

ΑΡΧΕΙΟΝ

ΟΙΚΟΝΟΜΙΚΩΝ ΚΑΙ ΚΟΙΝΩΝΙΚΩΝ ΕΠΙΣΤΗΜΩΝ

ΕΚΔΙΔΟΜΕΝΟΝ ΥΠΟ ΔΗΜΗΤΡ. ΕΜΜ. ΚΑΛΙΤΣΟΥΝΑΚΗ

ΕΤΟΣ 45ον (1965)
ΤΟΜΟΣ 45ος

ΤΕΥΧΟΣ Α'
ΙΑΝΟΥΑΡΙΟΣ - ΜΑΡΤΙΟΣ

THE ECONOMIC THEORY OF THE AUSTRIAN SCHOOL*

By NICHOLAS C. ANAGNOS
Professor of Economics, Howard University

TABLE OF CONTENTS

	Pages
CHAPTER I. Carl Menger's Economic Theory	2
CHAPTER II. Friedrich von Wieser's Economic Theory	19
CHAPTER III. Eugen von Böhm-Bawek's Theory of Economic Development: (The Theories of Value, Capital and Interest Combined)	45
CHAPTER IV. W. Stanley Jevons' Theory of Political Economy.	63
CHAPTER V. Concluding Remarks	79

INTRODUCTORY NOTE

This essay is part of a larger work. Because of this, at certain points it may seem to be either incomplete or out of place. This is the risk which I have to take at this point. As a whole, however, it is the result of careful work and teaching in graduate courses both at Howard University and The American University in Washington, D.C. A number of friends made valuable suggestions. Some of them have been incorporated; others have been left out because I thought that they should. The responsibility for what I offer is completely mine.

Bethesda, Md.

N. C. A.

* To professor Alfred Bingham of the University of Maryland my sincere thanks for reading the manuscript and making substantial linguistic corrections. My thanks also go to Mrs Toletto W. Chumley for her linguistic suggestions. I am also indebted to Professor Joseph Solterer, Chairman of the Department of Economics for his constructive suggestions.

CHAPTER I

CARL MENDER'S ECONOMIC THEORY

I. The subject matter of this essay will be a theoretical analysis of the Austrian School as represented in the works of Carl Menger (1840-1921)¹, Friedrich von Wieser (1851-1926)², Eugen von Böhm-Bawerk (1851-1914)³, and W. Stanley Jevons (1835-1882)⁴. The list is not exhaustive of all those who thought on the same lines, nor does it indicate the origin of this thinking. But it constitutes the development to a considerable extent and the forman presentation of the non-socialistic attitude towards the body of thinking of the Classical School.

I intent to discuss the theoretical structure of this group rather than the biographical presentation of their scientific work. This is why I chose those of their books which better suit my purpose. I want also to stress at this point that I restrict myself to the thinking of the period, free, as much as possible of interpretive suggestions and criticism of later thinkers in the field of economics.

The Austrians, of course, criticized the classical school but their criticism has been of a complementary nature. They did not attempt to invalidate useful economic analysis but rather to correct and complete it. In this attempt of theirs they had to face the impact of the German Historical School which «while excelled in the production of detailed investigations of economic and social conditions»⁵, they attacked formal theoretical economics, and it fell upon Menger to face the main thrust of this attack.

II. It was expected that critical attacks against the classical school and attempts of reconstruction would appear, and the attack appeared in Germany at the hands of the historical school and the socialists. «German economists had always remained conscious of certain contradictions inherent in any cost or labour theory of value»⁶. But the man who revolted against the historical school's views was Carl Menger who, while he disagreed with the form which theoretical economics had taken in the hands of the classics, still was convinced that the German school did not help to correct it. To use Schumpeter's somewhat exaggerated description «Menger belongs to those who have demolished the existing structure of a science and put it on entirely new foundations»⁷.

In Germany, Manger's work was neglected not because the German economists thought that what he said was wrong, but because they

considered that kind of analysis as useless⁸. Menger for his part objected the attitude of the German historical school that they only had the right to deal with economic problems. A serious controversy developed between Schmoller and Menger which Hayeck calls the thirty year war⁹.

A good deal of discussion has taken place on the influence under which Carl Menger worked in order to explain his economic theory. It is true that directly he has not been anyone's pupil; his work has been a point from which many new ideas developed; but on the other hand he has been an «economic theory protestant» and therefore his originality must be traced to his differences and the complementary work which he did in addition to the structure that has been erected by the classical school. The influence, as Schumpeter points out, of Smith, Ricardo and especially J.S. Mill on Menger is unmistakable. It was their teaching which he meant to revolutionize¹⁰.

III. *Carl Menger's theoretical contribution* — 1. The central propositions of the Austrian school were set forth by Carl Menger in his *Principles of Economics*¹¹. His main contribution to economics is considered his statement of «The Marginal Utility Theory» which he integrated into the value and price theory¹².

Inability to develop empirical foundations of economics as a science is responsible for the phenomenon that men of business look at experience and not at the science for guidance. It has not been understood that economic phenomena, like natural phenomena, follow «definite laws», and the ideas of those who substitute free will for «laws of economic behavior» are questioned because such an action would deprive economics of claims to «the status of an exact science»¹³. The purpose of economic theory is not to prescribe rules for economic action but to reveal the conditions under which men operate for the provision of their needs.

2. The means for the satisfaction of human needs are called goods; these goods must be causally connected with the satisfaction of human needs and this connection must be known. It is necessary to discover the causal connections between the goods and the laws to which they are subject. If the satisfaction of needs with goods is direct, then we have goods of the first order; if no direct causal connection exists, then we have goods of the second order; the relationship of the goods of the second order with our needs is indirect. For a thing to be a good it is not necessary to have a direct causal connection with the satisfaction

of needs, but what is needed is the existence of this causal connection. If commodities cannot be utilized for the satisfaction of human needs, they lose their characteristic as goods. Goods of the second order must be complementary with other goods of the same order so that together they will make possible the preparation of goods of the first order. And in general goods of a higher order must be complementary with goods of the same order in order to be able to make goods of a lower order¹⁴. Complementarity is necessary in all goods of higher orders until they become goods of the first order. This is the «principle of mutual interdependence of goods»¹⁵. The absence of complementary goods may create unemployment. In the process of transformation of higher order goods to those of a lower order time is an important factor. The time required to move from a higher order to the first order is different in each case. This period can never be eliminated.

While the possessor of first order goods is certain about their quantity and quality, the same cannot be said about goods of higher order. As the time period is different from one commodity to the other, in the same way the degree of uncertainty is different among different commodities. Scientific progress eliminates a good deal of this uncertainty and the greater our control upon the factors that create the uncertainties, the smaller these uncertainties become. This uncertainty is an important factor and has great significance in «human economy»¹⁶.

Human welfare does not depend exclusively on the division of labor as Adam Smith asserts : while the division of labor is a factor for improvement, it is not the only one and for that reason not the most important one. The quantity of consumer goods at the disposal of people is limited only «by the extent of human knowledge of the causal connection between things, and by the extent of human control over these things»¹⁷. The economic progress of mankind will depend on the degree of progress of human knowledge.

We are active because we must provide for our needs and to do this we must have command over the things for which this satisfaction depends. Planning for the satisfaction of needs is characteristic of civilized societies and requires long periods of time; planning aims, first, at determining how much is needed for the period covered by the plan and, second, how much is needed now to carry this plan through¹⁸. Needs determine the requirements for goods of the first order and these requirements determine the demand for goods of higher order. The first thing people must know are their needs and their intensity. Some uncertainty will exist about future requirements. Uncertainty, therefore,

is created by the uncertainty of human needs and by their capacity to grow. And while the growth of needs may be unlimited, the growth of goods for their satisfaction within a certain period is not unlimited. Within these time periods it is easy to determine the quantities needed more or less exactly¹⁹, assuming that complementary (corresponding complementary) goods to goods of higher order will be available. Another important factor for planning is the knowledge of future requirements as well as the knowledge of the quantities of available goods.

An investigation of the requirements and the available quantities may reveal that requirements are either larger than the available quantities or smaller or equal. If the requirements are larger people will choose which of their needs they will satisfy and they will try to direct the available quantities to the best use. The restricted goods in such a case are called economic goods²⁰. If this condition prevails in a community «every individual will attempt to secure his own requirements as completely as possible to the exclusion of others»²¹. This causes conflict of interests which created the need for the «*protection of ownership*, the basis of property»²². Property, therefore, is the inevitable result of the disparity between requirements and available quantities. To abolish property we must abolish this disparity which is the cause for its existence. We must increase the available quantities to such an extent that the requirements of all members of society will be completely satisfied. «Without establishing such an equilibrium between requirements and available amounts, a new social order could indeed ensure that the available quantities of economic goods would be used for the satisfaction of different persons than at present»²³. But this is not a solution.

If the goods are more than necessary for the satisfaction of needs they are not a subject matter of economics and they do not constitute economic goods; they are not the subject matter of human desire for property. The economic or non-economic character of goods is not inherent, but the outcome of quantitative relationships. A non-economic good becomes economic through increase of human requirements or the decrease of available quantities.

All goods, if they are more than our needs require, must be of the same quality because differentiation in quality may change goods from non-economic to economic. The economic character of goods of lower order cannot be explained by the economic character of goods of higher order. The origins of economic life are the needs of man²⁴.

The sum of goods at a person's command are called his «*property*».

The entire sum of economic goods at his command constitute his «wealth». Non-economic goods do not constitute part of a person's wealth. Wealth «is a measure of the degree of completeness with which one person can satisfy his needs in comparison with other persons ..., it is never an absolute measure of his welfare ...»²⁵. The highest welfare would be achieved if no one was in need of wealth. We have the paradox that the increase of the quantity of a commodity leads to decreasing wealth; there is nothing wrong with the fact that we are not anymore short of the commodity and the paradox is based on the misinterpretation of the nature of wealth and its components.

4. *Menger's Theory of Value.* Of the above described conditions the most important is the case where the available quantity of goods, within a period of time, is less than the quantity required; if this is the case, people have to face an economic problem. In case of such a shortage some needs must remain unsatisfied and further reduction will cause a need, up to now being satisfied to remain unsatisfied or less satisfied. Individuals realize the importance of such commodities and this realization makes these commodities to have value. «Value is thus the importance that individual goods ... attain ... because we are conscious of being dependent on command of them for the satisfaction of our needs»²⁶. For a commodity to have value it must be an economic commodity; it is not its utility that creates value but rather its shortage²⁷. Value is not an inherent property of commodities; value is the importance derived from the necessity of satisfying our needs and applied to economic goods which constitute the exclusive causes for the satisfaction of our needs²⁸. Non-economic goods have no value for us, they have no exchange value. In addition they have no value at all and therefore they have no use value. At this point we must indicate that Menger distinguishes between utility, which is attributed to all goods that satisfy needs, and use value which is not the property of non-economic goods. In the case of economic goods, it is scarcity that creates value. This value is the necessary consequence of our knowledge of the importance of the goods for our lives and our well-being. The source of value is the relationship of goods to our needs. Value does not exist in itself, it is not objective, it is something different from the things; and are the things which are objective. Value «is entirely subjective in nature ...»²⁹.

The values of different things are different and the value of the same thing changes. What is of importance is the satisfaction of our needs and «the value of all goods is merely an imputation of this importance to economic goods»³⁰. The difference among values of different

commodities is based on the difference on the importance of satisfaction which depends on the possession of these goods. The difference in importance of different satisfactions refers not only to different needs but also to different degrees of satisfaction of the same need. As the satisfaction of a need continues, the importance of this satisfaction becomes smaller and smaller until it has no importance at all.

With the progressive satisfaction of the most important needs, a point is reached where further satisfaction of these needs is of less importance than the satisfaction of other needs. We discover that a choice has to be made first, among the needs to be satisfied, and second, another choice on the extent to which each need must be satisfied, beyond which the satisfaction of another need becomes more important ²¹. The difference in the importance of satisfaction of different needs is the cause of differences in the value of goods.

People try to satisfy their needs completely and when this is impossible they try to satisfy them as fully as possible. The needs of greatest importance will be satisfied first; if there are goods remaining, people will satisfy with them needs which come next in degree of importance.

A good can be used for the satisfaction of several kinds of needs. In the satisfaction of each need, every successive step has diminishing importance, the degree of importance depending on the completeness of satisfaction. The needs of highest importance will be satisfied first and the remaining portions of the commodity will be used for the satisfaction of less important needs successively. In this way the time will come when the satisfactions which cannot be achieved have the same importance for all needs ²². Only satisfactions of least importance will not be attained. On this basis the value of a particular person of a certain portion of the entire available quantity of a certain commodity «is equal to the importance to him of the satisfaction of least importance» among the satisfactions which can be achieved by an equal portion ²³. The result of losing one section of the commodity would be to leave unsatisfied the last important need which was satisfied before the loss. The importance of this need will determine the value of each of the particular sections of the commodity which would be used to satisfy this need. The value of goods therefore is «merely imputed»; goods have value because the satisfaction of needs depends on them. The magnitude of satisfaction-value which is imputed to goods is unequal and depends on the importance of the need which must be satisfied. The different goods have different value because they satisfy needs of different intensity. This is how the value of goods is judged ²⁴.

Gold and diamonds are valuable because they are scarce and sufficient enough to satisfy «only the most important needs that gold and diamonds serve to satisfy ...»³⁵.

We have examined the influence of available quantities on the value of goods; the next problem is to investigate the case of satisfaction of needs by non-homogenous commodities. Such goods are considered as homogenous. In this case equal quantities of goods having different qualities will display different values. In the case of goods of different qualities, it is the importance of needs that will remain unsatisfied which will determine their value. If the quality cannot be replaced, the value will be determined by the available quantity of that particular quality.

Thus, the Menger theorem on value is that «value is nothing inherent in goods and that it is not a property of goods»³⁶. Value also is not independent. «The measure of value is entirely subjective in nature»; and not only «the *nature* but also the *measure* of value is subjective»³⁷. There is no connection between a certain commodity and how much labor was used for its production. The value of the commodity is not determined by the history of its production, but by the services which this particular commodity would render to an individual. The investigation of the cost of production shows whether production was economically sound, but cost as such does not determine its value. In the same way labor does not determine the value of a commodity reproduced. Changes in value may be the result of changes in human needs, of the quantities of goods available, of the physical properties of goods and changes of knowledge as to the importance of goods for the lives and welfare of the people³⁸⁻³⁹.

Goods do not acquire value because in their production were used commodities which had value to us. Such an argument is not supported by experience; because, the question is raised what determines the value of the original factors of production which are not the result of other factors. In reality, the value of goods of higher order is determined by the value of goods of lower order which they help to make; this is opposite from the cost of production approach as a determinant of value⁴⁰. The value of goods of higher order depends on the expected value of goods of lower order in the production of which they participate. The goods of higher order are not the determining factors of value. Further, the value of goods of higher order is not determined by the value of goods of lower order which already exist but by the «expected» value of goods of lower order in the production of which they help. The

value of the prospective goods may be very different from the value of existing goods. The connection, therefore, exists with present goods of higher order and expected goods of lower order.

The transformation of goods of higher order to goods of lower order requires time; people try to satisfy their present needs first and then they provide for the future; people may use their goods, for the present or the near future or the most distant future. With the progress of civilization previously non-economic goods acquire economic significance; ⁴¹ benefits to individuals may come from this transformation if they «possess capital». For goods to be capital, they must be able to be used in the future as complementary products with some goods of higher order. Capital is not wealth; it represents «a combination of economic goods of higher order ...» ⁴². Possession of such goods is a means for a better satisfaction of needs.

Payment of interest is not the reward for abstinence because abstinence as such cannot create value; in addition abstinence is not always the source of capital. Interest, therefore, must not be considered as a compensation to the owner of capital «but as the exchange of one economic good (the use of capital) for another (money for instance)» ⁴³.

To produce goods of lower order from ones of higher order requires time and therefore «*command of the services of capital is necessary for a certain period of time*». During this period capital is fixed, that is, in not available for other purposes ⁴⁴.

A person who has goods of higher order now, cannot have goods of the lower order before a certain period of time. If he wants to exchange his goods of higher order for goods of lower order available now, some discounting will take place. Thus the prospective value of the product is equal to the aggregate value of goods of the higher order now. In these goods of higher order we must also include «the services of capital and the activity of the entrepreneur» ⁴⁵. Thus, «the present value of the goods of higher order must be reduced by the value of services of capital and entrepreneurial activity» ⁴⁶.

The principle has been established that «the value of a particular good ... is equal to the importance (an individual) attaches to the satisfactions he would have to forego if he did not have command of it» ⁴⁷. In the case of value of higher order commodities, their value depends in the satisfactions provided by the portion of goods of lower order which could not have been produced if we were unable to command the corresponding quantity of the good of higher order.

Reduction of production does not make other complementary

goods useless because they may be used as complementary products for the use of other commodities. The value of the commodity of higher order is determined by the difference in satisfaction which we get when we possess it and the satisfaction which we get if we do not possess it ⁴⁸.

As far as rent is concerned, its value cannot be traced to labor or the services of capital but the determination of its value is subject to the general laws of value determination depending on whether land is used as a good of the first or higher orders ⁴⁹. Menger disagrees basically with Ricardo's theory of rent; the value of land, according to Menger, depends on the satisfactions which possession of land will give. Understanding of the differences in the values of these satisfactions follows the general principles of value determination.

When the services of land are used for the production of goods of the first order, together with other complementary services, then the value of these services will depend and be equal «to the prospective value of the goods of lower order or first order to whose production they have been applied» ⁵⁰. The value of each section of land is higher, the higher the value of the prospective goods and the lower the value of the complementary goods used. Land peculiarities influence not its value and its services but rather the value of all goods; quantity and quality affects all goods and not the land alone.

Menger shows some *naïveté* by rejecting outright the socialistic theory ⁵¹. Menger also rejects the minimum subsistence theory of labor as well as the Marxist theory of abstract labor which attributes higher price of labor to remuneration for special talents. According to Menger, labor services do not have value as such. The value of labor services is determined by the importance of satisfactions which would remain unsatisfied if we were deprived of labor services, and it is the prospective value of goods which determines the value of labor services. The last that can be said about Menger's theory of labor is that it is *fantastic*. He says that people feel the need for exercise and they enjoy working. The fact that they expect remuneration for their services «is due not so much to the unpleasantness of labour as such but rather to the fact that the opportunities to engage in remunerative labour are fully ample» ⁵².

The cost of production theory for the explanation of the value of goods is inadequate. In the case of capital, again, what determines the value of the services of capital is the same thing that determines the value of goods in general. «All phenomena of *value* are the same in nature and origin, and ... the magnitude of value is *always* governed according to the same principles» ⁵³.

5. In the discussion of the theory of exchange, Menger observes that Adam Smith did not answer the question why people exchange. Trade is not an end in itself; people do not exchange because they enjoy trading. Every act of exchange is carefully considered and there is a limit beyond which no exchange will take place. Exchange takes place because a certain person has a commodity which has smaller value to him and he does not have another commodity which has greater value to him than the commodity he has. Through exchange, each one of those exchanging will get more from what he receives and will lose less from what he gives. For exchange to take place each individual must possess commodities which have smaller value to him than they have for the other. This exchange takes place in an effort to satisfy needs as completely as possible and the need for this satisfaction is «the cause of all phenomena of economic life which we designate with the word „exchange”»⁵⁴.

There cannot be too much or too little exchange. Because excesses of this nature will lead to the absorption of all benefits. Somewhere there is a limit which exchange reaches when it will yield the greatest benefits; it is this limit that must be determined. This limit is reached at the point where the value of the goods surrendered is no smaller than the value of the goods received in exchange. At this point the incentive for exchange disappears. These points are points of rest and when they are reached «no exchange of goods takes place because an economic limit to exchange has already been reached»⁵⁵.

The intermediaries do not contribute directly to the physical growth of goods and for this reason they have been characterized as unproductive, but the act of exchange contributes to the better satisfaction of needs and to the increase of the wealth of the participants just as effectively as a physical increase of economic goods»⁵⁶. What is of economic importance is not «the physical augmentation of goods but always the fullest possible satisfaction of human needs», and trade contributes to this as effectively as production⁵⁷.

6. The most important point of the economic phenomenon of exchange is the satisfaction of needs which can be achieved through trade. The importance of prices consists in that they are «symptoms of an economic equilibrium between the economies of individuals»⁵⁸. They give the impression that they are the most important phenomenon, for they are all the time present and directly perceptible. Because of the mistake in exaggerating the importance of prices, the next mistake was

made to consider as equivalent the quantities of goods which are exchanged.

The causes of this equality were investigated and some attributed the cause «to equal quantities of labour expended on the goods; others found it in equal cost of production»; but commodities which «are *equivalent in the objective sense of the term*, do not exist ...»⁵⁹. The purpose, therefore, of the theory of price is not to prove equality of value but instead to show that the exchange of goods takes place for people to satisfy their needs.

It has been pointed out that exchange will take place only if the needs of the individuals are better satisfied and to the extent that they are better satisfied. If those bargaining are experienced in the art of bargaining, the prices will be formed somewhere in the middle between the two extremes beyond which no exchange will take place. Deviations from this middle place will take place only in special circumstances or under the pressure of external factors. But in this particular case price formation is influenced only by those immediately involved rather than by the economic activity of other persons.

A second case of price formation is that of a group of competing individuals for a monopolized good and a third possibility is the case where for each side there is a group made up of individuals in competition within the group. Thus exchange may take place :

1. Between two individuals with equal exchange capabilities;
2. Between a group of individuals competing among themselves in their attempt to exchange their product and one individual on the other side;
3. Between a group of individuals competing among themselves in trying to exchange the product and another group of individuals also competing among themselves.

We indicated above how the price is formed in the first case. It was pointed out that the price will be formed within a range of economic possibilities and this range varies with each product. Through competition, the limits within which the exchange will take place become narrower.

In the case where the commodities offered are not one but many, the commodities offered will be taken by those who can offer the greater quantity as an equivalent. The larger the quantity of the commodity offered the smaller the number of competitors who will remain unsatisfied. Finally, the larger the quantity of the commodity offered, the

larger the number of purchasers required, and in order to bring them in, the lower must be the price of the commodity offered.

In the case of a monopolist seller the competitors will not wait for the price of the commodity to be formed because the monopolist sets its price and the competitors buy the quantities they can afford at that price ⁶⁰. In this case the price is given by the monopolist and we have no problem of price formation. The problem in this case consists in which one of the competitors will be excluded, what will be the influence of a higher or a lower price on the quantities sold, and how the quantities actually sold will be distributed among the competitors. First, the price may exclude all competitors as too high. With price reduction fewer competitors will be excluded; for a competitor to be excluded what he receives for what he offers must be equal or smaller in price to what he gives. Each one will buy so much of the commodity «that one unit for it becomes for them the equivalent for an amount of the good offered in exchange that is equal to the monopoly price» ⁶¹.

The monopolist is not completely unrestricted in price determination. If the monopolist wants to sell a certain quantity he cannot fix the price at all, and if he fixes the price, he cannot determine the quantity Which will be sold at that price ⁶². The monopolist can either determine the quantity he wants to sell and have the price determined or determine the price and have the quantity determined. This decision he makes by himself. He will determine the price if he expects more profits from the sale of small quantities or «he will lower the price if he finds it more to his advantage to market larger quantities of the monopolized goods at a lower price» ⁶³.

Price and quantity do not fluctuate «in an exactly inverse proportion». This is due to the differences «in the scales of equivalents for the various individuals with respect to different goods» ⁶⁴. For this reason the policy of the monopolists will be neither to fix the lowest possible price nor to sell the maximum possible quantity but rather to make the maximum profit from the sale of the good available to him. The monopolist will offer only such quantities of the good for sale or he will set the price at such a level that it will yield the maximum profit ⁶⁵.

Suppose now that on both sides conditions of competition prevail; and first, whether a certain commodity is sold by one monopolist or by many competitors, as long as the quantity of the commodity is given the effect upon the price and the way it will be distributed among the buyers is the same as in the case of the monopolist. What is of importance here is the quantity of the commodity supplied. The same can

be said when the commodities are offered at the same prices since the price level has an effect on how much of a commodity will be sold and how much each competing buyer will buy, but not on how many people will bring it into the market. Supply has effect on price formation either when the quantities supplied by each of the competitors are different or when the prices at which they offer them are different ⁶⁶.

If the sellers are two (duopoly) they may come to an understanding and operate as a monopolist through a form of collusion. This understanding may refer either to the quantities to be offered for sale or the prices at which they will sell. In such a case the monopoly solution in price formation is applied. If the two follow independent policies we have a case of competition and the two questions raised are how much will be offered for sale and price will be set by the two competitors. Through competition the quantities available to the consumers will become greater because the competitors in supply will be unable to withhold or destroy certain quantities. Not only will the entire quantity available for sale be offered by competition, but also greater quantities will be produced.

While monopoly addresses itself to higher social classes, competition will attempt to attract all social classes to the extent economic conditions will permit. Under competition no single competitor has the power to regulate by himself either the price at which the commodity will be offered to the market, or the quantity to be offered. Competitors do not neglect the possibilities for even the smallest profit ⁶⁷.

7. Value in use is the importance which commodities acquire by satisfying *directly* needs which would not be satisfied if he did not command these commodities; value in exchange is the importance which commodities acquire because they satisfy our needs indirectly. Commodities may have both use and exchange value to the same individual, but their magnitude may be quite different. The question is raised: which of the two values directs the economic actions of men? since the objective of economic activity is the fullest satisfaction of needs, the direction will be given by the form of value which offers the greatest satisfaction. If a change in the importance of use or exchange takes place, then the center of gravity in the importance between value in use and value in exchange will change. If I do not like anymore what I have, it is evident that its exchange value will give me more satisfaction. Changes in the qualities of the characteristics of goods have the same effect. In an increase in the quantity of goods will take place *ceteris paribus*, the use value will diminish and the exchange value will become more important ⁶⁸.

The scope of exchange becomes more important in more advanced civilizations where the division of labor is more elaborate. Commodities are being exchanged in changing proportions; on the other hand exchange of different commodities becomes more difficult and more complicated, first because of restricted markets (number of persons to which commodities can be sold); second, marketability is restricted in connection with the area within which commodities can be sold and, third, marketability is restricted by the existing requirements. Sales beyond requirements are inconceivable. Marketability also is restricted by the time period within which commodities may be sold. Expenses are involved for storage and these expenses vary considerably.

The final aim of exchange is to exchange commodities for other commodities who have greater value to those who exchange. But this end must be reached immediately and directly. This can be achieved by a generally accepted commodity, that is, money. Valuation in terms of money is made simply because valuation in any other terms is a complicated procedure⁶⁹. But the function of money of serving as a measure of price has led to a misconception of the true nature of money⁷⁰.

IV. It becomes clear that Menger not only acted as a critic of the existing doctrine but also as the anchor man of what it came to be known as the Austrian School of economic thought. In this section I shall summarize Menger's ideas and in the next section I shall state briefly how these ideas were received and developed by the most able of his followers.

In Menger's view theoretical economics failed to influence the behavior of the world of business which turned for guidance to experience and not science. This is due to the absence of empirical foundations of economics. Between needs and goods exists a causal connection which gives the commodities the characteristic of 'goods'. All goods are mutually interdependent through the principle of complementarity, the absence of which leads to unemployed factors.

Goods of higher order with the help of complementary goods are transformed to final goods' this transformation requires time and creates a degree of uncertainty which is different among different commodities as the time required is different. Scientific progress makes this uncertainty less effective by reducing the time interval. It is true that the division of labor is an important factor of human welfare, but economic progress depends on human knowledge.

Planning among civilized societies is required to determine the sustaining needs for the period of the plan and the needs to execute

the plan. Uncertainty is created by the uncertainty of human needs and their capacity to grow. While needs grow the goods for their satisfaction do not follow the same growth pattern within the same period.

For planning we must know future requirements and the quantities of goods available, and we must look for the establishment of an equilibrium between requirements and available resources. The fact that available resources are smaller creates conflicts and makes the existence of ownership necessary. Proprietorship may be abolished only through the abolition of this disparity.

Menger distinguishes between property involving all goods at our command and wealth involving only economic goods. Wealth measures only the extent to which our needs are satisfied. The less wealth we have the more complete has been the satisfaction of our needs. This is the Menger paradox according to which an increase of the quantity of a commodity leads to decreasing wealth.

The bulk of Menger's book is devoted to the theory of value which is acquired through the realization that commodities are important because they satisfy needs and their value is determined by the importance of the need which, if satisfied, would have been satisfied last. Value is not the result of the utility of a commodity but rather of its shortage. Menger distinguishes between utility that characterizes all goods which satisfy needs and use value which is the property of economic goods. The source of value is the relationship of goods to our needs. While the «things» are objective, value as such is subjective. Value is the «imputation» of the importance which goods have for the satisfaction of our needs. Difference in importance gives different value to different goods.

In the satisfaction of our needs we have to choose which needs will be satisfied first and to what extent each need will be satisfied. The value of each particular section of a commodity is determined by the importance of the needs which will be left unsatisfied if this commodity is removed. Value according to Menger is not an inherent property of goods and it is not independent but its measure is entirely subjective. It is not the cost of production that determines value but the service which a commodity renders. Value depends on prospective goods, not on the importance of existing goods.

Capital is not wealth, but it is used in the future in the form of complementary products; abstinence is not the source of capital and the payment of interest is not the reward for abstinence. The present use of commodities of a higher order can be obtained with the help of the services of capital and the value of the activities of the entrepreneur.

The value of land is not determined by labor or capital, but, on the contrary, by the general principle of value determination. Its value depends on the satisfactions which the possession of land will give. The higher the value of land is, the higher the value of prospective and the lower the value of complementary goods used.

As regards labor, the value of labor services depends on the satisfaction of needs. The magnitude of value in general is determined by the same principles of value determination as developed by Menger.

Exchange takes place not because people enjoy commerce but rather because what is offered has smaller or equal subjective value from what is received. The satisfaction of needs is the basis for all economic phenomena which are designated as exchange. In exchange we must determine the limit that will offer the greatest benefits. This limit is reached when the incentive for exchange (Value differential) disappears.

Prices are symptoms of an economic equilibrium between the individuals involved. The establishment of price does not prove equality of values, but exchange takes place and prices are established if individuals are better satisfied. Price deviations from the equilibrium position occur only under the pressure of external factors. In Menger's price theory we find some degree of indeterminateness and to a certain extent we find the seeds of what later developed as the theory of monopolistic competition. Price and quantity do not fluctuate in inverse proportion due to the attitude of different individuals for different goods.

Commodities may possess both value in use and value in exchange but their magnitudes may be quite different. Decisions will be taken on the basis of the value that gives the greatest satisfaction.

V. There is general consensus among writers who studied Menger that he made some original contribution to economic theory even though different writers stress different points and criticize others according to their «subjective attitudes. It has been pointed out that Menger is one of the first to utilize the time dimension «in connection with the study of economic quantities necessary for the satisfaction of wants»⁷¹. His price theory is considered incomplete; he emphasized variable elements, such as needs in contrast with the classical school «which centered round more stable factors such as cost of production and labor»⁷². He touched on the problems of allocation of resources and the theory of imputation both of which were developed more fully by his followers. He study the way the contribution of each factor may be isolated and while he

accepted the impossibility of the separation of the contribution of particular factors, he removed this difficulty by measuring the loss of satisfaction to the consumers by a loss of a small quantity of factors⁷³. According to Schumpeter the basic concept in Menger's theory was «the increment of satisfaction individual consumers experience from that increment of product»⁷⁴.

According to Stigler, Menger, belongs to the group that rediscovered and popularized the theory of subjective value. But he is not precise in connection with the meaning of his magnitudes. He speaks in relative, not absolute terms⁷⁵.

One of Menger's most important contributions is «the formulation of the principle of variation of proportions as a *general* rule, governing all resources ...», a principle which led to the marginal productivity theory of distribution⁷⁶.

The factors of production for Menger are goods of higher order, but he failed to differentiate between goods and their services.

Frank H. Knight in his introduction to the American translation of Menger's *Principles* points out that he, Menger, played an important part in «the doctrinal revolution of the 1870's»⁷⁷. Menger recognized the connection between use value and scarcity, a fact to which no attention has been paid even though we find it in the works of «Lloyd, Senior, and Jennings in England, by Dupuit in France and (most elaborately) by Gossen in Germany ...»⁷⁸.

Menger understood the utility principle which has been grossly overlooked and applied it in two directions : «in the field of *complementary goods* and in that of *indirect goods*»⁷⁹. He also presented poorly developed theories of production, distribution and allocation of resources. We find in the *Principles* «some paragraphs ... about labor and land, and more discussion of capital and entrepreneurial services, but no attempt to define any of these, and to treatment of the problem of productive factors or the classification of productive agents»⁸⁰. Menger does not seem to have a clear notion of the working of the market as a complex system; he failed to realize that there are no original productive factors as he presents them.

I do not intend to comment here on the argument into which Professor Knight has been involved. I do not advocate agreement or disagreement with Menger. My purpose is to bring forth the main points of his theoretical analysis in order to be able to measure the departure from his predecessors and the foundations on which his successors build. These points will be presented at the end of this essay.

CHAPTER II

FRIEDRICH VON WIESER'S ECONOMIC THEORY

I. Friedrich von Wieser (1852-1926) seems to agree with John Stuart Mill by accepting common experience as the starting point of economic theory⁸¹, but Schumpeter holds that he did not have the necessary technical training. In his first work⁸² he emphasized and developed Menger's theory of value; in a subsequent work⁸³ he developed the theories of cost and distribution as well as the theory of imputation and in his third book⁸⁴ Schumpeter finds nothing new save an impressive summary of a life-time's economic thinking.

In his *Natural Value* Wieser re-emphasized and developed Menger's argument on value, but he did not restrict himself to a reformulation of Menger's doctrine. «He carried his thoughts further and drew the necessary conclusions independently»⁸⁵. He developed clearly the theory of imputation and in connection with it gave new basis to the theory of distribution. He attempted to link and give new interpretation to the classical idea of the law of costs with the principle of marginal utility. Wieser's solution of the problem of costs is original, and as Morgenstern puts it «constitutes one of the main developments of modern economic theory»⁸⁶. There seems to be disagreement on the contribution of Wieser's *Social Economics* because while Schumpeter considers it as adding nothing new⁸⁷, Morgenstern calls it «the greatest systematic treatise that has been written by an Austrian in which the principle of marginal utility is analysed in all its ramifications»⁸⁸. On the same book Wesley C. Mitchell remarks that the work «merits the place held by Mill's *Political Economy* in the literature of the classical school»⁸⁹. It constitutes a systematic summary and extension of the doctrines worked out by his disciples and himself.

Other consider Wieser's contribution⁹⁰ as his work on cost and complementary goods and the application of these doctrine for the «explanation of the distribution of wealth». He and his fellow Austrians attempted to clarify how cost goods are valued, to elaborate on this valuation process and to point out the limitations of the derived principles⁹¹.

Following now our method we shall present Wieser's theory as it appears in his *Social Economics* because it is in this book that his thinking appears, if not in its most detailed, at any rate, in its most complete form.

At the time of Wieser's life there were two important bodies of economic scientific thought, namely, the classical school which advocated freedom of labor from government restrictions and the socialists for whom the classical theory had been the strongest support of the demands of the workers. Neither theory offered a solution of problems of reality ⁹². Both led to contradictions and the task of removing these contradictions has fallen according to von Wieser on the marginal utility theory. From the heights of abstraction the economic theorist must proceed step by step to more realistic conditions; speculation in a vacuum must be avoided ⁹³. The fundamental assumptions of the classics are not supported by adequate observation; the classics demand freedom without restrictions.

Wieser investigates at first a single person operating in a simple (unit) economy (not Robinson Crusoe economy). He investigates the laws of economic activity in such an economy and especially the laws of value. The guiding line in such an investigation is given by the doctrine of marginal utility as it was formulated by the Austrians.

In the study of social economy he investigates the process of exchange and price formation where no state interference is allowed. But while the subject matter here is the same as that of the classical school, the case of the latter is restricted to well regulated, balanced competition; but the theory must go beyond these confines; well regulated competition forces self-interest «into subserviency to the general welfare» ⁹⁴.

In the third part of the theory it is asserted that the state cannot be excluded from the theory of social economy; the state's influence must be examined by economic theory; on this basis it is assumed that private households are under the supervision and control of a central power, the state, which ideally must look after the interest of society.

Furthermore in the case of world economy, while the free trade doctrine of the classics is significant, the applied conclusions on national trade to international conditions constitute error because individuals in different places are motivated by different socio-historical powers.

II. The marginal utility theory which Wieser follows turns its attention from the classical problem of value in exchange to that of value in use. While the marginal utility theory did not reject outright problems touched on by the classics, its exponents argue that these conclusions constitute half truths. The marginal utility theory tries to offer an explanation which does not depend on the form of exchange ⁹⁵. The motivating power is not the desire for profit as the classics asserted

but instead the joy for work. The objective in a simple economy is the periodic production and utilization of goods and every economic action must be accompanied by the greatest usefulness. Action begins with the desire for an economic object and here economic theory relates the concepts «use» and «need». Needs are satisfied by use actions. «The satisfaction of needs is related to their relative importance while utility may be compared to the relative amount»⁹⁶. The need for action is satisfied through energy and it is exhausted by fatigue.

Economic value is not «intrinsic», but merely value transferred through the satisfaction of needs to the means of satisfaction. Higher yield becomes advantageous not through achieving the greatest utility at the expense of our fellow men, but because we are interested in additional advantage and in this sense higher yield becomes advantageous⁹⁷.

Future needs are less important than present ones and their present value is the greater the more distant the day they materialize. This is the basic point which Böhm-Bawerk uses for the elaboration of the theory of interest.

The rule of economic lie are not purely individualistic; they are creations of society. In such a society future needs cannot be underestimated; underestimation of future needs is the characteristic of a weak economy.

Things to be commodities must be useful. If this usefulness has not been discovered things are not commodities; commodities as such do not possess utility of their own, they are fundamentally complementary. For gifts of nature to be utilized through the use of capital is the outgrowth of civilization without which a country is poor. In addition to the value of goods, the value of services is derived from their useful effects.

The error of economic theory up to this time had been that it had directed its attention towards production and had said nothing about consumption: consumption had mostly been the subject matter of moralists. Instead for looking for an equilibrium the attention of economic theory had to turn to the «margins of use»⁹⁸. The problem of scarcity is partly treated by Ricardo who together with the others of the classical school confuse the technical and economic possibilities of increase of production. Unlimited increase in production is in conflict «with the principles of greatest utility»⁹⁹. We must maintain proportionality of production in a rational output of different commodities..

The classics trace value exclusively to labor, while the problems of labor and capital are held secondary as being the tools of the workers;

labor is considered only in terms of pain and productive activity is not considered as an enjoyment of active effort. To achieve human happiness we must reduce the burden of labor to a minimum and to achieve this people must conserve labor power and the products of labor ¹⁰⁰.

This theory is applied only in primitive periods where everything is achieved through human effort. When economic considerations are introduced things become more complicated and the labor theory is not convincing under contemporary conditions. The labor theory is a stress theory and does not refer to work done under creative impulses. The theory, on the other hand, that examines labor from the point of view of usefulness takes under consideration all kinds of work ¹⁰¹.

Capital must be considered as «the indispensable aid to all effective production» ¹⁰² and not as a capitalistic power used as an instrument of exploitation. In a simple economy capital is considered as an indispensable agent consisting of produced means of production characteristic of civilized societies. Capital goods are not like land for they are perishable through use. Capital goods, however, are indestructible because they are continuously being renewed.

Capital helps in the production of consumption goods and the reproduction of consumed capital goods. In the former case we have capital in the form of materials and in the latter in the form of tools. Fixed capital is not incorporated with the materials and it does not move with the flow of liquid capital; it simply facilitates their movement towards succeeding stages, towards products ready for use. In the movement through stages we must maintain the principle of proportionality, in the use of materials and tools. Capital goods used in the complete process of production in a simple economy, are defined as natural capital. While working capital is the total of liquid capital in the plant, capital improvements constitute part of the total fixed capital. In an advanced economy replacement and growth of capital take place continuously. The characteristic of economic progress is the *per capita* capital increase. With each advance in production the period in the progress becomes longer; however this progress has a limit beyond which no advance can be made ¹⁰³.

Even if historically capital is the outcome of human labor as the labor theory asserts «it has become an independent factor of production in the practical economic organization» ¹⁰⁴.

The classical school was successful in understanding the problem of land. Because of a continuous increase in population expansion of cultivation takes place. Increase to the minimum necessary expenditure

res of cultivation is applied to less productive forces with less remunerative results. But while Wieser is Ricardian in his theory of rent, he insists that fertile land determines the extent of agricultural production while capital «gives the general measure of the extent of all production» ¹⁰⁶.

Distinction is made between cost means which constitute the productive agents and specific productive means which do not constitute cost, like the work of the entrepreneur. Labor and capital goods must always be regarded as cost productive means and land as a specific productive means. Labor constitutes the connecting element; It is a universal agent.

What has been stated up to now refers to what Wieser calls the theory of economic organization; we now proceed with his theory of value. In contrast to the classical theory of value derived «from the phenomenon of value in exchange» ¹⁰⁶ Wieser observes that «the laws of value are fundamentally those of the computation of utility» ¹⁰⁷. The classical school considered that the practical computation of utility is a waste of time while the laws of price and value ought to be carefully investigated. Karl Marx simplified matters by eliminating the concepts of exchange and value in exchange; both the above schools overlooked the fact that the basis for the laws of value is the computation of utility. The law of utility is based on desires and for this reason is difficult to clarify, but the task of economic theory is the difficulty of appraising and not simply understanding human surroundings.

Wieser assumes first an isolated household where goods are available and the only thing to be considered is utility. The intensity of needs will determine the degree of satisfaction and under conditions of restricted quantities the greatest possible utility will be sought. The margin of utility is the «degree of utility at which satisfaction is arrested» ¹⁰⁸. This will be determined by the lowest in intensity of the needs to be satisfied and the highest in intensity of the needs to remain unsatisfied. Consumers measure their purchases on the basis of the margin of utility. Computation of utility is not determined by consumption aims since these aims are determined by desire; the purpose for computing utility is to abandon all desires «which follow below the admissible margin of use» ¹⁰⁹. One condition for the application of marginal utility is the existence of homogenous divisible units; under this condition in a case of a simple economy the law of marginal utility states that: «all units ... of a stock should be economically valued as a multiple of the marginal utility» ¹¹⁰.

The law of demand is derived from the law of marginal utility, because on the assumption that needs remain the same while supply increases, marginal utility decreases and the opposite. Earlier theories were based on the law of total utility and not of marginal utility and on this basis they could not explain the phenomenon how more abundant crops leads to lower degree of utility. Marginal utility rises and falls with the magnitude of needs which constitute the «effective» demand. It is variations in effective demand we are looking for. In the case of free commodities that bothered Adam Smith there is no case of marginal utility and therefore of economic calculation. But this is not a reason for abandoning the problem of marginal utility as Adam Smith did.

In the process of production involving loss of utility because of the use of raw materials, and increase of utility because of the final products, there must always be an increase of utility. How certain factors will be used will be determined by the marginal utility of the marginal products.

Independently of the nature of the product the cost will be determined on the basis of the marginal utility of the products to which the cost factors are going to be turned to. The individual utility of each product equals at least the utility cost. Thus in addition to the fact that marginal utility is an improvement in comparison to total utility, calculation on a cost basis is an additional simplification. Changes in costs are mainly due to changes in supply and demand and to changes in techniques of production or both.

Technological changes reduce costs and lead to increased demand. If technological progress is very great, exchange will reduce the cost of many products and the utility of cost units will be decreased due to increase in their supply. This change in cost affects also the utility of already existing commodities when the prevailing consideration is not the original cost but the cost of their reproduction. All these changes affect price by affecting the computation of utility.

The law of reproduction applies also to capital goods and therefore the labor theory according to which capital is a mere product of labor is inconsistent with the law of the cost of reproduction ¹¹¹.

The factors of production are complementary, that is, the products they yield must be supported by other factors; in this sense every product is the result of innumerable means of production which are represented collectively by labor, capital and land. The joint product must

be apportioned among the cooperating factors, a task which requires a good deal of effort on the part of an organized economy.

Of the three factors labor is the commanding force, the other two are dead material; in this sense labor is productive while land and capital are «conditioning prerequisites to production by labor»¹¹². But to assign the entire yield to labor is unacceptable because in reality the amount of the yield depends on the extent the worker is aided by material instruments. How much will be allotted to the worker depends on the portion of the yield due to other factors.

The labor theory imputes whatever does not go directly to labor to indirectly employed labor. A confusion prevails between the distribution of income and the attribution of yield. The two are two different problems. The problem of attribution is a problem of inner organization of society. If we accept that all yields are product of labor, then the problem of apportionment does not exist. There are two problems involved here: first, the problem of the causes of superior yield which if solved constitutes the end of the investigation, but second, the problem of how this yield will be distributed is a problem of attribution, which in order to solve we must previously solve the problem of utility for the more complicated productive goods which render joint services¹¹³.

The road to the solution of this problem was opened by Carl Menger through his theory of complementarity of productive goods which are used in an endless variety of proportions yielding differing yields and from the differing yields of these variations we can determine the effect for which each factor as a cause is responsible. As soon as we determine the amount of cost elements which participate in the utility of marginal cost products, then the problem may be easily solved. The utility cost will be determined from the marginal utility of the specific products. If there is a residual yield this will be attributed to the «contributing specific factor»¹¹⁴. In the case of several jointly acting specific factors, first we determine the yield of those of a less specific character and then the contribution of more specific factors. Ricardo recognizes the case of specific attribution in his theory of rent with the case of differential rent, but he did not develop either a theory of computation of utility or a general theory of attribution¹¹⁵.

When something is attributed to something which is scarce there is something else which is abundant. For instance, it is the increase in population which forces expansion to additional land; in addition to the abundant factor productive wealth must increase in order to allow expansion to more difficult areas. In each the added utility of the

yield must be at least equal to the added cost. The greater the quantity of a factor the smaller will be the marginal utility of the crops because of their large quantity and «a large proportion of the total crop will be required to cover the costs and a smaller excess may be attributed to the factors»¹¹⁶. The yield will be equal to costs only if land, for instance, is a free good.

Yield is the result of productive exchange; it does not include increase in utility, it is repeated and offers a continuous means for the satisfaction of needs. In the case of land and labor yield is net but in the case of capital it is not only a means of production but a product itself. While consumption of the entire yield constitutes a satisfaction of immediate needs but in doing so we lose permanent yields. In the case of an increasing population we must maintain the level of yields *per capita*¹¹⁷.

The cost which is required for the renewal of consumed capital is not the same as the cost of production; if from the gross yield we deduct renewal cost we have net yield consisting of consumption goods devoted to the satisfaction of present needs; in a progressive economy net yield is divided into consumption goods and capital goods aiming at the increase of capital. The part used for renewal we call «reproductive saving» and the part used for increase we call «progressive saving»¹¹⁸. Both are designated as capital formation even though the term is usually assigned to the part that constitutes increase of wealth. What goes to capital must be sufficient to provide for capital renewal and leave a surplus over and above this.

The productivity of cost capital may be calculated and its yield expressed as a ratio of yield to original capital which coincides with the general ratio of increment and which ratio (net yield to capital) is the rate of interest. The economic appraisal of capital, control over its use, and the period of its use depend on interest. Yield constitutes the basis for the evaluation of a productive commodity. In the case of capital we must distinguish between gross yield and net yield each of which serves a different purpose and in appraising them we must keep them apart¹¹⁹.

Capital may be appraised either on the basis of net yield which is capitalized according to the prevailing rate of interest or on the basis of determining the capital substance by deducting the net yield from the gross yield. The latter method is fundamental and the former is derived from it. But on the other hand the basis for the evaluation of products is their utility yield. The determination of the net yield «est-

blishes the general percentage of increment» while the rate of interest measures the marginal productivity of capital.

Renewal of liquid capital which is consumed in the process must take place at once while renewal of fixed capital which is employed repeatedly has to take place gradually.

In a simple economy we try to secure the highest utility from the restricted means for the satisfaction of our needs; this requires an appraisal which refers to the laws of marginal utility, supply and demand, costs, common and specific attribution and capital appraisal. Completion of the study of these laws constitutes completion of the theory of value for the simple economy ¹²⁰.

In the classical theory the main objective was to avoid or minimize the pains of labor; this objective led to an interest for the products of labor which aim at reducing pain. In the case of the utility theory it is Menger who formulated the «subjective interpretation of value». For him value is determined by the importance which we attach to commodities in their ability to satisfy needs. Wieser's theory of value, on the other hand is broader because it includes labor, yet it is also more narrow because it includes only economic values. But he points out that his definition «is more in accord with practice» because it refers primarily to the external relations of the economy ¹²¹.

III. Wieser's Theory of Social Economy. State intervention directs uniformly only a small part of the economy; the remaining part is made up of private economies connected by three kinds of contracts; first, the social contract where a number of persons pledge to unite their resources for some given purpose; second, the contract of exchange usually between two persons, which is a coordinating contract that binds the individual economies to the national economy; third, the contract of insurance the purpose of which is to distribute the effect of loss over many private economies. In the national structure all individual activities unite as a total supply and demand. The entire process consists in each individual economy surrendering its value for the value it requires. This is a process of exchange rather than distribution. Distribution requires a combined product to be distributed among the participants in its production. In the present case we have a productive and acquisitive process connected with the mechanism of exchange.

The study of the simple economy becomes necessary because the social economy is made up of simple economies. But the study of the simple economy is an incomplete study because it studies the laws of

motion of a single economy which is not encountering restraint. In the social economy the individual units meet and clash with great force. The question is raised, does this clash change the established laws? While the classicists introduced individualism restricted by law and morality, their disciples pushed freedom to the extreme without realizing that the masters had established some restrictive values; only incidentally did they deal with the problem of power. But social organization is the result of human weakness and therefore the need for strong economic leadership became necessary which developed with the advent of capitalism ¹²².

The economic conduct of individuals is affected by social forces which are not only «law and morals» as the classics asserted, but it involves the influence of the environment and thus individual economies, when established, find set patterns.

Society is full of institutions the origin of which is not the state; they do not depend on a social contract but are the products of gradual historical evolution. In their existence the element of time enters as a factor. Menger, using money as an example proves that all social institutions in the economy are the result of individual factors. Menger could not see in money anything more than the will of participating individuals, but it was massed practice that pushed money beyond the narrow aims of individuals.

Everyone who is engaged in exchange surrenders something to which he attaches less «utility-value» from what he obtains. «Exchange has been defined as the surrender of the superfluous for the necessary» ¹²³. This puts limits to exchange because as soon as the individuals realize that there is no advantage in the exchange they will put an end to transactions. As soon as the marginal utility of the units surrendered equals or exceeds that of those received, transactions will stop as not being advantageous.

Exchange takes place in pairs; in the market the freedom of exchange operates as freedom of choice and the market price is not the result of an individual exchange but of the aggregate of conditions prevailing in the market. In the case of supply the cost of production exercises influence on the formation of prices while demand depends on needs. The magnitude of supply and demand depends on the prices realized. In exchange, to every price correspond certain quantities offered and demanded. We call these quantities market indexes and they indicate the effect of supply and demand on prices; the problem of the theory of prices consists in the establishment of prices from market

indexes. The group representing either supply or demand may possess a monopolistic position in the market which secures greater influence in price formation than does competition. Positions approaching but not reaching monopoly are called «monopoloid positions»¹²⁴.

In a money economy price is the money given for an economic service. The price level is the key to the distribution of the social income among households which constitute the demand. It is also the basis for income distribution among the supplying economies. Through money we explain the circulation of national wealth and this constitutes the basis for the calculation of economic values.

Rent, interest and wages are all forms of income and forms of price and the laws governing the three variables are known as «the fundamental law of the formation of prices»¹²⁵.

The formation of prices is examined first under the assumption of a closed market where the entire supply and the entire demand are brought together. The social economy is an open market where supply and demand are locally dispersed.

In price formation the development of a law of change becomes necessary. Price explanation on the basis of cost alone is incomplete. In a closed economy the commodities for sale have no utility value for the seller. All the supply will be offered which means absence of monopoly. The supply must be sold immediately and at the highest price. The supply is not indivisible and the buyer will choose the number of units. How much the seller will obtain in terms of price depends on the demand. It is the demand that gives value to the commodities¹²⁶. The buyers will try to buy at the lowest possible price but they must not ignore consumer competition which may force them to offer higher prices. The highest offer of the buyer will depend on his purchasing power and the marginal utility of the commodities he wants to buy. The latter will depend on the extent of the intensity of his need, the extent to which it has been satisfied. The highest offer will be made by people with higher intensity and greater purchasing power. The price will be established between the highest offer that the sellers will admit in order to sell the entire quantity and the highest offer of the demand group which must overbid in order to avoid competition. The realized demand is called effective demand and it is not effective demand that alone determines the price; the highest price of the effective demand also plays a role.

The expression that supply and demand determine the price is not completely incorrect, but it is «merely inaccurate»; from the quan-

tit es demanded and supplied alone we cannot derive the law of price.

We drop the assumption that the commodity has no value for the seller. If it has some utility then we shall find a point below which the price cannot fall; this value is the personal utility which the seller could get by personal use of the commodity he is selling. The price he gets must be equal or over the utility value. For mass commodities the marginal level is determined by the purchasing power of the people with the lowest incomes, while in the case of luxury commodities prices are determined by the purchasing power of the members of higher income class who exclude the competition of all other rivals. Between these two extremes we have commodities the marginal level of which is determined by the middle income classes. This phenomenon is called the stratification of prices¹²⁷. The price is determined not by the marginal utility but by «stratified marginal utility». Price is a social institution because it is the result of social appraisal and second the result of social contest among individuals of diverssified powers of demand. In low income groups minimum subsistence determines marginal expenditures. When the marginal level changes the price will change. Price changes are different at different strata of income, in the case of mass commodities prices are more stable. The larger the group involved the smaller the range of fluctuation¹²⁸. In unexpected changes of supply and demand the free organization of the market fails to operate.

We drop now the assumption of fixed supply. We assume that supply changes with the conditions of production and the prospects of the market. In the simple economy we talked of costs of production while in the costs of acquisition we include taxes, average wages of management and the expenses for producing specific productive means. All these costs constitute producer's costs and must be calculated by the entrepreneur in order to determine his production plan and the prices to be charged in order to operate without losses.

Under competition prices cannot be raised. Under the pressure of competition producers are forced to produce all commodities that the market will allow; at this point the pressure of competition will stop suggesting further production increase and the entire effective demand will be satisfied. We are at an equilibrium.

Through competition we have an adaptation of price to cost; but even when competition forces one to improve his own performance this performance will depend on outside forces, so the effect of competition will be restricted to the point where everyone is trying to do his best under the circumstances¹²⁹. With progress and the growth of social

forces, individuality, which constitutes the most competitive force, is surrendering to the forces of big capital. Against all this competition remains a social economic force and within each group of forces performs the task of personal selection, reviving the aspirations of individuals, especially in economic competition ¹³⁰.

In the case of monopoly, while the marginal bid is the controlling force, the monopolist has the power to influence the market and establish the marginal offer at a higher figure. The monopolist may decide either on what quantity to produce and then wait for the formation of price, or he may establish the price and then find out how much he has to produce at that price. Furthermore the monopolist may split the market according to its ability to pay. The classical formula of «unconditional approval of social competition and absolute repudiation of anti-social monopoly can no longer do justice to the institutions of today» ¹³¹.

Wieser examines prices first under competition; second, under monopoly; and third, under what he calls «monopoloid institutions». In this case he examines the great variations between competition on the one side and monopoly on the other. Due to great variety of circumstances, Wieser, in order to handle them, forms groups for purposes of investigating price formation.

Monopoloid enterprises are those which enjoy patents which create monopolistic utilization of the «innovation». Other forms of monopoloid institutions are trusts and cartels which even though they do not enjoy legal recognition, maintain for themselves monopoloid status. These institutions are rather interested with securities than production and commodities. In the cases of patents, after their expiration, a condition of competition develops, while trusts and cartels lead towards complete monopoly.

Wieser distinguishes between personal or subjective value-in-exchange and economic or objective value-in-exchange. On the demand side prices are formed as the result of competition among households. Whether commodities are cheap or dear is determined by the personal experience of individuals. Wieser observes that the terms objective and subjective exchange value are confusing and for the subjective value he uses the term *personal* while for the objective he uses the term *economic* exchange value ¹³².

Personal exchange value is derived from the utility value of the simple economy; the utility of the commodity received in exchange is used as a measure of value. Value in use exists without the element of

exchange. The value in use of the marginal expenditures of an economy gives to that economy a measure of the subjective value of money. With an increase in income the personal value of money decreases at a diminishing rate.

When transactions are about to take place, value in use and value in exchange are compared and commodities with greater value in use will never be sold. Exchange takes place because a gain in value-in-use is expected and when it occurs it is not unexpected because it has been anticipated.

In the case of social-economic (objective) value in exchange it «forms the foundation of the attribution of yields to the actively employed productive agents»¹³³. But there is no such a thing as objective value because it leaves out all those who do not agree with it. The classical school did not pay any attention to the personal (subjective) exchange value; the classics failed to understand that the «objective» exchange value was based on subjective estimates of the individuals¹³⁴.

In a social economy, due to the appearance of many factors, price formation becomes more difficult than the appraisal of values in a simple economy; but no matter how complicated the picture is when we analyse it in its component parts we come again to personal valuations, each of which obeys the laws of a simple economy. Thus the law of price is derived from the law of value of a simple economy. These laws are not identical; in the simple economy marginal utility determines value.

The significant elements of an exchange economy are money and credit. The latter is an institution of exchange through which some people gain control of a portion of the money economy while the ownership of money remains with the creditor. The debtor undertakes to pay a «price» suitably adjusted to the length of the agreement. The increase of a country's capital through credit is not permanent.

The money which we acquire through the process of production and acquisition is called «original income», and it is made up of the price payments for the surrender of natural values. It transforms the natural forms of values into money forms. In contrast to this we have the «derived income» which is income derived from services¹³⁵.

In the case of a static economy «the sum of natural values offered by the participants in the process of production and acquisition must be equal to the sum of the money values at the disposal of buyers»¹³⁶. This is what is called equilibrium of supply and demand. Every buyer must have produced natural of equal value. In this way for each mone-

tary commodity there must be a natural value. Both groups, in a static economy, those who constitute the community of production and those who constitute the community of acquisition, look after their own interests and adjustment is made without intervention of management ¹³⁷.

The equation of supply and demand does not refer to single sections of the economy. What the farmer sells does not necessarily coincide with what he buys.

The value of money is not the purchasing power of money, it is not an objective value, but a cross section of «personal» subjective valuation of money. It is this that makes money significant in the economic process. This significance is manifested when changes in the purchasing power of money take place and money takes new meaning and its value may be defined «as the significance attaching to a unit of money because of its relation to a unit of utility» ¹³⁸. The value of money is influenced by all factors that contribute to the determination of the general price level which in its turn is determined by the newly produced natural consumption values and the monetary income.

Money has no price but prices are paid money in and also the law of supply and demand does not apply to money as earlier theory asserts. The earlier theory failed to investigate the influence of money income. Change in the value of money presupposes change in the price level which may lead to reduction in consumption. Change in the price level affects the value of money while increase in price when the supply remains the same affects only money ¹³⁹. It is not only change in the quantity of money that affects its value but also change in the quantities of commodities involved. Since the time of Bodin the quantity of money has been used for the explanation of the depreciation in the value of money.

The increase in prices is not the outcome of increase in the quantity of money, but more accurate calculation of production costs of natural values. Increased taxation also accounts for increasing prices. Thus a price increase may be to money depreciation, to greater production of precious metals, to tax increase, and to the influence of the law of diminishing returns ¹⁴⁰.

People refer to capital in monetary terms but capital is very difficult to define. In addition to money capital another popular definition is «the capital assets of an enterprise» which does not involve accumulated reserves destined for expansion but to «the entire capital which has been invested and is actively used in the enterprise» ¹⁴¹. This involves liquid cash for operating expenses, loan capital and natural capital. The

working capital is circulating capital and fixed capital goods are plant investment. Circulating capital and plant investment constitute the capital assets of business. Capital consumed in the process of production is derived from the monetary yields of the outcome of production. An asset to be considered capital must be in the hands of an entrepreneur. Assets which are purchased not for resale are not considered as capital. Thus in everyday meaning capital includes monetary capital and all acquisitive property in which monetary capital is invested. This is the monetary form of capital.

In the process of development only productive capital was recognized which was later found to be an error, acquisitive capital being also recognized ¹⁴². But the meaning of capital must be broader and capital is defined as «the total mass of the monetary and natural forms treated as a unit» ¹⁴³. In an exchange economy capital is formed by the joint work of capital producing and capital using entrepreneurs. Only when the usual net earnings from the enterprise have been realized «has the process of the formation of natural capital been finally terminated» ¹⁴⁴.

The preservation of capital is part of the formation of capital. Savings are necessary for the formation of money capital. Savings do not come from restriction of the requirements of life but constitute a part of the income of the wealthy.

The role of money capitalists is that of producers because they introduce in the market more natural values than they withdraw as buyers. The money capital is derived from a surplus money yield and through loans this surplus passes to the demand for money. If nothing comes from the investment of debtors then both natural and money capital are destroyed.

Wieser is critical of Adam Smith who asserts that the division of labor has contributed more than anything else to the increase in productivity; this theory does not take into consideration that the increase in productivity must also be attributed to capital and the soil. Smith examines the division of labor from its effect on increasing yield, but he and the classics overlooked the theory of «power and dependency», which the division of labor creates.

The institution of enterprise is the instrument of modern economic stratification; the establishment of enterprise marks the beginning of economic leadership of the entrepreneur. In the process of income formation Wieser does not introduce the state but looks upon the economy as a voluntary «social institution arising in exchange». The first ob-

jective is sufficient yield for the satisfaction of regular needs. To advance in prosperity, a part of the yield must be set aside «that may be turned to the formation of capital»¹⁴⁵. This is the social income and to determine its effects we must know how it is distributed among the strata of private economies. The principal distribution of income depends on how the sources of income are distributed. These sources are wealth and labor and therefore income originates in possessions and labor. Income from wealth and entrepreneurial income is known as funded income while wage income is not funded income¹⁴⁶.

«The explanation of the natural rent of land is the first and most important problem»¹⁴⁷. Better grades of land yield the largest net profit and are taken up first for cultivation. Land that is brought in last is marginal and cannot pay any rent. The price of the crop is determined by the cost of cultivation of marginal land and therefore the excess over cost is attributed to the soil and constitutes the rent of land. Rent is a differential and does not enter the price of the product. From ground rent we must distinguish quality rent coming from equivalent lands which yield higher quality of products from which higher prices may be obtained.

The most serious defect in Ricardo's theory of rent is that he failed to develop a theory of «value and price» which was necessary for the explanation of agricultural rent. He did not explain how savings in cost lead to a surplus from the price of the product. Rent is not the result of land monopoly as Ricardo asserts; it is the result of the labor of the farmer and it is well earned.

Rent from urban land is the result of contract, it is what is left after deducting interest for capital employed. It is a specific yield of surplus over and above costs. The distinguishing characteristic of urban land is advantage in location. In poor districts, rentals just cover the costs. In urban areas, therefore, rent is the premium which is paid for the advantages of better location. In the case of business it is increased business profits from better locations. The increase in rental is not due to monopoly but to increased demand on the part of the people who rush to the city. The share of labor in increasing urban rent is slight¹⁴⁸.

Wieser defines natural interest as «the share of the yield which the producer attributes to the capital employed». At the beginning, technological developments increase interest, but later, because of increasing yields, the capital from which savings may be made is enlarged and the increase in supply reduces interest. The marginal contribution

of capital is the basis of interest which entrepreneurs offer to pay. Under competitive conditions this rate will not be above the marginal rate. If the marginal yield of capital rises, the rate of interest will rise ¹⁴⁹.

Fluctuations in the quantity of money are important for the individual rather than for the national economy. An increase in the quantity of money is counterbalanced by a decrease of its value, which causes the national wealth to remain the same. In the process of economic development the rate of interest shows a falling tendency because the increase of capital that takes place «reduces its marginal yield» ¹⁵⁰. Wieser objects to the use of the term «abstinence» which applies to those with low incomes when they decide not to consume. In the case of people with high incomes he uses the expression «willingness to dedicate income» ¹⁵¹.

The capitalists are entitled to interest because even though they do not earn their interest with their labor, they obtain it «for sound economic reasons». They are willing to dedicate capital which is part of their income. Consumption loans unduly hamper the formation of national capital when they extend consumption beyond the limits of an equalizing foresight ¹⁵².

The share of yield which goes to an entrepreneur is his income; his income is made up of wages representing labor performed in his capacity as an entrepreneur, interest which is paid for the use of the entrepreneurial capital, and profit which is his income after deducting his wages and interest. «Customarily the rent on personally owned land is included in (the) interest» ¹⁵³.

Profit is the part of the entrepreneur's income against which most objections are raised; his wages and interest are considered as part of the operating cost, but they are mixed up with his profits and it seems that the three of them constitute his income, which in a money economy is the only income which is not acquired through exchange. The size of this income is the result of the supply available and of the demand for this supply. The greater the number of entrepreneurs who are after this income the more meager the income will be. We may call these profits «The specific yield of the position of the entrepreneur». It has been characterized as the reward for the risk involved which is not the case. The specific character of the entrepreneur's function is derived from the fact that «it demands a combination of a service of management in the nature of labor with the possession of a certain amount of capital» ¹⁵⁴. In addition to this, rare services are required which constitute the basis for the entrepreneur's profit ¹⁵⁵.

Capitalistic enterprise was first based on able leadership; promoter's profits are justified by the initiative of the promoter. Another source of profit is speculation which is based on the expectation of price fluctuations. The energies of the speculator are directed towards the last act of the acquisitive process from which profits are realized. The speculator offers a service to price formation and he is entitled to a profit. The prices must be of equal power otherwise the profit becomes the outcome of a powerful squeeze ¹⁵⁶.

Workers sell their labor to gain an income. In a primitive society all there is, is common labor. There is no market for labor but slave labor. The employer dictates the terms and the wages will be just enough to sustain the workers ¹⁵⁷.

In a developed national economy the theory of wages may be stated in terms of the general theory of prices, but services are not subject to the law of costs as are consumption goods. Marginal demand is not determined by cost but «by marginal utility and ability to pay ...». The demand for labor comes from the entrepreneurs. «Its wages are based on the productive marginal contribution of labor as measured by the laws of attribution» ¹⁵⁸. It is determined by the extent of the yield that is attributed to labor. The marginal contribution covers a minimum subsistence wage or slightly above it and the entrepreneur tries to make labor fit his cost calculations «and to raise the hours of labor» ¹⁵⁹.

One of the most serious errors of the labor theory has been to associate the cost theory with problems of labor. While the wage fund is used for the payment of wages, it does not determine them. The amount of the wage fund «is always determined in accord with the total amount of the entrepreneur's capital, the conditions of labor and the state of technical arts» ¹⁶⁰. Law wages lead to increase in the use of cheap human labor; in case of higher wages employers will use more capital to save labor costs. Thus the capital of the enterprise and the wage fund are variable quantities. The maximum wage is determined by marginal productivity.

The entrepreneurs are at an advantage because of their small number, which may make understanding possible and not spoil prices. They form a demand monopoly opposite labor and prevent the workers from getting the wages which they would have reached theoretically. Wages will not reach marginal productivity and only an increase of the number of entrepreneurs will increase wages. Organization of workers is possible if not destroyed by internal competition.

A union despite outward similarity to a monopoly, because it restricts competition among workers, is nevertheless different. Monopolies face consumers who are not organized while labor faces employers who are monopolistically organized. The conditions of production to which unions also must adjust are created by entrepreneurs, and while monopolies control the entire production, unions control only one factor, labor. Unions cannot improve the position of the workers whose marginal productivity just covers or is below the subsistence level¹⁶¹.

The supremacy of capitalistic enterprise rests on the creation of exchange values; through savings from the income of the entrepreneurs they create capital and add «places for workers in their own enterprises». Increase in production and increase in employment are mutually conditioned.

A glaring contrast develops between capitalistic affluence and proletarian misery which is mainly due to the inability of the workers to understand that high wages do not mean great riches. On the other hand it has to be understood that completely proletarian social groups «can never contribute to the cultural values of society»¹⁶². Out of this may spring a new barbarism that will threaten modern civilization.

Capitalistic technique must lead to a safe provision and not divide society into a small class of enormous wealth and a proletarian mass of utter poverty while a middle class has disappeared. If this happens capitalism will condemn itself as the cause of the end of human culture¹⁶³.

The question is raised whether the institution of private property is consistent with the idea of social economy. The rational of private property is the rational of all economy, namely scarcity. Before the advent of the capitalistic era, the socialist doubt as to private property did not show up. Private economy is based on acquisition the essential features of which before the advent of capitalism may be summarized as follows : The economic process is made up of small processes working under the division of labor; national wealth is split into small units of individual wealth. All legal rights are private; income is distributed to individuals through the acquisitive process and wealth is increased through savings from values received. All these relations are based on and protected by law. Most of it is the result of custom of thousands of years. The classics, while they discovered the interconnection between private and social interests, exacted individual interest above social interest even after the advent of capitalism which constitutes a serious error on their part.

The classical theory of freedom appeared as a sequence of complete freedom required by big industries, but it was in the hands of these industries that this freedom was destroyed. Development required leadership through which the masses were subordinated and despotism established. The transition to very large industries was achieved through capitalistic leadership; at first it was personal strength and not capital which was the decisive element. Industry operating as a mass phenomenon became a social evil¹⁶⁴. This was followed by the creation of the mass proletariat, mechanization and a «physical and moral degradation of the proletarian strata»¹⁶⁵. «Capitalist supremacy has cut the ground from under the classical doctrine of freedom»¹⁶⁶.

The critics of this situation attribute exploitation to the laws of exchange value. Marx's theory of surplus value does not explain the origin of capitalistic power; it is not true that the dissolution of the exchange community will free society from the possibilities of economic despotism. In every regime leadership is needed; leadership leads to power and this again to despotism.

For the classics the inner policy of social economy is the doctrine that «a free economy of individuals, observing the limits of law and morality would secure the maximum social utility that could be attained»¹⁶⁷. The state should not interfere to regulate the economic decisions of the individuals. The creation of capitalistic despotism, however, formulated the content of modern domestic economic policy which has repudiated the doctrine of non-intervention.

The first departure has been labor legislation; usury measures, exchange regulations, national housing, land reform, were some of the others. The theorem of the classics that private freedom guarantees maximum utility attainable is no longer regarded as sacred. The classical doctrine is good only under equilibrium conditions. Otherwise the state must be called in as an indispensable factor of national economic progress.

The classical school does not go into the roots of the labor theory and does not help against the impact of socialist criticism quite the contrary it has supplied the grounds for such criticism. The utility theory on the other hand aspires to be an empirical theory without definite practical applications.

The fundamental tasks of the modern policy of national economy may be summarized as follows: First, freedom of the national economy from state intervention does not lead to absolute freedom; in the capitalistic era it is controlled by compelling forces against which the state

must protect itself. Second, capitalistic industry may dislocate proper distribution; in such a case the state must take corrective measures. Third, in large scale industries development of despotism is not infrequent. Fourth, some of the existing organizations serve the purposes of despotic powers. Fifth, against the need for restrictions the private organization is recognized as socially active in the capitalistic era.

From the social economy Wieser moves to the «economy of the state»; for the explanation of this type of economy we apply familiar ideas of the private economy. The classics looked at this form of economy as an exchange between taxes and administrative services. Essentially public economy should not be distinguished from private economy. The income of public economy is related neither to exchange nor to production; state expenses are close to those of private economy which are called personal outlays; these must be distinguished from collective outlays. The state's expenditures do not look to the immediate satisfaction of needs «but to the protection and advancement of these satisfactions» ¹⁶⁸.

In its economic calculations the state is guided by value in exchange in the calculation of which the state must be guided by pure «social valuation» ¹⁶⁹.

In a world economy there is no supreme political agency. The classical theory's contention that the value of money is automatically equalized among nations is subject to two serious errors: The first is that money is used on the same level as merchandise without realizing that money follows the merchandise and equalization movements are hindered by the movements of merchandise. The second error is that it disregards obstacles to which individuals are subject in the national economy. The quantity theory deals exclusively with the exchange value of money and disregards the international rate of exchange ¹⁷⁰.

The classical theory broadened the basis of economic theory but «did not penetrate to the roots of economic theory» ¹⁷¹. The classics oversimplified the conditions of money economy and came up with halftruths. A complete theory must explain how unification occurs from a great number of actively participating individuals.

IV. In Summary, in the study of Wieser's theoretical structure we find that he objects to the idea that the problem of consumption has been left to the moralist and observes that we must make economics a science of both production and consumption. Introduction of mathematics, he observes, oversimplifies the issue involved and instead for looking for an equilibrium we must look for «margins of use» ¹⁷².

Ricardo overlooks the factor of scarcity and the fact that all products are maintained in quantitative proportionality. The assertion of the labor theory that labor represents only pain is not correct. Labor must be approached from the point of view of usefulness and capital must be considered as an indispensable aid and not a capitalistic power. Capital helps in the production of consumption goods and the reproduction of consumed capital goods. The classics contradict themselves when they say that all capital must be reduced to labor while, on the other hand, they point out that capital is the «outgrowth of labor»¹⁷³.

The laws of value and the laws of computation of utility were overlooked by both the classics and Marx. It is true that it is difficult to determine utility, but the purpose of economic theory rests in the difficulty of appraising and not simply understanding human surroundings. The basis of theory is that in the presence of restricted quantities of commodities, the greatest possible utility will be sought. At the margin of utility satisfaction is arrested; there the least important of the needs that will be satisfied and the most important of the needs that will not be satisfied meet. The computation of utility is necessary for the regulation of desires. The law of demand is derived from the law of marginal utility, not of total utility, and marginal utility fluctuates with the magnitude of needs. In the case of free goods there does not exist the problem of marginal utility; marginal utility determines the limit of production.

The classical theory by advocating that capital is a mere product of labor is also inconsistent with the law of reproduction. While labor is the conditioning prerequisite of production, exclusiveness in productivity is unacceptable because productivity depends on the creative instruments. To support the labor theory we must accept the socialist theory that the support of private property is unattainable.

The problem of attribution, that is, how the yield will be distributed is solved only through solution of the problem of utility. Menger, according to Wieser, did not understand the problem of attribution; Ricardo, on the other hand, failed to develop a general theory of attribution and a theory of utility computation.

The appraisal of capital, the control of its use and the duration of its use depend on the rate of interest which measures the marginal productivity of capital. The use of capital must yield earnings that at least will cover the rate of interest.

The most important of the institutions of a social economy from the economic viewpoint is the institution of exchange which unites the

individual activities in the national structure as supply and demand. A productive and acquisitive process are connected by the process of exchange.

While the simple economy studies the laws of motion of an isolated economy, which motion does not counter restraint, in a social economy the individual units clash. The question is raised whether this clash changes the established laws. The classics accepted the phenomenon of an existing power without further investigation and their disciples accepted the conclusion of existing inequality. But the social forces that affect the economic conduct of individuals are not only law and morals, as the classics believed, but also environment. Individual economies are subject to institutional patterns which are the product of historical evolution.

Exchange has been defined as the surrender of the superfluous for the necessary; exchange will stop as soon as there is no advantage to it. In a social economy each individual operates under the influence of his own group and prices result not from individual exchange but from the aggregate of conditions prevailing in the market; exchange takes place under competitive, monopoly or monopoloid conditions. Prices explain the circulation of wealth, determine the distributive shares and help in the calculation of economic values. The expression that supply and demand determine the price, while not inaccurate, is incomplete. The whole problem must be associated with the problem of value determination.

Price is adapted to cost through competition; the error of the classical school consists in that they assumed the existence of an ideal competitive situation. They completely repudiated monopoly as an anti-social force. Between these two extremes Wieser finds an innumerable number of cases which control a considerable portion of supply and demand. He makes the distinction between objective and subjective exchange value and rejects these terms in favor of personal and economic exchange value. Natural values are appraised on the basis of their values in use and price formation in a simple economy takes place through appraisal of exchange values.

Exchange value is the basis on which distribution takes place. The classics disregarded subjective exchange value, a factor which prevented them from investigating the whole truth. They did not realize that the objective exchange value was based on subjective estimates of individuals. In a social economy price formation becomes complicated because money enters the picture. But in spite of it if we analyse the picture we

reduce the problem to one of personal valuations which obey the law of a simple economy.

Under conditions of the division of labor in an exchange economy the process of formation of natural capital is completed jointly by capital producing and capital using entrepreneurs. Capital must be preserved and this is done through money. Savings are necessary for the formation of money capital. Money capitalists are producers because they introduce in the market more than they withdraw. This appears as surplus money that passes to debtors; if nothing comes from the investment of debtors then both natural and money capital are destroyed.

Increase in productivity is not the exclusive result of the division of labor, as Adam Smith asserts but it is also the result of capital and the soil as well. The classics in studying the structure of the community and of income formation looked only at their own period and they used it as the foundation for their own investigations. They disregarded the effect of economic process.

Wieser considers the economy as a voluntary social institution where state intervention has no place; savings are necessary for the formation of social income.

In his rent theory Wieser is Ricardian, yet he observes that Ricardo does not explain that surplus comes from savings in cost and he also fails to explain how the transition takes place from a stabilization condition to the next. Increased rent in urban areas is not the result of monopoly but of increased demand.

Interest is the share of the yield which is attributed to the use of capital. The basis of interest is the marginal contribution of capital and rises with the marginal yield of capital.

Capitalists are entitled to interest because they obtain it for sound economic reasons; while the capitalists do not suffer from reduced consumption their contribution cannot be disregarded. The yield that goes to capitalists is made up of their wages as entrepreneurs, the interest for the use of their capital, and the remaining is profit which is their income after reducing their wages and interest. The latter two in the case of the entrepreneurs are confused with profit because they do not draw them through exchange. The income of the entrepreneurs is determined through demand and supply. In the case of labor, marginal demand is not determined by cost but by utility. Wages are determined by the extent of the yield attributed to labor.

The classics erred in trying to associate the cost theory with the problems of labor. It is not the wage fund that determines wages but

quite the contrary wages are determined by capital, conditions on labor and technical developments. Capital and wage fund are variable quantities. It is the appraisal of the demand that determines the fate of labor. Labor supply and labor organization are also responsible.

From the income of the entrepreneurs come savings from which is created capital and through which exchange values are created. Production and employment are mutually conditioned; despite this a glaring contrast has been created between labor and capitalism. The latter will succeed if it leads to a safe provision for the excess population. If this does not happen the middle class will disappear between the extremes of poverty and wealth and together with it capitalism will also disappear.

The classics exalted private interest above social interest by insisting that man's fortune is of his own making, but the freedom which the classics demand has been destroyed in the hands of big industries.

Marx's theory is not convincing because it does not explain the origin of capitalistic power. He attributes exploitation to the laws of exchange value. The classics on the other hand while repudiating the doctrine of intervention managed, through the creation of capitalistic despotism, to force state intervention. Private freedom, while not abandoned, is not considered anymore as sacred; the classical doctrine of freedom is good only under equilibrium conditions, otherwise the state is called to protect the weak.

While the classical doctrine developed the theory of freedom, the utility theory aspires to be empirical, and while both the classics and the utility people refer to the individual they both forget the social interconnections and the state.

In the case of the economy of the state the classics looked at it as an exchange between taxes and administrative services. Today the state yields peace and security. The income of the state is not related to exchange or production and its expenses do not aim at immediate satisfaction but towards the advancement of this satisfaction.

CHAPTER III

EUGEN VON BÖHM-BAWERK'S THEORY OF ECONOMIC DEVELOPMENT:

THE THEORY OF VALUE, CAPITAL AND INTEREST COMBINED

I. It is rather difficult to disentangle from the maze of blueprints which we find in the *Positive Theory of Capital*¹⁷⁴ the picture of a unified presentation of the theory of the capitalistic process. This picture has been hidden by the rather specific and may be narrow title of Böhm-Bawerk's book.

Böhm-Bawerk worked on grounds prepared by Carl Menger; he developed Menger's ideas and together with his own he prepared a «coherent structure» the outcome of which was «a comprehensive theory of the economic process»¹⁷⁵. On Menger's foundations he developed a theory of interest, he gave the price theory its particular Austrian form and in connection with the problem of imputation he differed from both Menger and Wieser.

The second volume of his work¹⁷⁶, *The Positive Theory of Capital*, became a comprehensive analysis of the economic process and it is this book which we shall use as the basis of our work in this chapter ... Schumpeter says that Böhm-Bawerk is the «architect» of science and not an interior decorator».

In the debate that followed the *Positive Theory*¹⁷⁷ he presented a masterful exposition of what he attempted to do. «I have endeavored», he said, «to place the conception of capital upon a sound, natural basis, -- to write ... a solid natural history of capital in place of a mythology of capital», another characteristic of Böhm-Bawerk's theory is that his different points have been discussed in such diversity of opinion that «we can hardly say that he formed a school»¹⁷⁸.

II.—1. Bearing interest is not an indication of the productive power of capital because capital yields interest both in the field of production and distribution, which reveals the existence of two problems to be solved, namely the problem of capital and the problem of interest¹. In our endeavors we combine human efforts with natural laws to achieve the desired material. Human intervention controls natural forces, but since they are great man needs allies in order to control them. In our attempts to produce consumption goods we use longer methods which lead to greater results and it is the task of economic theory to investi-

gate why this happens¹⁷⁹. Extention of the round-about methods means use of additional power for the control of natural forces. This power is capital which is a complex of intermediate products appearing during the several stages of production. Capital has been used as one term, but some stressed the production aspects of it and others the consumption aspects. One of the difficulties of defining capital is that the term is used to define things which have their own name. Böhm-Bawerk accepts as a correct definition of capital a group of products which serve as means for the acquisition of goods¹⁸⁰. This constitutes the social capital which represents the factors of production and it is also the source of interest. Land is not included by Böhm-Bawerk in capital which embraces only the produced «acquisitive instruments». This definition includes both tools and material. Social capital is connected with private capital by the fact that the aggregate of intermediate products coincides with the aggregate of products which are the source of income to society, but while social capital embraces the factors of production, private capital embraces also some consumption goods. The means of the workers' subsistence must be considered as a part of wealth destined for consumption and not to be used as capital. But these goods are viewed as capital for two reasons : first, historical transition, and second, the misunderstanding of the concept of capital. Böhm-Bawerk undertakes the development of the theory of social capital.

2. All goods come from the combination of natural resources and labor, a combination achieved with the help of technical knowledge. The limited gifts of nature are connected with land and from the economic point of view we are interested in what is offered by nature in limited amounts. Labor, therefore, is not the only original power as the socialists assert. To combine land and labor we use either other free resources directly or through a roundabout method we use intermediate products which represent the «economic social capital». The roundabout method characterizes capitalism, and on the one hand leads to greater production yet on the other requires more time. It is this loss of time that forces the worker to depend on capitalists.

While lengthening of the process increases production, the increase accompanying each lengthening becomes smaller and smaller, which means that the increase of surplus returns is not proportional to expansion. The capital that comes last leads to decreasing proportion of the product of labor. Extention or shortening of the roundabout method may be envisaged not in comparison with the time involved but rather

by the average period between successive expenditures and the obtaining of the final commodity.

3. It becomes clear that capital is the symptom of roundabout production, a tool and not an independent factor. The greater the accumulation of the past the greater the possibilities for investment. Poor countries do not have investment possibilities. Capital is an intermediate result of nature and labor which became an independent power through the division of labor. Its existence was also necessary for the justification of interest. What is stored in the form of capital is not only labor, as the classics assert, but both labor and natural powers.

4. While capital is not an independent factor, it is productive. As to the origin of capital there are three theories: (a) It is the result of saving; (b) it is the result of production and (c) It is the result of both. It is the third one that is accepted by Böhm-Bawerk; saving leads to accumulation but not production; It is production and not saving that constitutes the source of capital. To maintain capital the amount saved must be equal to the amount consumed during its use. To increase capital the current productive powers that are saved for the future must be greater than the ones consumed during the current period¹⁸¹. Capital came into existence from a production process as intermediate products and it is the continuation which is its aim. In communistic regimes people are forced to compulsory saving because few products are being made available for immediate consumption. In an individualistic economy consumers determine the direction of national production. If individuals consume a part of their income there will be a fall in demand for consumption goods. This will lead to reduced supply for fear of losses and the surplus will be used to increase capital. This leads to increased demand for factors of production or intermediate products and investment for the increase of such products will take place. On the other hand if consumption of individuals is greater than their income, this will lead to capital reduction of the community. This is the theory of capital formation.

Savings does not involve any sacrifice; what is important is that saving occurs unaccompanied by any sacrifice. While saving is necessary for the formation of capital, it must not be used as justification of interest; capital formation and interest are two different problems which must be kept apart.

Another theory asserts that capital formation is due to labor productivity since from income is deducted more than is used for consumption purposes. But saving does not originate to greater labor activity

but also to greater productivity. It is true that saving is not an act of production, as the socialists affirm but it gives direction to production because capital comes into existence through saving. It is the theory of value which will explain on what saving depends and the working forces in the formation of capital ¹⁸².

III.—1. The full extent of the difference between use and exchange value has been underestimated and use value at the beginning was completely abandoned. The importance of the value in use was discovered later to be the backbone of many economic laws. What is of importance according to Böhm-Bawerk, is not exchange value but the objective worth of the books that are exchanged.

There is a difference between price and exchange value; exchange value is the acquiring power of a commodity while price is what is being acquired «that other quantity of goods», but the laws governing the two coincide.

2. Capacity of serving human needs creates usefulness, but indispensability for human well-being creates value. Scarcity makes a commodity important for the well-being and it is this factor which is the source of value. Usefulness rather than value characterizes all commodities. For a commodity to have value, it must be useful and scarce in comparison to demand.

3. The purpose of a value theory is to determine the magnitude of value. Utility measures value for scarce goods. The value of a commodity does not depend on the kind of the need it satisfies but on the urgency of that need. The degree of importance differs with the extent of satisfaction. This point has been explained by Carl Menger.

4. Our resources are used first for the satisfaction of the most important needs. The value of a good is not determined by the greatest utility, but, as Wieser puts it, by the least utility. The value of a good is determined by the value of its marginal utility, a phrase coined by Wieser. The greater the number of commodities in a group the smaller the marginal utility that determines their value. In a case of surplus goods the marginal utility is zero which explains the «Smith paradox».

5 and 6. While a commodity's value is determined by its marginal utility the magnitude of value at the margin is determined by the intensity of wants; the greater the intensity the higher the marginal utility. Thus usefulness and utility are the ultimate determinants of value.

7. In case the marginal utility varies in different uses the value

of the commodity is determined by the highest marginal utility because the use with the highest marginal utility will get the commodity.

8. Both use value and exchange value are subjective values; the one is acquired through contribution to the welfare of a person. exchange value is the importance which a commodity has for the welfare of a person through its capacity to bring in other goods. The use value is determined by the marginal utility while the exchange value is determined by the use value of the commodities obtained through exchange. The marginal utility will measure the goods' exchange value. The objective exchange value may remain the same and the subjective exchange value may rise. Objective and subjective exchange values may move in opposite directions. Böhm-Bawerk proposes the distinction between objective exchange value and subjective value, the latter being distinguished into subjective use value and subjective exchange value.

9. The marginal utility of a group of goods obtained in joint employment is the true marginal utility, which determines the combined value of the entire group. What seems to be the cost of the total return are the expenses of the replaceable means of production while net return is assigned to the non replaceable members.

10. Production goods serve to satisfy human wants indirectly; they have value because on them depends the possibility of acquiring some utility. The marginal utility of the final product is determined by the product from which it is made, the value of intermediate goods depends on the marginal utility of the final product. We examine the amount of well-being which is created by the product it produces in order to determine the value of the productive instrument.

The value of the means of production and therefore of costs is regulated by the value of the products. In the case where a group of factors is raised for the production of more than one product, the value of the factors is determined by the product which possesses the least marginal utility from all the products that economically might employ this factor from their production. If we loose a unit of one of the products with the greater marginal utility then we shall produce less of the products with the smaller marginal utility, because the loss of utility will be smaller. This means that the marginal utility of the higher product is not determined by its own marginal utility, but by the marginal utility of less valuable products. This determines also the value of the means of production, and from there the value goes to the other products that may be produced by the factors of production. Thus it seems that costs regulate value although they are not the final but the intermediate

cause of value, and do not give value to the products but receive value from them.

IV. To what extent the improvement of those involved in exchange is achieved depends on the price at which those who exchange can sell. The achievement of economic advantage plays an important role in price formation. The theory of price developed on the basis of self-interest is sufficient foundation for the «further development of the theory of capital»¹⁸³. On the basis of self-interest exchange will take place only if there is advantage and towards the direction of the maximum advantage must consist in taking more in terms of well-being than in giving. The subjective value of the goods received is greater than the subjective value of the goods parted with. This motive works in the matter of price formation. The limits within which the price will fluctuate are restricted by the limits of economic advantage; the price will depend on the dexterity of those who exchange. The price in an isolated exchange, will be formed between the upper limit valuation determined by the buyer and the lower limit valuation determined by the seller.

In the case of two buyers the price will go up to the ability point of the weaker competitor and in the case of many buyers the price will set between the point established by the most capable competitor and the higher limit. In the case of sellers prices move downwards. In the case of many buyers the price will be the one offered by the weakest competitor, except where scarcities develop. Among sellers the strong ones will try to sell at the price at which the least capable ones can sell and the price will be lowered if there is danger of no sales. «The market price is limited and determined by the subjective valuations of the two marginal pairs»¹⁸⁴. The subjective value depends on the marginal utility of the commodity. On the other hand market prices are marginal determined by the economic interests of competing pairs. As regards marginal utility the last need to be satisfied determine the subjective value of the commodity, while price is determined by the exchange of the last pair. But the last pair has decided on the basis of subjective valuation and price formation is traced to subjective valuation. Important valuations are those which lead to exchange; at the exchange point supply is equal to demand. Böhm-Bawerk, however, considers the supply and demand formula of price formation ambiguous and if used without care may lead to misunderstandings.

Many buyers with high valuation and few sellers with low valuation lead to a high price and the opposite. The price depends on the extent

and intensity of demand which expresses individual valuations; it does not measure the usefulness of the commodity to the person that makes the evaluation. Buyers make subjective evaluation of the commodities depending on needs and the existing quantities and on «the subjective valuation of the *equivalent price* by the buyers»¹⁸⁵. This depends on how rich the buyer is. Finally buyers make subjective evaluation based on the extent and intensity of supply.

When it is a question of reproducible goods the market price tends in the long-run to equalize itself with the cost of production. Does this agree with the law of marginal price? How are marginal price and cost connected? The subjective valuation of finished products by the consumers assigns their price and value and also their demand. It is not the cost goods that fix the price of the products, but the cost goods receive their price from the product according to the law of marginal utility.

Another factor that influences valuation is time. The influence of time gives rise to interest and therefore we have to investigate interest within the framework of the value and price theory.

V. The basis of Böhm-Bawerk's theory of interest is that present goods are worth more than future goods. The value of future goods depends on the intensity of future pleasures. Future needs influence us as anticipations; in future evaluations the element of uncertainty enters the picture and this leads to smaller evaluation. Undervaluation of future goods is some kind of a premium for risk. The value of the present goods is estimated by the nature of the present needs and the existing provisions for their satisfaction, while the value of future goods is estimated by the nature of future needs and the available amounts for their satisfaction. There are three reasons for the difference in evaluation between present and future goods, namely: it is difficult to conceive exactly our future needs; another reason for underevaluation of future needs is defective will, and third, uncertainty of life. The first two factors are considered more important for undervaluation. In the second instance if a person is poor the value of a certain commodity now is much greater than its value in the future. If a person is well off the present advantage may be counterbalanced by greater units in the future. Through present goods we achieve higher marginal utility and therefore they have higher value than future goods¹⁸⁶.

It has been established that the difference in value between present and future commodities is due to whether a person is poor or rich

at present, to the fact that future advantages are underestimated, and to the lengthy methods of production. The effects of the first two factors are cumulative while the third works independently.

Present goods are superior because they make possible the round-about method of production. Here present goods have greater value because of their greater productivity through use in the future. With these goods we accomplish more in the future. The subjective valuations of future goods lead to higher exchange value of present goods.

VI.—1. The difference of value between present and future goods is the origin of interest on capital. Böhm-Bawerk, in trying to justify interest rejects the use theory and supports the exchange theory. In the case of manufacture, for their efforts the manufacturers obtain a compensation proportional to the amount of capital invested and they call it «natural interest on capital or profit». Others call it surplus value. The productive commodities which will be transformed into consumer's goods a year from now are equal in value to the value of the commodity a year from now. This difference is explained by the socialists and rightly so as the source of profit on capital, although this difference is not the result of robbery as the socialists maintain. The future commodities which the workers sell, their labor, are less in value than present commodities, their wages. As the future commodities become present they increase in value and this increase constitutes the profit of capital. Not only must they become present commodities in order to have higher value, but they also must become final commodities. The surplus value of the socialists is the increment of value of the future commodity when it is transformed into a present commodity. How much future goods loose depends on the length of the time intervening.

Factors used for several purposes and each use having a different production period have the same market price determined by the available quantity distributed in the different uses and by the degree of advantage they bring. The value of the employment at which a factor has been supplied last determines the market price of the means of production.

The question has been raised why the market price of the commodity «labor» must be less than the value and price of the finished product of labor¹⁸⁷. The workers have two alternatives; either to sell their labor or to use it in short unproductive processes. They will make the most advantageous choice and this choice will determine the supply of labor. From the point of view of demand the capitalists would not hire workers

if the value of final products at the end of the process would be less than the wages that the capitalist pays today. If the capitalist is not a producer himself other people will take the present goods of the capitalist in exchange for future goods and the capitalist can obtain an «agio», an advantage for parting with his present goods. The capitalist will not barter his money with the worker *at par* for their future product. But this is not acceptable to Böhm-Bawerk because we explain profit with interest at a time that interest itself must be explained. What really happens is that both workers and money lenders exchange present goods with future products.

The amount of the wealth in the community will determine the length of the productive process. The part of the wealth which is not consumed now is used either by the entrepreneurs themselves or by people who borrow. In the first case this wealth is used for subsistence of the employed workers, in the second case it is lent for either production or consumption purposes. Thus with the exception of what the owners consume the wealth of the community is brought in the market as supply of the means of subsistence. The projection in the future does not take place at once but in stages.

The existing stock today provides for the future at a decreasing rate and thus the existing wealth covers the needs of a longer number of years. What is not covered by the existing wealth in a given year is covered by labor of the current year. The remaining labor of the present year is used to be put in the service of future years. If all labor was used for the present, this would create a glut on the labor market.

The production period is determined by the accumulated wealth. But since production is carried on by stages not all accumulated wealth is used at once, different groups of workers are employed at different stages of the process. Subsistence for all stages of production will be provided for those who work at early stage; for those who work at later stages subsistence will be provided for shorter and shorter periods¹⁸⁸. Böhm-Bawerk produces a formula according to which the community on the average may engage in production processes which are twice as long as the period that may be covered by the accumulated wealth.

Subsistence is required for the length of the production process and it is required in installments from the owners of wealth who save it. The price of subsistence goods will be established through demand and supply. Supply is the total accumulated wealth of the community minus land and the amount consumed by the owners. The demand is

made up of wage earners who sell the future product of their labor. Also it originates in independent producers and in those who demand credit for their present consumption and are ready to pay something for it.

If there was no difference between present and future goods the entrepreneur would have no profit and therefore extension of the productive process would be impossible. The difference in price between present and future goods makes over-extension impossible. There is always a possibility for extension and a deficiency of capital.

The price of intermediate products remains also under the price of the products resulting from their use. The same differential is also observed in land as well as in labor. The socialists disregard the case of land and intermediate products and consider the low price of labor as the result of exploitation, a point with which Böhm-Bawerk does not agree.

2. Values of services depend on the needs which they satisfy and is measured by the marginal utility on the services. A material good has the same value as the aggregate of services it renders. When it comes to perishable goods the value of the service coincides with the value of the good. As for durable goods they yield services for a considerable time, but the more distant in the future the service is the more its value will decrease. Thus with durable goods their value is found by a sum of services decreasing in value. The loss of value which the durable good suffers during the year's use turns out exactly equal to the initial value of the *most remote* service inherent in the good¹⁸⁹.

When we use a machine it loses value, but this loss is made up by the remaining services which the machine can render which come closer to maturity and therefore to greater value. There is a difference between lost value and increased value and this difference appears in the form of «profit or net interest»¹⁹⁰. The interest on durable goods has its origin in the increasing value of services as they approach the present. Thus the same causes determine the origin of both profits and interest. In the case of durable goods the capitalized sum is less than the sum of the amounts realized by the services in the course of time.

3. The services of production goods are further reduced by the fact that they are separated from the final product by the production period. Böhm-Bawerk explains rent on the same principles on which he explains interest from durable capital. The fact that rent theories are different from the theory of interest is due to error. Despite this,

the differences between capital and land cannot be abolished because of other theoretical and practical differences.

4. Interest induces saving and accumulation of capital and leads to more fruitful methods of production and greater production. But abstinence cannot explain interest; on the contrary it is interest that leads people to saving. And there is nothing wrong with interest in this role.

5. The difference between present and future value of goods exists even in a socialist economy, but this difference does not motivate people in such a state because they do not work for themselves. Interest which the socialists consider as robbery remains an affair between the state and the workers.

VII. — 1. It has been indicated that the price of the commodities will be fixed somewhere between the value given by the owner as lower limit and the value given by the purchaser as an upper limit. The upper limits of interest or profit are different with respect to production and consumption loans. In the case of consumption loans the determinants are the urgency of the moment, the time of repayment and the risk involved. In the case of production loans the determinants are the expected returns, the expectations on returns of those involved.

2. While supply represents the community's current stock of wealth, the demand is a demand for personal credit to carry on individual production. The market price which is the result of all this must offer a differential «agio». The magnitude of this «agio» will be established by the point at which demand and supply balance which lies between the subjective valuations of the last pair who actually exchange¹⁹¹. In the case of labor, such subjective valuation is difficult because labor valuation varies according to whether labor has been invested for short or long periods. The extent of labor employment is determined by the price. In a poor country less capital will be used to pay the laborers; at equilibrium the existing subsistence fund would be all used to pay for supply of labor. If the production period was shorter there would be capital surplus; if longer there would be unemployment. Pressure from the one or the other direction would lead to necessary balance. This is the case when capital is given. If capital and the number of works is given, the production period would depend on the length of the productive process.

But the margin within which the supply and demand fluctuations take place is very narrow, which makes the role of supply and demand

unimportant. The rate of interest depends on the surplus return of the last permissible extension which is in agreement with von Thünen's law where the rate of interest depends on the productivity of the last applied dose of capital ¹⁹².

3. Since this last extension is so important, which are the factors which determine its productivity? The answer to this question will give us the explanation for the fluctuations of the rate of interest and especially its tendency to fall. A given subsistence fund will be fully occupied in case of its increase if we have an extension of the production period which will be accompanied by steadily decreasing surplus returns. If the subsistence fund decreases, the production period will with steadily increasing surplus returns. On the other hand if the number of workers increases the result will be the same as an increase in the subsistence fund and vice versa. With fluctuation of the number of workers in the one or the other direction the production period changes and the rate of interest changes.

If the state of productivity changes while the subsistence fund and the number of workers remain the same, the rate of interest fluctuates directly with the rate of productivity ¹⁹³. These three factors determine the rate of interest.

4. The assumption has been made that the annual product of the workers and the annual wage are the same in all employments. But even if they were completely different, due to the law of equalization the return to labor and the wage of labor ratio would be the same and it is this which is important in the rate of interest.

Also if productivity was different capital would be invested where the greater returns come from. The surplus returns of different marginal employments account for the marginal limits of the different interest rates. The height of marginal returns fluctuates depending on whether we are using shorter or longer processes.

It was assumed that the demand for present goods comes from workers or entrepreneurs. But we have other sources of demand : first; demand for consumer's credit; second, the landowners; third, the capitalists themselves, who live from interest and this subsistence will be deducted from the subsistence fund that will lead to an increase in the rate of interest. But the claims of wage earners, landowners and those who borrow for consumption purposes are different from the claims of the capitalists. The claims of the three former are the cause of the «agio» on present goods while the claims of the other are the effect. It is the demand of the former three that creates the surplus, but just the same

the demand of capitalists leads to an increase in the rate of interest ¹⁹⁴.

Thus in summary the determinants of the rate of interest are : (a) the magnitude of the subsistence fund; (b) the number of people to be provided for; (c) the surplus returns connected with the lengthening of the process; (d) the intensity of the desire for consumption loans; (e) the height of rent (the higher the rent the greater the unemployment and the number of claimants upon the subsistence fund) and (f) the existence of a capitalist class lives on interest. Thriftiness saves a part of the subsistence fund and thus it is used for the lengthening of the production period ¹⁹⁵.

5. Human needs are competing for wealth, either many of them at the same time or many of them at different times and the outcome of this competition will be decided by the law of maximum utility. The marginal utility of present goods is greater than that of goods allotted to future needs. Before deciding on spending, people must compare want, provision, and marginal utility for the present period with the same factors for the future. This is very difficult to do and we make estimates while allowing for adjustments for deviations.

One more point; there has been mention of the «subsistence fund». To what extent is this different from the «wage fund theory» of the classical school? Both assume the existence of a subsistence fund from which wages are paid; its magnitude has influence on the height of wages and interest. But beyond this there is no other similarity. The classic's wage fund is not fixed but fluctuating and creates uncertainty as to the height of wages. It is a variable portion of the community's wealth. It tries to explain the rate of wages by an amount which is conditioned by the wage rate. Böhm-Bawerk's fund is fixed, it is equal to the «stock of wealth accumulated in a community» ¹⁹⁶. According to the classical school wages are determined by dividing the wage fund by the number of workers. They disregard the element of time. The increase of the subsistence fund is used to lengthen the production period and not to increase wages as the classics insist. This, on the one hand, decreases the share of capitalists and on the other, increases the share of the workers.

Böhm-Bawerk has been engaged in a unifying process. He derived the theory of interest from the development of the elementary theory of value. The theory of capital is the legitimate and natural outcome of value theory which is being used as an instrumentality for the solution of a problem for which every previous attempt has failed.

VIII. We present now the pertinent points of Böhm-Bawerk's theory in summary. Capital is not simply productive because it yields interest. In the production process we use natural forces aided by human energies to human advantage. Final goods are produced through a roundabout process which leads to increased production. The roundabout method constitutes what we call the capitalistic process of production, and capital is nothing but intermediate products appearing in the successive stages of the process.

Difficulties have appeared from the fact that many things which are not capital have been characterized as such; as capital should be considered only the «produced acquisition instruments»¹⁹⁷ and not land.

Social or productive capital must be distinguished from acquisitive capital; the economic functions of the two are different. The origin of capital is explained by the theory of capital accumulation and the explanation how capital acts productively is given by the theory of the productive function of capital.

There is disagreement on the nature of usefulness of capital and this is due to the fact that economists, instead of describing the facts, mix them up with their own personal ideas. In order to straighten things out and remove the confusion we must study the process of capitalist production.

The result of production is the result of the common efforts of the powers of nature and labor the two primary sources of all goods. To these basic factors, in the process of production we add technical factors: to produce the final products with the help of land and labor we need the economic social capital which is made up of the intermediate goods used in the production process.

The capitalistic process increases productivity but requires more time. The need for time leads the workers to depend on the capitalist. The length of time required (degree of capitalism) is different for different products and as the production process becomes longer additional production increases at a decreasing rate; the capital used last leads according to von Thünen to a constantly decreasing proportion of the products of labor.

Prolongation of the roundabout method must not be measured in absolute duration of the period involved but «by the average period which lies between the successive expenditure in labour and uses of land and the obtaining of the final good»¹⁹⁸. The higher the degree of capitalism the more remote will be maturity day.

Capital comes into existence in the process of roundabout produc-

tion. Capital on the one hand is a tool of production and on the other the cause of the roundabout method. The more the capital accumulated the more of it will be used in the future. Poor communities have small investment opportunities.

No part of the final product can be attributed independently to capital without being attributed at the same time to nature and labor. Capital has been considered erroneously as an independent factor and the reason for it is the division of labor and the need to justify interest as income. Capital is the medium through which physical power and labor exert themselves. But, while capital is not an independent factor it is a productive factor. Of the three theories which try to explain the origin of capital as the result of saving, production and both, Böhm-Bawerk accepts the third one.

In an individualistic economy demand plays an important role on how productive powers will be used and to what extent; the desires of the consumers are exerted through their income. If part of the income is consumed there will be a fall in demand for consumption goods and the surplus income will be used for the increase of capital, an action which leads to an increased demand for the means of production thus linking saving and the formation of capital. Saving is an indispensable factor in the formation of capital, as indispensable as labor. What is important there is the «fact» of saving rather than whether any sacrifice is involved or not. But while saving is important, in capital formation, it cannot be accepted as a justification for the existence of interest. Capital formation and interest are two problems which must be examined apart.

Böhm-Bawerk also objects to the socialist claim that capital has its origin exclusively in the productivity of labor and not saving. Saving is not due to the fact that a person is industrious but it is helped by both greater industry and greater productivity.

The theory of value explains what saving depends on and which are the working forces in the formation of capital. Böhm-Bawerk distinguishes between subjective and objective value and it is the task of economics to explain the laws of subjective value and those of objective *exchange* value, that is the price theory.

While all commodities that serve needs are useful, not all useful commodities have value because the latter depends in whether the commodity is indispensable in human well-being. Value is conditioned by both usefulness and scarcity in relation to demand. Only insufficient «economic» goods have value. The theory of value aims at measuring

value and for a scarce good the measure of utility is the measure of its value. A good's value is determined by its marginal utility. This is the key law of the entire economic theory.

The value of goods is measured by their marginal utility, but the question is raised as to what measures the value at the margin. This is determined by the relationship between wants and provisions. This solution is different from the solution that value is dependent on the difficulty of obtaining a commodity.

A commodity's marginal utility may vary from one of its uses to the other depending on the importance of the need which it satisfies. The commodity's value is established by the highest of its different marginal utilities.

Both the use and exchange value of a commodity are subjective; the use value is measured by the marginal utility of the commodity while the subjective exchange value is set by the marginal utility of the commodity obtained through exchange; the subjective exchange value is different from the objective exchange value because the former changes while the latter may remain the same.

The relationship among complementary goods leads to value formation and the marginal utility of all of them as a group indicates the value of the group and is called the true marginal utility. But the value of the members of the group independently is determined differently. The theory of complementarity solves the problem of distribution.

Productive goods help to satisfy human needs indirectly and, on the basis of their directness in satisfying needs, are divided into goods of different ranks. Production goods have value because their possession yields utility. The value of each rank depends on the marginal utility of the final product because the intermediate commodities have no other use except for making the final product. Value goes from the marginal product to the means of production and assigns them their value. The law of costs is regulated by the law of marginal utility.

The purpose of exchange is to improve the position of those who exchange and this improvement depends on the price which those who sell take in exchange. Thus, the theory of price is developed under the assumption of the motive of self-interest. Self interest consists in taking more in terms of well-being than giving. The subjective value of the commodities being exchanged is unequal. Market prices are marginal prices being calculated on the marginal utility of the commodities exchanged, and price limits are calculated on «the subjective valuations of marginal pairs»¹⁹⁹. At this point supply and demand are

quantitatively equal, but the terms supply and demand are ambiguous.

Price depends 1) on the extent and intensity of demand, the latter expressing individual valuations of the commodity by the buyers. These valuations depend on needs, the available quantities and income. 2) On the question of how value, price and cost are arrived at by the subjective valuations of finished products by the consumers, which (evaluations) determine demand.

The valuation by the marginal pairs of the products to be exchanged fixes their price. Price depends on supply and demand. The price which the last buyer pays becomes the price of all goods. Cost goods do not determine the price of the product but receive their price from that of the product on the basis of the law of marginal utility.

Valuation of goods is also affected by time. It is the time influence that gives rise to interest and the place of interest is investigated in connection with the value and price theories. The basis of Böhm-Bawerk's theory of interest is that present goods are worth more than future goods. The value of future goods hinges on the intensity of future pleasure or needs and the amount of goods available.

The higher evaluation of present goods is due first to the fact that we cannot conceive future needs completely; second, to defective will to provide for future needs; and third, to the uncertainty of life. Due to the influence of these factors we estimate the utility of future goods at a lower figure.

A person's wealth also affects the value of future goods. For a poor person present goods have higher value. Present goods for Böhm-Bawerk are a means of obtaining greater marginal utility and therefore they receive higher value than future goods. Present goods are also superior because they make possible roundabout methods of production. Those who favor present goods appear as buyers.

The difference in value between present and future goods is the «source and origin of all interest on capital»²⁰⁰. It is not the use theory but the exchange theory that justifies interest.

In the case of wages future commodities which the producer will receive (labor), have smaller value than present commodities which the worker will receive (wages). With the passing of time future goods become present goods, they increase in value and the difference is «the profit of capital». For the future goods to get higher value it is not enough to become present goods but also to change from goods of higher order to final goods.

The exchange of the means of production for present goods and

especially for money take places in the labor market, the rent market and the market for intermediate products. The market price of the productive commodity «labor» must be less than the value of the finished product of labor.

The production period varies with the extent of wealth accumulation. But wealth is not used for the entire production period but for certain sections of the period. This makes it possible for the subsistence requirements to be demanded by installments.

The principles which regulate labor as a productive factor also regulate the price for the use of land and the same can be said for the price of intermediate products.

Returns are not the primary cause for which a given good has value. Returns have their true origin on the lower value of future goods.

It has been pointed out that supply represents the community's current stock of wealth. The demand comes from people who want to carry on individual production, to pay wages, for consumers' credit and for maintenance. The market price which is the result of all these must yield an «agio» which depends on the surplus return of the last permissible extension of production. Entrepreneurs who trust that this difference will materialize are willing to pay «agio».

IX. A considerable amount of criticism has been directed at Böhm-Bawerk's theory as could be expected. The space does not allow me to enter detailed discussion and in addition at this point I am not interested in criticism but in the presentation of Böhm-Bawerk's theoretical structure. The reader is urged to consult the bibliography appearing here. I want, however, to mention John Bates Clark's criticism on the grounds that Böhm-Bawerk ²⁰¹ sidetracked the theory of capital which of course Böhm-Bawerk rejects outright because as he emphasizes, he tried to avoid «the mythology of Capital» and to put it on a sound natural basis ²⁰².

CHAPTER IV

W. STANLEY JEVONS' THEORY OF POLITICAL ECONOMY

W. Stanley Jevons and his Theory of Political Economy. — 1. The theory of political economy has not acquired its perfect form; this is Jevons' complaint at the time of his writing. There are imperfections and difficulties still remaining and their origin is traced to the inability of economists to cope with the «quantity and degree of utility»²⁰³. The science of economics «can only be satisfactorily treated on an explicitly mathematical basis»; economists deal with quantities and for this reason have been for long mathematicians without being aware of it²⁰⁴.

2. Jevons calls the Ricardian assumptions hazy and preposterous and accuses the British economists of «living in a fool's paradise». The task of the economist is to liberate the science of economics from the wage fund theory, the cost of production doctrine of value, the natural rate of wages and other faulty Ricardian doctrines.

Jevons disagrees with the theories that labor is the origin, even the cause of value; he argues that variation of utility depends on the quantity of the commodity which we possess; furthermore, exchange and the law of supply and demand depend on this quantity; while labor cannot be disregarded, it determines value in an indirect way by influencing utility through variation of demand and supply²⁰⁵.

3. Since we deal with quantities subject to continuous variation, calculus becomes necessary, but it does not «constitute the mode of reasoning» which it embodies²⁰⁶. The difficulty in economics consists in the extent and complexity of existing data. It is true that it is hard to measure pleasures and pains, but it is «the amount of these feelings» which prompts us to buy, sell, borrow, lend, work, rest, produce and consume²⁰⁷. While we cannot give numerical expression to pain and pleasure, still under their influence we decide whether to buy an additional unit or not. But the feelings of pleasure and pain are translated into motives which persuade the will. We compare motives of the same mind and it is this condition of mind which theory investigates «and bases upon this investigation the whole Economics»²⁰⁸.

Taking a shot at the historical school Jevons observes that historical investigations in social sciences are valuable, but instead of transforming economics into an historical science it is better to perfect what we have «and at the same time erect a new branch of social science on

an historical foundation ²⁰⁹. Economics is a deductive science but it becomes more exact through the use of statistics. It aims at maximizing happiness through purchase of pleasure at the lowest cost of pain.

4. The magnitude of pleasure and pain is affected by their intensity, duration, degree of certainty and nearness or remoteness ²¹⁰. But the state of mind relative to pleasures and pain is characterized by continuous variation which is the origin of major difficulties. Pain is opposed to pleasure and they vary inversely, and the most important issue to be investigated by theory will be the equilibrium between the pleasure which we get from the possession of a certain good «and the pain encountered in its acquisition» ²¹¹.

There is a differential between anticipated and actually felt feeling. The intensity of the anticipated feeling must be «*some function of the future actual feeling and of the intervening time*» ²¹² and the intensity must be increasing as we approach the point of realization. The change is faster as we approach realization and slower as we go away from it. Anticipation controls the stock of commodities to be consumed in the future and the force of anticipation is affected by the force of future events.

Since economics deals with pleasures and pains, efforts are being made to maximize pleasure and avoid pain; whatever «can produce pleasure or prevent pain *may* possess utility» and utility possess all things which people want and for which they are willing to work.

In contrast to John Stuart Mill, Jevons contends that «economics rests on the laws of human enjoyment and economic theory must begin «with a corret theory of consumption» ²¹³. Utility for Jevons is not a quality but a «*circumstance of things*» which has its origin in the relation of these things to what man requires. It is not a demonstration of the intrinsic value of things so much as an expression of relations between pleasures and pains. Utility is not proportional to a commodity but varies as we possess more or less of that commodity. Utility is measured by the addition to a person's happiness and we must distinguish between total utility and that associated with the specific part of a commodity. Each increment of a commodity possesses less utility than the previous one ²¹⁴. Utility is trated as «*a quantity of two dimmensions*» one, the quantity of the commodity and the other the intensity of its effect produced upon the consumer ²¹⁵. We must distinguish between total utility which varies with the quantity of the commodity and the degree of utility which is «the differential coefficient of U (total utility) considered as a function of X (the quantity of the commodity) which varies indepen-

dently, and ultimately decreases as the quantity increases.²¹⁶ The more refined are our needs the harder it is for them to be satisfied. This is what is known as Senior's Law of Variety. Utility corresponds to a favorable alternation of the balance of pleasure and pain, while pain is the outcome of an unfavorable alteration.²¹⁷

If a commodity is capable of several uses it will be devoted to the uses that give the greatest advantage at the moment. For a commodity to be consumed wisely must be consumed with the greatest production of utility.²¹⁸

If we designate a certain quantity of a commodity by M (mass) and we divide it by the number of units of time over which the quantity must be expanded, then supply does not mean absolute supply but rate of supply that is M/T or MT^{-1} . Time enters all economic questions and therefore consumption. In reality we are dealing with «rate of supply, rate of production, rate of consumption per unit of time...»²¹⁹. (On the other hand, pleasures and pains are independent of time and of quantity. The only quantity that belongs to feeling is intensity; intensity of feeling is the «instantaneous state produced by an ... infinitesimal quantity of commodity consumed»²²⁰. This intensity of feeling is the degree of utility representing the favorable effect produced by the infinitesimal quantity of commodity. If a commodity produces an amount of pleasure per unit of time, this is not quantity of utility but a quantity which when multiplied by time «will produce quantity of utility»²²¹.

Pleasure has been defined as MUT^{-1} . $T = MU$ which denotes «The dimensions of *quantity of utility*». In the case of utility we begin with an absolute stock of commodity M , which over a period of time becomes the supply M/T or MT^{-1} . It is this expression and not M , that affects the final degree of utility. The longer the time the commodity must last the higher will be the degree of utility because the consumer's need will be less satisfied. «The absolute amount of utility produced will, as a general rule, be greater as the time of expenditure is later»²²².

Jevons distinguishes between *actual*, *prospective* and *potential* utility. The last is not included in the science of economics; only the probability that a thing may be needed changes it into prospective utility. The distinction is also made between direct and indirect utility. Indirect utility is what the things possess which procure us direct utility through exchange.²²³

Economics must show how a commodity can be consumed to the greatest advantage. If future pleasures or pains have to be reduces in

proportion to the absence of certainty, then the commodity assigned to each later day will be less and its final degree of utility, V , will be greater²²⁴. The quantity of the commodity which will be assigned to a future day will be «in some proportion to the intervening time». Since we are not certain as to the length of this time «as the probability decreases, the final degree of utility should increase in inverse proportion»²²⁵.

5. Through exchange we maximize utility and we save labor. Exchange alone does not increase utility, but it is an important factor towards this increase.

Jevons does not share J.S. Mill's contention that the theory of value is complete, that we know all there is to know about it. The term value is misleading and it may create confusion; value is not a thing or an object, as people usually think, there is no such a thing as «*intrinsic value*». Value «*merely expresses the circumstance of its exchanging in a certain ratio for some other substance*». Value in exchange is nothing else but an expression of a ratio. We cannot say what is the value of gold but only what is the value of gold as compared with that of iron. Value therefore is a ratio of quantities exchanged.

The explanation of the value of water as given by Adam Smith is not clear. Water in abundance has given all its utility, but when it becomes scarce acquires great purchasing power. What Smith means by value in use is «the total utility of a substance of which the degree of utility has sunk very low, because the want of such substance has been well nigh satisfied». Sometimes by value is meant the intensity of desire or esteem for a thing. Such a desire would be measured by the intensity of the pleasure to be acquired by a new increment of the same commodity. Total utility is considered as value in use; final degree of utility or marginal utility is confused with esteem, and ratio of exchange is confused with purchasing power. Instead of using the word value for all cases it would be proper to substitute the right expression in each case. Instead of value in exchange Jevons substitutes ratio of exchange of two specific commodities. The classics failed to substitute the term value. Only in France do we find Le Trasne and Condillac who did.

The essential characteristic in the market is the knowledge of supply and demand conditions. Secrecy promotes harmful speculation. Identical products in the same market must be exchanged at the same ratio. Differences which may appear are the result of external circumstances such as defective credit and imperfect knowledge of the market. Jevons calls this «*law the law of indifference*»; indifference leads

to equality of degrees of utility. But this uniform price of the commodity may vary continuously and must be conceived in a state of «continual change»; The ratio of exchange is a differential coefficient that is that «of an infinitely small quantity of one commodity to the infinitely small quantity of another which is given for it». The quantity purchased is a function of the price at which it is purchased and «the ratio of exchange expresses the rate at which the quantity of the article increases compared with what is given for it». The problem of exchange must be treated as a problem in motion as a «problem of Dynamics». But due to the difficulties involved it will be treated as a static problem. It will be assumed that there are possessed certain fixed quantities which are exchanged until equilibrium is reached. It is easier to determine the conditions under which trade is completed than to try to establish the rate at which trade will go on when equilibrium is not established.

Since in the same market at the same moment for the same commodity the prices will be uniform «it follows that *the last increments in an act of exchange must be exchanged in the same ratio as the whole quantities exchanged*». No part of the commodity may be treated differently from any other part. On this basis :

$$dy : dx = y : x;$$

Jevons states the theory of exchange as follows : «*The ratio of exchange of any two commodities will be the reciprocal of the ratio of the final degree of utility of the quantities of commodity available for consumption after the exchange is completed*». In exchange a portion of certain commodity is given for another commodity with considerable increase in utility. Exchange will stop at the point where the exchange of one commodity for the other does not involve any benefit. «The degrees of utility of commodities exchanged will be in the inverse proportion of the magnitudes of the increments exchanged». J.S. Mill observes that the quantity of a commodity given in exchange is equal to the quantity of the commodity received, but Mill does not explain how the quantity of supply or demand varies.

In a state of equilibrium the two utilities being exchanged must be equal and the degree of utilities of the commodities exchanged «*will be the inverse proportion of the magnitudes of the increments exchanged*». From the increment received of a certain commodity one must receive the same utility as that lost from the commodities given in exchange. This theory is consistent with the law of supply and demand which is the result of the true theory of exchange. Cost of transportation, Jevons explains, is represented as a reduction of the quantities received in ex-

change. Also the other party in exchange will receive a quantity minus these expenses.

The ordinary laws of supply and demand, if stated correctly, prove the theory of exchange. J.S. Mill under the pressure of the writings of W.T. Thornton in the *Fortnightly Review* was forced to modify his position that the theory of value as developed by the classics was «complete and perfect» and to allow that modifications were required. The classical school did not investigate in a satisfactory way what constitutes demand and supply. Jevons observes that what we must have in mind is the effective demand because it alone is of importance. Any change in price will be determined by the few who will buy or will not buy the commodity as a result of the change «it is only comparatively insignificant quantities of supply and demand which are at any moment operative on the ratio of exchange». The market price is not affected by the enormous amounts bought and sold at extreme prices «but by the comparatively insignificant amounts which *are* being sold or bought at the existing prices».

In the case where large quantities of a commodity are available in the market so that a small trader will not affect appreciably the ratio of exchange, the ratio of exchange is practically a fixed number and each trader will exchange as much as it suits him. The only thing that will have to be determined under such circumstances is the quantity of a commodity which the trader will buy by spending part or his own commodity. He will continue buying the commodity until the utility falls below the utility of the commodity he gives.

It does not make any difference how many commodities are in the market; what is of importance is «that the same pair of commodities in the same market can have only one ratio of exchange ... the cost of conveyance considered as nil». In a multicommodity market for every commodity being given something must be received.

In the case of two parties competing to supply a third a certain commodity, since the commodity is homogenous the rate of exchange must be the same in both cases. As far as the buyer is concerned he does not care where the commodity comes from; but for the two who constitute the supply, to achieve equilibrium they must both be satisfied with the share supplied. One thing certain is that the smaller holder must conform to the prices the larger.

If one's commodity which he is about to give in exchange has greater utility than the one he is going to receive and if the utility of the commodity of the other has greater utility to him who has it than

the one who is going to receive it then no exchange will take place. Also if the desire of the one for his own commodity is very low relative to the desire for the commodity of the other in such a way that even the last portion of his commodity to be surrendered has smaller utility than the increment he is going to receive, in which event «the whole possessions of the one might be exchanged for the whole of the other, and the ratio of exchange would of course be defined by the ratio of these quantities». Another difficulty appears in the case of indivisibility of the commodities possessed by one or both sides. But such examples very seldom occur. Still another possibility is that of exchange of an indivisible article with a divisible one; in this case there are two extremes in price : first, one above which the price of the commodity cannot rise because beyond that point the utility of money to the buyer becomes greater than the utility of the commodity and second, a low price below which the price cannot fall because the utility of the commodity to the seller is greater than the utility of money. The price in such a case will be anywhere between the two extremes. In this instance, in order to determine where the price will be fixed we must read another man's thoughts which at this instance are being determined through bargaining. Another difficulty may develop if the commodities being exchanged are not infinitely divisible. In such a contingency, the decision to buy another section of the commodity will be determined by comparison of the utility of this extra unit to the money given for it. Here the question of exchange or no exchange occurs with each successive unit and is decided in each particular case separately.

In expressing the principle of competitive commodities Jevons points out that «Whenever different commodities are thus applicable to the same purposes, their conditions of demand and exchange are not independent. Their mutual ratio of exchange cannot vary much, for it will be closely defined by the ratio of their utilities». This does not hold if scarcities develop in some of these commodities. But the conditions of supply will have no effect upon the rate of exchange of these commodities because if one becomes more expensive people will turn to the other. Such commodities must be considered as one. And this is what explains the stability in the ratio between the two commodities like, for instance, gold and silver. This ratio does not depend exclusively on the cost of production and this because the two or more commodities may be employed for the same purpose and it is the external qualities of gold for instance that make it to be preferred to silver at a certain ratio.

The theory of exchange according to Jevons is based on «consideration of quantities of utility, and no reference to labour cost of production has been made». «The *value* of a divisible commodity» is not measured by its total utility «but by the final degree of utility, that is by the intensity of the need we have for more of it». On the basis of this theory a person distributes his income among the different commodities in a way that he will receive the same utility from all of the final increments. The distribution will be different among different people : *«in expending a person's income to the greatest advantage, the algebraic sum of the quantities of commodities received or parted with, each multiplied by its final degree of utility (after the exchange), will be zero»*.

What is the utility of a person's income then? The final utility of his income is determined by the final utility of any other commodity which a person consumes. The utility of such portions depends on the extent of quantities by which the person is provided for. Through exchange we produce equality of utility among different commodities to the same individual. Such an equality does not exist among several individuals. All commodities are distributed by exchange as to produce the maximum benefits.

The ratio of exchange as developed in this theory does not give indication «of the real benefit derived from the action of exchange». The action of exchange involves also the total utility of the commodity. One of the first steps to disentangle the functions expressing the degrees of utility of various commodities «will be to ascertain what proportion of the expenditure of poor people goes to provide food, at various prices of that food». This is very difficult, however, due to differences of conditions of persons and the difficulties of substitution.

Price fluctuations occur more in the case of necessities than luxuries; since value depends upon desire for more, an excessive supply would reduce the price more drastically than in the case of luxuries; «Men can live without luxuries, but not without necessities'. If a small amount of our income is required to purchase an abundant quantity of a certain commodity «the degree of utility of income will not be appreciably affected by the price paid ... the final degree of utility of the small commodity purchased must be directly proportional to the price». If the price increases very much, either the use of the commodity must be completely relinquished or the need for it is so great that as small change in consumption becomes irksome, then this means that it possesses a high degree of utility which occurs when people are used

to it and are willing to pay a very high price for it than decrease consumption considerably.

It had been observed much earlier, before any systematic organization of the science of political economy, that in case of plenty an increase in commodity reduces its value by a much greater degree than the increase, and in a case of scarcity the reduction of the quantity increase its value at a much greater pace. Thus prices do not vary in simple inverse proportion of the quantity. The problem of variations in utility has not been overlooked in the past either. A very different utility of the same sum of money was observed in different persons. It was Bernoulli who has attempted to measure variations in utility ²²⁵.

In the past it has been stated by Ricardo that «utility is absolutely essential to value» ²²⁶. But the source of value of useful things are ~~scarcity~~ and the quantity of labor required to obtain them (Ricardo). Senior also recognised as conditions for value scarcity and utility. But as soon as we distinguish between total utility of a commodity and the degree of utility of different portions of it «we may say that it is scarcity which prevents the fall in the final degree of utility».

Jevons proposes to use instead of the term value the expression «ratio of exchange» but observes that «a ratio is not the meaning which most persons attach to the word Value». Beyond the ratio is a certain «sense of esteem» which we have for the thing beyond its ratio at which it will be exchanged; «I may suggest that this distinct feeling of value is probably identical with the final degree of utility».

It has been stated many times that value is proportional to labor expended in production. This is opposed to facts according to Jevons. «The fact is, that *labour once spent has no influence on the future value of any article* : it is gone and lost forever». We judge the value of things on the basis of their future utility. But labor while it does not determine value, is a determining circumstance.

It has been asserted that value is determined by the final degree of utility which fluctuates with the amount of commodity available for consumption. This fluctuation is the result of spending more or less labor. Thus labor affects supply and supply governs value or the ratio of exchange; thus

«cost of production determines supply;

Supply determines final degree of utility;

Final degree of utility determines value».

Labor is not equal but variable; its value is based on the value of the product and not the opposite. What we compare is not the labor

of one man to that of another but we compare the same person in different occupations.

6. Labor is defined as any painful exertion of mind or body undergone partly or wholly with a view to future goods. Jevon's theory of labor refers to that point where labor has become through exertion, so painful as to balance all other consideration. Labor may vary in duration and intensity; intensity again may refer either to the quantity of the work done or to the painfulness of doing it. To painful exertion and the amount of product produced we might add a third variable, namely, the amount of utility gained. Here we shall examine the variation in the painfulness of labor. The longer the time of work the more painful the effort. The pain does not vary directly with the quantity of labor performed but increases much more rapidly. At the beginning the exertion is greater than pleasure. Then, later on, the pleasure becomes greater than the exertion; but after a certain period in this zone energy is rapidly exhausted and the pain increases faster. The larger the wages the less is the pleasure derived from additional work. At a certain point the pleasure derived will be equal to the pain endured; if we go beyond this point the pain will be greater than pleasure and labor will stop at the point of equality. Thus, in the labor theory are involved the following quantities : time, or labor duration; the amount of labor as measured by pain independently of the product produced; the amount of commodity produced and the total utility of the commodity.

The rate of production is determined by dividing the whole quantity produced x by the time, provided that the rate has been uniform. We have then x/t where t is time. But if the rate of production is variable then it can be calculated at any moment by comparing a small quantity of produce with the small portion of time occupied in its production; then the rate of production becomes Dx/Dt . In the same way the degree of painfulness would be Dl/Dt where l is the amount of labor involved; but also the utility of the commodity is not constant and the degree of utility is determined by Du/Dx ; which is the ratio of increment of utility to the increment of commodity. The amount of reward is equal to $Dx/Dt \cdot Du/Dx$; that is the product of the rate of production to the degree of utility. The worker will stop working the t point where the pain becomes equal to the corresponding pleasure, that is :

$$Dl : Dt = Dx : Dt \cdot Du : Dx$$

This equation expresses *the final equivalence of Labour and utility*. As long as a person works he must be earning excess utility.

Labor may be treated as a case of disutility or pain. If we represent the intensity of labor by E and the total quantity of labor used in the production of a commodity by ME , if time is involved, ET «will express the dimensions of the amount of labour». When labor produces more commodities there is greater reward and therefore more inducement to work; on the other hand the fact that the worker gets more may make useless the additional work to him. Whether he will work more or not depends on the equilibrium of pain and pleasure. The workers work harder the less the output of their work.

Economists usually state the law that «value is proportional to the cost of production»; Jevons states the same law as follows: «the ratio of exchange of commodities will conform in the long run to the *ratio of productiveness*, which is the reciprocal of the cost of production.

Jevons avoids, as he says, the use of the term «value» and «cost of production» and an attempt is made to determine how his concepts compare with other more familiar concepts. For instance: ratio of exchange of two commodities X and Y is y/y which is the ratio of the two values y and x . There is a confusion between price and value «when price means price per unit, the quantities exchanged are reciprocally as the prices. When price means price of the whole quantity the quantities given and received are always of equal prices». The cost of production varies as the reciprocal of the degree of productiveness.

«The quantities of commodities given or received in exchange are directly proportional to the degree of productiveness of labour applied to their production, and inversely proportional to the value and prices of those commodities and to their costs of production per unit, as well as to their final degrees of utility».

Ricardo and Mill pointed out that if all branches of production had an equal growth to direct effect would be produced on the terms of trade; but even though there will be no direct effect there may be an indirect effect «through the variation in the degree of utility of different articles». An increased amount in all directions will not be equally desirable in consumption. This will cause the degree of utility to fall in some cases more than in others. An alternation of the ratios of exchange will result. The production of certain commodities will not be extended so much as that of others. Value therefore does not depend on labor but on the degree of utility. «The ratio of exchange of any two commodities will be determined by a kind of struggle between the conditions of consumption and production».

The cases of joint production, which John Stuart Mill calls peculiar

are not peculiar at all but form the general rule. The handling of these joint commodities will take place either as an increase in utility or will contribute to a decrease of the utility of the main product; such as, for instance, expenses of throwing away the unwanted remains of a manufacturing process.

The doctrine of overproduction «is evidently absurd and self-contradictory». To achieve a universal glut will be to achieve the aim of the economist «which is to maximize the products of labour». The supply must be suitable to the needs; oversupply is not possible all at once. If we have overproduction in one direction, consumers will refuse to take the products at the existing rate of exchange reflecting the labor consumed. «But we must lower the degree of utility of different goods otherwise there is an apparent glut and a real loss of labour».

It was alleged that we may have variation in both the duration and the intensity of labor. Intensity may be measured by the physical force used at a certain period of time, but what is of importance is the pain involved in that physical exertion. The maximum useful result would be obtained if the load (pain) of work was such that fatigued the man severely. Fatigue does not depend exclusively on the force employed but also on the frequency at which it is repeated. The rapidity of operation is also of importance.

7. Jevon's theory of rent rests upon what he has called the law of indifference «that for the same commodity in the same market there can only be one price or ratio of exchange». If, therefore, different qualities of land give different results to the same labor, some must have an exchange profit over the others.

If some land does not yield the ordinary wages, it will not be taken into cultivation. Some land will just pay the wages and other will yield surplus. «The last increment of produce will come to bear a smaller ratio to the labour required to produce it», and soon will be undersirable to apply any more labor. A proportional increase of output would eliminate rent; the output cannot increase proportionally to the outlay but at a diminishing rate; the least productive section of the outlay must yield «ordinary profits of the stock». Any yield above the ordinary constitutes rent. Jevons accepts additional applications of labor instead of additional applications of capital because those who use the term capital hold it to be synonymous with labor, and this because all capital was originally produced by labor. This proposition Jevons esteems erroneous, but he modifies it by saying that «the increments of labour applied are equally assisted by capital». The principle that determines

the distribution of labor among several pieces of land is that the most advantageous use of labor will be preferred. If the distribution of labor is satisfactory this means that the increment of the product from the same labor will be the same in each case. If more and more labor is applied to the same piece of land the increment of the product is not proportional. The amount of labor which will be profitably applied will depend on the point where «the increment of utility exactly equals the increment of pain incurred in acquiring it».

The last increment of labor is the most painful; if a person is paid on the basis of this last increment «it follows that all the labour he applies might be recompensed sufficiently at the same rate».

8. In Jevon's theory of capital there is no connection between employment of capital and the process of exchange. Through the use of capital and exchange we increase utility. But benefits from capital come even without exchange and therefore «Economics ..., is not solely the science of exchange or value : it is also the science of capitalization»¹. Jevon's theory of capital is in agreement with that of Ricardo. We are told, Jevons observes, that capital consists of things used to facilitate production; but this is part of the definition. «Capital, as I regard it, consists merely in the aggregate of those commodities which are required for sustaining labourers of any kind or class engaged in work». «The current means of subsistence constitute capital in its free or uninvested form». The purpose of capital is to enable the worker to wait, to put an interval between the beginning and the end of an enterprise. Capital helps to provide with elements which facilitate production when we undertake it. Capital helps in the performance of work which requires time. Capital also insures the steadiness and continuity of labor; thus the accumulation of capital becomes necessary for this purpose. The fact that capital «simply allows us to expend labour in advance» becomes not the «chief» but the «sole» purpose of capital. It is better to spend the first part of our labor to make implements that will assist us in our labor. If we invest labor in an implement that will last for long we invest at the beginning a good deal of labor which will be repaid gradually during the period of its duration. It is necessary to spend labor well ahead of time before a commodity is finished. The large investment in labor «is repaid by an annuity of profit extending over» (the duration) of the implements. This period may be elongated by the time the materials lay somewhere in the process idle. And by the time required for the commodities to reach the customers. All employment of capital resolves itself into «time elapsing between the beginning and the end

of industry». Jevons distinguishes between the *«amount of capital invested»*, a simple quantity, and *«the amount of investment of capital»*, which involves two dimensions, first, quantity of capital, and second, duration that remains invested. For an advantageous investment of capital we must look both at the amount and the duration of investment. The amount of capital invested will be decided by the amount of capital already invested at any moment and by the length of time for which it remains invested. In the case of capital the result of labor is not consumed immediately, but it lasts for some time. During the process of production, consumption of capital takes place, capital is *«uninvested»*. *«the amount of investment will be in every case the greatest amount of capital multiplied by half the time elapsing from the beginning to the end of the investment»*.

Assuming that capital is a commodity, we represent it by M; capital and time will be represented by MT. What is then what Senior calls *«abstinence»*? Senior observes that abstinence is different from labor *«in reality abstinence is the endurance of want, the abstaining from the enjoyment of utility which might be enjoyed»*. The degree of utility measures the degree of the intensity of want. One dimension of abstinence is utility U.

The distinction has been made between fixed and circulating capital. For A. Smith, circulating capital passes from hand to hand and due to parting yields a revenue. For Ricardo, circulating capital is what is destroyed and has to be reproduced; however the difference between the two kinds *«is one of amount and degree»*. Jevons proposes the use of *«free capital»* by which he means the wages of labor either in monetary transitional form or the form of foods an other means of subsistence. What is required to support laborers in the course of their work is *«the true form of capital»*. This capital remains invested until profit is returned *«equivalent to the first cost, with interest»*. A railway is not fixed capital but capital is fixed in a railway. *«The capital is not the railway, but the food of those who made the railway»*.

Free capital consists of all kinds of food that can indifferently be employed in any kind of industry. There is nothing that will press this free capital in one direction or another and therefore *«the rate of interest for free capital will tend to and closely attain uniformity in all employments»*. In the market of capital like in all markets there can be *«one price for one article at one time»*. This is the law of indifference. What makes interest different is risk, trouble and other such causes; *«every trade will employ capital up to the point at which it just yields the*

«current interest». The interest of capital is *«the rate of increase of the produce divided by the whole produce»*;

With progress of society and capital accumulation the rate of profit or the rate of interest shows a falling tendency. The downward movement will continue so much that it will discourage further accumulation. This is true on the assumption that accumulation continues and the arts stand still. That there is such a tendency is not in doubt, but doubt and disagreement exists as to the causes of the tendency. Adam Smith attributes it to the competition of capitalists; later economists attribute it to the increase of the cost of labor. Jevons points out that «interest is determined by the increment of produce» and is entirely independent of the total return of labor. The rate of interest will be greater «if the advantage of more capital ..., remains unchanged». The rate of interest is high because due to advance conditions, the supply of capital is not forthcoming.

We must not confuse «the rate of interest on capital with the whole advantage which it confers on industry». The rate of interest depends «on the advantage of the last increment of capital, and the advantage of previous increments may be greater in almost any ratio». Thus the capitalists will take from the workers «only a rate determined by the advantage of the last increment. The employers of capital always receive it at the lowest prevailing rate. The excess advantage from the use of capital go either to the workers or the public in general as consumers.

While this theory of capital resembles that of Ricardo and other writers there is a point of difference from all. It is not true that as soon as commodities pass to the consumers they stop being capital. And while Adam Smith does not stop considering them as part of the «stock of the community», other writers completely deny their character as capital. Adam Smith's error rests in the fact that what designates something as capital is the accident of ownership. «Adam Smith's view seems to be founded upon a notion that capital ought to give an annual revenue or increase of wealth like a field yield a crop of corn or grass».

Jevons did not deal with the problem of population because «it forms no part of the direct problem of economics». Population is taken as given, its needs and powers of production are also given and what is required to be determined is *«the mode of employing their labour which will maximize the utility of the produce»*. If we examine the results of variation of land and capital with a given population the results will be proportional to a changing population.

Labor is the starting point in production; the interests of the worker

constitute the subject matter of economics; inspite of this, labor in the hands of the economists becomes the subject of supply and demand; instead of investigating the problem of distribution of the products of labor they investigate supply and demand of labor. Wages have been defined as an average derived from capital appropriated for labor divided by the number of workers. But this does not solve the problem because it still remains to be estimated how much has been appropriated for labor. «The wage-fund theory is therefore illusory». The doctrine that if wages increase profits fall is incorrect because it presupposes that the product is a fixed amount. Ricardo's natural rate of wages «that which is just sufficient to support the labourer» is questioned ; They are not a constant quantity as Ricardo asserts. First the wages vary and second we cannot determine what constitutes necessities of life. Ricardo's assertion that the natural rate refers to common labor and any other form of labor is nothing but a multiple of common labor is unacceptable. The wages of a working man, according to Jevons, are what he produces minus rent, taxes and interest. A «product» is a variable and what must be first determined is profit. Wages are set in the long-run. It is the extent of expected product which «incites» capitalists to invest capital and buy labor. If the product «exceeds» the average those who come first will have profits and the competition among capitalists for labor will raise the rate of wages. «Competition will proceed until the point is reached at which only the market rate of interest is obtained for the capital invested». At this point all benefits will go to the workers and the public if the price of the product falls. The fall in the price of commodities will lead to a drop in the wages of unskilled labor. The capitalist must undertake the risk when the returns from their investment cannot be accurately known. The amount of capital invested will depend on the amount of anticipated profits and competition for the workers will secure for them their ultimate share to the product.

This to a certain extent comes near the wage-fund theory in the sense that expectations will determine the amount of investment which will be a «fixed quantity» until returns start coming in. The wage fund theory is of a temporary nature, until competition determines wages for each kind of skill.

Jevons considers it as his scientific duty «to break the monotonous repetition of current questionable doctrines, even at the risk of new error». He protests against the indifference in England for valuable suggestions because they were not comprehended by Ricardo Mill and the other traditionalists.

CHAPTER V

CONCLUDING REMARKS

No restatement of argument will be undertaken at this point, but from what has been stated certain general outlines become clear and it is the statement of this trends which will be the subject matter of the present chapter.

1. This essay aimed at presenting the argument of the *founders* of what we know today as the Austrian school of economic thought. We stress the word *founders* because the economists whose ideas are discussed here have not been the first to make the point which constitute the backbone of their theories and definitely not the last. In the history of economic doctrines they constitute an era and it is the examination of this era which interests us at this point.

2. W. Stanley Jevons was not an Austrian; he was neither a teacher nor a student of the group. But his ideas are part of the group's ideas at a time when in his environment and everything else was different. He is a member of the group from the point of view of doctrine and not of geography.

3. The scientists of the Austrian school discovered that they had to face more difficulties than the case seemed to be originally. Carl Menger had to fight what Hayek calls the thirty year war with the German economists who represented the historical school. He also had to build the theoretical structure which he considered as necessary to deal with the problems of the science of economics; this part, in his opinion, has been left incomplete by the classical school. He felt the need for theoretical analysis which the historical school considered as useless and the need for a correct and complete analysis on which the classical school did not seem to have done a satisfactory job.

Menger criticizes economics for the «sterility of all past endeavors to find its empirical foundations»²²⁷. He disagreed with the idea that economics is devoid of laws of economic behavior and that is a matter of simple free will.

While Adam Smith is not wrong in his emphasis of the importance of the division of labor, he overlooked some other factors such as the extent of human knowledge, causal connections between things, and the extent of human control over these things. He differs from Ricardo's rent theory because the value of land, according to Menger, depends on

the satisfactions which possession of land will cover. The value of each section of land is higher the higher is the value of prospective goods and the lower the value of complementary goods used.

Menger rejected the minimum subsistence theory of labor as well as the Marxian theory of abstract labor. He also criticized Adam Smith for developing an incomplete theory of exchange which he considers as an end in itself.

Compared to Jevons, Menger's theory is more systematic and profound. In Germany Menger's work was neglected, not because it was incorrect, but because it was useless. Menger on the other hand objected to the attitude of the historical school that they only had the right to deal with economic problems.

4. Wieser has been characterized as the summarized of the doctrine of the Austrian school. I found the case to be more complicated than this. First, Wieser had to deal with the clarification of the issues which Menger raised and to which he subscribed. This has been quite a task by itself. Second, he did not scrap the classical doctrine. He introduced corrections and made full use of what he considered to be valid and useful. Third, Wieser did not fail to take cognizance of the socialist doctrine and especially of the Marxian analysis. It is true that he did not do a creditable job on this; still, the fact that he did not bypass the issues involved constitutes one of its basic contributions.

Wieser developed the theory of marginal utility which was introduced by Gossen. He developed the role that time plays in the determination of the importance of needs. He criticized Ricardo because he restricted the principle of scarcity to few commodities and on the other hand he seems to be closer to the classics on the problem of rent than he is to Menger. In his rent theory Wieser is Ricardian. He disagreed with Adam Smith's abandonment of the problem of marginal utility because of the existence of free commodities. But Wieser criticized the classical school's labor theory, because they did not carry it to its logical conclusion which is the abolition of private property. This was done by the socialists.

Menger, according to Wieser, did not understand the problem of attribution of utility, and while Ricardo recognized the issue of specific attribution in his theory of rent, he did not develop either the theory of attribution or the theory of computation of utility. In the case of the utility theory it is Menger who formulated the subjective interpretation of value.

In the case of public intervention, while the classics introduced

individualism restricted by law and morality, their disciples pushed freedom to extremes without understanding the restrictive ideas introduced by the masters. In the case of money, Wieser points out that Menger did not see in it that money represents something stringer than the will of participating individuals.

The classical formula of unconditional approval of social competition and the absolute repudiation of anti-social monopoly is considered by Wieser an unjust.

5. Eugene von Böhm-Bawerk proved to be theoretical mind of breath and above all of vision. He was convinced that the Marxian system ought to be counteracted by a similar analytical theoretical structure and above all by arguments more convincing than those of his predecessors. To this effect he plunged head on into the task and despite the title of his *Positive Theory of Capital*, we have in it a work of broader scope, a statement of the capitalist process corresponding to that of Marx's capital, sometimes more convincing and sometimes with serious shortcomings, but all in all an analysis doing justice to the task of the science of economics.

W. Stanley Jevons, while he did not reach the heights achieved by those of his group, nevertheless, his task cannot be minimized due to the circumstances under which it was undertaken. He revolted against the classical doctrine in the middle of which he was raised and which he calls a fool's paradise. He puts as his scope the task of liberating the science of economics from the Ricardian assumptions.

Jevons may be compared with Menger in the sense that he had to attack the *status quo* and create a belligerent environment, the environment of the masters. His work may not be as systematic as the work of Wieser or Böhm-Bawerk, but on the other hand he contributed immensely to the introduction of ideas which were hostile to the British tradition but long overdue.

NOTES

1. *Principles of Economics* : By CARL Menger; Translated and edited by James-Dingwall and Bert F. Hoselitz; The Free Press, (Glencoe, Ill., 1950).
2. *Social Economics* : By FRIEDRICH VON WIESER; Translated by A. Ford Hinrichs; Adelphi Company; (New York, 1927).
3. *The Positive Theory of Capital*; By EUGEN VON BÖHM - BAWERK; Translated by William Smart; G. E. Stechert Co., (New York).
4. *The Theory of Political Economy* : By STANLEY JEVONS; fourth edition; MacMillan and Co., Ltd., (London, 1931).
5. *CARL Menger: The Founder of the Austrian Schools*. By HENRY-SIMON BLOCK; *Journal of Political Economy*; Vol. XLVII No : 3, June, 1940, p. 433.
6. *Collected Works of Carl Menger* : Vol. I. London School of Economics (no. 17, 1934). Introduction by Friedrich von Hayek p. vii.
7. J. A. SCHUMPETER : *Ten Great Economists*; Oxford University Press (New York, 1951).
8. *Works*, Introduction, op. cit., p. xx.
9. Ibid., p. xx; xxii.
10. SCHUMPETER'S : *Economic Analysis*, p. 827.
11. Op. cit.
12. Ibid., p. 52.
13. Ibid., p. 52.
14. Ibid., p. 60.
15. Ibid., p. 62.
16. Ibid., p. 71.
17. Ibid., p. 74.
18. Ibid., p. 78-79.
19. Ibid., p. 84.
20. Ibid., p. 85-96.
21. Ibid., p. 97.
22. Ibid., p. 97.
23. Ibid., p. 97.
24. Ibid., p. 99-108.
25. Ibid., p. 110.
26. Ibid., p. 115.
27. Ibid., p. 116 (note).
28. Ibid., p. 116.
29. Ibid., p. 121.
30. Ibid., p. 122.
31. Ibid., p. 128.
32. Ibid., p. 131.
33. Ibid., p. 132.
34. Ibid., p. 140.
35. Ibid., p. 140.
36. Ibid., p. 146.
37. Ibid., p. 146.

39. Ibid., p. 148.
40. Ibid., p. 150.
41. Ibid., p. 155.
42. Ibid., p. 304.
43. Ibid., p. 156.
44. Ibid., p. 158.
45. Ibid., p. 161.
46. Ibid., p. 161.
47. Ibid., p. 162.
48. Ibid., p. 164.
49. Ibid., p. 166.
50. Ibid., p. 169.
51. Ibid., p. 168 (note).
52. Ibid., p. 172.
53. Ibid., p. 173.
54. Ibid., p. 180.
55. Ibid., p. 188.
56. Ibid., p. 190.
57. Ibid., p. 190.
58. Ibid., p. 191.
59. Ibid., p. 193.
60. Ibid., p. 208.
61. Ibid., p. 210.
62. Ibid., p. 211.
63. Ibid., p. 212.
64. Ibid., p. 213.
65. Ibid., p. 214.
66. Ibid., p. 220.
67. Ibid., p. 225.
68. Ibid., p. 233.
69. Ibid., p. 277.
70. Ibid., p. 278. Menger's monetary theory will not be discussed at this point.
71. BLOCK, op. cit., p. 430.
72. Ibid., p. 430.
73. SCHUMPETER, *Economic Analysis*, op. cit., p. 914 n. 14.
74. Ibid., p. 941-42.
75. «The Economics of Carl Menger», By GEORGE STIGLER, in *Essays in Economic Thought*; Edited by Joseph Spengler and William Allen; Rand M'Nally and Co, (Chicago, 1960) p. 656.
76. Ibid., p. 666.
77. MENER's, *Principles* : op. cit., p. 4 of the translation.
78. Ibid., p. 12.
79. Ibid., p. 15.
80. Ibid., p. 24.

CHAPTER II

81. J. A. SCHUMPETER, *Economic Analysis*, op. cit., p. 577.
82. *Über den Ursprung und die Hauptgesetze des Wirtschaftlichen Werthes* (1884).

83. *Der Naturliche Werth* (1889); English translation : *Natural Value* by WILLIAM SPART (1893).

84. *Social Economics* (1914); Translated by A Ford Hinriches, Adelphi Co., (New York 1927);

85. *The development of Economics*; by WILLIAM SCOTT, The Century Co., (1933) Chapter XX, p. 354. I am indebted to Dr. Alfred Bingham, professor of French literature at the University of Maryland who read the manuscript and suggested a number of structural improvements.

86. OSCAR MORGENSTERN : «Friedrich von Wieser, 1851-1926», *The American Economic Review*; Vol. XVII (Dec. 1927) p. 671.

87. *Economic Analysis*; op. cit. p. 848;

88. MORGENSTERN, op. cit., p. 671.

89. WESLEY C. MITCHELL : «Wieser's Theory of Social Economics», *Political Science Quarterly*, Vol. XXXII (March, 1917), p. 95.

90. WILLIAM SCOTT, op. cit., p. 350.

01. Ibid., p. 359.

92. WIESER, *Social Economics*, op. cit., p. xix.

93. Ibid., p. 5.

94. Ibid., p. 11.

95. Ibid., p. 18.

96. Ibid., p. 22.

97. Ibid., p. 34.

98. Ibid., p. 52.

99. Ibid., p. 54.

100. Ibid., p. 58.

101. Ibid., p. 62.

102. Ibid., p. 62.

103. Ibid., p. 72.

104. Ibid., p. 73.

105. Ibid., p. 82.

106. Ibid., p. 86.

107. A detailed analysis of Wieser's theory of value is found in his book *Natural Value* : edited by Christian Smart and translated by Christian A. Malloch. Kelley and Millman. Inc. (New York, 1956); References in the text are made to his *Social Economics*, op. cit.

108. Ibid., p. 88.

109. Ibid., p. 91.

110. Ibid., p. 93.

111. Ibid., p. 109.

112. Ibid., p. 112.

113. Ibid., p. 117.

114. Ibid., p. 120.

115. Ibid., p. 121.

116. Ibid., p. 122.

117. Ibid., p. 130-131.

118. Ibid., p. 131.

119. Ibid., p. 136.

120. Ibid., p. 143.

121. Ibid., p. 146.
122. Ibid., p. 156.
123. Ibid., p. 167.
124. Ibid., p. 174.
125. Ibid., p. 178.
126. Ibid., p. 180.
127. Ibid., p. 188.
128. Ibid., p. 192.
129. Ibid., p. 209.
130. Ibid., p. 211.
131. Ibid., p. 217.
132. Ibid., p. 229.
133. Ibid., p. 234.
134. Ibid., p. 235.
135. Ibid., p. 253-54.
136. Ibid., p. 254.
137. Ibid., p. 256.
138. Ibid., p. 264.
139. Ibid., p. 279.
140. Ibid., p. 290.
141. Ibid., p. 294.
142. Ibid., p. 296.
143. Ibid., p. 298.
144. Ibid., p. 299.
145. Ibid., p. 331.
146. Ibid., p. 333.
147. Ibid., p. 335.
148. Ibid., p. 345.
149. Ibid., p. 346.
150. Ibid., p. 348.
151. Ibid., p. 349.
152. Ibid., p. 353.
153. Ibid., p. 354.
154. Ibid., p. 356.
155. Ibid., p. 356.
156. Ibid., p. 367.
157. Ibid., p. 369.
158. Ibid., p. 369.
159. Ibid., p. 370.
160. Ibid., p. 372.
161. Ibid., p. 378.
162. Ibid., p. 383.
163. Ibid., p. 388.
164. Ibid., p. 405.
165. Ibid., p. 405.
166. Ibid., p. 405.
167. Ibid., p. 408.

- 168. Ibid., p. 423.
- 169. Ibid., p. 425.
- 170. Ibid., p. 446.
- 171. Ibid., p. 449.
- 172. WIESER, *Social Economics*, op. cit., p. 52.
- 173. Ibid., p. 73.

CHAPTER III

- 174. *The Positive Theory of Capital*; by EUGEN VON BÖHM-BAWERK, Translated by William Smart, G. E. Stechert & Co., (New York).
- 175. SCHUMPETER: *Ten Great Economists*, op. cit., p. 147.
- 176. The first volume, *History and Critique of Interest Theories*, translated by George D. Huncke and Hans F. Sennholz; Libertarian Press, South Holland, Illinois (1959).
- 177. EUGEN VON BÖHM-BAWERK: «*The Positive Theory of Capitals*», *Quarterly Journal of Economics* (Jan. 1895), p. 131.
- 178. Ibid., p. 2.
- 179. Ibid., p. 20.
- 180. Ibid., p. 38.
- 181. Ibid., p. 104.
- 182. Ibid., p. 125.
- 183. Ibid., p. 194.
- 184. Ibid., p. 209.
- 185. Ibid., p. 219.
- 186. Ibid., p. 272.
- 187. Ibid., p. 213.
- 188. Ibid., p. 327.
- 189. Ibid., p. 344.
- 190. Ibid., p. 344.
- 191. Ibid., p. 382.
- 192. Ibid., p. 394.
- 193. Ibid., p. 401.
- 194. Ibid., p. 410.
- 195. Ibid., p. 411.
- 196. Ibid., p. 420.
- 197. Ibid., p. 56.
- 198. Ibid., p. 90.
- 199. Ibid., p. 214.
- 200. Ibid., p. 285.
- 201. JOHN BATES CLARK: «*The Genesis of Capitals*», *Yale Review* (1893) pp. 302-315;

202. BOHM-BAWERK: «*The Positive Theory of Capitals*», *Quarterly Journal of Economics* (Jan. 1895) p. 131.

See also *Quarterly Journal of Economics*: «Dr Böhm-Bawerk's, Theory of Interest» by General Walker, Vol. VI, no: 4 (July 1895); Also *Quarterly Journal of Economics*; (April, 1895) pp. 235-256 for Böhm-Bawerk's answer. In the same number G.J.E. «The origin of Interest» by J. B. Clark; pp. 257-278; Also G.J.E. «Capital and Interest: Once more I. Capital vs Capital Goods»: By Böhm-Bawerk, (November 1906) pp. 1-21 and Q.J.E. «Capital and Interest, Once more; II. A Relapse

to the Productivity Theory»; (February 1907), pp. 247-282. Also Q.J.E. «The Positive Theory of Capital and its Critics, III» By E. von Böhm-Bawerk, (January 1896) pp. 121 foll. Wesley C. Mitchell : *Journal of Political Economy*; (June, 1900), Review article pp. 420-423;

CHAPTER IV

203. W. STANLEY JEVONS' : *The Theory of Political Economy*; fourth edition, MacMillan and Co., Ltd., (London, 1931); Preface to the second edition 1879, p. vii.

204. *Ibid.*, p. xxiii.

205. *Ibid.*, p. 2.

206. *Ibid.*, p. 5.

207. *Ibid.*, p. 11.

208. *Ibid.*, p. 15.

209. *Ibid.*, p. 20.

210. *Ibid.*, p. 28.

211. *Ibid.*, p. 33.

212. *Ibid.*, p. 34.

213. *Ibid.*, p. 40.

214. *Ibid.*, p. 46.

215. *Ibid.*, p. 47.

216. *Ibid.*, p. 53.

217. *Ibid.*, p. 57.

218. *Ibid.*, p. 60.

219. *Ibid.*, p. 65.

220. *Ibid.*, p. 65.

221. *Ibid.*, p. 66.

222. *Ibid.*, p. 68.

223. *Ibid.*, p. 71.

224. *Ibid.*, p. 72.

225. See SCHUMPETER's, *Economic Analysis*, op. cit., p. 303, note 6.

226. JEVONS, op. cit., p. 161.

227. Menger : *Principles*, op. cit., p. 46.