, in fact, discuss this in the next section, after a few brief remarks on particular moves recently introduced in the exchange-rate system by certain countries.

For some time, despite belonging to the Monetary Fund of Washington, two countries have introduced a system of exchange which differs somewhat from the usual exchange controlled according to a fixed, or almost fixed, parity with the dollar. These countries are Brasil and Canada, and we shall now examine their particular variations.

For several years Brasil has adopted a fluctuating value for the cruzeiro, which is regulated by the internal index of prices. If this index rises, as frequently happens, the rate of exchange of the cruzeiro with the dollar is adjusted, and consequently there are repeated small devaluations every month, or every two months. This system of exchange, which we can call fluctuating parity, has allowed Brasil to reduce

certain inflationary tendencies, which were due to the differential speculation between the official rate of exchange, the external value of money, and the free rate, the internal value. This second value is inferior to the first because of the significant price increases inside the country. With the new system the difference between the two values of the currency has disappeared, and every differential speculation can be considered nullified. However, our judgement on such a system is that in the long run it has no reason for existence, for the two values, internal and external, eventually coincide and there is no longer any reason for keeping them separate. There still remains the problem of undepreciating money, but this is a problem for every country and an international problem, which will be solved by the internal control of liquidity and by a new interpretation of international money, as we shall see shortly.

For its part, Canada has recently returned to the system of a free and uncontrolled rate of exchange. This is a system which was adopted in the past, then abandoned, and which has now been re-introduced. Under this system the central bank involved does not intervene to maintain the parity of exchange within the limits of 0.75%, or a maximum of 1%, more or less than the pre-established parity. The rate of exchange therefore remains free and is established by exchange (or trade) relations. We must, however, explain the meaning and validity of this uncontrolled rate of exchange.

A free rate of exchange, which does not have a pre-established parity with regard to another currency, is, in our opinion, to be regarded as a currency without denomination, a money without numerary value. For this reason, a free rate of exchange expresses a qualitative goods value, since it is

regulated by the balance of trade and not by the balance of payments. In other words, the free rate of exchange becomes the equivalent of a qualitative settlement in the balance of trade; therefore such a system of exchange does not differ, in pratice, from the system which uses gold, or some other commodity, as a means of payment abroad. In short, therefore, the system of the free exchange-rate is also to be considered temporary and not lasting, for it does not express the unit value of the balance of payments. The result is that the relations of the country involved become restricted, with regard to the circulation of capital, even though its commercial relations expand. Finally, at a certain point, it will be necessary to re-introduce a quantitative currency, with a pre-established parity, in order to restore equilibrium in the balance of payments.

We must now undertake a final consideration of the Special Drawing Rights recently introduced within the Monetary Fund of Washington. As a result of these rights each country may draw from the Fund a certain amount of currency, to be repayed after a certain time. It is obvious that, with such rights, banking money has been introduced in the heart of the Fund; but no new money has been introduced, with a different expression from the traditional one of gold-money. In effect, with the drawing rights, the function of exchange currency has been extended somewhat with regard to gold. The former is now expressed also as international banking money, drawn on a current account of remittance or credit. But the monetary system has been changed in no way Therefore, even this corrective has not served to solve the crisis of the system; this crisis persists with or without the Special Drawing Rights, and it persists in the manner that

we have explained in the preceding pages. The salient factor which has determined the crisis is the inability of gold to act as a distributive means. To overcome this crisis, the only solution is to disengage the dollar from gold, completely and finally, and to couple it to a new interpretation of the monetary means. We shall now discuss this in the following section.

## 2 - THE NEW INTERNATIONAL MONEY

We must begin by stating the correct interpretation of money, in its proper meaning of dynamic value moving from certain causes to certain results. We are in a position to give this correct interpretation of the monetary means on the basis of the natural laws of circulation. These laws, in fact, permit us to assert that money is neither a gramme of gold nor a gramme of silver, which are merely qualitative values and of interest only to whoever produces and consumes these metals. Any weight of any precious metal can tell us nothing about circulating money, the money which is spent and which returns, the money which is saved and which is invested, the money which produces a certain product and an increase of this product. We believe, in short, that a definition of money as value of gold or silver is a jump back in time, to the age when the relations of production and exchange were carried out by barter in a very restricted area. Today, if the reader will reflect for a moment on the massive exchange of goods and services from one continent to another, such a definition of money is quite obviously absurd, and even ridiculous

If on the other hand, we wish to grasp the dynamic reality of money, such as in fact it is, and such as we have illustrated quite clearly in this book, then we must define and

interpret money in the following manner: money is an element of liquidity, or a unit means of payment, which circulates in a given economic and financial system with the purpose of obtaining a certain productive increase. We may accept for the moment this definition; but we know too that there exists a natural speed of circulation, valid in every country and in every age, and that there exists also, in close relation to this speed of the means of payment, an optimum rate of increase for the annual product. As a result, we can now define money in this way: it is the element of liquidity circulating in a system of production and exchange of goods and services for the purpose of obtaining the optimum increase of the system's product.

It follows from the above definition that the monetary unit of a given economic system cannot coincide with the value of any other commodity, nor is it the average value of a sum of goods already produced and ready for consumption. This last meaning of money will always give a static interpretation of the means of payment, an interpretation which does not grasp the most important function of money, which is that of operating as a unit value for the distribution of goods. We have already pointed out beforehand the two functions of the monetary means; they are to facilitate exchange, a function which one could even do without, and to make possible the division of undivided goods and services, the second function which is strictly distributive and which one could not do without. So, above all, money must be a distributive value; and if we wish to express this particular and singular value, we must refer to a liquidity projected in the future, a predicted liquidity, because all that which has passed is to be considered a value of exchange-consumption

already used for an earlier distribution. For these reasons, we must improve our definition in the following way: money is the predicted element of liquidity which must circulate in an economic and financial system in order that the system may yield the optimum income. It is this interpretation of the monetary means, in the light of this final definition, which may satisfy us at last.

We must now consider the fact that our definition expresses, in effect, the meaning of our formula for the control of the total liquidity of an economic and financial system. This formula, the reader may remember, was discussed and expounded in the fifth chapter. There we formed the equation, $M' = 0.3955 \times P$, which for the sake of simplicity we approximate to: $M' = 0.4 \times P$. In this equation M' is the total liquidity of the system, forecast for the new financial year with the precise aim of obtaining the optimum income, while P, from which M' is found, is the national product of the preceding year. This is, therefore, the very formula which gives us the exact definition and interpretation of money. The monetary equation links the future and predicted liquidity M' to the statistical product P of the economic and financial system under consideration. The money M' is projected into the future, as is necessary, and precisely because of this it expresses a temporal value, a nominal value, and in fact that value which we defined earlier as the value of distribution. On the other hand, M' is linked in a certain and unique manner to a real product P which already exists and which, as such, serves as counter-value and real backing for the present and future money. In short, it is clear that we have a precise connection between the formula which controls total liquidity, on the one hand, and the definition of money as a distributive value, on the

other. The immediate consequence is that one has only to control the total liquidity of the system according to our planning formula, in order to obtain the precise and constant value of money in its initial form and in its dynamic growth. This money remains automatically and permanently linked to the product of the system, in which the product acts as real counter-value and the expansion of the liquidity is assured in a strictly proportional manner with regard to the growth of the product. As a result, the distributive value of money is also its undepreciating value.

We observe, furthermore, that the above formula for liquidity is found from a natural speed of circulation, a speed which is the same in every country and in every age. Thus our money is both national and international at the same time, just as it should be if we wish to have a single market of goods and services. Indeed, the existence of two values for money, one for the internal market and the other for the external market, is logically quite inadmissible. If these two different values exist, we shall have two distinct markets, and one of them, the internal market, has to be considered a closed market, with limits of convertibility for the money which circulates in it. In the case, however, of our dynamic and distributive money, there exists only one value which is the same for both the international and the national markets. Hence the two markets coincide and our undepreciating money is also, as it must be, convertible without limit inside and outside every country, with no barrier or restriction of any kind.

We must consider, in a similar fashion, the fact that the interpretation of money as an element of predicted liquidity, linked to the product of the country concerned, is also valid

for the countries with a collectivist system. For these countries too, in the sixth chapter, we discussed and set out a formula for liquidity: $L' = 0.2 \times P$. The only difference between the two formulae is that in the latter case we considered internal business liquidity L', while in countries with a market economy we referred to inter-business liquidity M'. However, the definition which we gave, apart from the different numerical coefficient of proportionality, is valid also for the countries of the East. Here, too, money is defined as the predicted element of liquidity in order to obtain the maximum income, and here, too, it is enough to follow the correct planning policy, as we explained earlier, in order to have the optimum money with a value which is distributive, undepreciating and convertible without limit. Moreover, we have seen that the countries with a nationalised system must also, in some way, move towards the introduction of a total liquidity, due always to the needs of distribution. We may therefore consider that the interpretation and definition of the monetary means, as expounded in this section, are quite valid in a single world market.

It only remains now to see what the function of the Monetary Fund of Washington will be in the new monetary system, and in particular what the position of the dollar will be. The function of the Fund, apart from the radical reform of its present policy with regard to gold, will remain as it is, and will continue to be the important international function of managing the monetary relations between states. Indeed, in the light of the new interpretation of money, one foresees that the Fund will assume new and more important functions than those at present. In fact, the Fund will certainly take an interest in the liquidity figures and national product return

of every country, in particular of those more industrialised countries, and will establish checks and comparisons in order to ascertain both the rhythm of increase of the various national liquidities in relation to product, and up to what point and in what manner the international distribution of resources occurs. The policy of the Fund will finally assume a more and more concrete nature as it becomes aware of its own ability to check and to control, and this will be to the social advantage of everyone. The important task of the Fund, however, will be to overcome the present crisis in the system of international payments, by restoring confidence in the international monetary institutions to those countries which, having lost this confidence, have chosen to follow independent paths as a result of their own particular policy on money. Thus it will be up to the Fund to apply the correct policy, starting with a radical reform of its own present policy on gold, in order to overcome the present crisis and lack of confidence by means of a concrete course of action along new paths for the increase and distribution of resources.

Furthermore, the particular position of the dollar, as a result of the new monetary policy, must necessarily become stronger, especially because it will be clear that the present crisis in the system of payments, attributed by many to the dollar, is in fact to be attributed to gold, as we have already exhaustively shown. The dollar, instead, will have to continue to exercise its role of money of reserve and backing, even after the final abandonment of the gold system. This will be in the interests of all the countries of the West. Indeed, we must consider the fact that money, as we have already learned, is strictly bound to the product of a given economic and financial system and expresses the potential unit of this product.

The primary importance of the dollar follows from the fact that it is the economic system of the United States which yields the greatest national product in goods and services. We are dealing, clearly, with an importance which the dollar derives, certainly not from the fact that it is the expression of a certain quantity of gold, but from the fact that it is the quantitative expression of a massive complex of goods and services, which the western countries can most certainly not do without. It is necessary, we repeat, for the dollar to maintain its function as a money of reserve and backing; but to this end a new monetary policy is required. This policy will start from the crucial consideration that every coupling to gold has restricted and continues to restrict the international distribution of resources, thus giving rise to an anti-social policy. On the basis of this consideration the political leaders of America will have to promote a new monetary policy which will interpret money as it really is, as a necessary and irreplaceable value for the distribution of resources. Once this has been established, the United States must be the first to introduce a new policy for the control of the country's liquidity in relation to the growth of the gross national product. In this way it will be the United States, in virtue of its pre-eminent economic system, to initiate the new monetary line, which we may define as the « social income standard », and which will be the correct line for the distribution of resources between the rich and the poor countries. It is with this policy that America will be able to lead the whole of world economic progress towards the just social goal. Otherwise, should it lack the courage for this necessary new policy, it will be very probable that every country will go

its own way, with a very uncertain fate for the whole social system of the western world.

This is the situation at present, at least in the opinion of the writer. Therefore let us conclude with a formal request that the American leaders and the people whom they represent, just as they accepted their responsibility when the destiny of western civilisation was decided on the battlefield, will not decline to accept the necessary responsibility of the present moment, now that our destiny is decided with the arms of peace and social justice among men.

## 3 - THE INTERNATIONAL DISTRIBUTION OF RESOURCES

Several times we have said that the international distribution of capital is the most important economic and social problem of our age, and we now wish to give a reason for this repeated statement.

Modern civilisation, founded on industrialism, has reached its limits due to the existence of certain qualitative and specific obstacles which prevent further progress. But progress, even if realistically it cannot ignore these obstacles, certainly does not accept them. In fact, in the economic field as in every other field, whoever leads does not renounce his task if, at a certain point in his work, he comes up against obstacles. On the contrary, he will surmount the obstacles and thus gain new strength to reach new goals. Such is the progress of the world. All this is particularly true in the economic field, where the social pressures are more concrete, more pressing, and in short, more powerful.

It is an indubitable fact that modern industrialism has reached certain limits, which are the limits of the saturation

of qualitative consumption. If this were not true, industrialism would have solved, long ago, the pressing problem created by the areas of underdevelopment. But having ascertained these limits, it is absurd to think that those who are interested in progress are ready to accept them. This is definitely not the case; the result, instead, will be that the social pressures, already existing, will become more and more powerful as greater numbers of people become aware of the narrow confines of present-day industrialism. We feel that the moment has already come to make the historical choice between the two alternatives regarding the development of the relations of production and exchange. Either industrial progress, carried out as a result of free enterprise, succeeds in absorbing within the circle of exchange and consumption the underdeveloped areas, or else the inevitable social pressures, once they have exceeded the limits of industrialism, will carry away also the system of free enterprise which forms the basis of the market economies.

It is precisely for this reason that we firmly state the urgent necessity, above all for the major industrialised countries of the West, to face up to and to solve the problem of the distribution of resources. We have taken pains, therefore, to single out the specific and effective cause of industrialism's narrow existence, and to arrive at the important conclusion that this cause is not at all the system of free enterprise, inasmuch as there also exists a grave failing in distribution, as we explained earlier, in the countries which have adopted a nationalised system of production. On the contrary, we have found the reason for the limits of modern industrialism in the mistaken course of inter-business relations, in the relations between the financial and the industrial

concerns, and above all, in the now obvious insufficiency of the present international monetary system, still founded on gold as a basis of value for money. Furthermore, this is clear also as a result of the following general consideration, that a limited diffusion of economic development is no less than a distributive failing in the system, and if this is so, then obviously this failing cannot be attributed to industrialism, the sole aim of which is to produce and not to distribute. Therefore, we believe that we are not mistaken when we say that the grave insufficiency of distribution is to be attributed to the mistaken conception of money according to the traditional definition.

Throughout the preceding treatise, we have taken pains to express at great length what is, and what must be, the true and effective interpretation of the monetary means, with the policy which follows. Now we must draw our conclusions from this policy, with regard to the end to which it is directed, that is, with regard to the distribution of resources between countries which have different technological and economic levels.

The first conclusion is that the new monetary policy will lead to a single world market of means of payment as an established fact. Every rupture in the circulation of the monetary means can be considered solved. The new money, as a unit value which is undepreciating and also convertible without limit, is bound to ensure its function of distribution and division of goods and services. We have already shown that the new monetary policy is the necessary condition for solving the question of the circulation of capital and the distribution of income. We must now ascertain whether such

a condition is sufficient; we affirm that it is, for the following reasons.

The new money, defined as a potential element of product, is not outside production, even if it is not always present inside. In effect, the new money is a value which coincides with the product, and follows it as a shadow follows a body, in all the phases of its creation and consumption. The new monetary means becomes the nominal and temporal expression of a material product, with the characteristics of the constancy of value and of unlimited convertibility. A separation of money from the product, which it produces during its circulation, is impossible. Once the new policy of liquidity control has been set in motion, it will give rise to a certain transfer of every form of resource, without any spatial limit. Furthermore, we have ascertained the validity of the new interpretation of money on three levels: international, national, and within the sphere of the single concern. This has been possible because we have derived the new money from a natural and constant value of its speed of circulation. Thus, if we have a single value of the monetary element, both for the largest and the smallest market of any concern, we can be quite certain not only that we shall have no rupture in the circulation of the means of payment, but also that we shall have the assured distribution, from one area to another, of every productive excess.

We now reach a further conclusion, that once the single market for the means of payment has been created and a new productive system consequently set in motion in a depressed area, then this new system will move forward unaided, in an autonomous manner, controlling and developing its own liquidity in relation to resources and to product,

and according to the monetary laws. Therefore, what one is asking of the rich countries is only a concrete policy for initiating a new and better productive system in the poor countries, to overcome and eliminate the limits of obstruction and convertibility of gold-money. Once a new productive system has been established, at a more elevated level, the system will maintain itself and develop in an autonomous manner. But once again, with regard to this, we take pains to point out that a higher level of production and consumption for the poor countries will not be balanced by a lowering of the present level of income for the rich countries. The reasons for this follow.

We have discovered that the necessary and sufficient condition for the solution of the problem of underdeveloped areas is constituted by the introduction of a monetary policy to control liquidity, in such a way as to obtain the maximum and optimum rate of development of income. This rate, on the basis of the third monetary law, is 7.5% per year. If one accepts this, there are then two alternatives: either liquidity is controlled or the present system persists. In the second case, obviously, the problem which interests us remains unsolved. Therefore let us examine the first case. If the liquidity of a country is assessed and controlled in its development, the purpose of this control is to reach the maximum and optimum rate of 7.5% per year, as an increase of the gross national product. But in actual fact, in the system of uncontrolled liquidity, the rate of development of the industrialised countries is far from reaching 7.5% per year; instead, the rate of development in these countries is on average about 3%, and at most 5.5%. This means that with the new monetary system the increase in the national product of each

industrialised country will grow by at least 2% with respect to the present rate. It is in fact this greater productivity of 2% per year which will be transferred from the industrialised countries to the depressed areas, without the present level of income of the rich countries having to undergo any reduction. Moreover, even this transfer of 2% will be temporary, lasting probably for about five years, because, once the system has got under way, the new productive systems will develop autonomously. However, the rich countries will not have to sacrifice anything of their present level of consumption; while in the long run they will enjoy the great benefit of notably increasing their present level of well-being. Nor is it possible, without a planned policy of liquidity, for the industrialised countries to go beyond their present rate of development of 5-5.5% per year. The economic development of these countries is restricted by this limiting rate. These are in fact the limits of saturation which modern industrialism has reached, due to the inability on the part of the present gold-money to overcome these limits of convertibility.

The proof we have given shows once again the truth of the fact that the fault of the system is no other than a fault of distribution. In fact, it follows that the present system of production and exchange can produce more, passing from 5% to 7.5%, only on condition that the productive increase of 2.5% is distributed to the poor countries. Should this not occur, the industrialised countries will remain in crisis, restricted to the limit of 5-5.5%.

All this reveals the greater importance of the distribution of goods for human, rather than economic, relations. At a certain point in development, further production is possible only if one distributes the extra that is produced. This factor

of distributive justice is also to the advantage of whoever has initiated the distribution; because, in the final analysis, what is given returns.

To sum up then, the policy of liquidity control leads inevitably to total and concrete international solidarity. It is the solidarity which is neither political nor military, but which is civic and, in the end, human solidarity. Man, as a social being, must become one with other men, because he shares with them the common elements of intelligence and feeling. Probably no-one can avoid this imperative command, which is the essence of humanity itself.

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