



A Great Revolution in Economics

—Vienna 1871 and after

**Austrian economic thought:
its evolution and
its contribution to consumer behavior**

Lazaros Th. Housmanidis

Ruke R. Leen



A great REVOLUTION

In economics

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The letter type on the cover is of Arnold Böcklin (Basel 1827-1901 Fiesole). It is a typical example of the Art Nouveau (*Jugendstil*) style—the fashionable style of art in Vienna at the end of the 19th century (the time older Austrianism came in full swing). In a sense, Böcklin’s work represents the essence of Austrianism: *“Never was he interested in the accidental; he wanted the everlasting”*.

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In the memory of our beloved colleague

JACOB JAN KRABBE

PREFACE

A Great Revolution in Economics—Vienna 1871 and after is about the revolution in economic thought that started in Vienna in the last quarter of the nineteenth century. After a time of trying to save the objective value theory the time was there for a new awakening of economic thought. In Vienna, for the first time by the 1871 publication of Menger's *Grundsätze*, value became subjective, and the market a process with a sovereign consumer. This book is about this awakening that proved to be more than a *plaisanterie viennoise*.

The book is the result of the collaboration of professor emeritus Lazaros Houmanidis of Greece and Auke Leen of the Netherlands. During his life long academic career Houmanidis has written numerous articles and books, mainly in Greek, about the Austrian School of Economics. These include *The Subjective Theory of Value, from the Physiocrats until today* (1954) and, more recently, *History of Economic Theories* (1999). Leen has written a book *The Consumer in Austrian Economics and the Austrian Perspective on Consumer Policy* (1999) and several articles and articles in books about the role of the consumer in modern Austrian economics.

The first part, written by Houmanidis, mainly describes the older Austrian School of economics whose ideas were developed largely in Austria during the 1870s and 1880s. Similar views had been developed earlier, however, and other economists were also accepting a subjective theory of value at the same time. The main emphasis was on subjective marginal utility—not objective, physical realities. Houmanidis stresses the great importance of the Austrian school to the science of economics. Part one emphasizes both the subjective and the theoretical feature of the Austrian school. Both features are also extensively discussed from a non-Austrian, especially neo-institutionalist perspective too. Houmanidis concludes that Austrian and Institutional economics when combined can offer the expected solution to the crisis in economic theory from a humanistic point of view.

In the second part of the book, Leen mainly describes the modern Austrian School of economics. He describes modern Austrian economics as an extension of Menger's older static subjectivism: the market is first and foremost a process. In other words, subjective value is merely an implication of

the subjective appreciation of the economic process. Leen emphasizes the two essential features of this process: ignorance and entrepreneurial alertness. Ignorance is the foundation of the systematic quality of market processes and alertness drives the Mengerian market process. After an extensive overview of the method of Austrian economics, Leen then goes on to stress the role of the consumer in the market. He applies the modern Austrian vision on the market to the calculative and entrepreneurial role of the consumer. Consumers shape the pattern of resource use and the assignment of resource rewards according to their preferences. The role of the consumer, however, has been largely ignored in modern Austrian economics, as a result of the debate on rational economic calculation under central planning during the period between the wars. Though the debate in and of itself brought to the fore the idea of the market as a competitive-entrepreneurial process of discovery, the emphasis on the producer pushed the role of the consumer to the side in modern Austrian economics.

Hoping for a logical and just critique of our efforts on the subject of older and modern Austrians economics, we offer our research to the reader who can help us to judge our work better.

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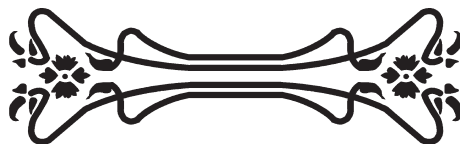
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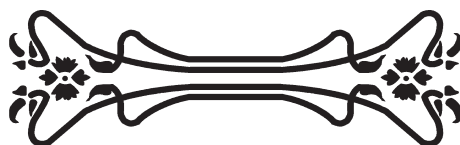
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Part 1



Austrian Economic Thought: its evolution



*“And marginal utility is subjectively estimated; it corresponds to a subjective maximization of the total utility”
—Perroux*

1 THE MAIN PROBLEM

1.1 The significance of value: Wicksell versus Cassel

The most important phenomenon and the cornerstone of economics is the phenomenon of value. Lewis Haney rightly writes, “Value being the heart of economics, the economist’s philosophy is bound to shape his value theory” ([1949], 1951, p. 16). Unfortunately, the theory of value presents great difficulties as it is connected with two conflicting views: the *objective* and the *subjective* one. Concerning the endeavor for the best approach, William Smart argues: “Yet the history of economic science is strewn with the wrecks of value” (1966, p. 1).

Gustav Cassel ([1918], 1927) from his point of view observed that price is important for economics, since it determines the phenomenon of goods and services. This means that the exploration of value is useless. He writes: “prices, or valuations of goods in terms of money on the part of the members of the community, could not be made the subject of inquiry, and thus the possibility of precise arithmetical expression of the valuations of goods was excluded. The indefinite and varying idea of ‘value’ was used instead” [...] “Consequently, it follows that a special theory of value is, to say the least, quite unnecessary in economics. Every attempt to frame such a theory without using a common measure to express estimates of value meets great difficulties. But as soon as a common measure is introduced, money in its essence is postulated. Values are then replaced by prices, valuation by pricing, and we have a theory of prices instead of a theory of value” (o.c., p. 49).

In accordance with this last paragraph we remark that Cassel excludes value in favor of price. But he is mistaken, since value is hidden behind price. On the other hand the value of money is not constant. An individual due to rarity has to restrict his wants and to make choices. In everyday life the consumer, because of his income, has to make a choice among competitive needs and different goods. But what is the essence of this choice? The reply is inevitable: the evaluation of needs and aims, and thus the evaluation of the utility of desired goods. Cassel extends his criticism especially to the theory of marginal utility by writing: "The first objection to this much-discussed theory is that it is superfluity in economic science. Marginal utility theory tries to reduce the psychology of demand to an abstract mathematical form. "The marginal utility must, in a state of equilibrium, correspond to the price to be paid for the last dose" [...] "The whole theory of marginal utility can also be seen as a theoretical deduction as to economic behavior from the assumption that the economic man aims at securing a maximum of utility. This purely formal theory, which in no way extends our knowledge of actual processes, is in any case superfluous for the theory of prices" (o.c., pp. 80-81).

Knut Wicksell replied to Cassel's view on value, and maintained that although Cassel wished to disregard value it is hidden in his writings. He criticizes Cassel in his *Lectures on Political Economy*. "On the other hand, he [Cassel] wants to expatriate the modern subjective theory of value; but he substitutes for the theory of marginal utility either nothing at all, or the "principle of scarcity [satiety, *Knappheit*]" (Wicksell, 1961, I, p. 221). He also repeats his old objection to the impossibility of 'measuring utility', as though exchange and economic activity in general—even in primitive economy—would be conceivable, if we could not estimate the utility of different objects to us. He also maintains that marginal utility as the basis of exchange value presents the disadvantage that it is neither given nor determinate. But is a variable itself: dependent on the prices that it is intended to explain. But how does this apply to scarcity? A commodity is not scarce because it is present in small quantities, but as Cassel himself states in the introduction of his book of 1918, it is scarce only in relation to wants: to the extent it becomes an object of demand. Haney underlines that the empirical consideration of the exchange of given quantities presupposes utility and subjective value. "He seeks [continues Haney] to explain economic phenomena by the single principle of scarcity. In doing this, he assumes and takes for granted: (a) limited supply and unlimited

wants, (b) the necessity of exchange and (c) the function of price in balancing supply and demand" (1951, p. 602).

Nevertheless, there are some basic questions to which we must give—if possible—a definite reply: What is behind demand? What is behind supply? Which economic motives urge buyers and sellers to evaluate their exchanges? There is no doubt that with the plexus of different evaluations of exchange between individuals, the phenomenon of value is hidden. Thus, value is the fundamental element, which directs buyers and sellers as far as their preferences and choices are concerned. Another important point involves the question of how the price is formulated: a) in a household economy (*Hauswirtschaft*), or b) in a domestic market (*Staatwirtschaft*), or c) within a National economy (*National Ökonomie*) or capitalist market or an international economy. Another important subject appears when we consider abstractly the exchange between goods or between two individuals and goods.

According to François Perroux the relation between exchange and goods is connected with the exchange of utility. But if we go deeper in the subject, we will see that individual estimation about a good is in fact the evaluation of the good in relation to other goods that are provided in the market (1943, p. 5 ff.). At this point two important elements emerge, *complementarity* and *substitution*.

Robinson Crusoe, isolated on his island, was facing a dilemma. Which good was the most important to be produced A or B? If A was more useful than B, then he should prefer to produce A. But, if Crusoe was obliged to spend more labor or to sacrifice many more goods for the production of A, then his preference should be in favor of B. In the case of equal utility between the two goods, Crusoe should have preferred the cheaper good. In the case of an equal sacrifice for the production of A and B, Crusoe would have chosen the production of the good with the greater utility. When Robinson Crusoe returned to his country, he found a market with a web of exchanges realized by sellers and buyers. The former supplying goods and services, the latter paying money to buy them. Under these circumstances, a system of prices was formulated that expressed the different estimations of value by the individuals. Nonetheless, the estimation and the formulation of price do not necessarily coincide, since money interferes in the exchanges along with other factors that play a role in exchange. However, in a market economy the existing mechanism facilitates the achievement of symmetry concerning value and price. Herein, we must

recognize that the first person who conceived this idea of symmetry was Aristotle. From this point of view, Karl Marx lauds Aristotle because the Greek ancient philosopher grasped the idea of the equalization of exchange value of goods in the market saying that there does not exist equality without symmetry ([1867], 1887, Vol. I, pp. 65-66). If we extend our research, we shall see that some sellers formulate the price. Sellers have an impact on the buyer through advertising or because of a monopoly.

In the present work, we investigate the theory of economic value and distribution as were conceived by the older Austrians and neomarginalists—Neo Austrians. The authors of the present work not only endeavored to present the positive or negative sides of the exposed theories but also to clear what the Austrians—as a School—tried to achieve (Part I). For me the theory of value cannot also be expressed with mathematical formulas that cannot give a right measurement, as we shall present in the following text. The History of Economic Doctrines presents the effort of the different authors for the best system and organization and management of the economy in the evolution of thought, an aspect directly connecting economics to the economic regime. Gaetan Pirou (1930, p. 1) made this the clear division between theory and doctrine by defining that the former means the exploration of an economic phenomenon in the theoretical field and the latter means the best structure and organization of the economy. In the present research the authors explore the Austrian economic thought during the period from Vienna 1871 and after.

1.1.2 Two basic and controversial elements in the determination of value

The estimation we make of a good for the satisfaction of one of our needs also means a sacrifice. In other words: a) the element of utility, and b) the element of labor or cost of production are both present. Utility means qualities of a good that satisfy a want. Cost of production is the services of land (land rent), capital (interest), labor (wage), entrepreneurial initiative (profit), as well as the state's assistance (tax).

Two basic groups compete in the market, the sellers and buyers. Any individual amongst them estimates the utility, which he sacrifices to get another more useful good in exchange. As a result of this competition, the equilibrium's price is formulated between *sellers* and *buyers*. In a market economy sellers and buyers act for their own benefit and price offers satisfaction to them. This

is the point of view of the market's price. Certainly, in the real world the social factor is important, since the social environment influences the individual economic estimation and action too.

Each economic theory is a hypothetical conceptual solution of an economic phenomenon, having logical consistency, which aims at achievement through logical abstractions, of uniformity, stable relationship and consequence. This conception of the economic phenomenon under exploration, is actually a theory that is tested and scrutinized by logically controlled experience. A criticism of the various economic theories is indispensable, as it is a path for the conquest of truth. This, then, is the birth, the transformation and rejection of theories and the creation of new ones.

The history of economic theories shows the tireless effort of various authors to perceive and interpret correctly the formulation of different economic phenomena. In studying the various theories, we must examine the environment within which they are formed, the intellectual and material causes that yield to their birth, their philosophical and social foundations, and the extent of their contribution to the development of economic science. Generally speaking each theory is a product more or less of its age and of the prevailing social, political, moral, religious, technical and institutional conditions. I use the expression 'more or less', since in the formation of a theory, there is the influence of personal ideas of the economist as well as the impact of the School he belongs to. And every theory aims to offer a satisfactory operational activity to an economy (Bertolino, 1952; Schumpeter, 1954). In any case the economist must have in mind what Hicks said: "Economics is more like art or philosophy whilst science is used to making its own history" (1976, p. 207).

Thanks to many economic theories and to their influence on the economy in various periods of history, the development of the science continues (Stark, 1946, p. 7). The historian of economic theories therefore, should always investigate further back in time to better understand the development of the science and to come closer to the truth through studying the terms and conditions under which they developed. He also tries to intervene in the spirit of any writer and in any economic School as well. He compares the different theories; he explores as well as classifies any author in accordance with his doctrine. The doctrine is a result of observations, prerequisites and norms, which appear from two kinds of influence: the subjective conscious that the writer adopts, and the impact on him from his environment.

1.1.3 The theory of marginal utility and its precursors

In philosophy, two main currents can be observed: the *idealists* and the *materialists*. In economics there are two main trends, the *subjectivists* and the *objectivists* and there is also another one that combines the two perceptions concerning the theory of value.

In accordance with the Austrians, utility is the capacity of a good to satisfy a human want. Diminishing utility means that for each additional unit consumed, the resulting utility we enjoy diminishes while the last unit (marginal utility) determines value. Scarcity and abundance are connected with utility as an increase in a stock of a good diminishes its value and vice versa. Abundance is wealth but it is not value. While scarcity (utility) is value, because the abundance of a good has use-value, the scarcity (utility) includes exchange value. Walras observed: a) only scarce goods have importance, b) only scarce goods are demanded for exchange, and c) we undertake an entrepreneurial business only to produce scarce goods (1926, pp. 43 ff.). The exchange is realized on the one hand by the disutility for the cost we pay for a given good and on the other hand the utility expected from acquiring it. In practical economic life, the exchange of the two goods equalizes the pleasure of these two exchanged goods, and so their marginal utilities become equal. In other words, the value-price of two exchanged goods X and Y—without intermediary money—in the exchange should be presented as $PX : PY = UX : UY$, where P is the value-price and U is the marginal utility. Utility is an abstract concept and not a concrete one as marginal utility is.

The utility function of a good X reaches its highest point and afterwards, with the addition of any unit of the good X, becomes more and more negative. The term to determine the maximum satisfaction is when $f'(x) = 0$ and $f''(x) < 0$ while the minimum satisfaction is when $f'(x) = 0$ and $f''(x) > 0$. Individuals try to get the greatest possible amount of satisfaction. According to the Austrians this behavior concerns the ideal type of man who competes in the market for his own convenience. Fanfani calls this behavior *naturalismo di convenienza* (1948).

In Part I after my historical research, I shall conclude that poor and rich men differ in the estimations of their needs and possibility to satisfy them. In the market's game, participants are human beings and not robots. Thus, distribution cannot be automatically equilibrated for both sellers and buyers.

The state's task is to facilitate, through its assistance, the market mechanisms establishing a favorable institutional framework. Katona about justice in distribution writes: "The poor are concerned only with subsistence; they live from hand to mouth, spending whatever they have for food and shelter so as to stay alive, without any plan or deliberation. The rich, on the other hand, satisfy their whims, purchase whatever comes to their minds" (1963, p. 63). Of course, expressions like "The poor are concerned *only* with subsistence", and "The rich [...] purchase *whatever*" [italics, L.H.] are acute. The problem of justice concerning distribution certainly is basic. Economic schools and streams exercised their criticism against Austrians by accusing them of being conservative as well as strictly attached to extreme individualism. Although this criticism includes an element of truth, as we shall see, this is not completely right.

Marginal utility can be expressed as the relation between margin and economic value. These ratio forms were based on the cofounders of this theory: Jevons, Menger, and Walras. Stanley Jevons presented in a few words the marginal utility, writing to his brother, "One of the most important axioms is that as the quantity of any commodity, for instance, plain food, which a man has to consume, increases, so the utility or benefit derived from the last portion used decreases in degree. The decrease of enjoyment between the beginning and end of the meal may be taken as an example. And I assume that on an average, the ratio of utility is some continuous mathematical function of the quantity of commodity" (Jevons, *Letters and Journal of W. Jevons*, p. 151 is ref. by Laird, 1969, p. 24).

Alfred Marshall (1842–1924), the leader of the Neoclassical School, combines demand and supply with the element of time. For him the demand is directed in short time by marginal utility as the supply cannot be adapted to the demand. Supply is directed by the cost of production, which coincides with demand as the economic forces have the possibility to be adapted in the long run with demand. For him value (price) is a function of quantity, an aspect that was also accepted by Wicksell. For Léon Walras the quantity offered to the market is a function of price. Léon Walras the leader of Lausanne's School conceived an economy working abstractly without frictions (*frottements*)¹ and

¹ This absence of friction exists in the mechanics of economics. "Friction means a transformation of energy from one form to another, in a condition of free competition.

automatically directed by rarity or intensity of the last satisfied want. His theory presents economic equilibrium using mathematics within a system of separated and interdependent markets. Each market has its own position of equilibrium and with all markets formulates the general economic equilibrium. This equilibrium is obtained when supply and demand become equal for any commodity or service into a plexus of interdependent markets and automatic determination of all variables. This concept of economic function was formulated by Pelegrino Rossi (1787–1848), who in his *Cours d'Économie Politique* (Vols. I–V, 1840–41) was influenced by the father of Léon Walras, Auguste Walras (1801–1866). A. Walras in his *De la nature de la richesse et de l'origine de la valeur* (1831) maintained that scarcity is the cause of utility. Augustin Cournot (1801–1877) from his side of view argued that demand is a function of price, which Marshall repeated. Léon Walras maintained demand is not only a function of the price of a good but also of the prices of the other goods as well. Thus, according to Léon Walras the theory of demand comprises substitution and complementarity.

Marginalism concerns to the economic schools I shall refer to below and which were called hedonists². Richard von Strigl (*Die Oekonomischen Kategorien und die Organisation der Wirtschaft*, 1923) from his side of view observed that we must separate the hedonism from marginalism as the former means a scale of pleasures and the latter a scale of preferences (Perroux, 1943, p. 71). The hedonists conceived the economy from a rational point of view and presented a new theoretical model while the followers of the Historical School cultivated the field of economic history that gives data in connection with the historical facts.

What is abstracted in equilibrium price theory is the fact of error in economic behavior. Perfect competition is among other things irrelevant here, errorless competition, fundamentally it is not comparable to a frictionless machine" (Frank Knight, "Value-Price" in: *Encyclopaedia of the Social Sciences*, E. Seligman and A. Johnson, eds, New York: Mac Millan Company, 1949, Vol. XV, p. 222).

² The term hedonists was used by many writers and especially by Ch. Gide-Ch. Rist: *Histoire des Doctrines Économiques depuis les Physiocrates jusqu'à nos jours*, 5^{ème} ed., Paris: Librairie du Recueil Sirey, 1926, p. 616.

The hedonists (the Subjective School, or Psychological School, or School of Vienna, or Austrian School and the Mathematical School, or School of Lausanne, or School of Economic Equilibrium) above all have not taken into account the distinction between the static and dynamic processes of the economy. This as Maffeo Pantaleoni remarked on the Austrian School (see Preface of his Italian translation of Menger's *Grundsätze der Volkswirtschaftslehre* (1927, p. XIV). Herein we must add that the older Austrians disregarded the element of dynamics as well as that of the society. Both, however, have a significant impact on the valuations of the individuals. But we shall discuss these subjects later. We start our research from Adam Smith: his value paradox and the deviation of his followers, Say and Senior, from the idea of objective value.

1.2 The paradox of value in Smith's thought

The Classics systemized the objective theory of value in their works during the period between the end of the 18th century and the first decades of the 19th century. This period also includes the Industrial Revolution (1760–1830). During the industrial revolution, the productive forces became more fruitful as technology progressed and productivity was improved. John Rogers Commons called this period a stage of Engineering Economy. The stage begins for him with Ricardo, is elaborated by Marx, and culminates in the Scientific Management of Frederick Taylor (1959, Vol. I, p. 84). Landed property and the existing hereditary system caused the concentration of land in few hands. The poor peasants and tenants from their part were oppressed to pay a heavy interest on their loans. Under these conditions, with the lapse of time, they abandoned their property to seek employment as proletarians in the big urban centers. On the other hand, mass production made the cost of production lower and the small manufacturer became unable to compete within the industrial way of production. We must also take into account the extension of the market from national to international; the existing environment (technological, institutional, cultural, etc.) and with inventions contributing to the transformation. Under these circumstances, small industrialists became owners of great industries.

Land rent was the headache of the classic writers. As the first industrial nation, England, was obliged to import great quantities of wheat and other

means of subsistence, and raw materials from abroad having not enough domestic production of these products, too. Of course, England was the country of “black India” with its enormous reserves of carbon, but with a deficiency of the above mentioned necessities with which to feed its population.

The leader of the Classical School, Smith (1723–1790), influenced by the just-mentioned technological, economic and social environment considered that the wealth of a nation coincides with its annual labor. In his famous book *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776) he says: “The annual labor of every nation is the fund which originally supplies it with all the necessities and conveniences of life which it annually consumes, and which consist always either in the immediate produce of that labour, or in what is purchased with that produce from other nations” (o.c., p. 1).

Smith, like Aristotle, made a distinction between *value in use* and *value in exchange* and his distinction was followed by his adherents as well as by Marx. Smith, although orientated definitely to the objective concept of value, grasped also the paradox of value; for example, items with low utility to have great value and vice versa. The paradox of value concerns not only Smith, but from one point of view some mercantilists of the transitional period. A writer of the same period John Law (1671-1729) (*Money and trade considered with a proposal for supplying the nation with money*, 1705) writes that different goods have value because of their value in use and of their stock (rarity). More or less, the same observations were made by another writer of the same period, Ferdinando Galiani (1728-1760) (*Della Moneta*, 1750). In this book he says that “if a natural cow and a gold one have the same rarity, then they have the same value,” and rarity is “the proportion which is between the quantity of a thing and its use” ([1750], 1915, p.32; cf. Houmanidis, 1978a, p. 604). Another Italian of the same transitional period from mercantilism to physiocracy, Antonio Genovesi (1713-1769) (*Lezioni di Commercio ossia di Economia Civile*, 1765) argued that needs govern human economic activity. He also considers value as the result of an estimation between needs and goods, the former’s are ruled by utility the latter’s are ruled by their rarity (Houmanidis, 1999, p. 127). It is true that before Smith, another English writer, William Petty (1623–1687) in his *Political Arithmetic* (1682), made the same distinction of value (value in use and value in exchange). Another mercantilist, Bernard de Mandeville (1670–1733), observed that every economic event produces a loss for someone and an opportunity for another. He presented us with an amusing

tale of a silk merchant who wished to sell at the highest price and a lady who wished to purchase at the lowest price. In the course of their bargaining the merchant deceived the lady by convincing her (with flatteries for her charms) about the quality of the silk. The lady was deceived by merchant's flatteries and purchased his silk clothes (Moss, 1967, p. 170).

The utilitarian philosopher Jeremy Bentham in his book *Introduction to the Principles of Legislation* (1789) made, similar to Petty, the same distinction of value. He, however, extended the concept of value in use, as he referred to the measures of pleasure and pain. A. intensity, b. endurance, c. uncertainty, and d. expenditure govern these measures. The two first remarks refer to pleasure and the latter two to pain (Stigler, 1965, p. 70). Smith did not interfere in Bentham's thought, which argued for a subjective theory of value. But Smith observed that the explanation of value presents a paradox. Things that have a great value in use, e.g., water, usually have low or no exchange value. While things that have low value in use, e.g., diamonds have a great exchange value (1970, p. 25). Despite all these observations Smith did not develop further his analysis, so as to conceive utility into the unit of quantity. Thus, he formulated an objective theory of value. "The value of any commodity, therefore to the person who possess it" [...] "is equal to the quantity of labor, which it enables him to purchase or command. Labor, therefore, is the real measure of the exchangeable value of all commodities" (Smith, 1970, p. 26).

The just-mentioned mercantilist of the transitional period from mercantilism to physiocracy made some important remarks. Law, before Smith, argued that goods have value because of their use and their stock. Water has a great value in use but has a low value because its quantity is greater than that which is demanded. Diamonds have a limited use and, although they have a great value, their demand is greater than their quantity (Law, 1705, p. 4).

Concerning the formulation of price, Smith's argumentation was based on the law of supply and demand. If supply is greater than the demand, the price will decrease. When demand is greater than supply the price will rise. He examined the game of supply and demand and said whether the price is sinking or rising, it is attracted by the equilibrium price. In other words, it is fluctuating around the natural price: the cost of production. "The natural price [wrote Smith] is as it were, the central price, to which the prices of commodities are continually gravitating. Different accidents may sometimes force them down even somewhat below it. But whatever the obstacles may be which hinder them

from settling in this center of repose and continuance they are constantly tending towards it" (1970, p. 51).

At this point the question emerges why Smith made the distinction between value and price? Smith reached the conclusion that supply and demand determine price, yet the price in its turn affects supply and demand in the game of market. But if this is the case we cannot have a clear explanation of value. This since the law of supply and demand explains the formation of price and it changes, but not its value. The price changes directly to the rate of demand and inversely to the rate of supply. Supply and demand determine price and the latter determines supply and demand. Thus Smith, to avoid this lack of clearness, found a way out by making the distinction between value and price. Some classicists presented a tendency of differentiation from the objective theory of value. Before them some other writers followed a more definite road on this subject. We shall present their ideas as below.

1.2.1 The differentiation of some classicists from the objective value theory

The philosopher Étienne Bonnot de Condillac (1715-1780) (*Le Commerce et le gouvernement considérés relativement l'un à l'autre*, 1776) who is leaning to physiocracy maintains that land offers more product with the assistance of labor. He maintained value is based on the utility of a good, or the same, on the need we have for it. "Goods have greater value, because of the need we have for them. Goods have less value in case they are not so desirable for us" [...] "and they have value not because of their cost, but we pay cost because they have value" (Condillac, 1776, Ch. I, pp. 1, 3, 5, 7 and 13; cf. Housmanidis, 1954, pp. 18-19). And Condillac completes: "Values in their comparative estimation are prices" [...] "prices are formulated from the competition between sellers and buyers" (o.c., Ch. XXX, pp. 345-357; cf. Sideris "The Philosopher Abbé Bonnot de Condillac one of the founders of Economics," in: *Anniversary of the Athens Graduate School of Economics and Business Science* (in Greek), Athens, 1959, pp. 61-71).

Anne Robert Jacques Turgot, Baron de l'Aulne (1727–1781) researching the phenomenon of value *a principio*, says: "Value consists of the relation which exists between two things in their exchange, and its measure is the relation between their expenses of production" ([1766], 1970, p. 227). And this is the fundamental price (*prix fondamentale*)—cost of production. But

there is also another value, the current price (*prix courant*) which is the formulated price in the market. The measure of this price is the need or the desire of the exchangers and which stands steady in accordance with their will. Turgot later initiated a deeper consideration of value, especially when he maintained that there are two kinds of value: The first concerns the *appreciative value* (*valeur appreciative*), the second concerns *the price which is formulated in the market* (*valeur estimative*) by game of the bargainers. This results in the equilibration of the price “and this is the indispensable condition of the value in exchange” ([1768], 1970, pp. 227 and 242–245). It can be conceived that a precondition of this appreciation is the cost of production.

Another French leaning to the physiocrats was Abbé André Morellet (1727–1819) (*Prospectus d’ un nouveau dictionnaire du Commerce*, 1769) who presented a theory of subjective value (Gonnard, 1930, p. 25). As we shall see, further down from J.E. Dupuit, French economists were in favor of the subjective theory of value. Smithians such as Jean Baptiste Say in France and Nassau Senior in England leaned towards subjectivism.

Jean Baptiste Say (1767–1832), the leader of Liberal School in France, in his *Traité d’ Économie Politique* ([1803], 1972) examined the phenomenon of value. He maintained that the law of supply and demand determines value. But he underlined the significance of the element of utility. He said, “production is not a creation of matter, but of utility” (o.c., p. 51). Say argued value is the quantity of a desirable good which one can acquire by exchange, or the need we have to enjoy the utility from a good in combination with the sacrifice we are willing to make. And this need for utility is evaluated in accordance with its importance. The more important the need, the more we are willing to sacrifice. There are wants that are satisfied with a little sacrifice, such as the gifts furnished by nature (natural wealth) as well as others we must pay for (creative wealth). Both kinds of goods concern human coexistence and social wealth.

The relative value between two goods hide the motives and needs of the bargainers. The cost of production is an important factor for the formation of value. The producer would stop the production of a good if the value resulting from the production of that particular good becomes lower than the corresponding cost of production. These changes would have had an impact on the relative value–price of goods (o.c., pp. 319 ff.). “Price is the measure of the value of things [...price] does not measure the length or the volume or the

weight of a product but it is in accordance with the utility we have for it" (o.c., p. 51). The demand should increase as the desire for more utility increases. Price rises because consumers need a good. At the same time the consumers are supposed to be able to pay the higher price the seller will demand. Certainly Say does not disregard the expenses of production. He makes the observation that Ricardo was right in maintaining that the value of commodities is determined by the expense of production, as well as that products cannot be sold at a price that is lower than their expenses (o.c., pp. 325–326). Say, also, followed the French tradition of Condillac and Turgot by taking into account utility. However he did not give to utility a substantial place in economic theory (Stigler, 1965, p. 77).

We have just referred to Nassau Senior (1790–1864) who in his *Outline of the Science of Political Economy* ([1836], 1951) examined utility and scarcity. Senior attributed a great importance to value. He considered it as a "subject of long and eager controversy" (1951, p. 13). He defined value as "a relation reciprocally existing between two objects and the precise relation it denotes is the quantity of the one which can be obtained in exchange for a given quantity of the other" (o.c., pp. 13–14). "[I]t is [he emphasizes] impossible, therefore, to determine previously value of any object or objects in which its value is to be estimated, or, in other words, of which a certain quantity can be obtained in exchange for a certain quantity of the object in question" (o.c., p. 14).

Exploring demand and supply Senior determined demand as "the force of the causes which give utility to a commodity" (o.c., p.15). Demand for him is synonymous to consumption, and supply is the quantity of a commodity actually brought to the market. Demand can change in accordance to our desire. "And, as the desire to eat is more urgent than that, the desire to feed horses, or drink beer or spirits, the desire to obtain oats and barley or, in other words, the pleasure given, or the pain averted, by the possession of a given quantity of them would increase" (o.c., p. 15). As far as supply is concerned, Senior observed that its increase or decrease is associated with the various obstacles that pose limitations in it. "And the *weakness* of the obstacles which limit the quantity of a commodity by the word *Supply*" (o.c., p. 16).

Senior intervened in a deeper exploration of value and price when he distinguished two sets of causes: the *intrinsic* and the *extrinsic*. Intrinsic causes "give the utility of the commodities and limit it in supply". Extrinsic causes are

those “which limit the supply and occasion the utility of the commodities for which it is to be exchanged”. According to him, utility (the power of occasioning pleasure and preventing pain) with scarcity play a role in the exchange. Utility and scarcity is the cause of increase or decrease in value. Obstacles are the cost of production, which is indirect utility and it increases or decreases the stock of a good. And Senior continued: “The circumstances by which each different class of commodities is invested with utility limited in supply (and) are subject to perpetual variation. Sometimes one of the causes alone varies. Sometimes they both vary in the same direction; wholly or partially neutralize one another” (1951, pp. 16–17).

These were the subjective ideas of some predecessors of the Classicists, and the objective ideas of the leader of the Classical School, Adam Smith, who—as we have seen—observed the paradox of value. His followers, Say and Senior quasi retreated from the objectivist conception on value.

In these writers we can include the Italian Francesco Fuoco (1774-1841). Fuoco accepts cost of production as determinant of value in accordance with the law of supply and demand (*prezzo vende, prezzo di mercato, prezzo contingente*). He observes that price is fluctuating around the cost (Fuoco, *Saggi Economici*, 1825-1827, Vol. I, p. 132 and Vol. II, pp. 224-244) and then maintains that value is determined by the estimation we make concerning goods (o.c., Vol. I, p. 175). At this point we can remark that, similarly to Condillac, Fuoco maintains value is measured in accordance with the utility of goods.

A German follower of classical political economy, J.A. Völlinger (Braun, 1975, p. 211), inspired by Immanuel Kant, starts his exploration from the economic activity of the individual. He takes into account both theoretical and practical reason. The latter is based on ethical norms. Völlinger starting—as we said—from the individual, conceives the different individual’s endeavors to satisfy his wants. Thus Völlinger researches about the wants and the best way for their satisfaction. His approach is close to the subjective value theory.

The above mentioned observers of the paradox of value as well as the authors who deviated from objectivism, prepared the soil for pure subjectivism as it was conceived by the Austrians.

1.3 Naturalism and voluntarism

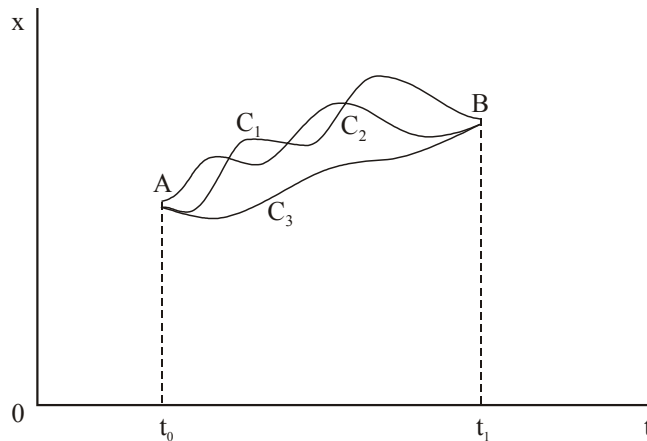
Before ending this chapter, we must make some clarifications. For example, what is the doctrine of the Austrian and Neo-Austrian Schools? And at this point we must have a distinction between *naturalism* and *voluntarism* (Fanfani, 1955, pp. 9-10). Naturalism, for Fanfani, is a rational order in human society offered by nature. Any intervention destroys it. Voluntarism means a lack of a rational order, which can be established only with human intervention. Another economist Giuseppe Palomba (*Lezioni di Economia Politica*) calls the former as Apollonian and the latter as Dionysian and another Italian economist Anna Pellanda asks: *Legge di Produzione o Forza del Terziario?* (1990) giving the same meaning as conceived by the two other Italian writers.

A rational man is supposed to calculate the wants and the possibilities so as to satisfy these wants in the least painful way. The logic of the economist is concerned with ideology, which is an uncontrollable psychomental procedure. It is an ideal concept, influenced by environmental and also cosmic theories, the emotions and personal idiosyncrasy. For instance according to Locke, property is a 'divine category'. For Marx, it is the result of the exploitation and cause of 'terrestrial hell' (Houmanidis, 1994, pp. 102–103). For the logicians of the Austrian School, as well as for the School of Lausanne, the predominating ideology of a market economy is freedom governed by economic calculation. Only with freedom can the market offer its fruits.

Economic calculation is connected to economic behavior. Classicists explored it as an instinct of human behavior. For the Austrians, it is logical human action. Let us use a simple example, with a graphical presentation to prove that man's behavior is logical and not instinctive as happens with animals or in nature.

In the natural world, we observe the cornerstone of economics, namely the achievement of the greatest results with the least effort. For example, a river follows the shortest direction to arrive in the bay, passing through different obstacles, which it meets in the course of its flow. A plant grows where there are most favorable conditions to sustain it. This behavior concerns the natural world to which animals also belong. We must also take into account that animals live in a deterministic world, which is the world of nature, whereas man lives in freedom which is itself as Georg Wilhelm Friedrich Hegel declared it ("*Freiheit ist bei sich selbst zu sein*"). But herein arises the problem to

determine how we can define what is freedom. Hanna Arendt replied as follows: “What is liberty? It is like a desperate enterprise” (1982, p. 186). Of course, today, reality directs us towards captivity of our actions in the world of economy by press, radio, television, and advertising. But in the final analysis, man is a being that chooses the best decision for himself. The economist from his side operates in a historic, institutional, and traditional environment and he is influenced by it. But he, in turn, influences it with his abstract and logical syllogisms. An animal has no logic: it acts by its instinct. For example, a mouse tries to get food, e.g., cheese. From point A at time t_0 , he has to reach point B where the cheese is at time t_1 . ‘Calculating’ instinctively the obstacles from A_{t_0} to B_{t_1} and the fear (obstacle) of the cat. Thus the mouse must choose the more convenient routes and the least dangerous ones too. The different possibilities and the shortest route are depicted by line C_3 .



The graphic given by D. Allen (1964, pp. 521-522) is about some problems in the calculus of variation.

If we leave the example of the mouse aside we see that man is behaving not instinctively but rationally. Man is not only a natural and biological entity, but he is a spiritual and moral entity as well. A rational individual is supposed to undertake an economic action that leads to the achievement of the greatest

result by making the least sacrifice. In other words he compares the benefit relating to an action with the cost he has to endure to achieve this benefit. Behaving in this way, man substitutes a less efficient production with a more efficient one to produce and to enjoy a good. Thus, man's behavior is acceptable, because it is useful for him and for the community. It should be pointed out that this type of behavior is not necessarily immoral. Only when it leads to an exploitation of the labor of another man or group of men, it becomes immoral.

Man is the supreme value of life. He acts not only for his own benefit, but also for the benefit of the community (of which he is a part) as a whole. Any deviation from this ethical road must be under the control of a democratic state. As we have already said, man is not like a robot of economic calculation. He has sentiments, altruism, solidarity and above all love, and all of these establish him as a person—not only a biological entity but also as a moral being as well. David Collard observes that for Darwin altruism enhanced man's evolutionary prospects only to a minor degree. The obvious contrast is with Kropotkin (1981, pp. 45-46) who argued that sympathy was the base of human society and Titmuss, who remarks "that commercial motives may weaken some forms of altruistic behavior" (p. 150). Finally, Collard tries to offer a system based on altruism.

The Austrians had not presented a social framework ruled mainly by institutions and ethics, but an economic theory ruled by economic calculation, which is the foundation of economics. The Austrians have basically taken into account human economic action from the subjective point of view while the institutionalists were based on the solidarity and above all on the institutional framework. This is the reason why the economist tries to get the convenient and the expense in a different way. I am, for example, able to go from my house at Aegina to the port of the island and then by ship to Piraeus, yet I can also fly with a helicopter from our house in Aegina and then to the port Piraeus. That is, it is possible for one thing or another to occur, while it is possible to achieve one through the other. Palomba cites the phrase: "*Akai Mikisan ni hutteson*" which in Chinese means: "The red to Mr. Miki sent book" which can also be interpreted as "The red book sent to Mr. Miki" or "The book sent to the red (communist) Mr. Miki" (Palomba, o.c., p. 27). This example shows the curious side of the interpretation of the phrase. It is the same with the phrase of the Oracle at Delphi "ἤξεις ἀφίξεις οὐκ ἐν πολέμῳ θνήξεις" ("*thou goeth thou*

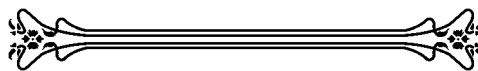
cometh not thou die in war”). Does it not happen the same in economics? For, each economist interprets reality or the text of a contemporary or older colleague, according to his own ideology or perception which may be exact or not, relatively untrue or true. From this point of view, economics exhibit lack of logical safety that does not concern the sciences, though they can also be covered by a general theory like Einstein’s theory of Relativity, which differs from the Geometry of Euclid or the Mechanics of Newton. Bertrand Russell characterized economics as a separate science, unrealistic, unable to lead to sure practical application. Certainly, we cannot reject some proposals, which are vested with the prestige of axiomatic correctness, otherwise the science of economics would not exist as such. Apart from ideologies or theoretical analyses or economic doctrine, if cost surpasses income, we have loss, while if income surpasses cost, we have benefit; likewise, we cannot reject the notions of gross and net product or a series of empirical laws, etc.

It is also possible for some authors to agree on the causes of the formation of an economic phenomenon, but at the same time to give a different explanation about it. According to Smith, in an advanced society the cost of production (wages, rent, profit) determines value, while according to Henry Charles Carey (1793–1879) and Francesco Ferrara (1810–1900) value is determined by the cost of reproduction. This means that if the cost of production of a good was 10.000 drachma, and its reproduction costs 15.500 drachma then the latter will be its value (Ferrara, *Lezioni di Economia Politica*, Bologna, 1935, Ch. XIII, Vol. II, p. 169; also by the same author in the Preface of the *Biblioteca dell' Economista*, 1864, Vol. III, Ser. II). These are two cost-based notions of value, which differ however with regard to the definition of cost. We can sustain the same for the interpretation of the phenomenon of economic value from the point of view of Ricardo, which is based on labor (individual time of labor), and from Marx’s point of view, which is based on labor force as well. Both conceived the measurement of value by the social necessary time of labor incorporated in a commodity. Sometimes, the same author gives a dual interpretation for the same phenomenon; for instance, Marshall, maintains—as we already said—that for a short time the price is defined by marginal utility, and for a long time by the cost of production. Smith distinguishes capital into *stock* (that is stock of real estates and wealth) and *fund* (that is capital circuit to be increased); similarly, Pantaleoni (1857–1924)

calls stock *fondo* and fund *flusso* (*Principii di Economia Pura*, 1879, p. 362; cf. Houmanidis, 1994, p. 47).

In my view, today crisis in economics, after the failure of Marxism and Keynesianism, is due to the undoubtedly useful adherence to mathematical models and to the disregard of the historical–institutional factor. These factors must constitute the basis on which to explore individual as well as collective economic action. Gabriel Tarde, an ingenious spirit indeed, maintained: “The tendency towards mathematical economics and the tendency towards the psychology of economics, although they are opposed and we are far from any reconciliation between them, can offer reciprocal support to each other” (1902, Vol. I, p. 141).

The methodology in use in our days leads to the adoption of narrow mathematical–quantitative models, while the historical and institutional factors more or less are ignored. The economic problem is undoubtedly serious. Extremely abstract discussions lead to the conception of an unrealistic world, similar to the flying kingdom in *Gulliver’s Travels* by Jonathan Swift. Due to this, Institutionalists have been preoccupied with the body of the economy but have more or less abandoned the economic mechanisms. The economist is also occupied with the subjects of his science, which result from the economic action of the individuals who coexist within society. The economist must also be blessed with an extensive education by asking assistance from related sciences. Accordingly, the economist is not concerned with the elements composing comet Haley or any other matter concerning this comet, but he is interested in stagflation, economic growth, the two speeds of Europe, the impact of the historical tradition, customs, habits, etc. on economics.



"Economics is, or aims at being, a science, like other sciences, with the organization of knowledge of facts; its ultimate subject-matter is economic welfare, also called satisfaction".
—D.H. Robertson.

2 THE OLDER AUSTRIAN SCHOOL ON VALUE AND DISTRIBUTION

Before starting my historical survey on the Austrians, I think it is important to refer to the ideas of Aristotle who, for me and for some other writers, is the father of the subjective theory.

In *Nicomachean Ethics* (1133a, E, 8, 30) Aristotle claims that through exchange every person tries to acquire something more useful in comparison with that which he gives. He also observes that without this expectation the exchange would not be realized and it cannot be realized unless the commodities would be measured by a standard. Marx discovers this paragraph of Aristotle as the concept of symmetry based on labor. Finally this symmetry is obtained in accordance with Aristotle by the medium of exchange (money) (*Nicomachean Ethics*, 1133b, E, 8, 10-25, 25-35). In his *Ρητορική* (*Rhetorics*), Aristotle refers to individual utility that makes an individual feel the pleasure of a good, and to the utility derived from a good that produces a yield. (o.c., 1361a, 15). The first utility is the direct individual value. The second refers to the subjective value of exchange. Though a good that gives a yield, may satisfy more individuals besides the one possessing it. So it can be exchanged. Aristotle also says: "Lasting goods are of a greater value than less lasting ones, and certain goods are of a greater value than uncertain ones". «Και τα πολυχρονιώτερα —says— των ολιγοχρονιωτέρων και τα βεβαιότερα των αβεβαιοτέρων· υπερέχει γαρ η χρήσις των μεν τω χρόνω τω δε τη βουλήσει όταν γαρ βούλονται, υπάρχει μάλλον η του βεβαίου» (o.c., 1364b, 30). Aristotle, formulating his concept on value says: «Και το σπανιώτερον του αφθόνου, οίον χρυσός σιδήρου αχρηστότερον ων μείζον γαρ η κτήσις δια το

χαλεπωτέραν είναι. Άλλον δε τρόπον το άφθονον του σπανίου, ότι η χρήσις υπερέχει» (Aristotle, *Rhetorics*, 1364a, 20-25). (“but the more rare is preferable in comparison with the abundant. Thus, gold is more desirable than iron although the former is less useful”). Entering into cost as a pre-condition of value, Aristotle, ends up with: «Και το αλυπότερον και το μεθ’ ηδονής πλείω γαρ ενός, ώστε υπάρχει και η ηδονή αγαθόν και η αλυπία» (o.c., 1365b, 10) (And that which is more free from pain and accompanied by pleasure is a greater good”) (o.c., 1364, 20-25, 1305, 10). In my opinion Aristotle was the first to open the road to subjectivism. Herein I must refer to another interesting point concerning Aristotle’s theory of value. He maintains that value is determined by the degree of utility without mentioning the utility into the unit of quantity. He says: “Those things which are available in greater need ” (o.c., A, 7, 1365, 35). “And that which is more free from pain and accompanied by pleasure is a greater good (o.c., 17; 1365b, 10; cf. Houmanidis, “Aristotle on value and price,” *Archives of Economic History*, Vol. VI, No. 2, 1995).

J. W. Baldwin (“The medieval theories of the just price,” *Transactions of the American Philosophical Society*, 1959, Vol. 49, Part 4, p. 12) maintains that Aristotle formulated a subjective theory of value. He also maintains that classics from their part added the objective aspect of labor or cost of production to the Aristotelian theory of value. R. de Roover (“Schumpeter and Scholastics economics,” *Kyklos*, 1957, Vol. 10, p. 130) explains the objective concept in the Aristotelian theory of value. Schumpeter underlines the importance of the cost of production in Aristotle’s theory (1963, pp. 61-62). Marxists, as F. Poliansky and A. Anikine (*La Jeunesse d’une Science. La pensée économique avant Marx*, Moscow: Progress, 1975) in our days, maintain after the ideas of their mentor (Marx, 1887, Vol. I, pp. 165-166), the objective theory of value was formulated by Aristotle. But J. F. Bell (*A History of Economic Thought*, 1953, 1980, p. 4) accepts that Aristotle was for the subjective theory of value. It is true, that some passages in the works of Aristotle present the objective side of view in the Aristotelian thought. I think that from these writers escaped the fact that Aristotle conceived cost of production as a precondition of value. Boeck from his point of view maintains that Scholastics were influenced by Aristotle to resolve their subjective and objective theory of value (J. Boeck, “Aristotle as a Mediterranean Economist,” *Individual and Society*, Istanbul: Diogenes, pp. 138 and 91 ff.; cf. Houmanidis, 1999, p. 60).

As precursors of the subjective theory of value we can refer also to other subjectivists, as well as the Aristotelians Duns Scotus (1274-1308) and Buridanus (1300-1358). We can also refer to the German Walch, the earlier mentioned Italians Galiani (1728-1787), Antonio Genovesi (1713-1769), and Pietro Verri (1728-1797), and the Frenchman Étienne Bonnot de Condillac (1715-1780) (Sideris, 1954, p. 161; Houtmanidis, 1999, pp. 124, 126 and 127), and others of whose ideas we shall refer to as below.

2.1 Subjectivism and marginal utility

At the end of the XIX century the European economy was in depression. Wicksell, in explaining its causes, remarked that the *current rate of interest* was higher than the *natural rate of interest*. Other economists tried to show the real motives of economic behavior from the pure psychological point of view. The idea of free competition came back as the only possibility for economic stability and justice. The predominant method of research adopted by this school of thought was analytical-deductive, which was quite different from the historical-inductive method. And thus resulted the famous *methodenstreit*.

The economists of this period, about 1870, conceived a new theory regarding the phenomenon of economic value, so as to place it under a new consideration of economics. As a result of this, the theory of marginal utility was formed and it succeeded the old objective theory on value (cost of production or labor). Anyway, the two afore-named methods continue to compete against each other until today.

The first to formulate the theory of marginal utility were three economists from different countries: The Austrian Carl von Menger, the English Stanley Jevons (*Theory of Political Economy*, 1871) and the French Léon Walras (*Éléments d'Économie Politique Pure*, 1874). The first described marginal utility as 'least important use', the second, 'final degree of utility', and the third, 'the intensity of the last satisfied want or rarity'.

Towards the end of the XIX century, the Austrian or Psychological Subjective School, or School of Vienna emerged, headed by Menger and by his followers Eugen von Böhm-Bawerk and Friedrich von Wieser. In America two economists, John Bates Clark and Frank Fetter, followed the Austrian economic thought. The Austrians conceived utility differently from use-value. The latter means value added on a product, while the former is completely

subjectively based on estimations and desires of an individual. For this reason Commons rightly says that utility is included in the field of psychological economics (1959, Vol. I, p. 85). Another School was the Mathematical School or School of Economic Equilibrium or School of Lausanne whose leaders were Léon Walras and Vilfredo Pareto. Successors of the School were Pasquale Boninsegni, and the New School of Lausanne with Firmin Oulès. The Schools of Vienna and Lausanne were called hedonists, since their fundamental principle was the achievement of the greatest benefit with the least sacrifice.

The precursor of the Austrian School was Hermann Heinrich Gossen (1810–1858) who in his work *Entwicklung der Gesetze des menschlichen Verkehrs, und der daraus fließenden Regeln für menschliches Handeln* (1854) formulated the law of satiety. According to this law needs are satisfied by the successive addition of units of a reserve of a good, until full satisfaction at the point of saturation (third edition with Preface by Hayek, Berlin 1927, pp. 1, 3 and 5-6, is ref. by A.D. Sideris, 1953, p. 161). For Gossen, different goods and their units require different degrees of satisfaction, "and the value of things produced thereby will naturally be diminished in the same degree with the estimation of the difficulty of needs" (*Entwicklung der Gesetze*, p. 38, is ref. by Haney, 1951, p. 502). According to Gossen the acquisition of direct goods was achieved through the proper combination of indirect goods ruled by the hedonistic principle. The production of direct goods relates to this so that the last unit of each good produced has the same value for the producer.

The book of Gossen has not been a work of reputation, with regard to the value of the ideas exposed in it. However, Gyula (Julius) Kautz in his book *Theorie und Geschichte der National-Oekonomik*, 2 Vols. (1858-1860) referred to it (Sideris, 1953, p. 162).

The pioneer of the Lausanne School or the Mathematical School was Augustin Cournot (1812–1877), In his work *Recherches sur les principes mathématiques de la théorie des richesses* (1838), he depicted through the demand curve, the demanded amount as a function of prices. According to the Lausanne School, the economist does not need to concern himself with all the manifestations of social life, but only with economic phenomena as they belong to a separate world. The followers of this school believed that this way of confronting economic problems signifies the field of investigation of the economist. The investigation of these writers goes from the abstract to the concrete and from the perfect to the imperfect so that their abstract model will

be applied in a rational market. Thus, these economists searched for an establishment in the world of reality: a rational economy. The application of their system to real life was left to men of action and to politicians.

The hedonists did not examine how the market was actually operated but how it would operate if each individual seeking his own interest achieved it. These writers proposed that an individual acting in the real world is obliged to act in this way for his own benefit and so for the community's general benefit. In addition, the hedonist's principle of the greatest satisfaction of man should regulate the conduct of government, trying to offer the maximum usefulness (*ophelimité*) to the people of a national community (Pareto). For Austrians the reserve of a good is measured by the utility it offers to an individual when the last unit of a product was consumed. The central idea that underlies this approach is that economic behavior aims at satisfying individual's needs by the lowest means of expenditure.

2.1.1 Some other precursors of marginal utility

From the history of economic thought we are informed that there were also many other precursors of the theory of marginal utility as: Johann Heinrich von Thünen (1783-1850), (*Die isolierte Staat in beziehung auf Landwirtschaft und Nationalökonomie*, 1826-1860) who first referred to the term *Grenze*. It is important to refer also to Henry George who writes about the margin land. Katouzian argues that Ricardo (1980, p. 15) discovered this idea as marginal cultivation. The French engineer Arsene J. Dupuit in his works (*La Mésure de l'utilité des Travaux Publiques*, 1844 and *L'Utilités des voies des communications*, 1849) is also one of the precursors of marginal utility (Ch. Gide–Ch. Rist, 1923, p. 611; Ch. Turgeon, 1927, Vol. III, p. 200). Another writer was Richard Jennings (*Elements of Political Economy*, 1855) who refers to the 'degree of utility'. John Craig and Lloyd Longfield have also referred to final utility. Say referred first to the classification of wants—preparing the ground for Menger's Table. Maffeo Pantaleoni (1857–1924) (*Principii di Economia Pura*, Firenze, 1894, p. 96 ff.) argues that Alfred Marshall taught the marginal utility since 1869 and Keynes maintains the same (Alfred Marshall in *Economic Journal* of 7/9/1942). Léon Walras refers to Jevons who, for him, formulated the theory of marginal utility.

Laird (1969, p. XVIII) includes two professors of the University of

Göttingen as precursors of marginal utility, the philosopher Herman Lutz and the theologian Albrecht Ritshi. Schumpeter recognizes (1963, pp. 207, 302–305) as a pioneer of marginal utility Daniel Bernoulli (1700–1782) (*Specimen Theoriae Novae de Mensura Sortis*, 1738) as well as Achilles Nicolas Insard (*Théorie des Recherches*, 1781). Anyway, it is a fact Aristotle was the first to refer to the “degree of utility” (Houmanidis, 1954, p. 26; 1999 pp. 59 and 61).

In 1904 in Moscow an interesting book was published by V.K. Dimitriev entitled *Economieske Oeroki (Economic Works)*. It followed the path opened by the School of Lausanne of Walras. The work of Dimitriev was translated into French by B. Joly under the supervision of A. Zaubermann and H. Denis in the editions of the *Centre Nationale de la Recherche Scientifique* (1968). The same was translated in English with the title *Economic Essays on Value, Competition, and Utility* (1974). A Russian Economist who taught in France, H. Storch (*Cours d'Économie Politique*, St. Petersburg [1815], Paris, 1823) maintained: “Our estimation concerning a good, determines its value” (Vol. II, p. 3 ff.). Another Russian follower of subjective value was Bilimovič.

2.1.2 A prelude

Marshall calls the satiety function as ‘Law of satiable wants’, while Austrians call it *Gesetz der Bedürfnissättigung* (Schumpeter, 1963, p. 910). The utility curve is presented with a slope, which begins from the vertical (utility) axis and cut the horizontal axis at a point, at which utility diminishes until 0. Below 0 appears the negative utility. Pantaleoni (1889), A. Graziadei (1901), and U. Ricci (1905) maintained that the utility curve at the beginning goes up and then begins to diminish. For Böhm-Bawerk it occurs some time (Perroux, 1943, p. 192).

Our previous century is marked by a lot of changes: the revolution in physics and economics; the progress of technology; the invention of atomic energy that succeeded the historical stages of steam and electricity; the invention of new synthetic materials; the two World Wars; as well as the Great Depression (1929–1932); the changes on the world map; the ideological division between the West and the East; and the opposing tendencies towards universality (Houmanidis, 1953). In this historical period, man drew his attention and endeavor to the external world abandoning his internal world. In our days, although humanity has reached great achievements in technology and

science, it is going through a period of agony and decline. But this concerns another subject, which we shall not discuss in the present work.

During two centuries, there also appeared the revolutionary contribution to biology by Charles Darwin (1809–1882), to sociology by Émile Durkheim (1858–1917), to philosophy by Ernest Mach (1838–1916), Nicolai Berdyaev (1874–1948) and Paul Sartre (1905–1980), to physics by Albert Einstein (1879–1955), to psychology by Marcel Proust (1871–1922), Sigmund Freud (1856–1939) and Carl Gustav Jung (1875–1961), the progress in Literature by Franz Kafka (1839–1934) and Albert Camus (1913–1960) to economics with John Maynard Keynes (1883–1946) and in other fields of science, arts, and political philosophy. The question was: “What kind of a new economic doctrine would appear in the 21st century?”

2.1.3 The debate of methods and the new horizons in economics

The subjectivist Austrian School criticized the objectivist Classical School as well as the Historical School for its historicism and tried to improve classical economics and economic theory. The Classicists were based on supply and not on demand. "The great founders of the Neoclassical School Carl Menger, W. S. Jevons and Léon Walras and their precursors A. A. Cournot and H.H. Gossen conceived the glaring omission of demand from the classical model. They took as an expository point of departure a model which was the polar opposite of the classical, the model of pure exchange" (Hutchison, 1978, p. 69).

The militants of the Historical School disregarded more or less any exploration of economic theory and dealt mainly with economic history—at least concerning the younger Historical School. The Historical School rejected the abstract method of reasoning. Its followers were attached to the study of history. The militants of the School cultivated economics from the point of view of habits and customs, the conflicts of interests, Ethics etc. From the other point of view, the attitude of the Austrians, and especially their leader Menger, was in contrast with Gustav Schmoller's attitude about methodology. The famous *methodenstreit* was the result. Hayek called this controversy “thirty years of war” (*Collected Works of Menger*, Introduction by Hayek, Vol. I, pp. XX and XXII). Menger starts his exploration on the economic phenomena from the side of view of an isolated individual who tries to satisfy his own wants with some doses of a good in an isolated situation. Schmoller starts his

exploration within a frame of ethical feelings, customs and habits and institutions as well as how individuals and their groups act in a human society. Menger's consideration of the economy is based on a deductive methodology. However, Menger, up to a point, made some concessions on the usefulness of the historical method (Hayek, 1967, Preface; Katouzian, 1980, p. 38). Schmoller considers an economy in an empirical way; practice and historical reality did attract him. At first Menger presents his ideas having an individual as his model. An individual acts within the economy independently of other individuals. Both these economists enriched our science with their controversy since they guided us to combine methods (analytical-deductive and historical-inductive) in a frame of a humanistic economic system.

The debates between Menger and Schmoller on methods were the passage from the old to the modern. The retreat of Schmoller opened the road to Menger. However Schmoller was not rigid in maintaining the importance of both methods (the inductive-historical method and the deductive-analytical one) (Krabbe, 1993, p. 156; 1994, pp. 7-14). Both these methods are—says Schmoller—useful and indispensably for economics. They, “are like using our right and left feet in sequence to walk” (Schmoller, “L'Économie Politique. La Théorie et la Méthode,” *Revue d'Économie Politique*, Vol. XIII, 1894, p. 163).

Thus Schmoller was for a historical investigation, which, according to the Historical School, leads to the formulation of general laws through induction. But he also had admitted the significance of the deductive method (Schumpeter, 1954, pp. 166-170; Katouzian, 1980, p. 36). For this reason, Hutchison rightly observes, “It is doubtful whether the misunderstandings were all on the side of Schmoller” (1966, p. 147). Katouzian criticizing the Historical School says: “The biggest mistake of the Historical School was their belief in socio-economic studies by *direct* observation—involving a detailed study of history and not much besides and the inference of “general laws” through such a procedure” (1980, p. 37).

Menger, on his part, made some concessions concerning the usefulness of economic history. Karl Popper exercised a rigorous critic on historicism but Katouzian from his own side attacked Popper's critics. I think these two writers misunderstand each other. Popper's critic on Marxian historical determination was mainly concerned with the concept of freedom. “A historical law is connected [according to Popper's writings] to prophetically predictions like Marx conceived it” (o.c., pp. 37 and 49 ff.).

Hayek, on his side, says: "our knowledge of the principle by which social phenomena are produced will rarely if ever enable us to predict the precise result of any concrete situation. While we can explain the principle on which certain phenomena are produced and can from this knowledge exclude the possibility of certain results, e.g., of certain events occurring together, our knowledge will in a sense be only negative. It will merely enable us to preclude certain results but not enable us to narrow the range of possibilities sufficiently so that only one remains" (o.c., p. 139).

2.2 Carl von Menger

The founder of the Austrian School, Carl von Menger, was born in Vienna in 1840. Menger started his career in the Austrian civil service. He became famous especially after his death. His reputation is attributable to the fact that he entered into a deeper analysis of the economic theory and especially on the theory of value, which is based on marginal utility. Menger taught at the University of Vienna from 1873 until 1903. He wrote many books and articles amongst them his *Grundsätze der Volkswirtschaftslehre* (1871). He wrote only one volume of it, as he had no time to continue its edition, because he was busy with his debate with Gustav von Schmoller. Thus an other main work, *Untersuchungen über die Methode der Sozialwissenschaften und der politischen Oekonomie insbesondere* (1883), was based on his disputes with Schmoller. He died in 1921.

In sum, Menger was an original spirit, he has not been anyone's disciple, and he was not under the total influence of another economist or a School. He was a revolutionary in economics and he has the honor to integrate value and price from a subjective point of view (Schumpeter, 1963, p. 52) and thus to offer entirely new foundations in our science.

For Menger the final aim of economic theory is not to prescribe rules for economic activity, as the Historical School argued, but to show the economic behavior of the economic acting individual and his estimations for the provision of a good to satisfy a definite want. Menger, writes Krabbe, "used the expression psychology and anatomy of wants" (1993, p. 156). But Menger's main contribution is his argument that the value of a good is dependent on the last unit of the good consumed for the satisfaction of the individual's want. Menger explored value and price on the abstract level of an

ideal world in which everyone acts so as to get the maximum of his satisfaction.

For Menger "public and private goods have the property of scarcity" (Krabbe, ib.). He divided goods into two basic categories: A category of goods of a higher order (*Höher Ordnung*) i.e. the indirect goods or productive goods and into goods of a lower order (*Erster Ordnung*) or consumption goods. Thus, the relationship of the goods of the *Höher Ordnung* with our needs is indirect and the relationship of the *Erster Ordnung* is direct.

A good can be an economic one or a non-economic one. The first good involves the satisfaction of a determined need and has value. The second good is useful and has value in use but not marginal utility, which determines value. Value has an entirely subjective nature connected with the *intensity of a need* and also with *risk* and *time*. The production of a good or the satisfaction from portions of a good needs time. The intensity of the individual's want influences his decision to satisfy this wants under the control of time.

Without scarcity, goods have no value and they eventually become free goods. Economic good means scarcity-utility (and value is utility) into the unit of quantity. Barry Gordon in his *Studia Patristica*, Vol. XXII (ed. by Elizabeth Livingstone, Leuven: Peters Press, 1989, p. 108) writing about the Fathers of the Church says: "As it happens the problem of scarcity is not only the necessary *condition of the human condition* but it is something which also *happens* to mankind rather than something, which mankind imposes on itself." I think that these two cases are included in the Mengerian economic thought. The cost of production is ruled by scarcity. We sacrifice utility to get more utility and that is the corner stone of the individual's activity in the economic life. Anyway, Menger "went too far in diminishing the role of the cost of production and indeed attempts no analysis of the cost side" [...] "The suspect was to supposed to be taken up by Wieser" (Hutchison, 1966, p. 142). Menger was fully attracted by the analysis of demand and its directive force of marginal utility. Schumpeter for this reason characterized—as Krabbe (1996, p. 56) says—marginal utility as "the organon of pure economics."

The value of indirect goods is determined by the value of the goods produced by them (Menger, 1927, p. 36). Complementary to goods of indirect goods is the available time. In the production of direct goods, the indirect goods are combined with the elements of *time* and *risk* (Menger, 1927, p. 37). About it Krabbe refers "Satisfaction for him [Menger] is bound to an interval of time"

(1993, p. 157). Because the production of a good requires time, its duration depends on the nature of the good under production as well as the possibility of its production. The element of time has significance (the short or long period) for the time needed to produce a good. The possibility to satisfy immediately our need from a consumer good, which we have at our disposal, excludes the hindered element of risk. This, however, is not irrelevant with regard to the uncertain quantity and quality of goods that we expect to have in future. And because of this assumption Menger observes: "In every day life, the buyers of goods of a higher order necessary for the production of a direct good, never pay the foreseen price of it, but much less" (1927, p. 195).

The value of direct consumption goods is different as they satisfy needs of different intensities. The degree of the satisfaction of a need differs. Value is subjective and the measurement of it is subjective as well. Thus Marx was mistaken when he maintained that labor determines value. Marx says: "The value of one commodity is to the value of any other, commodity is the value of any other as the labor-time necessary for the production of the one is to that necessary for the production of the other" [...] "But labor-power or capacity for labor is to be understood the aggregate of those mental and physical capabilities existing in a human being, which he exercises whenever he produces a use-value of any description" (1887, pp. 47 and 164).

Keynes from his part implicitly relates labor with value. He defines value as follows: "I propose therefore to make use of two fundamental units of quantity, namely, quantities of money-value and quantities of employment. The first of these is strictly homogenous and the second can be made so. "For, in so far different grades and kinds of labor and salaried assistance enjoy a more or less fixed relative remuneration, the quantity of employment can be defined for our purpose by taking an hour's employment of ordinary labor as our unit weighing as hour's employment of special labor in proportion to its remuneration, i.e. an hour of special labor remunerated at double ordinary rates will count as two units" (Keynes, [1936], 1951, p. 41).

Thus Marx (Houmanidis, 1999, pp. 248 ff.) and Keynes were mistaken because they have not clarified what ordinary labour is as well as the non-ordinary labour!

The value of a direct consumer good is determined by the intensity of the need for it. The change of this relationship between the good's utility and the intensity of the need changes its value. In consequence, the measure of

value is entirely subjective.

An individual, Menger says, always endeavors to satisfy his most urgent needs, each need puts pressure on him with particular intensity. This is determined by the value of the goods by which the needs are treated. So, the value of goods depends on need in relationship to the reserve of the good through which this is to be satisfied.

And Menger presented his famous Table (1927, p. 158) on which each horizontal arrangement of Latin numerals shows the needs according to the degree of importance and the vertical arrangement of Arabic numbers the intensity of each of these needs.

I	II	III	IV	V	VI	VII	VIII	IX	X
10	9	8	7	6	5	4	3	2	1
9	8	7	6	5	4	3	2	1	0
8	7	6	5	4	3	2	1	0	
7	6	5	4	3	2	1	0		
6	5	4	3	2	1	0			
5	4	3	2	1	0				
4	3	2	1	0					
3	2	1	0						
2	1	0							
1	0								
0									

In the beginning of the Table above, are placed the most urgent needs (e.g. food, clothing, shelter, etc.) followed by the less urgent needs (e.g., alcohol, tobacco, etc.) followed by the least urgent needs (travel, entertainment, etc.).

Menger's Table verifies that less intensity of need diminishes value. This is in accordance human psychology.

According to Menger and his followers value is grasped in the mind of an individual who chooses to maximize his benefit or utility (Leen, 1999, p. 108). Consumers make evaluations between their needs and the goods for the satisfaction of these needs. Producers make valuations between expected demand and the cost of the factors of production, which they undertake in

accordance with their marginal utility. The interaction of demand and supply determines the market price. Menger did not interfere into the market's research from the point of view of the "notion of mutual determination and interdependence so—as Hutchison underlines—emphasized by Marshall, Edgeworth, Walras and Pareto" (Hutchison, 1966, p. 147).

For Menger, exchangers in the market try to profit from their bargaining, offering a good of less importance for that of greater importance each one departs satisfied from the market with the utility they desired. And this subjective performance of the exchangers is the fundamental (margin) approach of the new theory (Pirou, 1943, pp. 49 ff.). Free market means just price in the competition.

Because of his ideas concerning value Menger distinguishes three instances in the formulation of prices (1927, pp. 232 ff.):

1. *The formation of price between two individuals.* In this case each of the exchanges enters into the exchange because he believes that the exchange will be beneficial to him. This evaluation occurs through the comparison by calculation of what amount of units of the good possessed by him it is in his interest to exchange for units of the good he desires. If money comes into the exchange then the highest price will be determined on the evaluation of the buyer, and the lowest by the seller. The price that will be realized falls between these two limits.
2. *The formation of price in the case of one seller and many buyers.* In this instance, it is observed: a) If the seller has a singular and indivisible good, then its price is formulated by the marginal utility which it gives to each of the buyers. He who has the greatest need will pay the highest price and displace the rest of the buyers. b) If, however, the seller has more units of the good, then many prices are formulated, the first unit having the highest price because it will be purchased by the strongest of the buyers. However, this happens only when the units of the good are offered in succession. In the case, when the units are supplied simultaneously, the price that will be formulated will be singular, fluctuating between the price offered by the weakest of the satisfied buyers and the price offered by the strongest of the exclusive buyers.
3. *The formation of price in the case of competition of many buyers and many sellers.* In this case the price will be on the one hand lower than the lowest price offered by the satisfied buyer and the lowest price offered by the excluded seller. On the other it will be higher than the price offered by the strongest of the exclusive buyer and higher than the price asked by the most expensive

seller who has affected the sale. In this way, a singular price is formed after competition.

As for monopoly, Menger maintains that the interest of the monopolist concerns: a) exclusion of any probable competitor, b) bringing down price through various methods of improving the conditions of the production of the product. By doing this the monopolist will succeed in increasing his profits. His behavior includes in his sales more consumers. But the monopolist is not completely the determinant of price. He cannot fix price, and if he tries it, he cannot determine the quantity that will be sold at that price.

Menger based his view of the formulation of prices on the marginal utility of those who supply and demand goods through their individual evaluations, ruled by the intensity of the final satisfied use. In addition, Menger via his theory of marginal utility wanted to avoid the weakness of the theory of objective value based on labor or cost of production. Because, in accordance with the objective theory, value is explained through cost or labor. And cost or labor, in their turn, are explained by the cost or labor paid for them. Menger's theory, however, followed by Böhm-Bawerk and Wieser, avoided this weakness since the value of the indirect goods is determined by the value of the direct goods produced by them.

Examining the rest of the economic phenomena Menger also explores the value of *labor*. He observes that labor service is dependent on the satisfaction of needs it offers. The magnitude of labor's reward is determined by the terms that concerns its general economic value. Thus for Menger the value of labor is determined by the importance of satisfaction which it offers. And this importance depends on the last want that would remain unsatisfied, in case production was deprived from labor. Menger observed that the future value of a produced good (direct good) determines the demand for labor. Since the entrepreneur pays less for a factor of production in comparison to its effectiveness in the future. With this logic he pays the worker. Anyway, the wage must cover the expenses for the maintenance of the worker and his family. Labor is not a commodity; it is human contribution for the production of economic goods, so labor is not an economic good similar with other goods (o.c., pp. 211-212). However, its price is regulated in accordance with its value.

This theory is considered weak as it presents labor's wage to be determined by the entrepreneur and not by the worker as well. Therefore it is an one-sided theory. But this theory is parochial as it cannot fix the level at which

wage should be formulated. Menger speaks for less reward but without defining how much lower it will be. At the same time he did not explain why it will be that lower. It is—in my view—an imperfect theory of wage as it explores the phenomenon of the remuneration of labor in a world of perfect competition (which does not involve the world of reality) and it does not take into account the cost of dependence. According to my theory on wages (Houmanidis, 1957, Ch. IX; 1994, p. 159) this is the psychological cost, which arises when the worker balances between pleasure (salary) and pain (labor). When his reward is high, his cost of dependence becomes low and vice versa. This leads to a linear function:

$$a - bx, \text{ where } a, b > 0$$

or

$$\frac{\alpha}{X^\beta}, \text{ where } \alpha, \beta > 0$$

Another function is, e.g., $Y = ax$ where $\alpha > 0$. For example as it occurs between entrepreneur and banker (rate of interest), landowner and tenant (land rent), or state and citizen (tax) in comparison with the state's assistance.

Stigler, thinking about Menger's consideration of the future result of labor, says that we must take into account that the "element of anticipation arises from the fact [...] that production requires time" (1959, p. 152)

Menger expanded his subjective theory to relate it with the reward of capital. Payment of interest is not a reward for abstinence as it cannot create value and abstinence is not a source of capital. "[I]nterest happens in the exchange of the economic good (use of capital) for another economic good (money)" (Anagnos, 1965, p. 9).

Concerning capital, its value is determined by the direct goods produced (in accordance with Menger's theory that the value of the indirect goods is dependent upon the value of direct goods). However, until the direct goods are produced, a period of time is needed in which, so to speak, the value produced by capital is pre-paid as interest. When considering *interest* it is also necessary to take into account the risk in the case of withdrawal of capital for use by another person as a loan (Menger, 1927, p. 197). The businessman from his part is rewarded from the total of the produced product through his business activity, i.e. the profit. This theory presents a weakness, as well, since it does

not explain to us how the interest's level is formulated. Brenner at this point observes: "The plan of the entrepreneur in his view was merely that of a sort of "computer" which calculates the best combination of factors of "production" (1966, p. 117).

Concerning the theory of *profit* Menger presented a deficient theory. Since next to the entrepreneur's work contribution (concerning organization, information, ability, supervision) we cannot disregard another main entrepreneur's contribution. This is his ability to undertake an enterprise, *his entrepreneurial initiative for the establishment of his enterprise*.

As for *land rent* in relation to the Ricardian theory, Menger observed that this theory explains only certain changes. The viewpoint of Ricardo concerning the varying fertility of various lands is certainly correct, but he did not take into consideration that in countries, which have no extensive land for cultivation, land rent appears, too (1927, p. 208). Ricardo also overlooks the significance of marginal utility of the production factors. The price of which is determined by the marginal utility of the goods produced by them. At this point Anagnos observes "Thus, the value of each section of land is higher, than the value of the prospective goods and the lower the value of the complementary goods used" (1965, p.10). The characteristic of land, Menger said, is that it is immovable, limited, not easily increased, of varying quality and therefore rare. So when there is a large demand for products of the land their prices will be higher, hence land rent appears (1927, p. 209).

2.2.1 Some complementary remarks on Menger's theories

Menger is one of the great economists (Schumpeter, 1966, p. 87). He was—as we have already said—nobody's disciple. He had not conceived any sociological or any other form of explanation of history. But he contributed to the further exploration of value and distribution. And above all "without external stimulation and certainly without external help, he attacked the half-ruined edifice of economic theory" [...] "Menger belongs to those who have demolished the existing structure of science and put it on an entirely new foundation. The old theory was vanquished, not only by the historians and sociologists who brushed it aside, nor by the markets of economic and social policies who rejected its practical conclusions, but by one who recognized its inner organic deficiencies and who made it into something new by acting it on

its own ground” (o.c., pp. 82–83 and 87). Anyway, on the other hand, we cannot disregard the fact that Menger—as Krabbe says—“introduced a typical organizational approach in a way following Roscher’s steps” (1996, p. 18).

Stigler remarks about Menger: “He must be considered one of the first economists to introduce the indispensable methodological tool of “static” assumptions into economic analysis. His treatment is, to be sure, primitive and oversimplified in the light of present day accomplishments, but at the time it was a distinct innovation. In this respect, moreover, he was more influential, although less rigorous than Walras and distinctly superior to Jevons” (1959, p. 141). In a few words, to evaluate Menger’s contribution to our field, we can say that he was the first who systemized the subjective theory of value.

The origin of subjective value was first grasped—as we have already said—by Aristotle and then by the authors of medieval times—I already mentioned Duns Scotus and Botero—and some of the authors of the School of Salamanca, as Domingo de Soto (1495-1544), Diego de Covarrubias (1512-1577), and Juan de Salas (1533-1612) (cf. Popescu, 1997). Subjective value also was presented by Galiani (1728-1787), and some of his followers such as Antonio Genovesi (1713-1769) as well as in two classics—as we have seen—who were not strictly connected with objective value: Say and Senior (Houmanidis, 1954, p. 21 ff.).

Menger finally recognized the necessity of historical investigation and generalization, and Schmoller was not completely negative to the deduction. Schumpeter (1954, p. 170) clearly says: “Although Menger opposed these views, he recognized at once the necessity of a historical basis for the solution of a great many economic problems and he considered such a historical basis essential for the investigation of individual cases”. For Schmoller (1838-1917) (“Zur Methodologie der Staats- und Sozialwissenschaften,” *Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reich*, Vol. 7, 1883, and *Zur Literaturgeschichte der Staats- und Sozialwissenschaften*, 1888) the first step is the observation and the research of the economic phenomena and facts. After that we explore what happened (*was stets zugleich vorkomme*) and what we get in searching to find the common in many cases, as well as why it occurs. Schmoller, as Schumpeter says, “recognized not only that some of Menger’s critical observations were justified but also how essentially similar the causal nexus in social and natural science is; and naturally he also described the explanation of social phenomena in the form of cause and effect and in the

form of laws—for him at this time both coincided—as the aim of scientific effort. Indeed we find even the far-reaching proposition that all perfect science is ‘deductive’, that is, that ideal perfection is only reached when it has become possible to explain concrete phenomena completely with the help of theoretical premises” (1954, p. 170).

Competitiveness, says Leen, exists among sellers, but for Menger and his followers, also it exists among the buyers. Production without competition is like planning an economy in a socialist regime. In the case that consumers cannot compete we have a closed cast social organization similar to that of India. (Leen, 1999, p. 1). Sellers and buyers are competing in a free competition. If prices are below the level of equilibrium there is excess demand and producers enhance their market. When prices are over the equilibrium then producers try to isolate the weakest amongst them so as to sell bigger quantities of their product. Austrians paid more attention to the demand aiming so as to attract supply. Thus, for the older Austrian the classical position was faulty as it was tied with supply. Menger like the German Historical School criticized the Classical School because it does not explore the human action. The Historical School examined human action globally, i.e. from the point of view of history as human experience. At this point the debate between Menger and Schumpeter was not so acute. But from another point of view human action was in contrast with the tradition, habits, customs, and ethics. These moral values concern to the Historical School, which was connected with the historical inductive method. Thus, the famous Methodenstreit appeared.

For Menger’s School the principle of naturalism governs human rational action. For Schmoller’s School the principle of voluntarism rules the economy. Menger supports that there are no inconvenient economic laws. For Schmoller the intervention into the economy is logical. For him, no natural economic order exists so government can intervene into the economy to establish whatever it wants. For Menger cost is a presentation of value, for Smith it determines value. For Menger, only utility–value is valid and utility incorporates the cost of production.

The contribution of the School of Vienna was to acknowledge that value is determined by the importance of the last unit of a good for the satisfaction of a definite need. Any unit, which increases the stock of a good, diminishes its marginal utility.

It is right to say that the Mengerian approach includes the basic aspects:

- a. The individual's behavior aiming to get the maximum of the satisfaction with the less effort or sacrifice.
- b. To achieve it, the individual moves into a plexus of conditions and circumstances through economic choices.
- c. This behavior concerns sellers and buyers. Thus, the law of supply and demand is governed by the marginal utility of each seller or buyer in relation to the benefit each one of them aims to achieve from their bargaining.

From this point of view three factors result:

1. The individual's estimation.
2. The degree of individual's satisfaction.
3. The various estimations as well as market possibilities.

Hutchison observes: "Menger was, I think, the first theoretical economist to give some of the great emphasis that it deserves. It amounts to the most serious and fundamental of all the abstractions widely resorted to in a micro-economic theorizing, the abstraction from ignorance and uncertainty" (1973, pp. 21-22).

The Austrian School, as Morgenstern ("Bemerkungen über die problematik der amerikanischen institutionalisten", *Saggi di Storia e Teoria Economica in Onore di Lr. Prato*, Torino, 1931, pp. 338-339) maintains, has not anything in common with Benthamism as well as with his predecessors of the Physiological Schools of Kraus or Enrafels. Menger (says Morgenstern) and his adherents have no relation with hedonism. However, we cannot agree with him. To an extend utilitarianism rules the individual's economic calculation while his hedonistic mentality forces him to consider his pleasure. At this point the Neo-marginalists (R. von Strigl, P. Rosenstein-Rodan, L. Robbins, L. Schönfeld), the so called Neo Austrians (Mayer, Mises, Hayek, Rothbard, Shackle and others) tried to contribute by exploring the economic calculation from the aspects: a) risk, b) uncertainty, c) time, and d) complementarity. It is a fact that a distinction between neo- marginalism and neo-Austrianism does not make a lot of sense. We use two terminology's to emphasize the latter including several extensions about macroeconomic considerations. Summarizing, we can say that the theory of the Mengerian conception concerns the basic aspects:

- a. The individual's behavior aims at getting the maximum of satisfaction.
- b. To achieve it the individual moves into a plexus of conditions and

circumstances through its economic calculus.

c. This behavior (b) governs sellers and buyers.

Thus, the law of supply and demand is impacted by the marginal utility of each seller or buyer. From this point of view, three basic factors result: a) The individual choice (not independent of its culture and tradition in accordance to Hayek) (Leathers, 1990, pp. 161–179); b) The degree of satisfaction; and c) The various estimations and market possibilities (Hutchison, 1973, pp. 21–22).

2.3 Eugen von Böhm-Bawerk

Another founder of the Austrian School was Eugen von Böhm-Bawerk. He was born in 1861. For a period he was honored as Minister of Finance. Professor at the University of Vienna, he worked following the path of Menger. In his work *Grundzüge der Theorie des Wirtschaftlichen Güterwerts* (1880) he speaks about immaterial and material goods making a distinction between them to present the concept of the economic good in accordance with Menger. His most famous work is *Kapital und Kapitalzins* (1884–1889) where he explores the same doctrine. Böhm-Bawerk also exercised vigorous criticism against the Marxian theory of value in his work *Zum Abschluss des Marxschen Systems* (1896). He passed away in 1914. In 1890, he retracted the Methodenstreit as Pellanda says about the debate between analytical–deductive and historical–inductive methods (2001, p. 10). Concerning value he maintains marginal utility is the basis of economics. He proposes a deeper analysis of subjective value in relation to the exchange value of goods. For Böhm-Bawerk marginal utility is the basis of economic theory and not of one that is concerned with the theory of value only. Marginal utility for him determines human economic action and predominates any economic theory ([1884], 1903, Vol. II. B. III, pp. 237–248). cf. Housmanidis, 1954, p. 35). The significance of a good for the satisfaction of an individual's want depends on man's desires and the possibility of the good to offer satisfaction. These qualities of the good consists of its value in use for an individual, which increase or decrease in accordance with the intensity of the existing want for satisfaction. Intensity means degree of utility in accordance with a unit of a good. And Böhm-Bawerk, like his mentor, Menger, presents a Table starting from the Latin I until X and with vertical Arabic numbers starting from 10 to 1 (o. c., Vol. II, pp. 236–237 and 242–244).

In accordance to Böhm-Bawerk we have three basic kinds of value: a) *the subjective value in use* when a definite want of an individual is satisfied with a good, for example the book of an intellectual; b) *the subjective exchange value* which is the quantity of a reserve of goods belonging as property to an individual who wishes to sell them, for example, the books of a bookseller; and c) *the objective exchange value* or price which is formulated in the market because of estimations made by buyers and sellers.

Concerning the cost of production, he considers it as indirect utility sacrificed for the production of a desirable good. We decide to produce a good only if the sacrificed utilities are less than those enjoyed from the consumption of it. He also observes that if we can produce with the same factors of production different goods, we shall prefer the production of the good that would offer us more utility. As well as Menger, he accepts that the total utility of a stock of goods is determined by the addition of the utility of each unit of the same good.

For price he says it is depended on supply and demand. He presents the example of bilateral competition between the subjective evaluations of buyers and sellers in a market of horses. If we have ten buyers and eight sellers of horses, he says, the strongest buyers will try to exclude the weakest from the bargaining. The sellers on their turn will do the same. They exclude the weakest of them, i. e., the excluded producer with the higher cost. Herein below we present a Table of buyers and sellers of horses who estimate the horses in florins (1884, Vol. II, B. III, pp. 361-373, cf. Cornélissen, 1913, pp. 120-122).

Buyers			Sellers		
B1	Estimates the horse	300	51	Estimates the horse	100
B2	Estimates the horse	280	52	Estimates the horse	110
B3	Estimates the horse	260	53	Estimates the horse	150
B4	Estimates the horse	240	54	Estimates the horse	170
B5	Estimates the horse	220+	55	Estimates the horse	200+
B6	Estimates the horse	210-	56	Estimates the horse	215-
B7	Estimates the horse	200	57	Estimates the horse	250
B8	Estimates the horse	180	58	Estimates the horse	260
B9	Estimates the horse	170			
B10	Estimates the horse	150			

In the above Table the first five will realize the business because each of them estimates the horse or the florins which are offered as less in comparison with the good (horses or florins) which he sells or buys. Thus, the price would be formulated between 210 and 215 florins i.e. the price would be higher than the price which is offered by the weakest of the excluded buyers and lower than the price which is offered by the cheapest of the excluded sellers.

2.3.1. Böhm-Bawerk's theories on distribution

For Böhm-Bawerk, land is a factor not transferable between different industries. The landowner plays a different role from that of the capitalist. The landowner is not strictly competitive, since land cannot be increased due to its place, fertility, and quality. His land property is a capital of a particular form and use, which offers him *land rent*. Capital increases productivity, as well as labor. Böhm-Bawerk exploring the phenomenon of *wages* mentions that the value of labor—as far as the other factors of production are concerned—is determined by another factor of production. This factor can replace labor and which is retired from other uses of less return since the possibility of substitution was conceived as a prerequisite.

Capital for Böhm-Bawerk represents an amount of goods used to acquire other goods. Capital according to him is distinguished as: a) The amount of goods that are used for the satisfaction of personal needs; and b) The amount of goods that have a social importance as they reinforce production. Capital is furnished from an individual to another as a loan to use it for transactions, obligations, rewards, risks, etc.

For Böhm-Bawerk the value of the present goods is estimated in accordance with the nature of the present needs and "the existing provision for their satisfaction" (Anagnos, 1965, p. 51). He distinguishes three main reasons for the remuneration of capital: a) Different conditions of the need of capital at present and in the future; b) Under-valuation of the future so as to give a super demand for productive loans; and c) The technical superiority of present goods in relation to future goods. The questions that arise are how we have a super demand of loans and why present goods have technical superiority in relation to future goods.

According to Böhm-Bawerk the reward of the factor capital must be equal to its marginal utility. The lender concedes capital to the borrower after

taking into account the possible reward in the future. For him capital results from saving and production. The former contributes to its accumulation but not the latter. Nonetheless, production is the source of capital and saving occurs for the formation of capital.

Böhm-Bawerk accepts as we have already said that present goods are worth more than future goods. And the value of the latter's depends on the intensity of future satisfactions. But "future" means time, and time is always related to risk. Thus, we can say that the *interest* is also a kind of remuneration for risk. He considers those since the future goods are more in number than the present goods the former have less value than the latter. Böhm-Bawerk accepts that through the present goods we get security and direct satisfaction. Thus present goods have higher value than future goods. Although present and future goods have the same quality (Heijman, 1991, p. 63). He does not explain why an individual takes into account this surplus of goods in the future without knowing what his future needs are. In other words, why present goods are supposed to have more value in comparison to future goods. He also does not make any distinction between short-term and long-term interest.

For Böhm-Bawerk, capital is an indirect good related to a period of time. It is a total of non-final goods participating with labor in production to strengthen land returns. Whoever demands capital is obliged to pay interest to its owner. This reward does not belong to the productivity of capital but it concerns between sacrificed goods and required goods. At this point emerges the point of his theory that introduces the psychological law according to which man estimates present goods more than future goods. Based on the just-mentioned theory, Böhm-Bawerk paid more attention to the psychological factor and he devaluated at a point the importance—as we said—of the productive-technical process.

Shackle evaluating Böhm-Bawerk's contribution to the theory of interest observes he was the first to propose the exact theory concerning interest. This because he perceived the "role of time in the economic process" (1954, p. 6). Something I can write here is that his theory of interest was ingenious, but he contributed more, in my opinion, to the formation of capital.

2.3.2 Complementary remarks

Böhm-Bawerk combined his theory of interest with *profit*. He maintains that the entrepreneur proceeds to different combinations to maximize his profit.

Thus, the entrepreneur transforms indirect goods to direct goods, which are of greater value since they satisfy present wants. As mentioned above, the question arises of how it is possible to determine means of production and time before the value of future goods is determined. The present goods in accordance of Böhm-Bawerk have greater value than future goods. Thus profit is justified because the entrepreneur produces present goods. This profit can be coincidental or differential so that the entrepreneur also receive profits from different existing conditions prevailing in the market, and his successful combinations, to get a greater difference between cost and price. Böhm-Bawerk also observes that there is a great profit with a monopoly.

Böhm-Bawerk, in his research on value, uses the psychological element to propose an explanation of economic phenomena. From this point of view, he abandoned the production (Kuenne, 1971, pp. 23 and 25). Nonetheless, for Böhm-Bawerk, prices in a free competition are adapted to the cost of production when the last marginal producer is rewarded by the sacrifice under which he was submitted to pay the different factors of production in relevance to their marginal utility. An approach which will be adopted by Wieser (1889, pp. 27 ff.). Hicks does not express any objection concerning Böhm-Bawerk's aspect between an individual's calculation concerning the present and the future. He says, "all the input is utilized at one given date and all the output comes to fruition at another given date" (1939, p. 222). He also observes another more true aspect, than the effect of a change in interest that can change and postpone entrepreneur's decisions. In this period of time the technical methods and risk interfere because "risk coefficients increase as the scale of output expands. But if we suppose that the rate of interest falls the entrepreneur undertakes some of these extra processes which were not profitable previously" (o.c., p. 224).

2.4 Friedrich von Wieser

If a visitor would be in the garden of the University of Vienna, he would see different statues and amongst them are the busts of the three founders of the School of Vienna. We have already referred to the theories of two of them, Menger, the leader, and Böhm-Bawerk. The third is Friedrich von Wieser, the ideas of whom I shall discuss here below.

Wieser was born in Vienna in 1851 and died in the same town in 1926.

He took his first academic courses in Vienna, where Böhm-Bawerk was also a student and with whom he was connected in a sincere and friendly relationship. In the University of Vienna, Wieser studied Roman Law and History, and later Economics. In 1903 he was elected Professor for Menger's chair. Between 1922 and 1925 he taught Sociology. In 1917 he was elected senator and two years before the collapse of the Austria-Hungarian Empire he was elected Minister of Commerce. In the University of Vienna he taught the theory of marginal utility which he first called *Grenznutzen*.

Between his main works I refer herein: *Über das Verhältnis der Kosten und Wert* (1929) in which he explores for the first time the phenomenon of value under the influence of his leader Menger, *Über den Ursprung und die Hauptgesetze des Wirtschaftlichen Wertes* (1884) in which he calls marginal utility *Grenznutzen*, *Der natürliche Wert* (1889), *Theorie der gesellschaftlichen Wirtschaft* (1914) and "Das Geld", which was published in the 4th edition of the *Handwörterbuch der Staatswissenschaften* in 1927. In 1929 his students published a collection of his main articles under the title *Gesammelte Abhandlungen*.

Wieser is also a subjectivist and maintains that value is determined by the need for the last unit of an economic good and which need remains unsatisfied. Wieser considers the total value of a store of a good as resulting from multiplying its units with its marginal utility (Wieser, 1893, p. 27 ff.; Pirou, 1945, pp. 112-155). In accordance with his thought, we shall have the a table as follows:

Number of Units	1	2	3	4	5	6	7	8	9	10	11
Marginal Utility	10	9	8	7	6	5	4	3	2	1	0
Total Value	10	18	24	28	30	30	28	24	18	10	0

(The eleventh unit gives zero utility because from the tenth unit appears satiety).

At the fifth unit the total value reaches its peak point, at the sixth it remains the same and from the seventh it is going down until it reaches the zero point. From his analysis, Wieser presents to us the existence of two elements: the positive and the negative. The first results in the successive addition of the units of the marginal utility of the good so as to have the sum of a greater utility

with the increment of the reserves of good. The second becomes upon the subtraction from the total utility the positive element. That is because with the increase of the reserve of the good we get a greater sum of utility but in tandem our satisfaction from the good decreases.

Number of Units	1	2	3	4	5	6	7	8	9	10	11
Marginal Utility	10	9	8	7	6	5	4	3	2	1	0
Total Value	10	18	24	28	30	30	28	24	18	10	0
Positive element	10	19	27	34	40	45	49	52	54	55	55
Negative element	0	1	3	6	10	15	21	28	36	45	55

By observing the above table, it is obvious that we arrive at a *paradox*. As the number of units increases, our desire of the good decreases. In other words, utility differs from value. For this reason, the total value of units instead also to be a semi of marginal utilities, for example $10 + 9$ and so on so, with the increase of the units of the total utility also to increase so we have a diminishing process. To make it clear. If we had only one unit of marginal utility 10 the total value should be coincide with the marginal one. And if we had two units of marginal utility 9 the total utility should be $(2 \times 9) = 18$ and so on. Thus, we see that the total utility of a reserve of good is diminishing. For Wieser, utility diminishes, because of the increase of the quantity of good wanted. The per unit utility continues to decrease while the quantity increases until utility becomes zero. According to Jevons at this point utility becomes disutility. Thus, says Commons, the ‘paradox of value’ appears. Since value is a multiple of the utility per unit and the quantity of units. Each of which is an independent variable (Vol. I, p. 382). Wieser distinguished, except for the subjective value in use, the value in exchange, which results objectively from the different subjective estimations in the market between producers and dealers.¹

¹ The late Palomba (o.c., pp. 71-71) presents to us a number of bargained goods, for instance, if the i marginal utilities are P, Q, R and their prices are p, q, r the comparison of the pondered marginal utilities will be: $P/p/Q/q/R/r \dots$ and will be presented as $P:Q:R = p:q:r\dots$, which means that the marginal utilities of the different goods are related to their market prices which are analogous to their corresponding marginal utilities.

$$p = KP$$

$$q = KQ$$

$$r = KR$$

...

From 1889 on, Wieser formulated a more realistic law of good's use concerning the equality of the marginal utilities. Wieser says that goods of different utilities are used by an individual so as to get in any use the most marginal utility without to lose a marginal unit in relation with a higher of another use. In other words, each unit of any good is used in such a way that in the whole stock no unit would be realized at the expense of a more particular unit, which is greater. This is the so-called law of Wieser (Perroux, 1943, p. 212). Wieser's law concerns the consumption and production. It is a static consideration concerning an individualistic economy.

Wieser says that to produce a good, on the base of experience, we combine in the most profitable way the factors of production. For this reason—says Wieser—we substitute the most expensive factor with the most productive. Wieser divided the factors of production into two kinds:

- a) The *specific* (*spezifische Produktivmittel*), which are used for the production of only one good, taking into account the marginal utility of the good which is produced and
- b) The *common* factors that are used for the production of more than one good, taking into account the lowest of the marginal utilities that are produced. This happens in case we recognize a greater reward for the factor which is used as common (easily increased) we would have a greater supply for this factor and thus through competition would be formulated the lowest level of its reward. For example, labor is a common factor and since for a specific task many workers are participating who can substitute each other, the *wage* would be equal to the contribution into the production of the last productively employed worker in the work (the marginal worker). At this point we observe that Wieser more or less conceives man as a producing machine whose wage depends upon his productivity.

Wieser rejects the wage fund theory, because according to him, does not determine wages, since 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" (1956, p. 372). In case we have low wages, we should have the increase of demand of labor hands, but in case of higher wages entrepreneurs use more capital and less labor.

Wieser also explored the cost of reproduction that is the value we must sacrifice to produce a good, with the presupposition that we are able to produce

it. Wieser does not disregard the side of production but his theory starts from demand and is based on demand.

2.4.1 Complementary ideas and aspects on Wieser's theories

Production for Wieser is an estimation of different combinations between sacrificing factors, to acquire goods of greater utility. For this reason, we must pay attention to the various relative products (*Verwandte*) which can be partly produced by the same means of production in comparison to the good, which can offer us the greater satisfaction.

Menger maintained that to get the value of a factor, we must presuppose loss of it so as to calculate the diminution of the total value of the product of all factors. For Böhm-Bawerk, the value of a factor of production is determined by the value of the factor which can substitute it and which is retracted from other less important combinations of production to the purpose of replacing it since we took into account the presupposition of its substitution.

The above *theory d'imputation (zurechnungs Theorie)*, as it was conceived by Menger and Böhm-Bawerk, is basically wrong. This because we cannot calculate a priori the contribution of a factor of production. We also cannot disregard the fact that the effectiveness of a factor of production is dependent on the other factors of production with which it is combined. Wieser, however, maintained that a factor of production has value because it is combined with other factors. We must find its contribution to the value created (Wieser, o.c., p. 88). Thus, we must solve a mathematical problem of many differential equations so as to discover the value of all the unknowns.

Wieser also considers that the factors of production are a priori definite, and their final demand is unlimitedly flexible, so that the price cannot be impacted by the different re-adaptations of the product (Stigler, o.c., p. 177). Wieser argues that prices are fixed depending on the utility of the exchanged goods. The seller offers a utility, which is lower than the utility he expects to get, and the buyer in his turn buys a good with a greater utility for him than the good he pays to get it. This utility means the sacrifice of some factors of production of the good that the buyer or seller must pay. The buyer pays in accordance to his income. He does this through various calculi in relation to the importance of the last unit of this income. Consequently, price is formed in these two ways of estimation being equal or superior to them.

According to Wieser, cost is a prerequisite of value (indirect utility), because we never produce to have less than we have paid to the different factors of production. Prices in free competition are adapted to the cost of production when each producer is rewarded for his expenses for the entire output. The last producer anyway covers the rewards he paid to the factors of production according to their marginal utility.

In the case of mass production, the marginal level of prices is determined by the purchasing power of the individuals on low income. In case of luxury goods the level of their price would be fixed by the purchasing power of people having high incomes. Thus, Wieser conceived the *stratification of prices* (o.c., p. 188 ff.). In other words, Wieser included in his price theory social criteria. From this point of view, we can say that, by taxation, a part of high incomes could be moved to the lower incomes.

Wieser also explored monopoly (o.c., p. 10 ff.). The monopolist for Wieser has the possibility to fix his marginal supply at a higher level than in free competition. For this reason, the monopolist receives more profits than the producer in free competition does.

Concerning the concept of capital and its reward, Wieser considers it as a value: a) paid for production expenditures; b) owned by the entrepreneur himself; and c) as loan capital, which also concerns the circular and fixed capital.

According to Wieser savings are used for the formulation and the growth of capital. These savings are made due to abstinence in spending. As capital is accumulated the interest rate diminishes, and vice versa. *Interest* is the reward of capital as it increases the productive possibilities of the producer.

Wieser conceived the cost of production—as we have already said—as an indirect utility, which is satisfied to get a greater utility. Prices for him are formulated into a free competition between buyers and sellers aiming to the maximum their convenience. For this reason, Fanfani characterized the main principle of the Austrian School as *naturalismo di convenienza* (1960, p. 54). Each factor of production is recommended according to this principle.

Wieser took into account the cost as well as *the opportunity cost* and *complementary goods*. Brenner writes about opportunity cost: "opportunity cost means in Austrian thought that "consumers are opposed to be continually meeting the satisfaction of one of their wants against the satisfaction of another" (1966, p. 116). Wieser has also contributed the theory of value of

money, which is not analyzed in the present work. He referred to the phenomenon of any exchange guided by marginal utility.

Wieser in his theory of distribution did not omit to explore the phenomenon of profit. For him *profit* is formulated in relation to: a) the number of entrepreneurs, b) the undertaken risks, as well as the remuneration of the entrepreneur as organizer of the enterprise. Wieser omitted the important contribution of the entrepreneur's initiative to grasp the enterprise, which needs talent, fervor, and ability. Wieser speaks of conjectural profits without disregarding the impact of technology and innovations on profit, which create differential benefits for the entrepreneur. For Wieser through competition we have an adaptation of price to cost of production and the impact of competition means that everyone is trying to do his benefit under the circumstances.

Menger, as well as Böhm-Bawerk, more or less disregarded the state's assistance. But Wieser followed another road. He accepted that up to a point the *State's assistance* is in favor of the market, leaving to self-evaluation, the regulation of exchanges and competition. For Wieser, in a social economy, the state cannot be excluded, as it is the supervisor and controller of private households in the interests of society. He also rejects the free trade doctrine of the Classicists. In international conditions (being in different countries) individuals behave differently. They are motivated by different socio-historical powers (Anagnos, 1965, p. 20). Like Menger and Böhm-Bawerk, Wieser analyzed production from the point of view of cost and imputation. Yet he directed his thought to consumption, so as to avoid the faulty way of the Classical School, which directed its attention towards the cost of production. In my opinion that was inevitable as the Classicists were based on labor or cost to explain value, while Menger, Böhm-Bawerk, and Wieser supported the theory of marginal utility.

2.4.2 Concluding remarks

We have exposed, with a critical view, the different theories as the older Austrian School approached them. Austrians in general accept the principles:

- a. The utility of each unit of a good is measured by the last consumed unit e.g. its last intensity of satisfied need.
- b. The cost is incorporated into utility.

- c. The value of goods is determined by the value of the direct goods produced by them.

The Neo-Marxian Nicholas Bukharin (*The Economic Theory and the Leisure Class*, 1927) exercised a rigorous criticism. For him marginal utility concerns the psychology of the consumer-renter and finally expresses the ideology of the bourgeois class. Marxian theory expresses the value of different goods according to the attitude of the producer-worker (the ideology of his class). Blaug (1973, p. 57), from his point of view, rightly observes that Bukharin is mistaken to affirm that Menger, Jevons and Walras worked having in mind to attack the Marxian doctrine. He maintains that the first volume of *Das Kapital* was published in 1867 and its translation into English was published in 1887. Concerning *Notice of the General Theory of Political Economy* of Stanley Jevons—says Blaug—it was written in 1862 and its publication was realized in 1863. It shows him, "in full possession of the theory of marginal utility and even of the marginal utility of capital" (1983, p. 307). Marshall from his point of view—continues Blaug—began his main work in 1867 and an outline of his system appeared in 1872. And besides that, there is no doubt Jevons, Marshall, Menger, Walras never heard of Marx before their 'formative years'. Neither other writers such as Böhm-Bawerk, Wicksteed, Pareto, and Wieser wish to fortify their theories and reject Marx's theory. Of course, in the political field, the theory of value has a predominant place in political socialist thought, which supported the labor - value theory as well as the labor - force theory. Anyway, the fact that marginal theory cannot be familiar with a kind of socialism is not completely disregarded to Wieser's aspect of the *stratification of prices*. It is from this aspect of Wieser's that we can deduct for the transfer of income from the rich to the poor (as the latter have greater marginal utility than the former). And this aspect can be connected to today's stream of humanistic economics.

The theory of marginal utility as developed by its followers opened new horizons in our science. Schumpeter who endeavored to combine all its currents and to confront critics exercised against it, maintained that in an ingenious way, marginal utility effectively explored the phenomenon of economic value. "The representatives of the theory of marginal utility [he says] from their point of view, perceived much more clearly what the classical economists had done, that conclusions depend on the concrete data which themselves must be derived from case to case, from the material of the facts of place and time, and cannot

be established once and for all in a definite manner. This knowledge, which certainly demands humility from us, assumed in the parlance of the opponents, the form of a charge that the theory of marginal utility was 'barren' " (1954, p. 189).

It is true, that the theory of marginal utility starts from the valuation of given quantities without examining the influence of the stock of other goods on them. We can also say that it disregarded the side of production in favor of the demand side. It is also omitted the exploration of technological efficiency. Bertrand Nogaro argued it is impossible to calculate exactly the comparative utilities. The main weakness of marginalists is that they disregarded the significance of cost in the formation of value (1944, pp. 233 ff.). The German militant of Chair's Socialism, Lexis, supported the fact that the law of diminishing utility and the law of saturation have only theoretical value. They are deprived of practical application (Sideris, 1954, p. 205).

Jean Marchal maintains that the Mengerian Table is faulty because the individual can choose his wants irrationally. The individual does not need to know under what social condition he is living, or about the impact this condition may have on his choices (Marchal, 1949, pp. 770-771).

The theory of marginal utility was a great invention of the human spirit. Schumpeter rightly emphasizes, "The so-called theory of marginal utility has changed the inner structure of modern theory into the new ferment which is something quite different from that of the classical economists" (1954, p. 184).

The theory of subjective value-marginal utility accepts man within the world of economics. The same theory conceived the abstract in favor of the concrete, the imperfect and real in favor of the perfect and ideal (Houmanidis, 1978b, p. 20). Certainly the Austrians contributed to our science and created the marginalist revolution. The Austrians underlined the significance of the elements of time and risk and conceived equilibrium as a result of free competing individuals. They did not disregard the cost of production, which however is considered as a prerequisite and precondition of value. In England, Jevons with a small paragraph presented the formation of subjective value:

*"Cost of production determines supply;
Supply determines final degree of utility;
Final degree of utility determines value."*
([1871], 1970, p. 187).

The question, which appears herein, is why cost of production or labor does not determine value. Jevons clearly explains that labor differs in quality and efficiency. For Ricardo—he says—labor affects supply and supply determines value. Thus from Ricardo's thought escaped the concept of final degree of utility. He founded his theory on quantities of labor considering it as one uniform thing. Though it differs in quality and efficiency.

Although the Austrians elaborated economic phenomena from the static side of view, in their writings is hidden a quasi-dynamic element. Since the Austrians explored above all human behavior. Knight rightly observes, "the purposes of men are inherently dynamic and changing" (1935, p. 101). Human wants do change, and their development is more important than their satisfaction (1935, pp. 101 and 103). Men by their action create new needs and in the course of their lives acquire more and better wants and goods. This is the economic problem of men who are the actors of their welfare. This endeavor is one of the basic motives for human civilization.

The Austrians explored all these subjects with originality and opened new horizons in economic thought. However, the theory of marginal utility presents some basic weaknesses (Houmanidis, 1954, 1978a, p. 20) as follows:

a) It does not consider that the supply in some case (for example advertising) could also be imposed on demand. In addition Nogaro observes we cannot exactly judge a scale of utilities (1944, p. 229 ff.). Cassel says that before being informed about the price of a good we don't know what quantity of it we would consume and consequently we don't know which is the margin of utility. Thus, if marginal utility and price coincide, it is impossible to have as primordial the former (Sideris, 1955, p. 206). R. Liefmann ("Hermann Heinrich Gossen und seine Lehre," *Conrad's Jahrbücher für Nationalökonomie und Statistik*, Vol. XL, 1910, pp. 483 ff.) observed that the marginal thought (*Grenzgedanke*) was proved very important for economic theoretical research. However, the concept of marginal utility cannot be conceived without the margin of return (*Grenzertrag*) (Pirou, 1994-1996, pp. 110 ff.). Albert Aftalion ("Influence du coût coté de l'utilité comme fondement dernier de la valeur," in: *Mélanges Truchy*, Paris 1938) despite being a supporter of the theory of marginal utility, observes we cannot disregard the cost of production. Böhm-Bawerk replied to him in favor of the marginal utility (Nogaro, 1944, pp. 79 and 231 ff.; cf. Sideris, 1953 p. 207).

- b) The consumer is unable to proceed buying without a precise calculation of the utilities under comparison.
- c) In the comparison between desirable goods, the theory of marginal utility does not take into account the social environment, which impacts on individual's choice. Because in accordance with the Austrians we have—in my opinion—a quasi Robinsonean model.
- d) The table of utility has no practical significance—the individual coming to market cannot have in mind a similar rational table.
- e) The demand for a good or for a certain stock of goods does not pass through a rational economic calculus that takes into account at the time of estimation the quality and the quantity of other goods as substitutes.

Menger, the leader of the Austrian School, was the man who debated with Gustav von Schmoller about the economic methodology, which was the corner stone of the new theory in economics. The famous Methodenstreit is something more of a dispute between two economists of even international reputation. It was the beginning of a new effort towards the solution of the economic problem. The starting point is the abstract theory. The subsequent step was its application in real life.

The Historical School tried to solve the economic problem and to explain economic phenomena from the point of view of the evolution of economic life. Thus, it also abandoned the speculation of the interpretation of economic phenomena. The Austrian School, from its own side, after the analytical-deductive method, tried to analyze the psychology of the individual in the market without further interference in human action. This honor concerns to Neo Austrians. Schmoller does not reject the deductive method completely. Marshall from his part tried to reconcile the two Schools but he did not grasp the importance of cultural and social element in an individual's estimation. Thus, he disregarded the significance of the element "society". Edwin Seligman tried to erect his theoretical building of the concept of *social value* but he was detached from the individual's estimation, preference, and choice. He anyway pursued a more thorough research on the social framework. Thorstein Veblen and his followers, the institutionalists, were devoted to the interpretation of the behavior of different social groups and more or less abandoned the economic mechanisms (Pirou, 1943, Vol. III, pp. 11 ff.).

Böhm-Bawerk followed his leader Menger in the psychological way without interfering more deeply into the exploration of production (Kuenne, 1971, pp. 23-25).

Another issue explored by the Austrians was the problem of imputation. For Wieser there are two conditions: The first concerns the value of the factors of production that is equal to the product that is produced by these factors. The second condition concerns the combining of the factors of production in a constant ratio that varies by unit. For Frank Knight, these two conditions essentially coincide (1925, p. 55).

The Austrian School and the Mathematical School or School of Lausanne have not taken into account the impact of history and the institutions on economy, just as they have not achieved a distinction between statics and dynamics (Pantaleoni, Preface to Menger, 1927, pp. XIV).

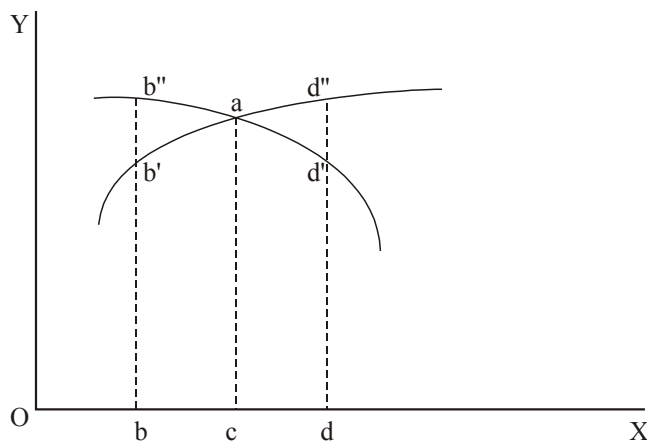
For the Austrians, the maximum of pleasure is achieved in free competition directed by hedonistic behavior², with less cost of pain for the producer and the consumer. This behavior means homo hedonicus, self-benefit, and individuality. Prices are formulated in the market according to economic behavior based on the above mentioned principles. "Relative prices are determined by marginal utilities", thus "The magic formula of the marginal value seems to have resolved all the major economic questions" (Katouzian, 1980, p. 15).

² "The hedonists [says Piettre] tried to make Political Economy 'Pure Political Economy'" giving to this science the most abstract concept (1965, p. 80). But this methodology did not mean hedonists ascribed to a technological aim so as to combine the theory with reality, in other words, the achievement of rational application (Gilles-Gaston Granger, 1955, p. 4). The hedonists were criticized as having a strictly consideration of the individual's behavior. This aspect—I think—is very narrow as Menger and more Wieser at a point had at least a favorable attitude towards history and social element. Böhm-Bawerk, the more individualist of the two mentioned Austrians, declared "It should be stupid in our days to mention that institutional and social measures don't impact on the distribution" [...] "but it should be equal a stupidity to maintain that" [...] "the social environment is the decisive and unique term" (Böhm-Bawerk "Macht oder ökonomisches Gesetz?" *Zeitschrift für Volkswirtschaft, Sozialpolitik und Verwaltung*, Vol. XXIII, 1914, pp. 205-271, is ref. by Anna Pellanda "Power or Economic Law?" *Rivista Internazionale di Scienze Economiche e Commerciali*, 1988, Vol. XXXV, N° 45, p. 344).

Let us see the formulation of price according to the principle of the School that is based on these basic axioms:

- a) The formation of price depends on the number of buyers and the number of sellers,
- b) The formation of price depends on the *quantity* supplied of the good at a definite price and the *quality* of the good which is demanded at a definite price,
- c) The formation of price depends on the *marginal utility* of the good for sellers and buyers.

In the figure below on the axis OY are presented quantities, and on the axis OX the prices, so we have the prices: ob, oc, and od. The curves of supply and demand intersect at the point of price oc, which is the equilibrium price, and of quantity ac. Any other price is not convenient for the exchangers. If price could be od, then the supplied quantity dd'' will be greater than the demanded quantity which is dd'. And if price was ob and the demanded quantity bb'', then the supply would be increased so that sellers could include more buyers. (Charitakis, 1940, pp. 64-65).



Another basic principle of the Austrian School is that between two exchangers the price in a free competition satisfies equally both of them: their marginal utilities do differ.

The Austrian School adopted subjectivism when the old Classical School was based on objectivism e.g. labor or cost of production. Both used the

same method, and were based on individualism. The Classical School has not explained the paradox posed by Smith. The School's interpretation of value was faulty, because it was based on labor or cost. Its interpretation of value concluded by providing the same explanation for the value of a good based on labor and the value of labor explained by the labor paid for the means of its subsistence. Another weakness of the School was it was unable to explain why goods with many hours of labor spent on have less value than others with less labor spent on for their production. As well as why the entrepreneur prefers the production of good A and not of the production of good B.

On the other hand the theory of marginal utility—as we have already observed—was mistaken by taking into account only the individual psychological point of view, and disregarding the impact of the social context on the individual. For the Austrians, an individual hedonistic instinct governs economic action. For the Institutionalists the instincts are the result of social action, which appears in a human society as a biological, cultural, and legal unity. The instincts change with the change of social reality that means institutions, which at their turn change the human behavior and determine the development of the selective activity. In this institutional environment are formulated the different values from one generation to the other, in a frame of futurity and expectations. The institutionalists, however, disregarded more or less the human individual action. The neo-Institutionalists (C.E. Ayres, K. Galbraith, G. Myrdal, and others) tried to examine not only the sociological element but until a point the individual economic calculus element, as well. Thus, nowadays, economic theory try to conciliate these two opposite views on economics in favor of our science. Another weak point of marginal utility is that every member of a society is not rational and does not move with a table of gradual intensity of needs.

In our view both the mentioned theories (objective and subjective) also present weakness, since there is not a right measure of labor or utility. Some prominent economists tried to measure utility: For example E.S. Slutsky ("Sulla Teoria del bilancio del consumatore," *Giornale degli Economisti e Rivista di Statistica*, Series 3, II, 1915, pp. 1-26) and W.E. Johnson ("The pure theory of utility curves," *Economic Journal*, Vol. XXIII, 1913, pp. 409 ff.). These writers were followed by J.R. Hicks and G. Allen ("A consideration of the Theory of Value," *Economica*, 1934), and H. Schultz (*The Economic Measurement of Demand*, Chicago 1938). Pioneers of the same research were Auspitz and

Lieben (*Untersuchungen über der Theorie des Preises*, Wien, 1899, Irving Fisher (*Mathematical Investigations in the theory of Value and Prices*, 1892) and R. Frisch ("Méthodes Nouvelles pour mesurer l'utilité marginale," *Revue d'Économie Politique*, 1932) (cf. Houtmanidis, 1999, p. 533).

Marxists and Keynesians also insisted on their idea that ordinary and usual labor is a measure of labor. The Austrians from their point of view maintained the margin of utility into the unit of quantity. Commons, to avoid the difficulties that exist concerning the measure of utility, adopted the concept of scarcity-value and in essence scarcity-utility (1959, Vol. I, p. 16 ff.). Despite the endeavors of some great economists as Fisher and Hicks, nobody—in my view—succeeded to measure utility. We cannot escape the fact that Walras declared utility is not a measurable magnitude. Hicks (1939) from his side proposed the *marginal rate of substitution* to measure utility. If we ask the question: "Money, does it not measure utility?" The reply is: "And how is measured money's utility?" Stigler, concerning the contribution of Hicks, says it is valid only in case the utility of a good is independent of the utility of the other goods and especially with regard to their substitution and complementarity (1950). For us the existence of a unit to measure utility (that means individual estimation and calculation) is not necessary. The concept of (scarcity) utility is enough, as Walras rightly maintained.

We conclude this chapter of our historical exploration concerning the Austrian School, and we think we must furnish the reader with another chapter, which includes the ideas of the neomarginalists—Neo Austrians.



"An economic organization must employ its available productive power in part to provide for current needs of society and in part to provide for future growth"
—Frank Knight

3 THE NEO AUSTRIANS

3.1 The new horizons in the evolution of marginalism

The older Austrians prepared the soil for their successors the Neo (Modern) Austrians. The latter advanced with their research concerning human action ruled by economic calculation. They were based on their theory of marginal utility and they accepted "value in use as a fact of individual psychology". Thus their starting point became associated with psychological and philosophical Hedonism (Schumpeter, 1954, pp. 190-191).

Neomarginalists (Lionel Robbins, Leo Schöpfung, Richard Strigl, Rosenstein–Rodan) and the Neo-Austrian economists (Hans Mayer, Ludwig von Mises, Friedrich von Hayek, G.L.S. Shackle, M.N. Rothbard and others) tried to improve the theories of the School of Vienna based on a new consideration of marginalism. Herein we don't make any distinction between the different currents, and origin of country of any just-mentioned economists, as it is acceptable today to define them all as Neo-Austrian subjectivists.

For the first marginalists, human action was based on human wants, and, more generally in a wider point of view, on desirability. However, for the Neo-Austrians, human economic action was based on time as an economic good as well as a choice ruled by economic calculation. Sir Lionel Robbins explored the field of scarcity in relation with human behavior. He interferes in the human economic behavior to find the relevance between endeavors for the satisfaction of needs. He also extended his research in investigating the frame in which an individual is acting, e.g., ethics, morals, religion, political influence

and so on. This economic calculation is the more thorough study on the behavior of the economically acting individual, who is moving with a rational way to satisfy his needs. The Neo-Austrians examined possibilities into which the logically motivated individual acts. These possibilities also concern the cost of production, which was not ignored by the older Austrian School, which considered it as a term of value-indirectly sacrificed utility. Aristotle who was the father of subjective value (Houmanidis, 1954, pp. 20 and 28) first opened this path—as I have mentioned above. Aristotle was the first to examine cost as a prerequisite of value and not as a determinant of value.

The fundamental principles of Austrians were grasped as follow:

- a. The value of a good is determined by its marginal utility (*Grenznutzen Theorie*).
- b. The value of the factors of production is depended upon the marginal utility of the produced goods.
- c. The combination of supply, demand, and price tend to achieve with an automatic way the equality of subjective marginal utilities of goods.
- d. The value in exchange of goods is a subjective estimation i.e. the utility which is combined with the estimation of exchangers.
- e. The value in use is a fact of individual psychology and "the value in exchange is based on alternative estimates of value in use" (Schumpeter, 1954, p. 194).

The Classicists from their point of view considered cost as a quantity of goods or factors of production or labor. Marginalism's position concerning value was subjectivist and conceived cost of production as an indirect utility. With von Wieser, marginalism adopts a specific point of view as far as the matter of cost production ¹ and its importance for the formation of the value of goods are concerned. Wieser maintained that the cost of a good would be more

¹ The cost for some neoclassical writers is a reality, which we must directly recognize: "The effort, the sacrifice are constantly balancing with utility" (Nogaro, 1944, p. 25). And Nogaro concludes that the theory of marginal utility is not realistic (o.c., p. 237). Pirou (1948, p. 111) says, "cost is an element of the exchange value and equal important with marginal utility". Otherwise "[We] must not escape from [...] the fact that under free competition price coincides with cost." Both these French writers conceived cost from the objective point of view and not from the prism of its exploration through an indirect utility and a prerequisite of issue as it is the concept of cost of production in the Austrian theory.

useful to be produced then another good. Thus he formulated the notion of *opportunity cost*.

3.1.1 Economic calculation and the role of time

The older Austrians analyzed the behavior of the consumer, his choice, and his competition with producers as well as other consumers. Consumers aiming to their own benefit exclude the weak ones from competition. Certainly it should be also a great mistake to accept that producers remain negative concerning the importance of cost of production. The Neo-Austrians did not disregard the cost of production, as the producer must reward the other factors of production in accordance to their contribution-marginal utility.

The aspect of these writers that cost is a utility sacrificed and estimated in comparison with the expected utility, after comparison with other utilities, for the production of a specific product (indirect utility), placed within a whole of appreciation's and calculations within time. The Neo Austrians said that indirect utility plays a major role in the economic calculation and, mainly, for the determination of the value of goods and services.

The Neo-Austrians innovate with regard to utility. Avoiding the use of terms such as "utility" and "usefulness" they talk about economic calculation (*calcul économique, Wirtschaftsrechnung*). For them, economic calculation represents the whole of the choice of the individual in view of the limited quantity of goods and the particular character of his needs, collectively and in combination appreciated, aiming however to achieve the satisfaction of all of his needs. To satisfy his needs, the individual can follow two paths: a) preference, as far as the aim is concerned, he prefers A instead of B, because A has more advantages than B; or b) choice of means for the accomplishment of a certain purpose, i.e. for the acquisition in a more profitable terms of the good that serves as a mean. The individual proceeds to the economic calculation between cost and utility. He refuses the utility of successive goods to get the desirable ones.

The effort of the economically thinking individual is concentrated on the good's utility and not on the good per se. The individual evaluates the good from a strictly economic point of view. Neomarginalism is occupied with economic calculation and it is not interested in other technical or material elements. Consequently, neomarginalism examines under a strictly economic

view the interpretation of the phenomenon of value, in the comparison between sacrifice and economic result. Until the neomarginalists, we had a scale of preferences, a series of useful goods, and of the necessities satisfied by them. The mentioned writers consider the question as follows: The evaluation of goods is the synthesis of logical observations, comparisons, and integrations through the particular judgements of the individual, on the good and its utility within a complete choice of goods and their relative utility. The Neo Austrians also accept a plexus of necessities or desires in relation to (and always in comparison to the existing market prices and existing income) a limited stock of goods, which are supplied for the satisfaction of a given necessity.

Man faces a hierarchy of intensity of necessities in relation to the existing goods. This presupposes economic calculation that means such an evaluation of goods so each individual is satisfied. The importance of the utility, or, in other words, the evaluation of the properties of a certain good for an individual, is examined within the framework of the economically acting individual. According to the neomarginalistic thought, this evaluation can be either direct or indirect. It is direct when there are not substitutes for the good under evaluation and indirect in the opposite case.

Moreover, the examination of utility and the effort for the achievement of the more of this is not examined by the Neo-Austrians, as one and unique evaluating judgement and action. For them it functions in relation to the utility of the rest of the goods possessed by the individual. The magnitude of the particular utility of a good is the use which it offers and does not depend only on the kind of the good but also on the quantity and the kind of the goods which an individual possess. The utility can be named *directly dependent utility*, exclusively and directly belonging to a part of the stock of a certain good for a determined use. Yet, it can also be considered as *indirectly depended utility*, since it depends on a certain product and transforms in the most proper way the uses of the rest of the goods. Thus, the determination of the indirectly depended utility of a unit of a stock of good has to take into account not only its loss but also the transformation caused by it which impinges upon the total disposition of the rest of the goods. This indirectly dependent utility is marginal utility according to the neomarginalists.

Thus, utility is examined in a different manner from the one of the marginalists. According to neomarginalism, utility is not only the advantage derived from a good: the utility of an individual good through its evaluation in

relation to another good. But it is also the use of the goods disposed by the individual within a determined period of time. Utility is investigated not only from the quality and the intensity of a want point of view—as it was argued before—but from the point of view of quantity and extension within time as well.

Leo Schönfeld in his *Grenznutzen und Wirtschaftsrechnung* (1924), when he talks about utility says it is ruled by the following principles:

- a. *Quantity*. The Utility of a good depends on its disposable quantity.
- b. *Time*. Utility is no longer viewed within a specific static field but it is estimated at the time of its evaluation and the satisfaction that the good will offer within time.
- c. *Risk*. The economic calculation cannot be independent of risk. The individual always looks forward to a good's utility that he can enjoy with sacrifices and risks.
- d. *Complementarity*. The principle of complementarity concerns the importance we attribute to a good whose consumption is necessary to enjoy another good. The importance of coffee for the one whom wants it depends on the quantity of sugar, he must buy. This way of placing the subject matter does not satisfy the neomarginalists. They observe that through complementarity, as considered by the old marginalists, namely the utility of two or more goods in combination for the satisfaction of a given necessity, we have been guided to a theoretical research concerning one need or a group of needs, technically isolated between themselves. Coffee and sugar are complementary to each other, but at the same time, both goods are complementary to others as well. Just as are all the necessities in the economy. Accordingly, for the neomarginalists complementarity takes a different form. It precedes economic calculation, for it is a fact of experience, of human practice. Complementarity arranges goods in different and interrelated uses, and joins utilities with cost.

3.1.2 Human Action under the exploration of Neo Austrians

To the Neo-Austrian theories we could also add the theory of von Neumann and Morgenstern *Theory of Games and Economic Behavior*, ([1943], 1953). The first steps of this theory were done by J. von Neumann “Zur Theorie der Gesellschaftsspiele” in: *Mathematische Annalen*, 100 (1928, pp. 295-320)

while it has been complemented between 1940 and 1941. The two writers tried to proceed in the investigation of individual choice and the function of utility that rules it. This under the conditions of risk and uncertainty as they affect the choices of the economically active individual.

This choice derives from other choices, so the maximum utility is achieved. Possible risks lurk during the choice. This choice becomes ideal when it achieves the better satisfaction through different alternatives (Neumann-Morgenstern, 1953, p. 19 ff.). It is obvious this behavior applies to consumer and producer for the materialization of the highest benefit. To achieve their aim, they adopt the method of measuring the utility through a probable forecasting or expectation which in turn, is subjected to unpredictable situations of risk where accidental variables intrude. The consumer does not know and cannot foresee these variables. In this way, Neumann and Morgenstern move more or less in the field of neomarginalism, having covered it with the mantle of mathematics and objectivity of the phenomenon of value including risk.

G.L.J. Shackle, M. Rothschild, P. Nelson, G. Demaria, and others have criticized this theory, although Neumann and Morgenstern do not claim the universality of their system. (o.c., p. 2). They recognize the limitations of the mathematical method as well as the necessity for its use in economics. For them, the mathematical method is necessary as it was for physics (16th century) and biology (18th century). The existence of economic magnitudes leads us inevitably to quantitative measurements and the application of calculation (o.c., pp. 3-4). Here, we must also mention that both are not doctrinarian economists as they have adopted a theory using the mathematical “tool” without pretending a new “ism”.

As we know, cost, according to the Classical School is the quantity of goods and labor. But for the older and modern (neo) Austrians, this is not independent from utility. For the Austrians cost is examined through the necessity, which remains unsatisfied. In their view, for the acquisition of good A, we use the goods a, b, and c; their use however can also be done for the acquisition of the good B; thus the oppression of the necessity shows the economically thinking individual which of these two goods is preferable. Such a choice takes place within the time. It is not the knowledge of necessity and quantities, as the first marginalists of the Austrian School claimed, but the purely evaluating judgement of the individual who is guided by the economic

calculation in the economic field. Von Strigl avoids the arduous measurement of utility and, through economic calculation, he is directed to the comparison of quantities offering satisfaction in relation to the utility of the good or to the stock of other goods.

Ludwig von Mises follows Böhm-Bawerk up to a certain point. But he moves away from him, when he accepts the impossibility to conceive an economic law through the method of induction. Mises proposes, based on human action, an a priori system of economic theory, which does not concern the individuals's psychical world. This system is not occupied with reason for which the economic subject acts in one way or another but with what derives from his action (Shand, 1980, p. 4).

Menger's Table presented doubts as far as the logical placing of the individual's necessities are concerned as well as the economic equilibrium by the different ratings per individual. Nevertheless for Hayek the natural behavior of a logical individual is to act through economic calculation. Hayek in particular studied the business behavior. Murray N. Rothbard, another von Mises' student, will reject through his book *Man, Economy and State* (1962) all the traditional principles of Marshall' neoclassicism (Shand, o.c., p. 7) as well as the use of mathematics as not being able to contribute to the economic knowledge. Rothbard set aside the study of the economic behavior, of its action and counter-action, given that for his teacher (Mises) praxeology means conscious actions directing to chosen goals. From his side, Shackle explores the significance of the time and uncertainty in accordance to human behavior and decisions. He also examines the impact of the expectations as well as their relation with the moments of time.

3.2 Complementaries and final remarks

In their system, the Neo-Austrians accept economic equilibrium from their own point of view. The Classical economists—as Leen observes—completely neglected rationality on the part of the consumer. (1999, p. 5). The consumer has no choice or monetary calculation or entrepreneurial innovation. For the Classical economists the starting point of the economy is production, and behind it is its costs, whilst the consumer remains in the shadows. The Neo Austrians accept economic equilibrium from sellers and buyers both acting in a climate of economic calculation giving the preference to demand. The same

authors exploring economic equilibrium, accept its existence, with the difference, they also accept that its disturbance is not readily attended. For them, the velocity of the adoption of acting forces is unequal whilst the fluctuation of those forces can be either bigger or smaller, depending on the necessary time for the achievement of equilibrium. Thus, the dynamic view was also examined, from the activity of the economically acting individual. And here I must mention one of the great economists of our century, Joseph Schumpeter who founded his economic system on the entrepreneurial initiative.

According to Schumpeter in a static economy there are no fundamental diversities between a barter economy and a money-credit economy. Schumpeter explored the activity of entrepreneur within continuous transformations of time through a continuous economic circuit, which begins with a barter economy and ends with a monetary-credit economy.

Businessmen's combinations involve, according to Schumpeter, the following cases:

- a) The production of a new product.
- b) The introduction of innovations and new methods of production.
- c) The opening of new markets in product deposit.
- d) The ensuring of new sources of raw materials.
- e) The materialization of a new organization of economic unit (e.g. trust).

These preconditions for the development of the circular flow in a dynamic economy are due to two elements: business initiative in relation to the time of its expression, and to a quantitative element: money-capital which, channeled in the economic circuit permits more yielding combinations to the entrepreneur. Since competition tends to equalize cost with prices, the entrepreneur adopts innovative methods to get a net profit by the difference between prices and cost. W. Röpke considers, as Hayek underlines after him, that in a static theory there are no fundamental diversities between a money economy and a barter economy (1933, p. 46; Houmanidis, 1990, p. 175).

The Historical School rejected classical individualism, and tried to conceive human society and the formulation of the economy in the passing of historical time. Thus, they are not favorable for mechanistic economic laws based on the natural behavior of the *homo oeconomicus*. They proposed for a rational economic order the government's intervention and left aside individual logical calculation in favor of *homo societatis* as a product of history. The

institutionalists-sociologists followed the same principle of voluntarism, proposing intervention for the regulation of the irrational organization of the economy. But following this way the institutionalists limited their research on the “cadres” of the economy as Pirou observed, and abandoned the economic mechanisms (1943, Vol. III, p. 11).

The Neo Austrians are based on human action. Mises says that we must begin from the exploration of human action, because it is the base of the economic behavior with its logical legitimacy (1966, p. 4). “The latter day Austrians claim to derive their economic insights from a priori reasoning unaided by experience and hence repudiate empirical testing as a method for establishing the validity of their calculation” (Blaug, 1980, p. 259).

The Neo Austrians also considered the economy at first in a static subjectivism and then conceived a dynamic subjectivism ruled by time, culture, and logical or illogical economic decisions. There are buyers with wrong and others with good calculations. The same concerns sellers. For this reason Kirzner (1962, p. 81) remarks: “The systematic way in which plan revisions are made as a consequence of the disappointment of earlier plans.” Alternatively there is a disequilibrium, which means that market ignorance is inevitable and information is indispensable for sellers and buyers. Friedrich von Hayek underlines this point of view (1949, p. 46). He says that to define equilibrium we must stoke it with exact information. Because this is never completely effective, the entrepreneur is under a) uncertainty and b) risk (Kirzner, 1985, pp. 40–67).

For the Neo-Austrians, economic calculation is generally placed in the organized struggle conducted by the subject of the economy against the rarity that exists in:

- a. *The means* with which goods are produced and necessities are fulfilled.
- b. *Man*, within his nature, his organism, his psychical world.
- c. *Time*. Life is short and nature thrifty in the furnishment of goods. Everyday experience and human practice teaches to the economically acting individual how to join his actions so as to constitute continuity in a series of choices.

Concerning c) Perroux says: “The time factor intrudes in the interpretation of the formation and transformation of value. The first marginalists had essentially transformed classic theory, yet without proceeding

to its completion in its serious and obvious vacancy, time effect. However, neomarginalism does not examine time within a system of thoughts ending up in a result able to be determined without it. It places it exactly where it is, namely within the framework of an individual's appreciation. "[...]" Thus, time has a double meaning. It is an element of economic activity, which cannot be examined in a specific manner but only for a determined period. Time is also an economic good the use and place of which, are the objects of calculation and an individual's activity. No one among those devoted to the general theory of economic activity can deny the fact that these achievements reflect progress. They are not only useful to the one who is preoccupied with theoretical economics but also give useful orientations to the observer and economist, who proceed to evaluations about economic activity and economic policy every day. They permit us to avoid numerous temptations of the inflexibility and unrealistic evaluation incorporated in the old theories of cost and, to a smaller extent, in old marginalism" (1943, pp. 220-221). In my opinion, the great contribution of the Neo-Austrians is not only the further investigation of economic behavior; it is also the economic calculation of time, which is conceived as an economic good, as well as risk.

Menger, with his Table, was setting as first need, from the intensity's point of view, the need for nourishment without considering that human existence is connected with time. Thus, the first want is time within which man moves into the economic life to fulfill not only his economic needs but also his other needs within the time he lives. Time, in its moment and in its duration, presses him to chose means, aims, innovations, inventions, and economic efforts. This is the reason why both the older Austrian and Neo-Austrian Schools are devoted to the ideal of freedom because economic development can only be realized in freedom.

Neo-Austrians are opposed to paper money, as connected with credit-money and they demand return to the money-commodity, in a free market, to which both the Austrians are devoted. Within this freedom they erect their theoretical building.

The Neoclassical School of Marshall conceived the formation of prices in short-term and long-term period but they considered them as given for buyers and sellers. This idea is rejected by the Neo Austrians who consider that the buyer and the seller do not exactly know the price but are involved in a series of evaluations through the economic calculation within a large number of

goods and prices, possessed by the influence of time. Consequently, buyers and sellers move within opportunities that arise at any moment of time. This is the reason why Walras' theoretical pattern is abstract, when he accepts an automatic mechanistic action of separate markets constituting the market of the whole. Thus, we could also maintain that through this side of view economic equilibrium in comparison with reality ends up to be an illusion. Maybe for this reason if Schumpeter talks about the Austrian School—as Shand underlines—he speaks of the subjective technique "and their inability to understand the meaning of a set of simultaneous equations" (Shand, 1980, pp. 29-30).

Human action—for older and Neo-Austrians—means practice, this is because of the economic behavior of man. But the Neo-Austrians interfere more to explain the human action "which is necessarily always rational" (Leen, 1999, p. 16 ff.). Efforts are made to improve man's economic situation, thus his destiny, and so "man begins the efforts to exchange a poor situation for a better one". Human action is always rational; the basic instinct is the welfare of the individual and in total that of his society. The problem is "How to achieve it?" For the Classic economists it should be to get it in a completely free competition governed by egotistic instinct of economic man. For the Marxians it should be achieved in the communist regime, for the followers of the Historical School, an altruistic society enriched with the historical moral values of "homo societatis" and for the Austrians by "man of convenience". But for the Neo Austrians the problem concerns the "know-how" of the market process and the economic calculations.

In accordance to the Neo Austrians, economic calculation takes place in a world of scarcity. As well as, Lionel Robbins says: "Economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses" (1935, p. 16). At this point Blaug does not omit to notice that Robbins was deeply influenced by Wicksteed (*Common Sense of Political Economy*, 1910) while he, among British economists, quoted Austrian and German writers (Blaug, 1980, p. 87).

Every individual has his preferences in a scale of classification, according to their importance with regard to different wants and choices in a free competition between sellers and buyers. Rothbard says: "Individual valuation is the keystone of economic theory" [...] "Economics analyzes the attributes and consequences of the existence of individual valuations" [...] "It is absurd to attempt to arrive at a consumer's preference scale not through

observed real action but through quizzing him by questionnaires” (Leen, 1999, p. 21). Economic action concerns total utility: every relevant unit for a certain action is the marginal one. If speaking about eggs, the relevant unit is one egg. But for boxes of six eggs however it is a box. (Leen, *ib.*). Human action concerns a choice of preference that is relevant to the environment and culture. For the Neo Austrians environment and culture concern the individual and his actions. It is a personal situation not a social one. Hayek argued this aspect and the Austrians followed him without any objection. I think this individualistic aspect is not completely right since we should not disregard the element "society" with its institutions which have an impact, up to a point, on the individual's culture. Social control also affects an individuals as first conceived by Galiani with his expression by *voce* (fashion) (Galiani, pp. 156-157; cf. Houmanidis, 1978a, p. 609).

Schumpeter (1963, pp. 301-302) admits a confusion concerning Galiani's theory of value, but he does not refer anything about what Galiani meant with the word 'voce'. Galiani used the term *rarietà* and *fatica*. Galiani connects *rarietà* with *utilità* and accepts as preponderant the latter. Many authors, e.g., A. Dubois ("Les Théories Psychologiques de la Valeur au XVIII siècle," *Revue d'Économie Politique*, 1897, I, pp. 840 ff. and 917 ff.), Böhm-Bawerk ("Essai sur la valeur," *Revue d'Economie Politique*, 1894, pp. 500 ff.), J. Marchal (*L'École Psychologique Française et la Théorie de la Valeur*, Paris 1938, pp. 300 ff.), P. Lebrun ("Réflexions Méthodologiques sur l' Histoire des Théories et des Doctrines Économiques soit disant Modernité de Ferdinando Galiani," *Studi in Onore di Amintore Fanfani*, Vol. VI, p. 329 ff.), Ch. Rist (*Histoire des Doctrines relatives au crédit et à la monnaie*, Paris, 1948, pp. 90-92, G. Rosetti ("Galiani e la teoria dei gradi finali di Utilità" *Rivista di Storia Economica* 1942, pp. 112-116), Einaudi ("Galiani: Economista" *Saggi Bibliografici e storici intorno alle Dottrine Economiche*, 1953, pp. 267-305) underline Galiani's subjectivism. Fanfani (1955, p. 161) accepts the subjectivity in Galiani's theory on value as being behind dispute. For me (Houmanidis, 1978a, pp. 599 ff.) Galiani is a subjectivist, but he takes into account the common opinion, or better fashions (*voce*), which is related directly to utility. "Because [says Galiani] it varies the utility of things with the variation of pleasure, which is becoming from their use (Galiani, 1915, p. 41). He—in my view—stresses the significance of a super-individual element, which interferes in the formation of value. At this point emerges the question

“Can Austrians and Institutionalists bridge their Doctrines?” We shall discuss this as below.

According to the Neo Austrians, economic calculation is the laboratory of choice while time, with the numerous points of the course of all actions (estimation, prediction, and activity) concerning economic calculation and choice, is its course. Economic calculation and choice are the two views of the same concept, i.e. utility. Economic calculation—according to the Neo Austrians—governs the healthy economic system. In a system without free economic calculation like the socialist economic system exist a disequilibrium which creates obstacles to economic growth.

The Neo-Austrian economists reacting to the monopolistic organization of the market, observed that the contemporary organization of the markets corresponds to this order, but the function of the natural laws brings about the ultimate good for all. They are naturalists, since they do not accept human intervention into natural laws. This appeal to the economic action is removed, so that man becomes able to achieve the maximum economic result - goal.

The Neo-Austrians accept that freedom is necessary for the moral and spiritual elevation of the individual, who otherwise withers in the absence of this beneficent activity. They maintain that personal interest, under free competition, achieves the less cost by man economic calculation. Goods and services exchange in conformity to free competition based on equal satisfaction, so every economic factor gains such as it contributes. At the same time, social progress is achieved, given that the producers, through competition, try to apply the most perfect technical methods.

The Neo Austrians, researching in an individualistic frame, accept the basic economic principle that the individual producer or consumer aims at getting the most satisfaction with the least sacrifice. This fundamental economic law governs human action. Yet, for them this law is not mechanistic, because it affects human action and individual culture and consciousness as well “Action and reason are congenetic and homogenous for the Neo-Austrians” (Leen, 1999, p. 35). Believing in the existence of economic laws in the economy we can make predictions, but for the Neo Austrians predictions suppose preconditions (Mises, 1961, p. 131). Thus, the facts “illustrate the workings of the law” (Rothbard, 1976, p. 36). Toward this direction concerning forecasting, works the producer directed by his cost of production and the consumer makes his choices in accordance to his income.

The Neo Austrians do not use mathematical forms, as mathematics ignores the actions and reactions of the individuals. For us, the problem is not if the reader of a book of economics puts it away because it includes mathematics. Certainly mathematics as tool is useful mainly for econometric models but not for the individual behavior in the market. We cannot reject mathematics but we must use it with precaution and we must have in mind that economic Science is also a qualitative one.

Valuation means the existence of the quantitative element as well as of the qualitative. Since economic choice is connected with qualitative estimations. Mathematics is full of research that as Commons rightly said, "any school can use according to the assumptions which it takes as presuppositions for mathematical calculations" (1959, Vol. I, p. 115).

For the Neo Austrians, the dangers deriving from freedom were exaggerated, given that the lack of equilibrium in any economy is presented only with short-term depressions. This is in contrast to the Institutional School, which maintains that in real life economic equilibrium cannot be realized. The Neo Austrians are favorable for a free market economy because only in it economic forces can be adapted. The contrary concerns to an economy with interventions. Neo Austrians according to their doctrine fear a directed economy, which they reject. Because in a directed economy, supply and demand become rigid and prevent every movement towards an adjustment of economic forces to a point of equilibrium. The Neo Austrians observe that given the absence of economic calculus (*Wirtschaftsrechnung*) a centralized economy is unable to solve the economic problem. They claim that within a free market the price mechanism offers a rational orientation to production and satisfies the individuals' needs in a better way.

Rothbard underlines that in a socialist system without a free market no rational calculation and above all no creative entrepreneurial initiative exist (1988, p. 78). Similar aspects are expressed by Kirzner (1989, p. 94). In a centralized economy the master is government, in a free market economy, the master is the consumer. As Leen rightly observes, the consumer, "is the markets sovereign king" (1999, p. 46).

For the Neo Austrians, enterprise is the level of economy working with less cost and taking into account consumers' preferences. The entrepreneur establishes his business, plans, organizes, and directs it. The government encourages his endeavors and protects the consumer, but without interfering in

the economic mechanisms which must function freely without any friction. Thus for Neo Austrians any exchanger achieves a just price as each of them is satisfied after his bargaining in accordance with the utility he offers and the utility he gains.

Classicists considered technology as a factor separate from market. The Neo-Austrians explored its process and its contribution as a product of a market's mechanism. The Classicists grasped their system based on production when the older Austrians and Neo-Austrians mainly explored the consumption analyzing the significance of the consumer's behavior into a frame of different choices and preferences. Thereby, Neo-Austrains exert sharp criticism against the spirit of "economophobia", which is the concept which is opposed to free economic action on behalf of individuals because of their calculation. They consider socialism as opposing human nature which can never be subjected to an artificial scaling of values on different goods and needs, as it occurs with socialism which ends up in tyranny. For Mises and Hayek, a centralized economy is starving concerning innovations, quality of goods, and above all economic growth. This opinion is right and has been proven in a number of countries with a socialist regime. They showed a lack of progress in different fields of human activity. This occurred because socialist regimes suffer from a lack of entrepreneurial initiative as well as of a creative spirit in general. Scitovsky was yearning for new things and ideas, and "the yearning for new things and ideas is the source of all progress" (Leen, 1999, p. 104).

3.2.1 Some doctrinaire discussions

For a doctinary discussion I must mention Wernhard Möschel (1989, pp. 142–159). He used the term Ordo-Liberalism meaning by it a "competition policy oriented to a goal of securing individual freedom of action, from which the goal of economic efficiency is merely derived [and a] strong role for the state in the preservations of the prerequisites of the competitive markets". He holds "a distinct reserve towards intervention by government in free market prices." Möschel concludes "the shaping of competition policy into a rule of law rather than a mechanism of discretionary decisions" (o.c., p. 142). Thus Möschel proposes Ordo-Liberalism and avoids the institutional framework. However he recognizes the impossibility of perfect competition, searching to find in Law the solution of the problem of competition. But he is right when he rejects

Hayek's position that abandons rigid rules in the area of competition though he opposes monopoly.

In contrast to Hayek, Walter Eucken speaks for 'natural monopoly' and favored a special form of control by an independent agency (the monopoly agency), and he makes a distinction between the term "complete competition with perfect or pure competition" (Möschel, 1989, p. 155). Herein I must also refer to my proposal so as to limit monopoly's speculation by establishing an 'Office against Monopolistic Exploitation' (Houmanidis, 1993, p. 25).

The School of Chicago adopted a similar economic policy but it was characterized by a lack of: (a) a philosophical basis and (b) a doctrine concerning the role of the State. Concerning the remark (a) I think it is basic for an economic doctrine to be directly connected with Philosophy and especially with Social Philosophy. With regard to remark (b), the school of Chicago neglects the importance of the State's task to protect the consumer. Walter Adams correctly expresses the idea: "The freedom of the sheep to coexist with the wolf is meaningless in the absence of a shepherd" (Möschel, 1989, p. 147).

To summarize for neoliberalism, or *ordo-liberalism*, a free market economy must be governed by the principles:

1. The economic order: a) Free exchange economy, b) Stability of monetary system, c) Free competition—free entry, and d) State's assistance only to facilitate market's mechanisms.
2. The economic process: a) an anti-monopolist policy, b) a distribution and a taxation based on justice, and c) an economic policy to equalize individual and social costs (Meijer, 1981, pp. 152 ff.).

Léon Walras worked on economic equilibrium and then conceived the market process on the static position. The Neo-Austrian's subjectivism explains the market's mechanism from a static and a dynamic point of view.

Yet, some new efforts that tried to avoid the weaknesses of the individualist system, over which the naturalism of the Older and Neo Austrians is founded, wanted to link the economic calculation of the freely acting individual with Institutional Economics. Such an effort was done by P. Wijnarczyk (1992, Vol. II, No. 1, pp. 23-43). The consideration of the just-mentioned issues escaped the attention of many writers. This is the reason why they move within a confused doctrinary field—choosing to link different fundamental doctrines.

Nevertheless, the pattern of the Neo-Austrian School is mainly

microeconomic without ignoring the differences distinguishing these 20th century-born Schools. During the last years of the 20th century there began a reaction against collectivism and this continued without sufficient combination of individualism and collectivism. In practice socialism (Marxism) collapsed into a full failure and extremist capitalism is in crisis. I think that we must study better Neo Austrianism and Institutionalism. Although these Schools present a great variety, we can select from them any good from their proposals for *peace*, *order*, and *justice*.

With his works (*Prices and Production*, 1931, and *Monetary Theory and the Trade Cycle*, 1933) Hayek draws a way beyond the one of the adherents of the Austrian School and those of the Neoclassical School. Both Walras and Marshall did not consider exogenous factors. Anyway, Marshall superseded in the element of time, but Walras, under the influence of Kepler, abandoned it for the sake of the automatism of economic forces.

For Hayek money does not disturb the formation of economic equilibrium when this remains stable. This happens in case there is the non-existence of two factors which are able to disturb it: a) the exogenous factors and b) the creditbank factor. Here we must refer to Wicksell's thoughts about *natural interest* and *market or current interest*, which, in its fluctuation, being higher or lower than the natural rate of interest, causes disequilibrium.

For Wicksell, in a money static economy the rate of interest corresponds to the level of prices, which neither rises nor fall. This rate of interest is natural and it's determined by the natural productivity of capital, rising and falling with the increase or decrease of the natural productivity of capital (Wicksell, 1961, p. 120). In a money-less economy, supply and demand of savings coincide, in a money economy the mechanism of credit will change this equilibrium until we have a disequilibrium between saving and investment. The current rate of interest falls below the natural rate of interest or becomes higher than it. The normal rate of interest is at a level where natural interest and current interest (monetary interest) coincide. And this equilibrium means that it achieves the stabilization of prices as well as the equivalence between saving and investment.

Mises, as the older Austrian, is a pure naturalist and he accepts an individualistic model of market's structure and methodology. He presents in his writings the important role of the individual's valuations and decisions in an 'atomistic' system so as to realize economic equilibrium. He also conceives the

significance of culture but as individual culture. Mises' tries to confront socialism, which for him is a 'non-economic system'.

The matter, which arises, is: a) Can we have a steady equilibrium in the real world? And b) Which equilibrium can be achieved when even Pareto observed that people's hearts and reactions cause situations, which do not permit the continuation of equilibrium?

The Institutional School from its side believes reality means change, fluctuation and a series of disequilibrium and equilibrium states. And the institutionalists conclude that in the real world a steady equilibrium is unattainable, at least without intervention.

Economic equilibrium is a relatively unattainable fact since it cannot be isolated by the factors within and outside of social framework which disturb it. Here, we will not take into account those exogenous factors, which change the ex ante anticipations; instead, we will consider the abilities of the entrepreneur who is the pivot of the economy, to use notions similar to these.

The abilities of the entrepreneur are acceptable by the Neo Austrians. In this point the School of Rational Expectations observes that, since the information about economic process in time is correct, businessmen's anticipations become rational. Hayek also accepts this. Some economists have the idea that the mentioned School can be combined with Neo-Austrians. This because they have the common elements: a) The principle of naturalism according to which we must not interfere in economic life because rational order exists in a free market, which regulates the production of productive and consumption goods; b) The principle of private initiative, which encourages the economy for its growth. However, there are two elements that are not taken into account here: 1) Rational anticipation can be irrational (as all persons it is impossible to have a rational attitude towards uncertainty (risk) (Knight, o.c., p. 54). And 2) Whether all the anticipations of economically acting individuals coincide. For, it is natural that the plan of A is opposes to that of B. Smith and the Smithians accepted that the adoption of the economic principle for all individuals would achieve the system of equilibrium. Economic expectations, however, is being done within time and under opposed anticipations. The Classical School ignored this fact while the mentioned School wanted to do it within rational anticipations, excluding the exogenous variables.

For Hayek, money in a static situation of the economy is taken as a neutral factor in the economy. From this point of view we must put into

account "there is a diversity between a money economy and a barter economy which is assumed in static theory" (1933, p. 46). And the static theory "always keeps the supply of capital goods in equilibrium with that consumption goods" (o.c., p. 76). But with credit from private banks it is possible to have unexpected situations during this period of time and so to disturb the state of economic equilibrium. Hayek is a naturalist: men must not interfere and disturb the natural law moving within freedom. On this point neo liberalism does not accept any kind of permanent disequilibrium.

Credit, as Hayek said, causes a differentiation between production of productive goods and production of consumption goods.

He distinguish two kinds of choice:

- a) Of the producer who is balancing between the choice of production goods and production of consumption goods,
- b) Of the consumer who desires to use his income balanced between saving and expenditure.

When the above attitudes coincide, the result is an encouragement of investment through a steady equilibrium. When credit occurs, there is a situation of over-investment and a structural depression.

For Hayek, the economic calculation that determines economic actions of individuals in the economy brings about equilibrium, even if the predictions of A, B, C, and D do not coincide, they will finally coincide so that a general equilibrium occurs. When credit supersedes in economic procedure, things are faced differently and here Ludwig von Mises formulated—in my view—the extreme by abstract theory about money value.

Mises distinguishes different forms of money: money–merchandise (*Sachgeld*), money-symbol (*Zeichengeld*), credit-money (*Kreditgeld*) as well as money-substitutes (*Geldzurogate*) and certificate of money (*Geldzertifikat*) (Mises, 1934, pp. 25-27). For Mises—and here is his originality and distinction from the older Austrian School—money value is due to its property while it is used because it has exchange value (*Umlaufsmittel*) (Mises, 1912, pp. 113-114). Even this, however, is not enough to measure money's value. Thus, going back from stage to stage to the past, we reach to the era when a good was used as a medium of exchange in a barter economy. Thus, its value was determined by its marginal utility.

Mises tried to incorporate his theory of the value of money into the theory of marginal utility. He conceived a subjective theory on money derived

from the subjective value based on marginal utility. Mises also developed his theory on the value of money in his work entitled *Theorie des Geldes und der Umlaufsmittel* (1912). He formulated his theory based on two other articles written by V. Zwiedineck-Suendendorst ("Einkommensgestaltung der Geldwertbestimmungsform," published in: *Schmoller's Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reich*, 1909; cf. Federici, 1945, p. 142).

The question that appears is how the objective value of money is determined? The exchange value of money—says Mises—depends on its function: it has value in exchange and has the quality to function as value of exchange. Federici observes that this kind of explanation is in reality a vicious cycle (o.c., p. 143). The exchange value of money for Mises—as I have already said—is based on the ratio of a previous calculus. In an opposite case, the individual should be unable to estimate the value of money at any time.

In few words the subjective money value always leads back to the subjective value of the commodity obtainable in exchange of money (Mises, o.c., p. 17). It is a deprived conception (Greidanus, 1932, p. 110). And Mises concludes, "the subjective value in exchange is nothing else but anticipated value of the commodities that they may be bought for money; it is a magnitude which may be determined by the marginal utility of the commodity that may be received in exchange for money" (o.c., 1932, p. 187).

For the Neo-Austrian theory, price is a leading factor of the action of the individuals based on economic calculation. They do cause optimistic and pessimistic forecasting. They are also the leading factor of entrepreneurs. Despite the different forecasts between the individuals in an economic society, general equilibrium is achieved by economic calculation, which in their mind has the stature of a natural law similar to the natural laws of the Liberal School.

Yet, when the credit factor supersedes, then natural action—based on economic calculation and on rational expectations—is transformed. Individuals ask for more goods, and entrepreneurs are encouraged to increase production and also to order intermediate goods. Under those circumstances, relative prices rise and entrepreneurs are moved in the field of profit anticipation, which is yet outside rationalism and creates economic disequilibrium. Interest in its turn reinforces this movement. For, interest rise diminishes optimistic anticipation for profits and vice versa. So, when the interest level falls, the wage level rises and *vice versa*. As a result, the demand for workers on behalf of entrepreneurs

will be determined by the marginal productivity of labor, pre-settled in the running interest level. This happens, because the entrepreneur is asking for labor until the last unit of its productivity is equalized by the marginal productivity of the borrowed money for this purpose. Thus, when the contrary occurs, then pessimism reigns among the entrepreneurs who have to settle the loans given to them by the private banks in the period of recovery. From this time, depression starts in the business cycle until the economic calculation does its miracle and restores order in the economy.

The Austrians in general have not followed the macroeconomic consideration of the economy because their method was mainly microeconomic. This microscopic method, in my opinion, is of particular assistance as a tool of theoretical enquiry of economic policy (Houmanidis, 1987, p. 213). We can also notice that the theoretical building of the marginalism is founded on the subjectivism that the Neo Austrians extended to praxeology (estimation, preference, choice, and decision) ruled by economic calculation. And this is the reason why they have not used the indifference curves. Neo Austrians are against socialism as well as against a mixed economy, because only in a free market is possible to achieve a right economic calculation. Mises and Hayek especially exercised a rigorous critic of this point and Mises speaks for fear from the part of the socialists concerning any individual economic calculation (Houmanidis, 1999, p. 646).

The Austrian thought was ruled by theoretical research and their system was turning around the needs and wants of the individual. Thus, their approach was based mainly on demand and its rational satisfaction. This rationality means in accordance with Max Weber a "highly subjective procedure dependent upon expectations, plans, situational adaptations, and so on" (Oakley, 1997, p. 159).

The Austrians, also, rejected the law of necessity of causation, which guides towards prophecies (o.c., pp. 121 and 159). Here I must also repeat that the Neo-Austrians were not positively inclined towards mathematics. Concerning mathematics the Austrians considered it as a tool-medium of symbolic demonstration and graphical representations as it is an erroneous way to believe qualitative elements can be completed or replaced by quantitative mathematical symbols. Mathematics is a useful tool for empirical research, but

for economic theory it is an erroneous method. The older Austrians and the Neo Austrians remained with economic logic but deprived from mathematics.²

Undoubtedly—in my view—in case we use the abstract method, mathematical techniques are useful to present our logical thought in a short way as well as for the exposition of a model. But mathematics basically deprives the economist from the world of reality. To conclude with Katouzian, "the use of any technique including mathematics in any scientific pursuit, including economics is legitimate" [...] "but is not *inherently* superior to any other; it does not, by itself, add to the substance of the theory; and it does not beset any special honour on its user" (1980, p. 166).

For this reason and the Pope of the Neo Austrians, Mises, overlooks the mathematical method and he examines reality as a human action governed by logic. For him any scientific knowledge in the social reality is derived from experience. History is experience and all experience is historical (1962, p. 45). History deals with the concrete content of human action. It studies all human endeavor in their infinite multiplicity (Mises, 1966, p. 30) and he underlines: "the end of science is to know reality. Life is not mental gymnastics or a logical pastime" (o.c., p. 65). For him we cannot conceive a reality of community without human action.

We could refer to other writers with opinions similar to those of Mises about mathematics but it is enough to say what Paul Painlevé wrote in his Prologue of the French translation of Jevons' work *The Theory of Political Economy*, 1874 (p. xvi): "Mathematical knowledge serves us as an auxiliary and temporary instrument, to assemble quantitative deductions from qualitative suppositions. We dress with a quantitative suit qualitative data. It is a question like of borrowing a suit which we take off when we reach at the point of our conclusions". Jevons strongly advised economists that they had to be mathematicians, as well: "I contend that all economic writers must be mathematical so far as they are scientific at all, because they treat off economic quantities, and the relations of such quantities, and all quantities and relations of quantities come within the scope of mathematics" (1970, p. 52).

² We must anyway consider that Menger, the founder, was included by Irving Fisher in the bibliography of mathematical economics because of Menger's mathematical method of reasoning (O. Morgenstern "Mathematical Economics" in: *Encyclopaedia of the Social Sciences*, E. Seligman and A. Johnson, eds, Vol. V, New York, 1949, p. 366).

Alfred Marshall (1947, p. X) about mathematics says: “The basic use of pure mathematics in economic matters is to assist in writing quickly, concisely and precisely a person’s thoughts for his personal use”; in his *Principles* mathematics are placed in the footnotes.

Keynes (1951, pp. 297-298) writes that we must avoid the illusions of symbolic formulations and he underlines “it is a great fault of symbolic pseudo–mathematical methods of formalizing a system of economic analysis”. So the economist “must not lose sight of the complexities and interdependencies of the real world in a maze of pretentious and unhelpful symbols”.

Bernhard on his side says: “Mathematical Science is Queen in its own Kingdom but it is servant of the other sciences” [...] “if we wish to predict the future events it is not enough to adopt mechanistic methods” (1966, p. 16). The late Nobel Prize winner George Stigler on the contrary has the opinion that mathematics is a main method of research as “it is the poetry of logic” (*The Mathematics in Economics. Five Lectures on Economic Problems*, New York: Macmillan, 1949, p. 37).

Perceptions that economics concerns only to *magnitudes* are—in our view—faulty. Economics of course are related with quantity but it is also equally related with quality that veils many things.

Economics studies the ways to increase wealth but it also studies its distribution. For this reason Economics is related to Ethics.³

Jevons who explores the relation between economics and ethics observes that “each laborer in the absence of other motives is supposed to devote his energy to the accumulation of wealth. A higher calculus of moral right and strong would be needed to show he may best use wealth for the good of others as well as for himself” (1970, p. 93).

³ Pellegrino (2000, pp. 2-3) from his point of view makes a distinction between Ethics and Economics. “The first means the moral right and wrong of human behavior *descriptive* noting for how people in fact act or *analytic* focus on the logic and meaning of ethical discourse or *normative* prescribing what ought to be done.” The second– Economics–is a science dealing with production and distribution of wealth and managing or distributing scarce resources or finally “providing guidance on the optimal use of natural wealth.” In other words economics is a science of means which provide empirical data descriptive and predictive of human behavior in individuals and institutions. About Ethics and Economics see also Frank Knight (1935) especially Chapter II, pp. 41-75.

3.2.2 Can the Austrian School be combined with the Institutional School?

Some of today's economists sustained the possibility for an approach between Austrian and Institutional Economics (P. Winarczyk, 1992, pp. 36-37). "Both Austrians and Institutionalists [says Winarczyk] could do more to bridge this division. The former can be charged with failing to pay enough attention to the institutional framework, or set of rules, which permit spontaneous orders to function effectively " [...] " while the later need to attach greater primacy to "individual" action in historical time" (Winarczyk ib). Of course, Winarczyk does not omit to express his wish for this approach stressing: "The Austrians would do well to pay more attention to concrete institutional forms and the Institutionalists would benefit from taking the problems of knowledge dynamics more seriously." (o.c., pp. 39)⁴.

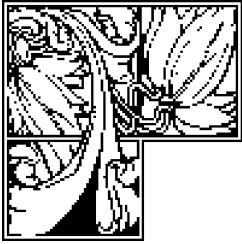
In accordance with what we have already said, we can maintain that the two aforementioned Schools probably differ. The Austrians (Wieser) moved to

⁴ After the failure of Marxism and Keynesianism we must find a new road in Economics. Today the majority of the economists more or less accept that economics is in a crisis. In I.S.I.N.I.'s Congresses (The International Society for Intercommunication of New Ideas), I had the opportunity to support this idea and to try to get a new way in Economics. Rugina in his *A long Journey to the third Revolution in Economic Thinking* writes: "At an annual meeting of the History of Economics Society, by chance I became acquainted with another Greek Economist, Lazaros Houmanidis [...] Who was also searching for a better alternative beyond capitalism and socialism in an article "Der Dritte Weg" ("*Third Road* ") published in the *Regensburg Sideway letters Universität Magazine* (No. 2, 1971). Curiously enough, back in 1950 I wrote an article with the same title and for the same purpose, but using a different method of approach. This seeking coincidence led to a new friendship between us in the world of ideas. Houmanidis promised to remain in touch with me, which he did, and so began a friendly correspondence," and after him and me other intellectuals of I.S.I.N.I. tried to do the same (A. Rugina, 1994, p. 44). We must try to open a new way in economics and we must take into account the fact that, "The crisis is as certain as the absence of a generally accepted solution to it" (Katouzian, 1980, p. 4). My proposal is to work in a selective way taking into account the theories of the past and the present so as to irrigate the land of our science with more successful approaches as a "parthenogenesis" in economic theory—to use a successful caraterism by Barucci—is impossible. [Barucci, 1983, p. 501].

a more or less favorable attitude towards taxation of higher incomes as—according to their ideas—the receivers of higher incomes give less importance to the last unit of their income than people with lower incomes. There could be also a kind of relation between them and Welfare Economics. At this point we can repeat what Katouzian observed on Rousseau “had sought to achieve by uniting utility (self-interest) with justice (sympathy)” (1980, p. 21). Certainly the Austrians in general have not disregarded the importance of technology as well as of culture, and with their theories influenced the economists of other countries (Vaughn, 1994). But they explored economic phenomena from the individualistic point of view, leaving aside the institutional factor.

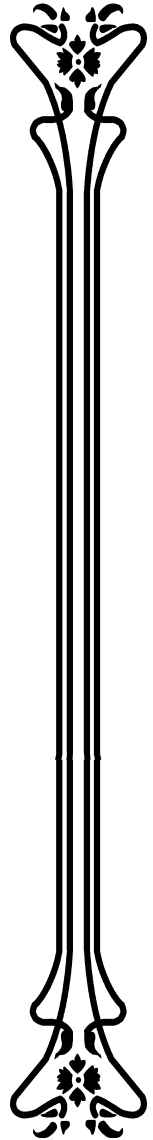
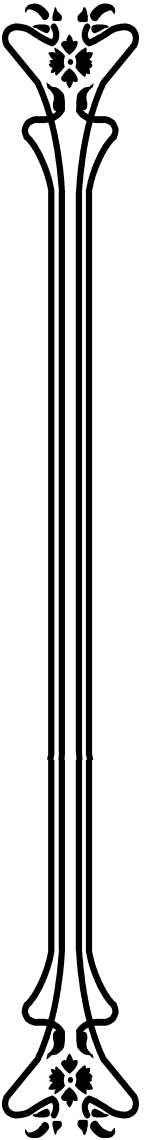
The Austrians explored the side of the consumer that was neglected from the previous schools of economics and they facilitated our endeavors to analyze better the consumer's choice and decisions as well as the contradictions that come from the unequal distribution of income. Of course, Marxians and Keynesians tried to do the same, but their theories were faulty—as up to a point is the case for Say's Law in the world of reality. Neo-Austrian Economics with Institutional Economics—in my view—in combination can offer the expected solution to the current crisis in economics from the humanistic side of view. And this can be realized in a regime of a social democracy with the yoking of the individual free spirit and the collective democratic authority.





Part 2

Austrian Economic Thought: its contribution to consumer behavior



“[T]he demand for goods with the expected utility and marginal utility that it recalls, is the first and last link, the alpha and the omega, in the chain of the origin of price, it is the driving and decisive force, the dynamics of it all”
—Leo Schönfeld-Illy

4 THE DEMISE OF THE CONSUMER: THE SOCIALIST CALCULATION DEBATE

Although the consumer was central to Menger's thought (cf. Menger, 1923), the consumer is not for modern Austrian economics. The consumer became lost somewhere along the way between Menger's contribution to older Austrian economics (the way in which all value springs off from the final valuation of the consumer) and the modern Austrian contribution (the process through which the consumer's valuation translates in production decisions). What caused the demise of the consumer in modern Austrian economics?

4.1 How the consumer became lost

From the beginning Austrian economists were polemical writers. Menger fought the Historical School, Böhm-Bawerk fought the Marxists, and Mises and Hayek had their own clash with the Socialists. And today, modern Austrians fight the mixed economy (cf. Soto, 1998, pp. 88-89). No wonder Austrians say the "debate over economic calculation under socialism [...was] a catalyst in the development and articulation of the modern Austrian view of the market" (Kirzner, 1988, p. 1 and 1994, Vol. I, p. xxii; cf. Rothbard, 1980, p. 27). The socialist calculation debate in the interwar period began with Mises's denial of the feasibility of calculating costs rationally and thus to allocate factors of production efficiently in

a socialist economy. For most economists the debate ended with the answer of Lange and Lerner to ‘play at’ market prices: centrally promulgated given prices.

The calculation debate brought to the fore two modern Austrian insights (Taylor, 1980, p. 23). First, without market determined monetary prices, rational calculation is impossible in a centralized economy. Subjectivism, a tenet central to Austrian economics, entails the contention values cannot be calculated or measured directly (cf. Harper, 1974). They are calculated with the results of individual valuations: money prices. Prices do not measure value but they express it. Just like a work of art does not measure aesthetic beauty but expresses it. Consequently the pivotal point is the necessity of a market for the means of production. "For a long time, the misconception that costs determined prices prevented economists from recognizing that it was prices that operated as the indispensable signals telling producers what costs it was worth expending on the production of the various commodities and services, and not the other way around" (Hayek, 1978, p. 2). Second, without market-determined monetary prices, a centralized economy lacks ability to promote discovery. "*The most impressive aspect of the market system is the tendency for [...] opportunities to be discovered*" (Kirzner, 1985, p. 30). Prices expressed in money show price discrepancies. Through the possibility of monetary profits, prices stimulate the discovery of valuable concrete information. And it is precisely the institutional setting of the market economy that translates error into prospective net gain. There is a social setting in which people are continuously pressed to improve. But if this social structure does not prevail, this puts an effective cap on the possibility of economic theory to explain a situation. "Outside the market context we have nothing, within the realm of economic theory, upon which we can rely to generate any systematically rapid processes of mutual discovery that might tend to eliminate episodes of social sup-optimality (caused by sheer ignorance)" (Kirzner, 1999, p. 7). So Austrians disagree with Gary Becker's so-called economic imperialism. There is, e.g., no real market for marriages or children. Markets in which we can ‘buy cheap and sell dear’. As Mises said, “it is absurd to want to apply the elements of this calculation to problems other than those confronting the individual actor. One may not extend them to *res extra commercium*. One may not attempt by means of them to include more than the sphere of the economic in the narrower sense” (1981, p. 159).

I do not plan to go into the analysis of whether one or both insights was the crucial point more than 70 years ago in the calculation debate. Rothbard

(1988, p. 37) and Salerno (1990, p. 45) represent the calculation insight, Kirzner, (1985, p. 129; 1989b, p. 66) and Lavoie (1985a and 1985b) the discovery insight. Though both insights are theoretically compatible they differ in their consequences for the feasibility of a socialistic system. The calculation insight believes socialistic calculation is impossible. A socialist system has no markets, so calculation cannot be based on market prices (Rothbard, 1988, p. 37). The discovery insight believes socialist calculation is flawed. The scope for entrepreneurial decisions is available only for the central planner. In a market economy with its decentralized decision-making, however, entrepreneurial decision-making has a widespread scope (Kirzner, 1989b, p. 94; cf. Rothbard, 1988, p. 78 note 28).

I suggest that because of the focus on the central planner in the calculation debate, modern Austrians discuss both insights from the point of view of the producer. They discuss the first insight (in a socialist society rational calculation is impossible) explicitly as a problem of the calculation of the means of production (Salerno, 1990, p. 439). How can a central planner rationally calculate costs or allocate factors of production efficiently? The modern Austrians discuss the second insight (a socialist society lacks ability to promote discovery) by way of the methodological makeshift of an entrepreneurial producer and a non-entrepreneurial consumer (Mises, 1966, p. 253; Kirzner, 1973, p. 41). Though alertness is in principle present in every action, in their elaborations the modern Austrians give it to the producer (cf. Rothbard, 1985, p. 282; Ekelund & Saurman, 1988, p. xx; Pasour, 1989, p. 95). So alertness is called the entrepreneurial element. Consumers are passive, non-alert, Robbinsian maximizers. See for instance how Austrians look at advertising. One of the roles of advertising is "getting the Robbinsians [the potential consumers] to see the availability of [...] opportunities" (Kirzner, 1973, p. 148). Advertising differs from changing the consumer's taste or providing information (non-entrepreneurial knowledge) to him. Regardless of his level of alertness, advertising (an entrepreneurial device) makes the consumer aware of available opportunities.

Just as Mises did before him (1966, pp. 251-256), Kirzner motivates the identification of alertness with the role of the producer in the market process as "purely for simplicity for analysis" (1967, p. 797; 1973, pp. 18 and 41). In addition, he says the identification makes sense if we consider the "near-inevitability of an entrepreneurial role's, being filled by the producer" (1973, p. 72). I do not discuss whether or not the identification makes the analysis less complicated. I

do ask, however, if it makes 'sense' to give the entrepreneurial element to the producer? Kirzner looks for the answer in the roles of the market participants. He distinguishes consumers, resource owners, and producers. Producers, converting resources into commodities, are *alert* to price discrepancies between the price paid for a product on the resource markets and the price got for it on the final product markets. Alertness to price discrepancies, however, is a form of entrepreneurial behavior. In society, there is "a built-in group of entrepreneurs" (o.c., p. 18). Otherwise, the essential difference between consumers and resource owners on the one hand and producers on the other is producers do not have to possess any means. The gains of the pure producer are caused by a certain alertness to price discrepancies. We can think of all consumers and resource owners as pure Robbinsian allocators, which is unthinkable for all producers. For a pure producer, alertness is a *conditio sine qua non* (o.c., p. 39).

4.2 The consumer: somewhere along the way of the market process

In the modern-Austrian discussion about calculation and entrepreneurship, the sovereign consumer as the personification of the ends moves backstage—the one who determines by his buying or abstention what should be produced in what quantity and of what quality. But if the market is a competitive-entrepreneurial process of discovery, more can be said about the consumer. Something that is relevant to the subjectivistic (Austrian) notions of the market process. Is there no relevant distinction between the calculations of the producer and those of the consumer? And perhaps the methodological makeshift of a Misesian entrepreneur and a Robbinsian consumer, both used for the elucidation of the market process, is spun out too long? See the way Kirzner introduces his reason for focusing on the entrepreneurial producer. He speaks of men who "are able to see where a good can be sold at a price higher than that for which it can be bought" (1973, p. 14). This is exactly the position the older Austrians challenged in the first place: the actions of businessmen the classical economist could already explain. Therefore I suggest giving entrepreneurship—the alertness towards new means and ends—to the consumer too. The one whose behavior, for the first time in the history of economic thought, the Austrians did fully explain—in that great revolution in economic thought that took place in Vienna in 1871 and after. This consumer is a real living human being seen from the point of view of consumption. He is the market's sovereign king.

In other words, for Austrian economists, classical economists were at fault because they were able to explain only the actions of the businessman. Classical economists completely neglected rationality on the part of the consumer. They did not find the law of marginal utility. "The famous formula 'to buy on the cheapest and to sell on the dearest market' makes sense only for the businessman. It is meaningless for the consumer" (Mises, 1990, p. 41). It was precisely this limitation, explaining only the actions of the businessman, the Austrian subjective theory of value was able to overcome (Mises, 1981, pp. 147 and 175). To a certain extent modern-Austrian economists, just as the classicals, have lost sight of the consumer too. We are back—so to speak—at stage one (classical economic thought) in the history of economic thought. The consumer is absent in the analysis of the possibility of economic calculations in monetary terms. He is also absent in the elucidation of the market as a dynamic process of entrepreneurial discovery. As is just-shown, the possibility of monetary calculations is discussed only for rational production. And in the elucidation of the market process, modern-Austrian economics uses the methodological makeshift of an entrepreneurial producer and a non-entrepreneurial consumer.

It is not only we are back at the classical stage of the history of economic thought: the oblivion of the consumer. No, the consumer is also no longer king. By giving the consumer a passive role in the market process, he is vulnerable and needs protection from the government. Since he cannot take care of himself—he cannot spot new opportunities himself—the producer has to do the marketing job. But can the producer be trusted to do this job faithfully? There seems to be a reason for the government to protect the consumer. But what is the impact of the consumer policy of the government upon the perception of consumer and producer of the available array of opportunities? Consumer policy "may effect what it is that decision makers *discover* to be the situation in which they act" (Kirzner 1985, p. 94; cf. Leen, 1994, pp. 104-108). It is these consequences that must be looked for, in terms of costs, in each assessment of the likely consequences of consumer policy. But there is more than this to say. May be consumer policy is not necessary in a market economy truly understood as a discovery process for both producer and consumer alike.

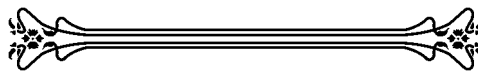
I think Kirzner's idea of entrepreneurship as a process of error correction suits the consumer—just as much (perhaps even more) than it suits the producer. Why? First, it is the definition by Kirzner of the idea of alertness as distinct from, for instance, Schumpeter's that is so well adapted to the part played by the

consumer in the market process. "The entrepreneur is to be seen as responding to opportunities rather than [as by Schumpeter] creating them" (Kirzner, 1973, p. 74). Second, Buchanan and VanBerg distinguish a cross-sectional from an intertemporal divergence between different parts of the market (1991, p. 321). But, if the creativeness of the human mind is emphasized they believe it is difficult to ascribe error correction to an intertemporal world. "What sense does it make [if the market is an open-ended process] to describe today's failure to possess tomorrow's knowledge as *error*?" (o.c., p. 321). Human choices, if real, that is inherently creative, could have been different and with different effects. For a cross-sectional situation, however—the world of ignorance the consumer of final products faces—it is legitimate to say we correct an error of what is already out there. Something that waits to be discovered. This is not to say that the discovery of intertemporal 'errors' is not important. The point is "Can we, without stretching the use of language too much, describe this situation as an error?" Nevertheless, to conclude with the words of Kirzner: "Philosophically, all this may be so. But it doesn't matter for the sake of the metaphor I have chosen. *Ex post* we have to recognize that when an innovator has discovered something new, that something was metaphorically waiting to be discovered. [...] [I]n a more fundamental sense, he is correcting an already existing discoordination. He is redirecting resources that are already misplaced" (1997b, pp. 3-4).

I resume my argument and program for the following part on the consumer in Austrian economics. What I think is unperceived in modern Austrian economics is the calculating, entrepreneurial consumer. Who is he? First, he is the final consumer who tends to buy or not to buy according to the valuations he places on the offered commodities. But, second, final consumers are entrepreneurs too "in that they search for better trade possibilities" (Reekie, 1984, p. 54). "This is the same as saying that as long as there is ignorance in the economy there will be profit opportunities: there will be trades available at more convenient terms, there will be arbitrage opportunities, there will be different goods to produce, better technologies to use, more efficient organizational forms to adopt, and so on" (Thomsen, 1992, p. 17). As the Austrians always say, market phenomena—each and every market transaction, each and every real world market decision—reflect the entrepreneurial activities of *all* market participants. Entrepreneurship refers to those who are alert to previously unknown profit opportunities.

Of course, like resource owners and consumers, entrepreneurs are an abstraction of economic theory too. In that usage the entrepreneur is a

businessman who plans, organizes, and directs an enterprise. But what interests us here is that, to some extent, all individuals are entrepreneurial. In the words of Gordon Tullock: “Kirzner mainly talks of entrepreneurs continuously seeking new profit opportunities. The same phenomenon is found, however, when a housewife decides to look in one more shop before finalizing her purchases. All of us [...] seek improved outcomes [...] No doubt the entrepreneur is more important, but the phenomenon is widespread” (Tullock, 1999, p. 230). Let us follow up this idea. Let us see what the consumer’s entrepreneurial and calculating activities look like. Since—though definitely not part of their intention—it seems the modern Austrians adhere to Alfred Marshall who wrote, “much that is of chief interest in the science of wants is borrowed from the science of efforts and activities” (1920, p. 90). A still fashionable and also thought necessary approach in modern mainstream economics. “[A] more sophisticated analysis of consumption [...] calls for prior developments in the analysis of production [...] . The time is now ripe to borrow some ideas from the economic analysis of innovation to develop our understanding of the science of wants” (Swann, 1999, pp. 102 and 103). We, however, do stick to the two sesame keys of older and modern Austrians: the consumer’s marginal utility and the idea of the market as a discovery process.



“What distinguishes the Austrian School and will lend it immortal fame is precisely the fact that it created a theory of economic action and not of economic equilibrium or non-action.”

—Ludwig von Mises.

5 PRAXEOLOGY

5.1 The method of Austrian economics

By looking at entrepreneurship and calculation processes, I use the Austrian methodology. The following also is—as far as it criticizes and shows a way out for modern Austrianism—an internal criticism and solution thereof.

Subjectivism characterizes not only the substance (human valuation) but also the method of Austrian economics. The subjectivistic method, first explicitly written down by Mises and to a lesser extent by Hayek, is called praxeology. A name, the logic of action, introduced by Mises that characterizes the verbal axiomatic-deductive method of Austrian economics (Lachmann, 1976, p. 56). And as Ludwig Lachmann hoped for in 1978, “the ‘language’ of means and ends will come to be recognized as a legitimate medium in which to express human thought about action” (Mises, 1981, p. xi).

5.1.1 The older roots of praxeology

The term praxeology itself is an old one (for a historical overview see Jan Zieleniewski, 1971). Today the term is used by the Austrian but also by a Polish school of praxeology. This last school builds on ideas, from the first half of the twentieth century, of its founder Tadeusz Kotarbiński (cf. Mises, 1962, p. 42). Oskar Lange further developed the school. Later I give some of the differences between the two schools.

Mises found the ideas for the praxeological method in the writings of some classical economists and older Austrians (Rothbard, 1980, p. 29; cf. Mises, 1981, pp. 17-22). In fact it is claimed the praxeological method was the implicit one of the economic profession until the 1950s (Hoppe, 1988, pp. 9 and 11). Think of such economists as Jean-Baptiste Say, Nassau W. Senior, and John E. Cairnes. What unites them is (1) that they distinguish between the natural and human sciences; (2) that they do their economic theorizing with verbal logic from certain self-evident premises; and (3) that they are reluctant to use mathematics and statistics in their economic theories. In the words of Cairnes: "*The economist starts with a knowledge of ultimate causes*. He is already, at the outset of his enterprise, in the position with the physicist only attains after ages of laborious research" (1875, p. 87). And as Say says: "Political economy [...] is composed of a few fundamental principles, and of a great number of corollaries or conclusions, drawn from these principles [...] that can be admitted by every reflecting mind" ([1803], 1964, p. xxxvi). Also: "Such persons [...] have not been able to enunciate these [economic] questions into analytical [mathematical] language, without divesting them of their natural complication [...] of which the consequences [...] always essentially change the condition of the problem, and pervert all its results" (o.c., p. xxxvi). And finally, as Senior says: [The science of economics] "depends more on reasoning than observation [...]. His [of the economist] premises consist of a few general propositions, the result of observation, or consciousness, and scarcely requiring proof, or even formal statement, which almost every man, as soon as he hears them, admits, as familiar to his thoughts" (1872, pp. 5 and 3).

Böhm-Bawerk, too, follows the same method in his famous paper of 1914 "Control or Economic Law". In answer to the question whether human laws or human coercion of any kind permanently and successfully neutralize or overwhelm economic laws, he says, "I shall have to start with self-evident trivialities which are close at hand. I shall merely present them in a certain connection and lead them into certain conclusions, equally so manifest that they merely need to be formulated with full clarity and purpose" (1962, p. 153).

5.1.2 The modern Austrian roots of praxeology

Praxeology starts from a fundamental, self-evident axiom: men act by virtue of their being human. "In the beginning was the deed" (Mises, 1981, p. 14). It is based on a form of introspection shared by everyone and is of the same form as

used for logical and mathematical truths. Human beings try to exchange a poor situation for a better one. Things that do not act purposefully are not classified as human beings. A human being that does not act, in other words does not behave rationally, changes into a plant and vegetates. "Human action is necessarily always rational. The term 'rational action' is therefore pleonastic [...] The opposite of action is not *irrational behavior*, but a reactive response to stimuli on the part of the bodily organs and instinct " (Mises, 1966, p. 20 and 19). "Scientifically, the only people who are irrational are people who are out of their minds, people who are crazy" (Greaves, 1984, p. 14). For the same reason we distinguish purposeful and reflex behavior. The last does not imply human choices. It can be interpreted through the natural sciences. To say that animals act, that they have an instinct, is not based on knowledge but on a lack of it. We can only know the world around us in two ways: causal or teleological. If we see animal behavior that we are unable to explain causally, we use teleological notions suitable for describing human behavior. The quasi-teleological way is the only way left to us. But nothing is said of the cause of the action (Mises, 1940, pp. 29-30; Rothbard, 1962, p. 435 note 5).

As a Kantian, Mises describes the fundamental axiom as a priori to all experience. It is a part of "the essential and necessary character of the logical structure of the human mind" (1966, p. 34). "Our science [...] considers only the essential. [...] It views action and the conditions under which action takes place [...] as formal constructions" (1981, p. 13). In this respect, praxeology is like logic and geometry. To find the essence of a phenomenon we need concepts that will guide research and can be used for the analysis of results. In the words of the German philosopher Martin Heidegger: "Basic concepts determine the way in which we get an understanding beforehand of the area of subject-matter underlying all the objects a science takes as its theme, and all positive investigation is guided by this understanding. [...] Laying the foundation for the sciences in this way is different in principle from the kind of 'logic' which limps along after, investigating the status of some science as it chances to find it, to discover its 'method'. Laying the foundation, as we have described it, is a productive logic—in the sense that it leaps ahead, as it were, into some area of Being, discloses it for the first time in the constitution of its Being, and, after thus arriving at the structure within it, makes these available to the positive sciences as transparent assignments for inquiry" ([1927], 1962, pp. 30-31). Or as Mises said: "It is not at all clear what the obstinate denial of the apriori is to achieve. [...] What sense does it make to assert

that we gained this category [for instance the categories of negation and means-ends, A. L.] by experience if we do not know to what other results other experiences could have led?" (1978, p. 126). "History needs to be interpreted by theoretical insight gained previously from other sources"(Mises, 1981, p. xiv).

For Rothbard as an Aristotelian, however, the fundamental axiom is "so broadly based in common human experience that once enunciated [...it becomes] self-evident and hence do not meet the fashionable criterion of 'falsifiability'" (Rothbard, 1976, p. 25). "The fact that men act by virtue of their being human is indisputable and incontrovertible. To assume the contrary would be an absurdity" (Rothbard, 1962, pp. 1-2). In other words, since all reasoning presupposes the apriori categories of action (means and ends; preferring and putting aside; valuing; success and failure; profit and loss; costs), it is vain to embark upon attempts to prove or disprove them. The negation of what the apriori category asserts is unthinkable and the apriori categories are necessarily implied in our approach to all the problems concerned.

Praxeology has a few broadly empirical axioms. Individuals, e.g., vary in tastes and abilities, they do think of leisure as a valuable good and learn from experience (cf. Dolan, 1976, p. 7). The axiom people learn from experience is of fundamental importance to the description of the market as a systematic sequence of economic states. Its broadly empirical character is based on the general inclination man to be alert to opportunities. "The process by which facts are hammered into human consciousness is not wholly ungoverned by the logic of human action" (Kirzner, 1979, p. 30). Although we recognize that people err, we assume man tends to notice those facts that constitute possible opportunities for gainful action. "The market process emerges as the necessary implication of the circumstances that people act, and that in their action they err, discover their errors, and tend to revise their actions in a direction likely to be less erroneous than before" (o.c., p. 30). This Austrian idea of human rationality—as essentially human purposefulness, resourcefulness, and initiative—has nothing to do with mainstream ideas of rationality: maximizing behavior of individuals who are in a situation of full knowledge or optimal ignorance. In sum, some of the apriori and deduced postulates are (1) all men seek to improve their situation from their own point of view; (2) the factors available for improving men's situations are scarce; (3) men make mistakes; (4) all human action takes time; and (5) all human actions have consequences (Greaves, 1984, pp. 10-16).

Praxeology consists in the verbal elaboration of the logical implications of the fundamental and subsidiary axioms of human action. It has the form:

1. Suppose A—the axiom of human action.
2. If A, then B; if B, then C; if C, then D and so on—the rules of logic.
3. That is why we state the truth of B, C, D, and so on (Rothbard, 1962, p. 63).

The only test of an economic theory is the truth of the evident premises and the logical analyses build on it. Praxeology is based on the fundamental fact that individuals act. Save logical errors in the deduction, we deduce true conclusions from a true axiom.

5.2 The different parts of praxeology

Economics is the most developed part of praxeology. It contains the apodictically true axiom of human action. An axiom that is enough to deduce a large part of economic theory. A small number of subsidiary axioms, such as there are a variety of human and natural resources and leisure is a consumer's good, are necessary to deduce the rest of economic theory.

Rothbard (1951, pp. 945-946; cf. 1962, p. 80) describes the various types of human action.

- A. The theory of the isolated individual (Crusoe Economics)
- B. The theory of voluntary interpersonal exchange (Catallactics, or the Economics of the market)
 1. Barter
 2. With medium of exchange
 - a. On the unhampered market
 - b. Effects of violent intervention with the market
 - c. Effects of violent abolition of the market (Socialism)
- C. The theory of war-hostile action
- D. The theory of games
- E. Unknown.

Economics, war, and games all are examples of human action. The way men approach each other, however, differs. In war, men are enemies. In games too, the intention is to defeat the other player—sometimes in cooperation with other players—according to rules. A game, first of all, however, is a pastime that involves costs and belongs to the sphere of consumption. A game gives pleasure but does not contribute anything to the improvement of human conditions.

Economics (business), however, aims at improving the conditions of life. Psychologically it is possible to see economic competition as a battle too. But the praxeologist sees great differences. For him, competition is a social process of cooperation. In it the tasks of society are divided. Not a dictator but the consumer himself decides who best fulfils his (the consumer's) wishes. How to serve someone best, that is the question. (Mises, 1966, p. 117 and 1981, pp. 89-90). The term catallactics in economics hints at this cooperation. It not only means to exchange, but also to become a part of the community: to change from an enemy into a friend (Hayek, 1982, II, p. 108). Catallactics [...traces] the formation of prices back to the point where acting man makes his choice and pronounces his decision: I prefer A to B (Mises, 1981, p. 208). Also, the theory of games and the theory of war-hostile action have no reference whatever to the theory of economic action (Mises, 1962, pp. 87-90).

Parts A and B (economics) in Rothbard's scheme are the most developed parts of praxeology. The Polish praxeologist Kotarbiński developed part C. I give an example of Polish praxeological thinking. It illustrates the principles of economics and the art of warfare and brings them back to general praxeological principles. Historically the different ways of using money as a means of payment continuously improved. First there was direct barter, then coins, then paper money and so on. Instead of someone getting the actual possession of something, he gets the assurance he can possess it. We apply the praxeological principle of potentiality: a specific activity is substituted by the potentiality to do it. For warfare this means that instead of attacking the enemy directly, one tries to persuade him to give up his position by the threat of attack. One replaces a specific action, with the same result—but cheaper—by the showing it can be done (Kotarbiński, 1964, pp. 304-305). The Polish praxeologists emphasize the differences between the Austrian ideas of praxeology and their own (Zieleniewski, 1971, p. 359). For them, praxeology is the science of efficient human action. The praxeologist gives utility maximizing principles (Kotarbiński, 1964, p. 298). They also do not recognize the apriori character of the praxeological theorems. For Rothbard, however, Oskar Lange, in his later work shows great similarity with that of Mises.

5.3. Concepts and laws of human action

5.3.1 Praxeological concepts of action

Time permeates every action in the real world. If wishes could be instantly satisfied, there would be no reason to act. The moment one decides to act, to reach to a certain goal, the goal can only be reached later in time. Everyone must necessarily distinguish the time before and the time after his act. Logic, mathematics, and praxeology are all examples of apriori sciences. What distinguishes praxeology from the other two is—among other things—time. The last are based on a timeless world, praxeology, however, cannot do without it (Mises, 1940, pp. 76-77). The most important difference between praxeology and geometry, however, is that geometry is based on freely chosen postulates (e.g., Euclidean versus non-Euclidean geometry's) and praxeology is based on a self-evident truth: the praxeological apriori of the cognition of action (the praxeological structure of the human mind).

To act implies the belief action makes a difference and the situation after the action will be better than the one before. It also implies the actor has no full knowledge of the future, for if he did, none of his actions would make a difference. To act also implies the means are scarce in relation to the goals. They are limited in relation to the possible ends they can serve. If they were abundantly available, there would be no reason to act. Abundantly available means such as air, though indispensable, are no true means; they are not the objects of action. They do not, like time, have to be allocated. The distinction between free goods like in most cases air and economic goods is irrelevant to the praxeologist (Mises, 1940, p. 66; Rothbard, 1962, p. 6).

This all sounds similar to the definition of economics Lionel Robbins gave in his book *An Essay on the Nature and Significance of Economic Science*. "Economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses" (1935, p. 16). No wonder, for Robbins tells us in the preface of the book (p. xvi) of his indebtedness to Mises. Though Rothbard called Robbins's methodology "a watered-down version of Misesian praxeology" (1988, p. 53). In the course of time, however, the conditional sale of method and object of economic science has been lost. Nearly all (text) books recall Robbins's definition but hardly any mentions his aprioristic method.

5.3.1.1 Valuation

Every human being has his preferences; he is not indifferent towards his environment. Every time he acts, he chooses: he prefers one thing to another. He must choose, make valuations, because things are scarce. Man lives in a world of quantities: the relations between cause and effect are quantitative. If this were different, if certain things could deliver unrestricted services, they would never be scarce and be valued as means. As Rothbard said: "Individual valuation is the keystone of economic theory. For, fundamentally, economics does not deal with things or material objects. Economics analyzes the logical attributes and consequences of the existence of individual valuations" (1956, p. 224). The individual valuations of the consumer permeate the whole production process. First they are related to the direct satisfaction of the consumption goods, then to the goods themselves, and later to the production goods. (Without money, however, valuation is impossible. This was Mises's starting point of the famous socialist calculation debate I examined before.)

Individual valuations show themselves in the acts of choice. The scale of valuations of the ends is transposed to those of the means. Austrians have a so-called 'demonstrated preference' concept. The difference with Samuelson's 'revealed preference' notion is not that Samuelson's notion is, and the Austrian notion is not, based on a given scale of preferences. The difference is Samuelson's scale, contrary to the scale of the Austrians, stays the same as action unfolds in time. It can be reconstructed from the actions. For the praxeologist, the scale of preferences exists only at the moment of choice. Choice demonstrates preferences but will never contradict or be measured by them. For the same reason is it absurd to "attempt to arrive at a consumer's preference scale not through observed real action, but through quizzing him by questionnaires" (Rothbard, 1956, p. 228; cf. Lachmann, 1966, p. 161). There is no guarantee he is telling the truth. There is a difference between talking about values and actually choosing values.

5.3.1.2 The marginal unit

In a transaction, the change of a poor situation for a better one, we value the things we exchange. The value we give to a certain thing is purely subjective. What is relevant are the units at the margin. For human action marginal does not mean a small amount. No, it does mean the relevant amount. Every relevant unit for a

certain action is the marginal one. If speaking about eggs, for instance, the relevant unit is one egg. For boxes of six eggs, however, it is a box. In both cases we can speak of a marginal utility. Both utilities are marginal. But in no way is the utility of one the sum of the other. A praxeologist sees no total utilities; all utility is marginal. The core idea is the variable marginal unit: the relevant unit for the transaction looked at. From this it follows that marginal utility is unmeasurable. If for instance a mathematician says the opposite, for the praxeologist this is a typical example of mathematical techniques taking over from economic content. We go along the wrong track. The mathematician implicitly supposes ‘marginal’ in marginal unit equals ‘marginal’ in differential analysis. There, indeed, the total of something is the integrand of the marginal units of that something. This, indeed, implies that the value of a sixth unit is equal to the difference between the value of six minus that of the preceding five units (Rothbard, 1956, p. 233).

Otherwise, valuation always relates to the supply in a certain unique situation. The supply, by definition, consists of homogeneous units every one of which can be exchanged for every other. The law of decreasing marginal utility follows. “[A]ction aims at encompassing the fulfillment of as many of the actor’s desires as is possible, *in the order of their urgency*” (Kirzner, 1963, p. 46). Marginal utility is a subjective valuation. It has no relation to the objective qualities of goods. If the latter should be the case, then it is possible that the marginal utility increases or decreases if the number of units increases. Take again the example of eggs. Suppose for baking a cake you need five eggs. Then it could be that if we increase the number of eggs of one to four marginal utility decreases. It would increase, however, as we add the fifth egg. “What is significant for human action is not the physical property of a good, but the evaluation of the good by the actor” (Rothbard, 1962, p. 19).

5.3.3 Indifference curves

John Hicks, who popularized Francis Edgeworth's invention of the indifference curve, describes an indifference curve as follows. Two commodities and their related utility can be illustrated graphically by measuring the amounts of the first commodity along one axis and the amounts of the second commodity along the other. An indifference curve connects all points that represent goods combinations having the same total utility ([1939], 1946, p. 13).

Austrians are unhappy with indifference curves. I think there are two

reasons. One of them is found in modern Austrianism. The other one is almost forgotten but can be found in older Austrianism. Austrians describe economics as a science of human action. Action entails two things. (1) "Acting man chooses between various opportunities offered for choice. He prefers one alternative to others" (Mises, 1966, p. 94). (2) "Action is an attempt to substitute a more satisfactory state of affairs for a less satisfactory one. We call such a willfully induced alteration an exchange" (o.c., p. 97). So the two sides of the one coin of human action are preference (choice) and exchange. The modern-Austrian reason for denouncing indifference curves is expressed in terms of preference. The forgotten reason is expressed in terms of exchange.

5.3.3.1 Indifference and preference

Rothbard gives the most elaborated denunciation of indifference curves in terms of preference (1956, pp. 236-238; 1962, pp. 265-268; cf. Salin, 1996). Economic action involves choice: given preference. So, when an individual values two things equally, "they cannot be alternatives for choice, and are therefore not relevant to action" (1962, p. 267). The reason, also, is based on Mises's first characterization of human action: preference. If someone is really indifferent to two alternatives—he is unable to choose. No one acts in a choice that cannot be demonstrated. In human action, however, every action is based on a choice: something is valued above something else. "What distinguishes the Austrian School and will lend it immortal fame is precisely the fact that it created a theory of economic action and not of economic equilibrium or non-action" (Mises, 1978, p. 36).

I distinguish between what interests a psychologist and what a praxeologist. The psychologist is interested in how and why preferences are formed. He wants to know if someone is certain or almost indifferent to two alternatives. But praxeology, a logical science, is based on the existence of human action. The praxeologist wants to understand the universal form of human action—not its concrete content. He is interested in preferences as far as they show themselves in a choice. He is uninterested in the psychology, the intensity of them. It is unimportant whether the choice is made by flipping a coin in the air or whether it is based on a strong preference. The praxeologist looks at human action. He ignores the psychological states that lead up to an action. "In the praxeological terminology the proposition: man's unique aim is to attain

happiness, is tautological. It does not imply any statement about the state of affairs from which man expects happiness. [...]. [T]he incentive of human activity is always some uneasiness and its aim always to remove such uneasiness as far as possible, that is, to make the acting men feel happier" (Mises, 1966, p. 15; cf. 1940, p. 68). Economics starts where psychology stops. Action is a formal construction. This pure form—what Hayek called the ground for the existence of the theoretical sciences of society (1942, p. 288)—gives the laws of economic science.

For a praxeologist, the fable of Buridan's ass doesn't prove the relevance of the notion of indifference for human action. Nor does it prove that indifference shows itself in action. In the fable the ass cannot choose between two equally attractive bales of hay. It has, however, not two but three options. It can choose one or other of the bales of hay or choose neither and die. This last option will certainly be valued lower than the other two. The choice for the two bales of hay is set in a random fashion (Rothbard, 1962, p. 267). The last also answers Robert Nozick (1977, p. 370) who claims Austrians need indifference. For Nozick, Austrians need it to prove for example the law of decreasing marginal utility. For a moment I spoke of a homogeneous supply of goods. This implied, since all goods are the same, man is indifferent (impartial) about them. Walter Block (1980, p. 424) solves the problem as follows. The situation before and after the action must be separated. Before the action all units of a certain supply are homogeneous. They can be substituted for one another and are of equal value. But in that situation, indifference is no praxeological concept but a psychological one. However, for an act to take place, a choice has to be made: the units are no longer equal. This is the first, modern Austrian reason against the notion of indifference. Let us look at the second, older Austrian one.

5.3.3.2 Indifference and exchange

Between the wars there were several (partly interlocking, Kirzner, 1994, Vol. II, p. ix) economic circles in Vienna. One was a circle around Mises's *Privatseminar*, another was one around Hans Mayer. One member of the Mayer circle was Leo Schönfeld-Illy. Both Mayer ([1932], 1994, pp. 206-217) and Schönfeld-Illy disliked indifference curves. Their analysis of indifference curves focuses on the problem of whether such curves reflect the basic characteristics of an economic exchange. Our world is one of scarcity. At the moment of exchange, we compare

the utilities of the goods attained with the utilities of the goods given up (Schönfeld-Illy, 1924, p. 44-45; 1948, p. 51). Exchange entails that to get one thing (1) something else has to be given up (2) at the same moment. In an indifference curve, total utility, U , is a function, F , of all the goods, that is x and y , one possesses. $U = F(x,y)$. Marginal utility is the change in total utility brought about by the smallest change in the quantity of one of the goods, given the quantity of the other good. (They are the first partial derivatives $\partial F/\partial x$ and $\partial F/\partial y$; Hicks, 1946, p. 305). This leads to the following mathematical formulation of an indifference curve

$$\partial F/\partial x \cdot dx + \partial F/\partial y \cdot dy = 0$$

What interests me are the reasons Schönfeld-Illy gave for opposing indifference curves. First, what are the arguments—and that interests us—of the two marginal utility functions $\partial F/\partial x$ and $\partial F/\partial y$? Both marginal utilities are functions of the quantities of the goods the consumer possesses and can use later. Consequently, both functions show a decreasing slope. The greater the quantity of each good, the smaller its marginal utility. Schönfeld-Illy is dissatisfied with this description of the act of exchange; it is illogical. To describe exchange (action) the objects being exchanged need to be compared. This is not the same as describing the final result of the exchange. The arguments in the marginal utility functions must be those quantities that are the objects of the action. At least one of the goods should be the cost of the exchange: the quantity of goods to be given up (Schönfeld-Illy, 1948, pp. 73 and 79). "The value of the price paid is called costs. Costs are equal to the value attached to the satisfaction which one must forego in order to attain the end aimed at" (Mises, 1966, p. 97). For those discarded goods, the marginal utility functions must show an increasing—not a decreasing—slope: its arguments are the quantities of goods given up, not the one gained by the exchange. There are also two sorts of marginal utility: positive ones, what one gains, and negatives, what one gives up, what it costs (Schönfeld-Illy, 1948, p. 52).

There is a second reason. To state the partial derivative of x , the other variable, y , must be held constant. Functions c.q. experiments in physics satisfy this precondition of partial derivation. For example, in the function $v = f(t,p)$, the dependent variable v , the volume of a substance, is a function, f , of temperature, t , and pressure, p . The method of a scientific experiment: changing the temperature while holding pressure, p , constant, equals the logical

principle of the differential method (Schönfeld-Illy, 1948, p. 83). But physics gives an inadequate description of economic exchange. For in exchange every performance demands, in one form or the other, compensation at the same time. In economics an individual does not increase his economic goods without at the same time decreasing some other (o.c., p. 84). Every economic act is conditional on "the instant of the transaction and under the conditions which this instant offers him" (Mises, 1966, p. 204). So partial differentiation is an unworkable description of economic exchange. The differentiation in two phases, exemplified in the indifference curve equation, is no real possibility. Meanwhile, for the mathematical economist it is hardly possible to resort to total differentiation. For him partial derivatives are necessary for stating the prices of the different goods. Using the formula that equates the price ratio to the marginal utility ratio does this (Schönfeld-Illy, 1948, p. 88). For Mayer, however, when "all wants differing in kind or quality are not reciprocally present to one another, then the postulate of the law of equal marginal utility becomes impossible in the real world of the psyche" (1994, p. 81). He compares the forced synchronization of utility estimations with the situation "as if one were to express the experience of aesthetic value of hearing a melody—an experience determined by successive experiences of individual notes—in terms of the aesthetic value of the simultaneous harmonization of all notes of making up the melody" (o.c., p. 83).

In other words, the *ceteris paribus* condition is an unworkable notion for exchange. Exchange cannot be split up in time by way of partial derivatives. If one thing changes, other things change too. What the mathematical representation of an indifference curve expresses is like someone who first finds something and then loses something else. He compares in his 'action' the marginal utilities of the goods he possesses after the 'transaction' has taken place. As—again—Mayer said: "In essence there is an immanent, more or less disguised, fiction at the heart of mathematical equilibrium theories: that is, *they bind together in simultaneous equations, non-simultaneous magnitudes operative in genetic-causal sequence as if these existed together at the same time*. A state of affairs is *synchronized* in the 'static' approach, whereas in reality we are dealing with a *process*. But one simply cannot consider a *generative process* 'statically' as a *state of rest*, without eliminating precisely that which makes it what it is" (o.c., p. 92). To state the partial derivative (marginal utility) with the help of the *ceteris paribus* condition is invalid. No indifference curve shows action to be sequential and non-synchronic.

Third, and in general, there are other complications that make the indifference curve for the Austrian unrealistic beyond repair. Most goods are related goods; they are the complements or substitutes of one another. This is something an indifference curve, as opposed to Marshall's utility curves for one good, was supposed to show in the first place. Consequently, only the full marginal utility of a good is relevant for consumer demand. The consumer never looks at the marginal utility of a car alone. He always looks at the (complementary) necessary gas too. This also holds, *mutatis mutandis*, for the goods the consumer has to give up (Schönfeld-Illy, 1948, p. 90). As Hicks says: "It is a very curious consequence [...] the indifference diagram, which Pareto took up as a means of throwing light upon the problem of related goods, proves to be of little direct use for the particular problem" (1946, p. 45). Indifference curves are also impossible to construct by anything close to a real experiment. The fiction of an experiment in the construction of an indifference curve has no relation whatsoever with a real experiment in physics. And besides that, the necessary infinitesimal changes and possibilities to substitute goods for one another put a real blow to the construction of any real indifference curve (cf. Mayer, 1994).

To conclude, if we want to describe human action, that is action at the one moment of exchange, indifference curves are irrelevant. Exchange entails (1) benefits and costs are to be compared, and (2) they are to be compared at the same moment in time. What we have to compare in exchange are the marginal utilities of the goods received with those given up. Logically, it is contradictory in exchange to compare the marginal utilities of the goods we possess. Though it is not contradictory for a description of the equilibrium situation after the exchange has taken place.

5.4 Praxeological laws

For the praxeologist, there are economic laws. Laws, e.g., implied by the relation between means and ends (the law of decreasing utility) and by the use of money as an intermediary with the exchange of goods (Gresham's law). Mises had no problem with the idea, first, of the existence of eternal and universal laws, and second, that these laws cannot be deduced from historical facts. For him the question was how these laws were possible. In other words, how economic science is possible (Meyer, 1981, p. 37)? "[I]n the social realm too there is something operative which power and force are unable to alter and to which they

must adjust themselves if they hope to achieve success, in precisely the same way as they must take into account the laws of nature" (Mises, 1981, p. 3).

The existence of human action and our notion of it imply all economic laws. The opposite of an economic law, if correctly deduced from self-evident axioms, is unthinkable. Of course we can say it. Just as we can say one plus one is three. But we cannot think it. And, since the Austrians consider the praxeological not the logical apriori, as far as their laws of human action go, the opposite cannot be done in action either. Otherwise, to disprove a praxeological law means moving in a circle. What is seen is the character of a self-evident axiom. This is called the boomerang principle. Suppose someone wants to refute the axiom of human action: man uses means to attain chosen ends. "[D]oing so, he is ipso facto a person making a conscious choice of means in attempting to arrive at an adopted end: in this case the end, or goal, of trying to refute the notion of action" (Dolan, 1976, p. 28). "Laws of physical nature," as Kirzner says, "are inferred from the observation of sequences of physical events. Economic laws [...] are founded on our understanding of the influence that a given event will have upon the actions of individuals" (1963, p. 4). They refer "to the essential and necessary character of the logical structure of the human mind" (Mises, 1966, p. 34; cf. 1940, p. 16).

5.4.1 The law of decreasing returns

As an example of what a neoclassical and an Austrian economist say of laws I want to look at the law of decreasing returns. Economists consider the law of fundamental importance. "One of the most fundamental economic theories—and one on which many other major theories depend—is the well-known law of Diminishing Returns" (Katouzian, 1980, p. 56). Hicks (1946, p. 84) says that if we are deprived of this law "the threatened wreckage is that of the greater part of general equilibrium theory," and Stigler (1966, p. 122) says, "The discovery of this law [...] was one of the heroic advances in the history of economics."

First I give the content of the law and the neoclassical proof of it. It is followed by the praxeological proof of it. The proof shows the law is used whenever man acts. The proof needs no empirical verification.

5.4.1.1 What the neoclassicals say

The law holds that when one or more factors are held constant, there will come a point beyond which the extra output from additional units of the variable factor will diminish. In other words—stated not in marginal but average terms (cf. o.c., p. 130)—if the amount of a certain complementary factor is held constant the variable one will always have an optimum: the highest average return.

How does a neoclassical verify the law (cf. Brue, 1993)? It is a law based on experience; daily experience and empirical research suggest the law. Take for example the combination of labor and a certain capital good. One way of explaining the law is to point at the advantages at the beginning of specialization (efficient work organization and better adaptation of the labor factor on the capital good) and later at the effect of overcrowding. Of course it can also be looked at the other way around. Instead of starting with experience, we do start with theory. Axioms and conditions for equilibrium, including the law of decreasing return, can be postulated and then examined to see if they make sense. "So far we are taken by geometry; but now it is necessary to inquire whether the equilibrium conditions thus arrived at are in fact plausible conditions" (Hicks, 1946, p. 82, cf. p. v). This recourse is impossible for the praxeologist. For him every statement must make sense. The mathematician, however, often interprets a statement later on. Then there is Joan Robinson. She describes the law as a tautology (1954, pp. 30-331). Production factors are different by definition; they are imperfect substitutes. This gives us the content of the law: the extent to which we can substitute one factor for the other has a limit. If the law does not apply, the production factors are wrongly classified. The same reason can also be used to prove the law of demand holds for homogeneous goods—not non-homogeneous goods. When the price increases and the quantity demanded does so too, then the goods are non-homogeneous. The higher priced good is, in the eye of the beholder, of a better quality—and that is what counts.

Stigler concludes his proof of the law by saying the law of decreasing returns is an empirical law, not a tautology (1966, pp. 129 and 138). To prove it, however, is impossible. Examples that demonstrate the law prove nothing. How many instances would confirm the law? Moreover, if an example should ever be found to disprove it, then it can always be said the law speaks about ultimately decreasing returns. For Stigler the most convincing proof of the law is that until now no economist has ever been able to prove the opposite—and became famous

in doing so (o.c., pp. 23 and 138). For the praxeologist, however, if this last were possible, the economist would have proven the non-existence of human action: human beings. So the one Stigler is looking for would not gain immortality but just the opposite (compare the end of Chapter 7). Why is this so and what does a praxeological proof look like? The law is neither a disguised definition nor an uncertain hypothesis. There is a third possibility: it is a self-evident proposition.

5.4.1.2 What the Austrians say

Praxeology has nothing to do with psychology (why and how people adopt ends) or technology (how to achieve ends). So, just as the law of decreasing utility needs no psychological proof—for instance that the tenth cup of coffee tastes less pleasurable than the ninth (Gossen's law of the saturation of wants)—the law of decreasing returns needs no technological proof. We are looking for a praxeological proof.

Take a product P that can be produced with three complementary factors: X, Y, and Z. The supply of the goods can be given quantitatively and leads—in nature—to quantitative measurable results. So it can always be said that x units of X, together with y units of Y and z units of Z, give p units of P. Now if unit's y and z are held constant, then units x and p can vary. The value of x, which gives the maximum of p/x , the largest average return, is the optimum. The law says that if the amounts of the complementary factors are held constant then the variable production factor has an optimum.

Let me as a thought experiment think of the opposite of the law. Since "[t]he specific method of economics [praxeology] is the method of imaginary constructions. [...] The main formula for designing of imaginary constructions is to abstract from the operation of some conditions present in actual action. Then we are in a position to grasp the hypothetical consequences of the absence of these conditions and to conceive the effects of their existence. [...] It is, to be sure, a method difficult to handle because it can easily result in fallacious syllogisms. It leads along a sharp edge; on both sides yawns the chasm of absurdity and nonsense. Only merciless self-criticism can prevent a man from falling headlong into these abysmal depths" (Mises, 1966, pp. 236-237; cf. 1940, pp. 227-228). So, if there is no optimum then, if X rises, the average product will rise infinitely. But if p/x can rise indefinitely, because x increases, it means that every amount of P is made possible just by increasing X. Every decrease in Y and Z can be substituted

by X. This means that X is a perfect substitute for the factors Y and Z. As long as X is plentifully available, the scarcity of these factors is of no concern. There would also be only one production factor. This, however, is impossible. Since what was the situation we started with. Men act. They try to exchange a poor situation for a better one. For this they make use of whatever they find around them. Some goods satisfy directly. Others need preparation before they can be used. For the production of these last, more than one good is necessary. Suppose the good in question is a cup of coffee in my hand, while sitting behind my desk. If the cup of coffee is in the kitchen then, to produce the good, I need (1) the cup of coffee; (2) the transport to the desk; and (3) time. If all I need is one factor, the cup of coffee, I would have to suppose that the cup of coffee moves, in some magical way and in an instant, from the kitchen to the desk. Such a situation would be a paradise on earth; action would no longer be necessary. But as in the example of a cup of coffee, production needs more than one factor of production.

Otherwise, what our thought experiment wants us to believe, is that the action of the production factors Y and Z is unlimited. Even the smallest amount of Y and Z would be enough. Y and Z would no longer be economic goods. Since they do have an unlimited effect. Think for instance of our knowledge of a causal connection, e.g., the recipe for making coffee. It does not lose its utility: its use is unlimited. But then, it is no object of human action. A human being does not ever have to choose between a known recipe and the utility of a certain good (Mises, 1940, p. 96; Rothbard, 1962, p. 9). But if he acts, if he behaves rationally, and keeps the amount of a certain complementary factor constant, then the variable factor always has an optimum.

To give another reason, let us take a closer look at the concept of means. Means are found in the world around us. They involve the notions of quantity and quality. For human action this is a given. Because everything has only a limited action, things can become scarce thus becoming a mean. Because the actions of different things are unequal, they can be classified in different quality classes. Think of the classification of the factors of production: nature, labor, and capital. For human action itself, however, the concepts of quantity and quality have only a limited meaning. If man acts, he places a value on the world around him. He either prefers it or rejects it. But this is done ordinal not cardinal. Satisfaction comes always from one sort or quality. Coffee, a visit to Disneyland, and a painting of Rembrandt are all valued on one scale of value. Action knows different degrees of importance but no quantity or quality.

Hence, as far as the world around us is concerned there is the marginal and total return of the law of decreasing returns. This cannot be said of the law of decreasing utility. In a world without quantities, adding or subtracting (as if total utility is the sum of the marginal utilities) is useless. Only the notion of marginal utility can be used. To sum up, means have limited action. If the quantitative action of goods is recognized before we see a good as an economic good, this implies that the combination of complementary goods must have an optimum (Mises, 1940, p. 96). In other words, because there is more than one factor of production, this implies that the average return of every production factor must have a maximum or a minimum (Rothbard, 1962, p. 30).

5.5 Praxeology versus the natural sciences

For Austrians, economic theory is absolutely true; testing is meaningless. The Austrian methodology stands against the logical positivist one that is inspired by the natural sciences. Again, as was the case in the clash with the Historical School, the Austrians are accused of being unscientific. This time, however, the criticism is not there can be no economic laws transcending the mere description of the particular circumstances of time and place. No, this time the Austrians are told economic laws can only be established tentatively by testing empirically (verifying or falsifying) the consequences. But "[b]ecause this [Austrian] view of the analytical basis for economic theory places so much emphasis on an unobservable—the purposefulness held to actuate human behavior—it follows that the epistemological character of the discipline, and hence the method appropriate to it, differs sharply from those relating to the physical sciences" (Kirzner, 1982, p. 3).

In the natural sciences one explains the known with the unknown. But in the social sciences one explains the unknown with the known (Hayek, 1967, pp. 5 and 9). In other words, in the natural sciences after the observation of known facts, hypotheses are formulated. The hypotheses are verified (falsified) by predictions made on the bases of the hypotheses. This method fits the physical facts. Facts that are homogeneous, replicable, and controllable under laboratory conditions. The social sciences, however, begin with the explaining axioms. Human beings are the explaining causal factors. "If molecules acted purposefully, no physicist would dare ignore the information which he could derive *from this fact alone*. Because molecules do not, as far as the physicist is aware, act purpose

fully, the physicist is at liberty to confine his inquiries to the explanation of empirical phenomena" (Kirzner, 1962, p. 385).

The foundation of Austrian economics is the existence of individual human action: the primary fact of human consciousness. It is possible to see if something is or is not based on purposeful human action. A physical event is seen in a different way from a purposeful human action. Natural sciences are causality research; the sciences of human action are teleological. Explanations based on the difference between the natural and the social phenomena cannot be dismissed on apriori grounds. There is a big gulf—said Mises—“that yawns between the natural events in the consummation of which science is unable to find any finality and the conscious acts of men that invariably aim at definite ends” (1962, pp. v-vi). There is a fundamental difference—hence it is logically impossible to compromise—between finality (design) and the absence of it.

Formerly, anthropomorphism, the understanding of the world *ex analogia hominis*, went too far in its ideal of explanation. For instance, when a stone rolls off a mountain, it is not moved by gravity but—as was said—by its own will: it wants to do it. It is unnecessary, however, to make the mistake the other way around—as the natural sciences with their postulates of panphysicalism (the model for present day neoclassical economics) tend to do. There is a fundamental methodological dualism. Because of the complexity of the facts, social scientist cannot verify theories in the same way as a natural scientist can. Historical facts are heterogeneous, not replicable, and are the result of complex causes.

What then is the relation between economics and reality? The modern Austrian answer is threefold. First, Austrian economics looks at a reality untouched by the natural sciences: purposeful human action, Second, to pose the question is itself the result of the preoccupation in modern economics with the method of the natural sciences. The natural sciences distinguish between thoughts and the outside world. But in the social world actions are planned. To understand human action means looking at the praxeological thought that lies at the basis of it. The reality that is the object of economics, human action, comes from the same source as human thinking. Action and reason are congeneric and homogeneous. They can even be seen as two different aspects of the same thing (Mises, 1966, p. 39). Third, the predictions, says Mises, of the modern Austrians are not that much different from the ones of the natural scientist. The latter is not a fortune-teller either. Successful predictions do not tell what will happen, but say what will hap

pen if certain preconditions are satisfied (1961, p. 131). The natural scientist can explain that if H and O are combined in certain proportions the result will be water. But he cannot predict how many scientists will combine H and O at a certain point in the future. In the same way, the Austrian economist predicts, with absolute certainty that if the demand of butter rises and the supply stays the same the price of butter will rise *ceteris paribus*. But the theoretical economist cannot predict if the price of butter will rise.

To put it differently, economic theory, "where relevant, is applied to help to explain the facts. The facts thereby *illustrate* the workings of the law" (Rothbard, 1976, p. 36). To explain complex historical facts, however, the economic historian must use more than just economic theory. He must, for example, use technology, physics, and psychology too. As an example let us look at the praxeological law "If the supply of a medium of exchange increases; and if the demand for that medium remains the same; then, the purchasing power of that medium will decline." How can an economic historian apply this law? First, he must determine if there has been a rise in prices. Then he has to try to explain it by using this praxeological law, asking whether there has been an increase in the supply. If the answer is positive, then he can assert three truths.

"A. It is a historical fact that the purchasing power of the medium X has declined to such and such an extent.

B. It is an historical fact that the supply of the medium X has increased to such and such an extent.

C. The praxeological law just mentioned. It is therefore concluded that a significant cause of the decline, A, was the increase in supply, B" (Rothbard, 1951, p. 944).

The work of the historian is to give the relevant application of the theory. This applies also to the art of prediction. Historical facts are the complex result of many causes. Many sciences can also be used. But the historical facts neither corroborate nor test the laws. They only illustrate them.

Otherwise, let us take a closer look at verbal deduction. One of the most important models for the deduction of logical implications is the—as said before—so-called thought experiment. For the economist it equals the laboratory experiment of the natural scientist. Since the variables in the social world cannot be held constant, the economist uses his imagination to do it. Economic laws have a *ceteris paribus* character. For instance, if we have an image of what it means not to act, we can form an image of what it means if we do. If the former, the

individual is completely satisfied or does not see how the means he has, can change the unsatisfying situation. But the comparison between a thought and a laboratory experiment is inadequate. The experiments of the praxeologist can never be opposed to reality or be measured by it. They aim at a level of thinking that reality says nothing about. If thought experiments and reality are brought into contact with each other, it is our thinking that must be investigated, not reality. The question is not whether the picture represents reality but whether the assumptions of the picture are identical to our understanding of the human action.

For the most part, however, for mainstream economics the *ceteris paribus* clause is a way of escape for every test. The conclusion must be that the clause is a useful abstraction in the deductive chain of economic reasoning as exemplified in a thought experiment. But it is impossible to formulate *ceteris paribus* falsifiable hypotheses that relate to reality. Other things being equal, no one observes the law of demand.

5.6 Praxeology versus quantitative economics

You do not have to be a praxeologist to question the usefulness of mathematics and econometrics for economics. For now I want to focus on the arguments used by praxeologists. Although the arguments they use, can also be used by others—with a twist in the tail, however. For instance, recognition of the complexity of historical facts and the consequences of it for carrying out experiments (the impossibility thereof), allow different conclusions to be made. One conclusion is that economics is not a science; it is only possible to describe historical and institutional facts. However, since an—as just said—aposteriori science of economics is impossible, it is also possible to conclude—as the praxeologist does—that economics is an apriori science.

5.6.1 Mathematical economics

What is the main objection of the Austrians to the use of mathematics in economics? For Walras and Jevons, marginal utility, income, and price influence each other simultaneously. This interdependence can be studied with equations. But Menger in his economics had no use for equilibrium and functional relations. He used genetic-causal relations. The needs of the consumer determine the value of the consumption goods. They in their turn determine the value of the producer

goods. The individual valuation of the consumer permeates production: first the needs themselves, then consumer goods and later on the producer goods. Otherwise, in each science the question is, "What needs and can be done?" Order in the variation of certain magnitudes needs to be established, as do explanations of the phenomena. The first case involves the natural sciences, the second the social sciences. In the first, the entities themselves are not the cause of their behavior. The objects are determined by the discovery of quantitative laws and the interaction between them. But as far as human behavior goes, free will and human choice are fundamental. The universal aspects of this sort of behavior must be analyzed logically. There are no functional quantitative relations between variables. The human mind causes certain actions that cannot be traced back to other forces (Rothbard, 1960, p. 166 and 1962, p. 279).

The use of mathematics in economics began with the introduction of marginal utility. It seemed particularly suitable for the use of differential calculus. At the same time, however, it showed up another difference between the three founders of marginalism: Menger on the one hand and Walras and Jevons on the other. Why would it be more general and precise—two of the acclaimed advantages of the mathematical form (cf. Niska, 1959)—to use mathematics instead of common language? As an example I use the notion of marginal utility as put forward by the mathematician Karl Menger (1973), the son of Carl Menger.

(I). Using verbal logic, the Austrians say that for every good the utility of a larger quantity is larger (or, at any way not smaller) than the utility of a smaller quantity. The marginal utility of that larger quantity is smaller (or at anyway not larger) than the marginal utility of the smaller quantity.

(II). Using mathematical terminology, the neoclassicals say that if q is the quantity of a good and μ its utility, then

$$\mu = f(q), d\mu/dq = f'(q) > 0 \text{ and } d^2\mu/dq^2 = f''(q) < 0$$

If we compare II and I we see that the mathematical formulation gives less information than the Austrian does. The mathematical formulation needs to make the additional supposition of differentiability: individuals have to find infinite small changes relevant. A supposition that clearly has nothing to do with the reality we live in. "Action does not deal with physical or metaphysical units which it values in an abstract academic way; it is always faced with alternatives between which it chooses" (Mises, 1949, p. 120). The Austrian formulation is

more general, and can be applied to situations where the mathematical can not.

Comparison of II and I also illustrates the point it is not necessarily true that the mathematical form shows hidden assumptions. In fact it is the opposite (cf. Dolan, 1976, p. 23). The Austrian form is also of the same "mathematical" precision as the mathematical one. To say 'every arbitrary real number plus one equals one plus that number' is fully equal to saying that ' $x + 1 = 1 + x$ '. To conclude, Karl Menger says that one has compared "expressions in formulae to a trip across America by railroad and verbal formulations to a transcontinental walk" (1973, p. 19). He, however, concludes "Thus if one wants to compare the two methods to crossings of a continent, then [...] one must not say that the [...second] is by foot and the [...first] by train, but rather that the [...second] is unencumbered while the [...first] is a crossing with unnecessary and obnoxious baggage" (1973, p. 20).

So again, what are the advantages of substituting symbols for plain words in economics? (Egger, 1978, p. 28). There is the economy of fewer words, the exactness in the definition of symbols, and the rigor of proof. For this last the whole package of mathematical theories available at this moment can be used. When is it an advantage to do this? To answer the question I compare the proofs of the praxeologist and natural scientist. In the natural sciences the argument is generally of the form: some words at the beginning and at the end of the article and pages of symbols in the middle. Indeed mathematics has its use if only the result counts. The premises are hypothetical and it is pointless to make every step meaningful in the process towards the conclusion. If nature has a mathematical structure then mathematics is the key to it. Otherwise, the book of nature can be read if its language (mathematics) is understood. In the natural sciences, the axioms and deductions from them are formal and receive their interpretation operationally as far as they can explain and predict the facts. But for the praxeologist it is the opposite: axioms are known and meaningful. Every step in the verbal deduction has meaning. Verbal propositions have a meaning of their own. Mathematical formulations, however, do not. The language of economics is verbal. Of course, mathematics is a language too. But ' $x - y = z$ ' and 'assets minus debts is capital' do differ. It is a problem of order here (o.c., p. 38 note 25). The advantage of verbal language is it can express essences. Mathematical formulations are always quantitatively precise, but unable to portray qualitative differences. Every step in the market process, however, depends on human decisions that are mental, qualitative, and unmeasurable.

To conclude, first, for the praxeologists, mathematical economics must at best either be cut away by Ockham's razor (Rothbard, 1963, p. 65 and 1976, p. 22) or be judged by the words of Mises as *Vestigia terrent* (mathematical formulations puts people off, 1981, p. 116). As Böhm-Bawerk says too, if you start with $d/dx \varphi(x) dx + d/dy \psi(b-y) dy$, the reader does not understand it anymore and puts the book away (Kauder, 1957, p. 412). Second, as Rothbard says, "the really important thing is *not* that nonmathematicians cannot understand them; the crucial point is that mathematicians cannot contribute to economic knowledge" (1962, p. x). For Austrians the most important objection to the use of mathematics in economics is the fear that economic phenomena are treated analogously to natural ones. If man becomes a complicated machine and machines start thinking, market processes as they happen in the real world tend to get lost. Mathematics ignores the most essential characteristic of human beings—the alpha and the omega of the social market process: entrepreneurial creativity.

5.6.2 Econometrics

The econometrist fills empirically and tests the mathematically expressed hypotheses. He tries to discover economic laws and solve problems of human action by the use of statistical data of the past. For the praxeologist, the econometrist makes two mistakes. First, economic theories do not need empirical testing. Economic theories are necessary true because they are deduced, using verbal logic, from self-evident axioms. Second, the econometrist assumes, at least for the moment, a stable relationship. A stable relationship, however, can only be seen with hindsight; but by then it is a historical fact. If this is the situation, the mathematically expressed hypothesis loses much of its charm. In physics the preference for its use is based on certain constants. But what if there are only variables (historical data) and no constants? The use of a system of equations, so convenient with many variables, loses its value. To speak of variables when there are no invariables makes no sense. The popular notion that statistics can prove anything is inapplicable to human behavior. In fact, you cannot prove anything about human behavior with it. All statistics are history, sometimes economic history, but never economics (Mises, 1977, p. 97; cf. Leen, 1992).

The reason for the distinction between the quantitative and qualitative method in the natural and social sciences is based on its distinctive objects. The objects of the first do not act, choose, or change their opinion and choose again.

The research can be repeated time and again with increasing quantitative precision. For the praxeologist, however, economics is a qualitative science. Economics is a science based on the ideas, valuations, and actions of individuals. The subject of economic science is not the tangible world around us; it is action based on individual valuations. Valuation does not measure anything, it only subsumes in a scale of value. Human action has no standard of valuation; no measuring can be done. Prices are not measured with money but are only expressed in it (Mises, [1912], 1971, p. 15). If this were not true, there would never be human action. If the valuation places A equal to B, then no trade takes place. Production and exchange do not happen because valuations are equal, but because they differ. In the prospective judgements of both buyer and seller, every exchange creates new additional value. The econometrist focuses on the objects exchanged; for him the market consists of endless sequences of exchanges. "From the subjective perspective, however, it becomes possible (if indeed not imperative) to recognize the market process as involving processes of mutual discovery [...] on the part of the market participants. It becomes possible to recognize scope for superior entrepreneurial vision into the future [...]" (Kirzner, 1998, p. 585).

Economics theory is often stated in statistical quantities that are based on monetary values, e.g., price indices and the measure of the Gross National Product. For the description of human action, however, these are unfruitful. First, human behavior based on individual valuations has no common measure. Macro economic measures ignore the application of the subjective and marginalist theory of value to money. "It is a relapse to the thinking of ages in which people failed to comprehend praxeological phenomena because they were committed to holistic notions. [...] Modern economics does not ask what 'iron' or 'bread' is worth, but what a definite piece of iron or bread is worth to an acting individual at a definite date and a definite place" (Mises, 1966, p. 400). Second as Menger said, economics does not investigate quantities but essences, e.g., the essence of value, rent, or profit. Verbal language has the advantage over mathematical language in that the former can express the essence of economic phenomena. For Mises economics looks at the pure form of human action.

As well as quantification, econometrics aims at prediction. In Chapter 5.5 I have said why the traditional way of prediction is invalid in economics. But why should prediction be desirable in the first place? In the positive science of economics of the Chicago school testable predictions take the center of the stage.

As the positivist says: "The meaning of a statement is given by the method of its verification." A notion can only be understood if it is somehow related to sensory experience. To speak of essences, is problematical. How can they be tested by sensory observation or have any meaning at all? But for Austrians the aim of science is not to predict. Its aim is to grasp the meaning of necessary connections. A prediction with the help of a black box, e.g., macroeconomics without a micro-economic foundation, is unsatisfactory. Economics enables men to predict the qualitative effects to be expected from the adoption of specific policies. But such predictions cannot be quantitative. There are no constant relations in the valuations that determine, guide, and alter human relations.

This also sheds light on the proper role and value of the economist. If for example the government does not intervene in the market, the role of the economist is to explain why. "The economist's role in a free society, then, is purely educational" (Rothbard, 1970, p. 257). The businessman, however, is much better equipped to predict future demand than the economist is. The theoretical concepts and laws of the praxeologist allow him to interpret reality. He can act with a greater chance of success. But if the government *does* intervene in the market, the practical use of the economist increases. For then, for example, the rise in the demand is certain and its consequences are looked for.

To conclude, for the praxeologist, econometrics is at best a useful form of economic history. But it is of no use for economic theory. As Hayek said, "[since] we know so much detail about economics, our task is to put our knowledge in order. We hardly need any new information. Our great difficulty is digesting what we already know. We don't get much wiser by statistical information except by gaining information about the specific situation at the moment" (1994, p. 145). Or, to sum it all up in the words of Kirzner, "it [economic methodology] rests upon an approach to economics which seeks, not replicable predictions, not econometric 'explanation' in terms of statistical correlation, but essentialist understanding of actual social phenomena in the manner in which they occur" (2000, p. 71).



“The idea of a price that does not reflect and express entrepreneurial judgement and hunch is virtually a contradiction in terms”

—Israel Kirzner

6 THE MARKET PROCESS

The end of Chapter 4 showed us that the socialist calculation debate brought to the fore two modern Austrian tenets. In their opposition towards the possibility of central planning, the modern Austrians say a centralized economy (a) is fundamentally flawed in its discovery process and (b) rational calculations of economic decisions are impossible in it. Because of the context of discovery, both tenets are discussed for rational, purposeful production only. Therefore I look at the entrepreneurial element in the act of consumption, and at the consumer’s process of calculation.

Otherwise, we are looking for a positive answer—as far as the consumer goes—for Kirzner’s three questions on the market process. The questions are: “What characterizes, what drives, and what constitutes the market process?” The answers are competition, alertness, and discovery (Kirzner, 1997a). All three closely connected notions characterize the competitive-entrepreneurial market process of discovery as we know it. And are, respectively, closely connected with the ideas of rivalrous competition as described by Smith, the entrepreneurial process as described by Mises, and the knowledge-discovery procedure as described by Hayek (Kirzner, 2000, p. 218).

6.1 Equilibrium states versus disequilibrium processes

Israel Kirzner (1986, pp. 134 and 152) describes modern Austrianism as an authentic extension of Menger’s older static subjectivism: a consequent dynamic subjectivism. In modern Austrianism, that post-World War II continuation of the Austrian tradition, the two central figures are Mises and Friedrich Hayek. Both

authors focus on market adjustment processes. Kirzner, building his theory like Mises and Hayek did, believes that one of the greatest failures of neoclassical equilibrium analysis is that it assumes an equilibrium is actually brought about. For instance, in a disequilibrium would-be buyers who have returned home empty handed should learn that it is necessary to outbid other buyers. Buyers who have paid high prices should discover that they could have got the same goods at lower prices (Kirzner, 1973, p. 14). Consequently the real problem for modern Austrians is to describe the possible realization of an equilibrium as the result of "the systematic way in which plan revisions are made as a consequence of the disappointment of earlier plans" (Kirzner, 1962, p. 381).

Neoclassical equilibrium theory cannot describe endogenous changes in the end-means framework. Its maximization scheme is unfit for the task of generating systematic modifications of choices. It suffers from a discontinuity in the succession of decisions. Only an exogenous change in the data: in tastes, in technology, or in information can generate a new decision; a decision that is unexplainable in the original framework. Without exogenous changes there is no 'choice-theoretic' explanation as to why yesterday's plans are replaced by today's.

Mises and Hayek made it possible to describe adjustment (endogenous change) as a systematic sequence of decisions. Mises's extension of subjectivism was to describe the individual decision unit not only as maximizing but also as finding out the ends-means relationship. This opened the way for incorporating learning into our understanding of the market process. Hayek's extension of subjectivism was to describe the process as one of learning by discovery (Kirzner, 1986, p. 147; cf. Kirzner, 1985, p. 26). Endogenous change in the ends-means relationship is possible with the entrepreneurial element in each individual market participant: alertness (Kirzner, 1967, pp. 793–794; 1973, pp. 70–72). Alertness is the propensity of knowing where to look for information, "the propensity [...] toward fresh goals and the discovery of hitherto unknown resources" (Kirzner, 1973, p. 34). A disequilibrium situation points to market ignorance—from which emerge profitable opportunities, entrepreneurial alertness exploits (Kirzner, 1979, p. 30). The market continuously presses people to improve. Alertness gives a more realistic image of human action and makes possible the description of the market as a unified discovery process. To sum up in the words of Kirzner: "What drives the market process is entrepreneurial boldness and imagination; what constitutes that process is the series of discoveries generated by that entrepreneurial boldness and alertness" (1997a, p. 73). "[The] 'alertness' view of

the entrepreneurial role rejects the thesis that if we attribute genuine novelty to the entrepreneur, we must necessarily treat entrepreneurially generated market events as not related to earlier market events in any systematic way. The genuine novelty [...] attribute[d] to the entrepreneur consists in his spontaneous *discovery* of the opportunities marked out by earlier market conditions (or by future market conditions as they would be in the absence of his own actions) [...These] entrepreneurial discoveries are the steps through which any possible tendency toward market equilibrium must proceed" (Kirzner, 1985, pp. 11-12).

For modern Austrians the main difference between the neoclassical market model and their own is that in theirs adjustment processes and market disequilibria are central. Adjustment copes with dispersed knowledge and lack of it. The central point of their approach is the incurable ignorance of most of the particular circumstances that determine the course of society. "Thus entrepreneurial activity [...] undoubtedly involves uncertainty and the bearing of risk" (Kirzner, 1973, p. 78; cf. 1985, pp. 40-67). In contrast to the neoclassicals, for the modern Austrians correct foresight, full knowledge, is not a precondition for the attainment of equilibrium but the defining characteristic of the state of equilibrium. "The statement that, if people know everything, they are in equilibrium, is true simply because that is how we define equilibrium" (Hayek, 1949, p. 46). In the modern Austrian market model, action does not—as is mostly the case in the neoclassical model—primarily follow from an optimal choice in a given ends-means relation. At the center of the Austrian market model is the process of conceiving the ends-means relationship. In the words of the modern Austrians, the change in market model contains a change "from a 'mechanical' Robbinsian [after Lord Robbins, neoclassical] economizer to Mises's [modern Austrian] *homo agens*" (Kirzner, 1973, p. 72). "[*Homo agens*] is not merely engaged in computing the patterns of means allocation that will most faithfully reflect the hierarchy of given ends [like Robbins's calculating agents]. *Homo agens* is actively seeking out the best course of action, he is venturing, innovating, exploring, searching" (Kirzner, 1967, p. 792).

The discontinuity in the succession of decisions in the neoclassical market model shows the neoclassical maximizer does not choose at all. "[T]he replacement of one set of given ends by a second set occurs *before* (or at least *outside*) [... neoclassical] choice itself" (Kirzner, 1986, p. 142). "The very circumstance that the 'chosen' course of action is seen as already inexorably implied in the given configuration of preferences and constraints, of ends and means, makes the choice

'mechanical' or 'automatic'—and thus not a true choice at all. True choice surely requires the realistic possibility of more than one alternative" (o.c., p. 139). Choices are not only concerned with merely selecting the highest out of an array of given and ranked alternatives, but also embrace the perception and evaluation of the alternatives identified as relevant (Kirzner, 1989b, p. 18). "What is today known as neoclassical economics rests on a theory of choice in which ends are not freely chosen by economic agents, but 'given' to them in the form of indifference curves: a badly misnamed theory of choice forced into the Procrustean bed of determinism" (Mises, 1981, p. viii). Otherwise, there is a sharp distinction between neoclassical search theory and a discovery process. In neoclassical search "[t]he searcher knows what he is looking for, and he knows where to look for it. [...] In the case of discovery, [on the other hand,] the discoverer discovers something he did not know existed, or something, the ready availability of which he had not realized" (Kirzner, 1989b, p. 27). Search wipes out known ignorance. Discovery wipes out utter ignorance—one is unaware one does not know. But the process of discovery is not completely unpredictable. For modern Austrians the outcome "may emerge as a result of the alert grasping of a hitherto unnoticed opportunity." In neoclassical equilibrium theory, on the contrary, the outcome is "*either* the fully expected result [...] of deliberate plans, *or* the fortuitous expression of pure luck" (o.c., pp. ix and 30).

To put it differently, the neoclassical economist often starts with a simplified static model. Processes are studied as the result of some higher order of (mostly) technical sophistication. For modern Austrians, however, the distinction between process and situation is not a choice between two independent subjects. For them the process elements "are central and essential for understanding markets and not merely refinements to our knowledge or matters of embarrassment (Kirzner, 1989a, p. 234). Process, discovery, and uncertainty are essential for everyday economics. "It is not that markets work in spite of the open-ended uncertainty surrounding human action, but rather that they work *precisely because* of this quality of human action. The open-ended uncertainty of the environment itself provides the scope and possibility for an entrepreneurial process of competitive discovery" (o.c., p. 234). A consumer problem (e.g., an information asymmetry between the producer and the consumer or a dangerous product) does not necessarily point to government intervention. The market is a discovery process: genuine inefficiencies can be relied upon to generate market processes for their own correction. But the systematic tendency for imperfect knowledge to

be spontaneously improved upon is not instantaneous one. In Austrian economics time is not the problem but part of the solution. Indeed, it is the old problem of the socialist-calculation debate again: "Can we do without the market?"

6.1.1 Negative and positive externalities

Austrians emphasize the division of knowledge and its growth. Hence, freedom of contract is necessary. Not because it produces perfect efficiency but because it produces more efficient outcomes than judicial intervention does. The market system encourages the full use of human knowledge. So, Austrians do disagree with the Pareto norm of optimality. Why? First, the market is an open-ended process in time. A static, timeless Pareto optimum is no meaningful measure of performance for actual market processes. The market is a process, not a state, or an institution that facilitates exchange. Second, all costs and benefits are inherently private. It is impossible to say externalities generate a divergence between private and social costs or benefits. As with all costs, externalities are experienced subjectively; they cannot be added together to arrive at a measurement of social costs (Cordato, 1992, p. 7). Third, the regulator does not have the necessary information to calculate a divergence between social and private costs. If he could get the information without the actual market process, the process of discovery would no longer be needed (cf. Rizzo, 1980, p. 641). But there is no efficient non-market resource allocation. This was the insight the Austrians tried to bring to the fore in the socialist-calculation debate we spoke of before. A debate that began with the question, "Is an efficient non-market resource allocation possible?" Market based prices are necessary to signal scarcity, to transmit knowledge, and to stimulate discovery. And as Mises concludes: "Inasmuch as money prices of the means of production can be determined only in a social order in which they are privately owned, the proof of the impracticability of socialism necessarily follows. [...] [T]his proof is certainly the most important discovery made by economic theory" (1981, p. 157).

For Austrians, policy relevant externalities are those that involve a conflict of property rights that are not clearly defined or enforced. External costs "are failures to maintain a fully free market, rather than defects of that market" (Rothbard, 1962, p. 944). All negative externality problems "could be removed by a reform of the laws concerning liability for damages inflicted and by rescinding the institutional barriers preventing the full operation of private ownership"

(Mises, 1966, p. 658; cf. Leen, 2001, 2002). The problem is that non-owners allocate resources. The same is true for example for the problem of air pollution. No one has a right to clean air; no law protects against pollutants emerging from natural processes. But there is a right not to have air invaded by pollutants generated by an aggressor. For an Austrian, terms as “reasonable air pollution” or “balancing of equities” are out of the question. If someone causes pollution, he is an aggressor. Damages should be paid in accordance with strict liability. Unless the polluter was there first (the principle of homesteading) and had already polluted the air before the other property was developed (Rothbard, 1982, p. 77).

Positive externalities do not in general involve a conflict in the use of property. So positive externalities are not the inversion of negative ones. External benefits are not viewed as either market or institutional failure. They are an unintended benefit of the market. We cannot conclude the resulting prices and quantities are sub-optimal. "These outcomes simply reflect the freely made decisions of market participants to trade or not to trade under one of an infinite number of cost-benefit relations" (Cordato, 1992, p. 19). If someone takes an action to his own advantage and a third party benefits, he does not have the right to ask others to subsidize him. In the extreme this will result in the good, e.g., a public good as consumer information, not being produced at all. Free riders reduce the effective demand almost to zero. For the neoclassical, an excise subsidy must encompass the market output. But as well as asking that no property rights be violated, the Austrian would ask how much free information is enough before allowing individuals to make their own decisions. Who decides then when consumers are well enough informed?

This makes it look as if the Austrian and Coasian traditions have much in common. Both, indeed, blame the standard Pigouvian analysis for ignoring the importance of property rights. But the similarity is superficial. For Coase, prices are equilibrium prices. If the transaction costs are high, the judge should mimic the Coasian theorem results. If the transaction costs are low, regardless of who bears the costs *ex ante*, parties will bargain. The result will maximize the combined value of the product they produce. As already shown the Austrian objections to this procedure are (1) knowledge is decentralized, (2) values are subjective, and (3) not all prices are equilibrium prices. The way the Austrian regards property rights differs from the Coasian one too. The judge should not decide who should have the property rights—but who already has them. For Coase, rights are a variable to be granted by the judge on the basis of who stands

to benefit most or to lose least from a particular rights assignment (Cordato, 1980, p. 401). For an Austrian no cost-benefit analysis but a closer look at contractual arrangements is necessary. If the owner of a right is known then strict liability comes to the fore. Not the internalization of costs, as the Pigouvian goal would be, gives rise to this rule. For Austrians, strict liability is based on the *prima facie* notion of he who causes harm is liable. Causation is a part of strict liability. For Coase, however, the notion of causation is almost irrelevant. The optimal allocation is achieved by whoever has the property rights.

6.2. What drives the market process?

Necessary is a consequent look at the consumer's subjectivism. Which aspect does the consumer—the consumption aspect of action—add to entrepreneurship? For "[t]he conduct of the consumer—i.e., of everybody—is no less a topic of economic studies than that of anybody else. The businessman is, in his capacity as a businessman, not more closely related to or involved in the process that produces market phenomena than anybody else [i.e., the consumer]" (Mises, 1962, p. 77).

We know from Mises that "every actor is always an entrepreneur" (1949, p. 253) and from Kirzner what entrepreneurship entails for the producer. For Mises (o.c., p. 255) "[e]ntrepreneur means acting man in regard to the changes occurring in the data of the market." For Kirzner (1988, p. 4) entrepreneurship is the "alertness to and the discovery of as yet unknown information (both in regard to existing opportunities for potential gains from trade with existing techniques and in regard to possibilities for innovative processes of production)." What, however, are the explicit repercussions for the consumer, the act of consumption, of the Austrian emphasis on adjustment processes instead of the more usual neoclassical market equilibria? The producer is always calculating in monetary prices between two markets: his input and his output market. The producer "should buy in the cheapest market and sell in the dearest market. In buying and selling [he] should know no other goal than the greatest monetary profit" (Mises, 1960, p. 176). The consumer, on the other hand, is always spending his money on one market. He tries to bring his unmeasurable utility in a motivated, efficient way into his monetary calculation process. He places utility at the center of his calculations. Utility and marginal utility are present in the calculations of the consumer only (Schönfeld-Illy, 1924, pp. 13-14; 1948, p. 1).

6.2.1 Menger's goods characteristics

Let us start at the beginning: the choices of the consumer that is consumer demand. For "[t]he demand for goods with the expected utility and marginal utility which it recalls, is the first and last link, the alpha and the omega, in the chain of the origin in price, it is the driving and decisive force, the dynamics of it all" (Schönfeld-Ily, 1948, p. 231; cf. Abbott, 1955, p. 24). Demand, however, is not the desire of the consumer for a hypothetical product not yet produced. "[T]he demand that is expressed in the demand curve for a product *means* the quantities of it that consumers will be prepared to buy, at given prices, *when offered the opportunity of doing so*" (Kirzner, 1973, p. 178). The sovereignty of the consumer: production patterns dictated by the pattern of consumer demand, means "production decisions are determined by entrepreneurial anticipation of the patterns of demand that will be evoked by alternative production plans" (o.c., p. 176).

Opportunities are placed before the eyes of consumers after the production decisions have taken place. So the consumer's alertness must be part of the answer to the question: What makes for a consumer of an already existing thing a consumer good? A question the modern Austrians lost sight of when giving predominance to the producer. As Böhm-Bawerk said "How frequently, for instance, in a society which engages extensively in 'utilization by way of exchange' [i.e., production] do we find there is a watering down in the subjective requirements" that makes of a thing a consumer's good (Böhm-Bawerk, 1962, p. 101). Compare this with what we said before at the end of Chapter 4: we do not take the road of "borrowing the more recent developments of production analysis" (Swann, 1999, p. 103).

The goods-question brings us to the heart of economics. One of the first questions is "What makes a thing a good" (Menger, 1950, p. 48)? The answer from a subjectivistic point of view reads like this. "[G]oods-character is nothing inherent in goods [...] but merely a relationship between certain things and men" (o.c., p. 52). In his *magnum opus*, *Grundsätze der Volkswirtschaftslehre* ([1871], 1950), Menger gave four essential characteristics of a good (need, useful properties, knowledge, and power of disposal). In this way he tried to define the essence of a good. Ten years later Böhm-Bawerk, in his *Habilitationsschrift, Rechte und Verhältnisse vom Standpunkte der volkswirtschaftlichen Güterlehre*

([1881], 1962), added as a fifth characteristic the condition that individuals must possess knowledge of how to use the thing (*Gebrauchskunst*).

In the history of economic thought the difference between Menger's and Böhm-Bawerk's characterizations has almost been forgotten. In most cases the difference is not even noticed (e.g., Amonn, 1911, p. 266). If mentioned the addition of a fifth characteristic is characterized as a sign of Böhm-Bawerk's objectivism (Endres, 1987, p. 294). Compare an often-quoted remark made by Menger. He said that the error of objectivism was made inside the Austrian camp in the works of Böhm-Bawerk (Schumpeter, 1954, p. 847 note 8). But, according to Mises, in Böhm-Bawerk's case this was probably only a matter of stylistic habit inherited from Böhm-Bawerk's own 'objectivistic' economic childhood. Stylistic faults to which even Menger sometimes fell prey (Mises, 1981, pp. 167 and 171). So—again according to Mises—it is better to turn to the more clearly stated views of the epigones (o.c., pp. 174 and 178). One of the results of this chapter is to prove the opposite: we can still learn from one of the founding fathers of Austrianism: Böhm-Bawerk. He, however, in a remark characteristic of his general attitude towards Menger, said that he supplemented Menger's findings "only in one minor respect" (1962, p. 41). In his *magnum opus*, *Kapital und Kapitalzins* of 1884, he dropped his fifth characteristic.

Is, however, Böhm-Bawerk's own and other people's negative verdict on this fifth goods-characteristic correct? Or have I come across a hint of the entrepreneurial appraisal of a consumer good? The question is "What light sheds Böhm-Bawerk's subjectivistic goods-concept on the untouched subject of the entrepreneurial behavior of the consumer?" What are the formal characteristics of this alertness concept? What are the implications for the theoretical underpinnings of the idea of competition: that what keeps the market in motion? In the modern Austrian vision, competition ("entrepreneurial activities that [...] are [...] creative acts of discovery", Kirzner, 1985, p. x) is not only a process of rivalry between producers for the money of the consumer but above all things a two-sided discovery process between producer and consumer (Kirzner, 1963, p. 110). It is a process that takes place between producers and consumers and at the same time within each of these groups. Still, when it comes to the point, the modern Austrians impute the entrepreneurial role in competition to the producer (Kirzner, 1973, p. 72). Though the ultimate king in the market is without doubt the consumer (cf. Mises, 1966, pp. 269-270). But, if the consumer king rules he must occupy a place in the market process. Indeed, parties on a market do both benefit

with each and every exchange they make. There is more, however. In the market, first and foremost, “the value scales of consumers come to govern the disposition of potential factors of production” (Kirzner, 1999, p. 173).

6.2.2 Böhm-Bawerk’s goods characteristics

In his *Principles*, Menger gave four characteristics of goods. He described them by stating the standard ends-means relationship. People have needs. The only way they can be satisfied is by a causal process. What things, to be called useful things (*Nützlichkeiten*), can satisfy the needs in such a causal process? Two conditions must be fulfilled: (1) a human need must exist and (2) the thing must have useful properties to satisfy the need. If the causal process is recognized and if we control the useful things, the thing is not only useful but also a good. This leads to two further conditions: (3) knowledge of the causal relationship and (4) the power of disposal over the thing (*Verfügungsmacht*) (1950, p. 52). The four characteristics were the culmination and more or less also the end of a lively discussion about goods-characteristics.

Alter (1982) gives an explanation why the four characteristics are the ‘end’ of economic thought on goods-characteristics for the Austrians in general and for Menger in particular. He refers to the Aristotelian character of the foundations of Menger's economic theory. A statement that can be extended to older Austrianism in general (Smith, 1986, p. 9). The four necessary and jointly sufficient conditions to make a thing into a good are “nothing else but Aristotle's four causes operating in the realm of immaterial objects [psychological states]. They are the material [need], the efficient [useful properties], the formal [power of disposal], and the final cause [knowledge]” (Alter, 1982, pp. 152-153).

In his *Rechte* Böhm-Bawerk stated five goods-characteristics. To Menger's four he added a fifth one: individuals should know how to use (*Gebrauchskunst*) a useful thing (1962, p. 42). He must have had good reasons. Austrians are not lighthearted about essences. Goods characteristics are part of their essentialism. Böhm-Bawerk himself played down his divergence from Menger; he gave his reasons in a footnote. Herein he says the knowing-how condition cannot be included in the fourth condition on the command over the thing. He gave two reasons: (1) the knowing-how condition is too subjective; and (2) it would stretch the language usage too much to include knowing-how as a part of the condition on the command over the thing (o.c., p. 42 note 2).

First I classify Böhm-Bawerk's fifth (knowing how to use) characteristic by differentiating it from the other four characteristics. To start with, I will differentiate it explicitly from the both by Menger and Böhm-Bawerk stated characteristic that we must have knowledge of the causal relationship between the mean and the end. I use the second reason (stretch the language usage too much) or more actually hint in Böhm-Bawerk's explicative footnote. The first reason (too subjective) I discuss further on. Subsequently I use the so stated classification for analyzing Menger's implicit concept of knowing how to utilize a useful thing. I call it "implicit" because in the posthumously published second edition of his *Principles* he made the remark that the knowledge of how to utilize a thing should be classified under the power of disposal (command) condition (1923, p. 17). It comes down to the question: "How is Menger's fourth characteristic to be interpreted to include the whole or part of Böhm-Bawerk's fifth characteristic?"

Both Menger and Böhm-Bawerk put forward the condition that one must have knowledge of the causal connection between a useful thing and a need. One must have the knowledge that such a situation exists. The knowledge, on the other hand, of how to use a thing—Böhm-Bawerk's fifth characteristic—refers to a form of knowing-how. The knowing-how aspect states what it is for someone to have the know-how to be able to perform certain tasks. It refers to the possession of certain skills. There is a difference between a theoretical knowing that something is the case and a practical knowing how to do things. The consumer's knowing-how concept I have in mind is directly combined with utility. It is particularly shown in consuming the subjective images of services. Classical music, for example, has no value for someone who only loves jazz music; he does not know how to use it. He cannot do a thing with it. This is an example of the general fact that "[p]eople want products because they want the experience-bringing services [the psychological states (immaterial objects) of Aristotle we just spoke of] which they hope the products will render" (Abbott, 1955, p. 40). Here knowing-how clearly has not the "objective" connotation of, e.g., knowing how to use a can-opener.

6.2.2.1 Ryle on knowing how and knowing that

In Austrian economic thought the difference between knowing-how and knowing-that is widely known and considered of fundamental importance (Hayek, 1967, p. 44; Lavoie, 1985a, p. 62; O'Driscoll and Rizzo, 1985, p. 104). It functioned as an

argument of the Austrians against the efficiency of a central planning system. Knowing-how cannot be communicated to and therefore used by a central authority. What I want to do is to look at the concept of knowing-how and see how it relates to Kirzner's idea of entrepreneurship.

At this point I refer to the famous elucidation of the concepts of knowing-how and knowing-that by the British language philosopher Gilbert Ryle (Ryle, 1945; 1949). This in contrast to the more usual Austrian explication of it based on Michael Polanyi. Given their appropriate logical uses, they ought to be clearly distinguished. If this is not done a category-mistake is made. A mistake comparable to the one somebody makes when he asks where the university is after a tour on the grounds of the university in which he has been shown a number of colleges, libraries, playing fields, and museums. "He was [by asking the question] mistakenly allocating the University to the same category as that to which the other institutions belong" (1949, p. 18).

Why are the logical uses of the concepts so different? Knowing-how refers to an observable regularity in the behavior of a person. The concept does not refer to a possession of knowing-that, neither does it signalize the occurrence of special (theoretical) internal acts of thought. Knowing-how has the character of a disposition not that of an occurrence. "Just as the habit of talking loudly is not itself loud or quiet, since it is not the sort of term of which 'loud' and 'quiet' can be predicated" (o.c., p. 33). Neither do we have to know-that before we know-how. "The crucial objection to the [what Ryle called] intellectualist legend [one tries to reassimilate knowing-how to knowing-that or some special theoretical act] is this. The consideration of propositions is itself an operation the execution of which can be more or less intelligent, less or more stupid. But if, for any operation to be intelligently executed, a prior theoretical operation had first to be performed and performed intelligently, it would be a logical impossibility for anyone ever to break into the circle" (o.c., p. 31). For the intelligence of an act is given by another, preceding intelligent act and so on *ad infinitum*.

If we confront the Misesian (entrepreneurial) producer with the Robbinsian (non-entrepreneurial) consumer, we find two irreducible concepts. There is on the one hand the dynamic market concept: the disposition to perform a certain activity (a knowing-how) and on the other hand, there is the static market concept: the possession of a certain knowledge (a knowing-that). In other words, the market has the capacity to perform certain tasks, to sort something out. Or it is a theory, a stock of cognitive knowledge. Both descriptions have parallels and dif

ferences. It is possible to speak of learning an activity as well as learning knowledge, although learning-how differs from learning-that (cf. Kirzner, 1979, p. 29). "We can be instructed in truths, we can only be disciplined in methods" (Ryle, 1945, p. 14). We can ask for the reasons why someone accepts a proposition, but we cannot ask this if someone's skill is at stake. So a distinction is made between the market conceived as a disposition and as a stock of knowing-that. Knowing-how is made clear through actions, not through internal or external dicta (which is knowing-that). To conjoin or disjoin them is a category mistake. Compare the conjunction "She came home in a flood of tears and a sedan-chair" with the disjunction "She came home either in a flood of tears or else in a sedan-chair" (Ryle, 1949, p. 23). Both of them make no sense.

The distinction Ryle made in the use of the different kinds of categorical concepts is of interest in expanding on Böhm-Bawerk's concern that it would stretch language too much if one included knowing-how as part of the condition that requires command of the thing. Böhm-Bawerk's fifth characteristic of knowing-how, in the light of Ryle's classification, cannot logically be put under the condition that states factual command over the thing. In language we make a distinction between a state of things and a mental disposition. The condition of command as used by Menger refers to an entity at our disposal. Likewise, Menger's discussion of the other characteristics clearly shows the need of their actual occurrence (1950, p. 52-53).

The question can be asked as to how the five characteristics of Böhm-Bawerk fit into Alter's explanation of Menger's four goods characteristics in terms of Aristotle's four causes. The question disappears as soon as it is realized that knowing-how is a dispositional concept and not the description of another cause. "The sense in which we 'explain' [...] is not that we infer to occult causes, but that we subsume under hypothetical [...] propositions." "The explanation is not of the type 'the glass broke because a stone hit it; but more nearly of the different type 'the glass broke when the stone hit it, because it was brittle' " (Ryle, 1949, pp. 49 and 113; cf. O'Driscoll and Rizzo, 1985, p. 26).

In the second edition of his *Principles*, Menger said that knowing-how can be classified under the command of a thing. This begs the question as to how to interpret the command condition to make this happen. For Menger the command of a thing appeared in the description he gave of the production of goods, i.e., converting higher into lower order goods. Menger's first law on goods-character concerned the causal connection between goods: "The goods-character of goods

of higher order is dependent on command of corresponding complementary goods" (1950, p. 58). If the command condition was to 'include' a form of knowing-how, then, for Menger, it had to be that aspect of knowing how which stated a capacity or skill of the producer. The producer could bring off certain things; he could actually produce the goods. He had control over the necessary complementary goods.

For Böhm-Bawerk, on the other hand, to illustrate the explicit condition of knowing-how in the context of production would be out of the question. For him the possibility of multiple uses of higher order goods and especially barter, both change the order of a good: the place a good occupies in the causal nexus of goods. Like the conditions of need and knowing-how, the prerequisites for a thing to become a good show themselves precisely in these situations in a watered down version. "The strange phenomenon of 'utilization by way of exchange' simply reveals here a feature which is apparent in many other aspects of the nature of goods, the vexatious power of causing supposedly well-defined characteristics to fade and become obliterated—a power which has so often caused economists in general to surrender to what Robinson calls 'the role of the inevitable supernumerary' " (1962, p. 101 note 2). So, the object of this chapter can also be characterized as sketching out, from a subjectivistic point of view, the difference between first (consumer) and higher order (producer) goods. For the causal nexus between goods, just like goods-character it self, is not a property inherent in the goods but a relationship between man and goods (Menger, 1950, p. 58).

The conclusions up to this point are threefold. First, Böhm-Bawerk's added fifth goods characteristic is different from the other four. Second, in Ryle's terminology the difference is parallel to the difference between knowing-that and knowing-how, or, more generally, between episodes (occurrences) and dispositions. Third, if knowing-how is to be included—as Menger is inclined to do—in the goods-characteristic of command over a good, then that characteristic seems to designate the capacity aspect of the role of the producer in the market.

6.2.3 The entrepreneurial consumer

Kirzner describes alertness as " 'knowing where to look for knowledge' rather than knowledge of substantive market information" (1973, p. 68). "He [the entrepreneur] has not 'deployed' his hunch for a specific purpose; *rather, his hunch has propelled him to make his entrepreneurial purchase and sale.*" [...]

"Entrepreneurial alertness is not an ingredient *to be deployed* in decision-making; it is rather something in which *the decision itself is embedded* and without which it would be unthinkable" (Kirzner, 1985, p. 22; cf. 1989b, pp. 23-24). "No matter how calculative a man's behavior may be, it seems impossible to avoid having accepted, without calculation, some framework within which to self-consciously engage in cost-benefit comparisons" (o.c., p. 48). The descriptions of alertness are analogous to the ones Ryle gives of the knowing-how concept. "[T]he explanation is not of the type 'the glass broke because a stone hit it; but more nearly of the different type 'the glass broke when the stone hit it, because it was brittle'" (1949, p. 49). And, we do not have to know-that before we know-how (o.c., p. 29).

Alertness, "the elusive analytical category", then clearly becomes a form of knowing-how, a mental quality. It is a disposition that expresses itself in practice for the producer as the capacity or skill to bring about certain things. Alertness and the capacity aspect of the command condition are two sides of the same coin. They bring about the producer's ends-means relationship as far as it depends on the category of knowing-how. So we can conclude that Böhm-Bawerk's explicit concept of knowing-how—as shaped implicitly in Menger's concept of the power of disposal—has found its counterpart in the modern Austrian theory about market processes. It refers to the producer's propensity of alertness. The core role in the market—at least till now—is for the producer and not for the consumer. If the modern Austrians should stop their analysis right here, this would be a startling situation. For it puts things back—as we saw—in the same position as described by Mises over seventy years ago. Even more astonishing, it was precisely this position of the classicals the Austrians tried to get rid of with their subjectivism.

To solve this riddle I return to Böhm-Bawerk and expand on his other (first) reason for adding a fifth characteristic. What is so subjective about knowing-how that it can neither be part of the command condition nor coincide with the above mentioned 'implicit' (producer's) capacity aspect of the command condition? To answer the question I look at someone who simulates the disposition of alertness (knowing-how). How can such acts be qualified? "We use abusive names like 'charlatan' and 'quack' for the frauds who pretend to be able to bring things off, while we use the word 'hypocrite' for the frauds who affect motives and habits" (Ryle, 1949, p. 128). With the disqualifications of both forms of reproachable behavior, I differentiate between two forms of alertness: a tendency to act or react in a certain manner, and a capacity to get

something right. Compare the difference between proneness and competence. "Tends to" implies 'can', but is not implied by it" (o.c., p. 126). A tendency concerns a proneness, in which the source is of interest. In contrast to a capacity, a skill, in which the method is of interest. This difference coincides with the different roles that can be ascribed to consumption and production. The consumer is asked why he believes something, whereas the producer is asked how he knows something and what his method has been. The fraudulent behavior of the hypocrite, for instance, is often a problem in market research. The consumer who is interviewed wants to give a socially accepted answer. To ask the consumer the wrong questions (alertness being understood as a capacity aspect, which the modern Austrians are inclined to do) and the silence following that question does not signal a lack of alertness. It signifies different forms of alertness by producer and consumer.

I interpret Böhm-Bawerk's concept of knowing-how as being broader than the implicit capacity aspect of the producer that is part of Menger's command condition. Böhm-Bawerk's explicit concept includes the subjective aspect of a tendency: one that is pre-eminently applicable to the entrepreneurial role of the consumer in the market. To describe a market process both forms of alertness, towards monetary profit (producer goods) and utility gains (consumer goods) are formally necessary.

The pejorative terms with which Mises describes the consumers do not contradict, but reinforce my interpretation of the alertness concept. Mises speaks of "The hosts of inferior people," "The inferiority of the multitude," and "These dull beneficiaries" (1962, pp. 112-113). It is exactly the quality of verbs expressing a tendency—a person tends to act or react in certain manners and which do not imply that anything is brought off—that they can be qualified by such adjectives as 'fanatical', 'stupid' and 'childlike'. On the other hand none of the qualifications are applicable to capacity verbs, which express that a person is equipped to bring things off, or to get things right (Ryle, 1949, pp. 128-129). Probably, however, Mises has already given himself the best attitude for an economist to take towards these pejorative terms. "There is little sense in distinguishing between economic and other motives (error, ignorance, incapacity, laziness, neglectfulness) [...] if one starts with the action of the marginal consumer and not with that of the businessman. [...] One can see how ridiculous such scholastic distinctions are. The maxims of the businessman cannot be applied to the action of the consumers, which, in the last analysis, governs all business"

(1981, p. 176). The just said, gives a theoretical answer to the unexplored subject of the entrepreneurial behavior of the consumer. I stated the logical domain of the categories: with what propositions they are consistent and inconsistent, and what propositions follow from them and they do follow.

6.3 What constitutes the market process?

In this section I look if there is in consumption an equally important role for market determined monetary prices as there is for it in production. In general, in what sense are market prices a relief for the consumer? In particular, in what sense are they the steps in the discovery process—the market is?

In older Austrian economics marginalism is not only the solution to a problem but also gives rise to a new problem. Marginalism, the solution to the value paradox, poses the problem of finding an overall goods allocation with its astonishing amount of individual comparisons. Comparisons are necessary to determine the values of the different goods and thereby the optimal goods allocation. In the classical objective value theory this problem was not intimate with the core of economics and could also be relegated by the theoretical economists. With subjective use value this changed. Value was no longer given by outside labor costs, but it had to be calculated by men itself. The problem further aggravated with the transition from a cardinal to an ordinal utility concept. For now the calculation problem changed from a quantitative to a much more difficult to handle qualitative one. The problem becomes even more complex if we use a household production function. For then the consumer has to state not only the needs to be fulfilled by the goods themselves but also by their intermediate products.

6.3.1 Short cuts in equilibrium: the first and second generation

In his "*Grundzüge der Theorie des wirtschaftlichen Güterwerts*" (1886) Böhm-Bawerk discusses the calculation problem. From a pure theoretical point of view calculation has to be labor and time consuming. To compute the marginal utilities we have to state again and again the needs which goods of the first order can satisfy and so on for all the units of the goods we have to our disposition. The problem even grows in complexity with goods of higher order. For then we have to state not only the needs to be fulfilled by the goods themselves but also by their

intermediate products (o.c., p. 74). But, he continues we know from our experience that calculations do not give us much trouble. First, we do have a lot of practice. We are great virtuosi in our value calculations. Calculations, after all, which from a cost-benefit point of view do not have to be scrupulously careful. We do not have to be more exact as is worthwhile. This reason is analogous to the one given by Kirzner. For him "[t]he essence of the problem facing the consumer [...] consists in choosing one out of an immense number of alternative assortments of goods" (1963, p. 64). The solution, however, of this problem as far as it concerns the "immense number" does not need special attention inside theoretical economics. "[I]ncome allocation can be made as precise as the consumer wishes; that is, as precise as the consumer feels worthwhile in view of the difficulty of choosing carefully between a number of closely similar alternatives" (o.c., p. 65). Second, we have all sorts of short cuts and rules of thumb: our own recollections of earlier, similar decisions, what we have learned from other people, and we follow routines. All these relief's can be used as long as our situation does not drastically change, which is practically the case for most of us. Third, there is a reason that is particularly relevant for the calculation problem of goods of higher order. Nearly all stages of production are taken care of by separate industries: the familiar phenomenon of the division of labor. Consequently, further stages of production lay outside the calculation problem of the producer. He only asks himself: what are these goods worth on my next market?

For Mises, too, economics is first and foremost concerned with the question how calculable action is possible (1940, p. 186). "No other distinction is of greater significance [...] than that between calculable action and incalculable action" (1966, p. 199). The infinity of the calculation process arises as we go from simple consumer decisions of first order goods to complicated producer decisions of higher order goods (Mises, 1981, p. 98). Production processes are many and long; the conditions necessary for success multitudinous. In other words, for Mises the calculation problem arises if we change the analyses from an isolated individual to an individual in a full-grown exchange economy ([1912], 1971, p. 48). So the solution to the calculation problem is given with the possibility of monetary calculations in an exchange economy. "No individual could so discriminate between the infinite number of alternative methods of production that he could make direct judgments of their relative value without auxiliary calculations" (Mises, 1981, p. 101). Money makes it possible to come to grips with "the confusing multiplicity of the exchange ratio's" (Mises, 1971, p. 48). The

division of labor in an exchange economy with money as its collateral "effects a kind of mental division of labor, without which neither economy nor systematic production would be possible" (Mises, 1981, p. 101). The producer—as we say before—"should buy in the cheapest market and sell in the dearest market. In buying and selling [he] should know no other goal than the greatest monetary profit". The consumer, however, places utility at the center of his calculations (Mises, 1960, pp. 174-179). But after signalizing the distinction between the calculations of the producer and the consumer, Mises and the modern Austrians lose sight of the consumer's part of the distinction. The consumer retains as the solution of the famous value paradox and as the basis of the valuation process. Human action in the form of only buying decisions (consumers)—but of only selling decisions (resource owners), too—becomes of subsidiary interest. The entrepreneurial role in human action is confined to the producer: his actions between the input and the output markets.

So, the question becomes what relief money gives the consumer? Money is the *sine qua non* for rational production save for primitive production and consumption. What is the role of money for the consumer in a full-grown market economy in respect of the multiplicity of all the necessary calculations and the impossibility of stating all the necessary utilities? A question that takes us to the core of modern subjectivism: "the analysis of the mental processes performed by acting man in applying quantitative distinctions when planning conduct" (Mises, 1966, p. 210). Subjectivism "systematically recomposes market phenomena in terms of typical structural components of every day decision making" (O'Driscoll and Rizzo, 1986, p. 252).

6.3.2 Short-cuts in equilibrium: the third generation

It is not only that it would cost the consumer too much time and trouble to make all the necessary calculations. It is also the case, claims Leo Schönfeld-Illy, that not all utilities can be stated and henceforth compared. It is almost impossible for someone to say with certainty whether a good that protects against death by starvation has a higher value than a second one that protects from freezing or a third that protects from being choked to death. These utilities cannot be compared or grasped at all (1924, p. 21). But if this is the situation, how can our theory be useful if it has to be in accordance with the just-called practical facts of life. Do we have to admit that, at least partially, subjective value cannot explain economic

calculation? For, we do buy goods in certain quantities without which we cannot survive (o.c., p. 21). Modern Austrians, with their predominance of the producer's point of view, do not worry about these problems. Indifference is not a concept of action. It lies outside economics, a science of human action (Rothbard, 1962, p. 265). Moreover if utility cannot be grasped it simply lies outside the field of economic calculation (Mises, 1966, p. 215).

The problem of how to abbreviate economic calculation became one of the core problems for the older Austrians in general and the neo-marginalists in particular. The neomarginalists were the third generation of economists of the Austrian school. They worked from the early 1920s until the end of the 1940s. Hans Mayer, Paul Rosenstein-Rodan, and Schönfeld-Illy were among them. (Menger, Böhm-Bawerk, and Wieser form the first generation; Mises and Hayek form the second). The solution to the abbreviation problem was so important that Rosenstein-Rodan in his summarizing article on marginal utility said "the essential function of marginal utility is to abbreviate economic calculation" ([1927], 1960, p. 94). He specifies the condition that permits abbreviation. "Observation shows that during an economic period the majority of the needs [...] usually remain constant" (o.c., p. 84). The same holds for the supply of productive resources. The complementarity of utilities, however, seems to pose a problem. Even when there is a small change in the data "this begets that". It suggests the necessity of a complete revision of the whole economic plan, This is not the case, however. Since the layers of goods allocation we are speaking about are the marginal ones. Here complementarity is always the lowest and the utilities the smallest. Therefore there are no great repercussions elsewhere in the system.

But how do we find the final situation that holds on in the first place? The situation that is of relevance if no big things do change. The situation is the result of a historical development. We cannot create it *uno actu*. It is the result of a historical process of trial and error. If, however, we are in this (final) situation, the attained marginal utilities fulfil their function as a short cut without which there simply can be no rational economic conduct. "The utilities of the new uses which are contemplated are compared with past marginal utilities in these uses; if they are larger, the new uses are expedient, if smaller, the new uses are not expedient. The marginal utility in different need classes (kinds of uses) thus fulfils a watch-dog function with respect to consumption" (o.c., p. 85).

6.3.3 Short cuts in disequilibrium: Schönfeld-Illy

In two of his books (1924, 1948) Schönfeld-Illy extensively investigates the abbreviation procedure of consumer calculations¹. For Schönfeld-Illy the use of marginal utility as an instrument of abbreviation changes from being useful in an equilibrium situation to being useful in one of disequilibrium. The phenomena to be explained are no longer associated with small changes in an equilibrium allocation, but with abrupt, great changes in means and ends. His favorite examples of budget allocation are students who receive their first income after graduation, people who get married, or emigrants upon arrival in a foreign country (1948, pp. 125-126 and p. 321).

6.3.3.1 Schönfeld-Illy: a modern-Austrian forerunner

Schönfeld-Illy is hardly mentioned in the modern Austrian tradition. This may come as a surprise. In his books of 1924 *Grenznutzen und Wirtschaftsrechnung* and of 1948 *Das Gesetz des Grenznutzes, Untersuchung über die Wirtschaftsrechnung des Konsumenten* he more or less describes the same issues as being the core of economics as Hayek did in his writings of the thirties and forties. Yet modern Austrians refer to Hayek as the one who pioneered their views on the operation of the market. Apart from a favorable book review by Hayek (1925), to my knowledge only Lachmann has ever spoken with any appreciation of Schönfeld-Illy (Lachmann, 1966, p. 162; 1986, p. 240). There are at least three reasons why Schönfeld-Illy is hardly mentioned today by modern Austrians. (1) Schönfeld-Illy started his analysis with maximization within a given ends-means framework. A given framework, however, is just about the opposite of the process with which modern Austrians start their analysis. (2) Mises, the founder of the

¹ Leo Schönfeld-Illy's original last name was Schönfeld. But when in the 1930s the Nazis occupied Austria he changed for political reasons his name to Illy (Kauder, 1965, p. 73). The reason was the following. After the Nazis occupied Austria, Schönfeld moved to Brünn then Czechoslovakia. From his new home he often travelled to Austria to work as an independent accountant and tax advisor. To make this possible he changed his name to the one of his mother Illy. So after Kauder, I refer to him as Schönfeld-Illy. For a more general perspective on Schönfeld-Illy's life and work see Mayer's obituary of Schönfeld-Illy (Mayer, 1954, pp. 1-3) and the introduction of Kurt Leube to the reprint of Schönfeld-Illy's book of 1924 in 1982.

modern Austrian movement, had no use for Mayer (Mises, 1978, pp. 61-62 and 65; cf. Kirzner, 1994, Vol. II, p. ix), a man highly esteemed by Schönfeld-Illy (1948, pp. 5, 187 and 215). A high regard that was reciprocal (Mayer, 1954, p. 3). (3) Few of Schönfeld-Illy's work have been translated into English: the language of the modern Austrians.

For Hayek the core of economics is "a problem of the utilization of knowledge which is not given to anyone in its totality" (1945, p. 78). For Schönfeld-Illy "the problem is the continual determination of a multipartite and circumstantial system, of which the data fundamentally are given only as subjective expectations [...] and fundamentally cannot be brought into the hands of one calculator" (1948, p. 208; 1924, p. 29). Schönfeld-Illy develops the central idea of his process analysis by using Wieser's idea of marginal utility. The way he does it resembles Hayek's discussion of competition. For Schönfeld-Illy, Wieser's definition of marginal utility relates to a situation in which action is already completed. But Wieser's description of the function inside economic action of marginal utility relates to the situation from which economic action has to start. Then Schönfeld-Illy asks: "What is the guarantee the last stage of economic action contains all those things we use during the actual economic action and consequently are contained in a conceptual definition grafted upon this completed stage?" (1924, p. 77). Posing the problem as the distinction between the function of marginal utility out of equilibrium and the definition of marginal utility in equilibrium, agrees—as just-said—with the problem formulated by Hayek in the forties as one of the central elements of modern Austrianism. In his article "The Meaning of Competition" (1946) he differentiates between competition as a process and competition as a situation. The greatest error in postulating an equilibrium situation and defining competition as a situation is that one assumes the situation to exist a true explanation ought to account for as the effect competition. For Hayek, "competition is by its nature a dynamic process whose essential characteristics are assumed away by the assumptions underlying static analysis" (1946, p. 94).

Kirzner and Schönfeld-Illy relate their view on processes to Jevons' Law of Indifference. The law states that "in the same open market, at any moment, there cannot be two prices for the same kind of article" (Kirzner, 1979, p. 157). Kirzner sees his analysis as a solution to the problem of "how during the course of the process, many prices converge, as entailed by Jevons' Law of Indifference, toward a single price" (o.c., p. 20). For Schönfeld-Illy, Jevons' Law refers to the

indifference *des Marktpreises* and marginal utility refers to the indifference *des Nachfragepreises*. Just as for Kirzner, the single market price needs to be explained, so for Schönfeld-Illy the one price the consumer calculates for each unit of a stock of goods needs an explanation. Both men question a self-evidence in the theory as they find it. In the end, however, for Schönfeld-Illy too, marginal utility is an intermediary and part of the explanation of the process that results in Jevons' Law (1948, pp. 41-42, pp. 230 and 296). Like Kirzner's, Schönfeld-Illy's analysis not only aims at a more realistic description of allocation at the individual level, but it has consequences for the analysis of the market at the level of society, too. The idea of marginal utility gives him the opportunity to describe the market as a causal-genetic process (a one-direction process of action going from individual utility to prices). A process that is at variance with neoclassical functional equilibrium theories (the simultaneous solution of mathematical functions). Schönfeld-Illy analyses the economic calculations of the consumer—the problem of how to use scarce means in the best way to produce the results wanted most. The peculiar problem of consumer calculations that also demands its special discussion in economic theory, is how to bring the immeasurable utility in a motivated, efficient way into the monetary calculation. Utility and marginal utility are only present in the calculations of the consumer (Schönfeld-Illy, 1924, pp. 13-14; 1948, p. 1). For him "the demand for goods with the expected utility and marginal utility which it shows, is the first and last, the alpha and the omega, in the chain of the origin of price, it is the driving and decisive force, the dynamics of it all" (1948, p. 231).

Since utility is immeasurable, what principles can substitute for actual numerical calculation (Schönfeld-Illy, 1924, pp. 40 and 56)? Schönfeld-Illy's view about this function of marginal utility as a dynamic, expected demand price is—as we will see—analogue to Kirzner's alertness and related price concept. Kirzner endorses Mises' thesis that "there is nothing automatic or mechanical in the operation of the market" (Mises, 1966, p. 335). "The idea of a price that does not reflect and express entrepreneurial judgement and hunch is virtually a contradiction in terms" (Kirzner, 1988, p. 6). I conclude (as a program for the rest of this chapter) that for Schönfeld-Illy, Kirzner's view of the consumer as a pure Robbinsian maximizer cannot be true. It is not inevitable to ascribe the entrepreneurial role to the producer. But, on the contrary, it is inevitable to confer this role on everyone, including the consumer. With this result in hand it is not really that remarkable that modern Austrians on the one hand have no difficulty in

recovering a preference of the older Austrians for adjustment processes instead of market equilibria, but on the other hand, have more difficulty in recovering the central position of the producer in adjustment processes. For instance, in his search for the entrepreneurial role in Menger's system, Kirzner finds a negative result and does speak of a paradoxical result (1977, p. 71).

6.3.3.2 Schönfeld-Illy's three principles

For a theory to be able to describe small changes in equilibrium only, and not the origination of the equilibrium itself, would be unsatisfying to Schönfeld-Illy. To be compared to a theory that can only explain price changes but not their origination. We cannot take as given the results that our theory intends to explain. What is noteworthy, is that with this change in perspective not only comes a different definition and function of marginal utility but also a change in the character of the proof of the abbreviation procedure.

Schönfeld-Illy introduces his version of the notion of marginal utility with the question: "How can the transition process come about to deduce from the data, which include Gossen's first law of diminishing marginal utility, the result formulated as Gossen's second law of equi-marginality?" A question overlooked by mean stream economics because of the mathematical mould of their theories (1924, pp. 204-205; 1948, pp. 3-4; cf. Leen, 1995, p. 69). To explain the function of marginal utility he states the principles that can substitute for actual numerical calculation, since utility is immeasurable (1924, pp. 40 and 56). He distinguishes three principles. All three are necessary and sufficient.

The first principle is the Principle of the separate utility of a good (*Prinzip des Einzelnutzens*) (o.c., pp. 41 and 49). Though the consumers' aim is to reach the greatest total utility they do not and cannot calculate total utility as such but only changes in total utility. Changes that are brought about by adding goods to the ones already used. These changes give the utility of a good. To determine the utility of each good separately, in the sense of its own abstract utility, is impossible. The utilities of goods influence each other simultaneously and depend on the actual situation. (o.c., p. 3).

The second principle is the Principle of *quid pro quo* (*Prinzip des Vergleichens von Leistung und Gegenleistung*) (o.c., pp. 44 and 50). Changes in total utility do not give the consumer numbers in which he can calculate. What he can do is compare the changes with other changes. Given scarcity, a change in

total utility can always be compared with another one. This comparison has to be done if the calculation is to have any economic significance. In discussing the principle, Schönfeld-Illy clarifies the object of Gossen's first law: the pivotal fact behind the third principle (o.c., p. 198 note 1). In conformity with modern Austrianism (Kirzner, 1963, pp. 50 and 56; Mises, 1966, p. 126) the object of Gossen's law is not the image of a subsequent consumption of goods (Schönfeld-Illy, 1924, p. 92) but a contemplated variation in goods quantities.

The interpretation of marginal utility as a subjective demand price gives us the third Principle of economic relevance (*Prinzip der ökonomischen Relevanz*) (o.c., p. 48). It states the economic relevance of a margin for the whole. The price relevant for the marginal part of a divisible amount of goods has an economic relevance for all other units. Since the utility of the other units is higher than the utility of the marginal one. So the price paid, as far as the other units go, certainly must be justified (o.c., pp. 59-60). The cumulative validity of marginal utility makes it possible to abbreviate calculation and to solve problems of goods of which the utilities cannot be stated or compared.

With the three principles not only utility in general and the two problems in particular are brought into calculation, but marginal utility fulfils a special role, too. It functions no longer pre-eminently as a watchdog that precludes all utility under it and sustains all utility above it. But its function becomes its economic relevance: the relevance of the economic use at a margin for a whole.

For Schönfeld-Illy, his interpretation of marginal utility solves an inconsistency in the thinking of Wieser. Wieser takes the description of marginal utility from the situation in which the calculation is already completed. "The measure of marginal utility is got from the least useful of the most important uses [...] conditional on the highest use of the supply and the most careful inquiry of the needs" (o.c., p. 75). On the other hand, Wieser draws the description of the function of marginal utility inside calculation from the situation whereby action starts. "All uses, which stand below, are forbidden [...] all uses which stand above or are equal, are permitted" (o.c., p. 75). Schönfeld-Illy wonders whether the last stage of calculation contains all those things that have been used during the actual economic action and, consequently, are contained in a conceptional description grafted upon this final stage. The correct definition of marginal utility consistent with the function it performs goes as follows. For a particular consumer the marginal utility of a certain amount of goods is the utility of the smallest part of a stock of goods relevant from an economic point of view. The economically

smallest part is the part that lies at the circumstantial margin of use of the stock of goods. It is of relevance for the whole stock of goods considering the plans one has for using it. Marginal utility is an instrument in a process of trial and error. (Schönfeld-Illy, 1948, pp. 67 and 126).

As a result, Schönfeld-Illy and Rosenstein-Rodan give a different interpretation of Wieser's statement that the entire surplus utility (*übernutzen*) can be neglected. For Rosenstein-Rodan the surplus utilities are the utilities above the equilibrium marginal utilities (1960, p. 85). For Schönfeld-Illy they are the utilities above the marginal utilities of certain quantities of goods in a disequilibrium situation (1948, p. 65).

What can we say about the change in character of the proof of the abbreviation procedure? For Böhm-Bawerk and Rosenstein-Rodan the possibility of abbreviation is a direct consequence of certain empirical, psychological characterizations: an unchanging world around and within us. For Schönfeld-Illy, on the other hand, abbreviation follows of Gossen's first law. Schönfeld-Illy gives a, in a modern Austrian terminology, praxeological proof.

6.3.3.3 Böhm-Bawerk versus Schönfeld-Illy on total value

At the end of the 19th and the beginning of 20th century Böhm-Bawerk and Wieser had a quarrel. The quarrel can be introduced as follows. What is marginal utility? Is it the utility of the last unit, or the change in total utility brought about by using the last unit? For Milton Friedman, in his *Price Theory* ([1962], 1976), it is the latter. He believes that the former leads to the paradox of marginal utility being the opposite of the way everyday language is used. Take for example a number of identical oranges. Since all oranges are the same, the utility of each one must be the same too. One is not preferred to another. If marginal utility is the utility of the last orange, this is the utility of every other orange too. Total utility would be equal to the number of oranges multiplied by the marginal utility. This does not seem to be a good description of marginal utility. Total utility is the number of oranges multiplied by their average utility. This accords with everyday use of language. Marginal utility for Friedman is the change in total utility: the utility of the last orange plus the change in utility of all the previous oranges used (1976, p. 36).

The way Friedman describes marginal utility is the way most economists do. However, one group of economists, the neo-Marginalists do not agree. For

them marginal utility is the utility of the last unit. The problem is not marginal utility but total utility. The consumer is unable to determine the total utility of a stock of goods. What he can do, however, is determine the change of utility of a stock of goods, and this change gives him the utility of each good. To determine the utility of each good separately is impossible. Utilities influence each other and depend on the situation (Schönfeld-Illy, 1924, pp. 3 and 41). The neo-Marginalist sees no antithesis between the utility of the last unit and the change in total utility.

Two of the pupils of Wieser, however, retained the truth of the rule that the total utility of a stock of goods equals the number of goods multiplied by the marginal utility. Though Friedman does not explicitly refer to this rule, it is also an old one. The question then too was how to determine the total utility of a stock of goods. In his *Multiplicationstheorem des Wertes*, Wieser maintained that we can get the total utility of a stock of goods by multiplying all units with the attained marginal utility. However, Böhm-Bawerk in his *Integrationstheorem des Wertes*, maintained that we can get it by adding the utility of each good separately. Almost every one agreed with Böhm-Bawerk. Wieser's theory underestimates the total utility of a stock of goods. Different units of a stock of goods satisfy different wants—not the same want all the time. Neo-marginalists Mayer and Schönfeld-Illy both gave their own interpretation of Wieser's theory. Both tried to explain it from the point of view of a consumer who faces the problem of estimating the value of a stock of goods. Mayer focused on the time aspect of calculation, Schönfeld-Illy—as we saw—on the limited capability of the consumer to calculate.

Mayer looked at the function of marginal utility as it relates to a consumer who has to plan his expenses for several time periods in advance. Every consumer has to portion his goods over different time periods till new goods become available. If the consumer looks at one time period, marginal utility functions once: it is unique. If, however, calculation involves more than one time period, the same marginal utility appears more than once; the same wants are repeated periodically (Mayer, 1922, pp. 17-18). Therefore Wieser's use of the same marginal utility more than once is not paradoxical, but is in accordance, at least, with this situation. Schönfeld-Illy expanded on the use of marginal utility. He was unsatisfied with a theory that could only explain small changes around an equilibrium situation in the behavior of the consumer, but could not explain its attainment: the way the equilibrium situation arises. His interpretation of Wieser's theory was to simplify or shorten calculation in a situation of disequilibrium. He

tried to explain what Wieser intended to say, but could not make it clear to his contemporaries. For the neo-Marginalist the idea of marginal utility is two-fold. First, it functions as a watchdog: it lets every good with a higher utility pass, but retains every good with a lower utility. Not only in the present time period, but also in the future. Second, it has an economic relevance: the relevance of the use at the margin for the whole. It shortens the consumer's calculation. Both functions follow if we look at the day-to-day calculations of the consumer. To look at the realism of the assumptions is of course not necessary in Friedman's positive methodology. If we do, however, we come to both Mayer's and Schönfeld-Illy's banal interpretation of the rule: the total value of a stock of goods equals the number of products multiplied by the attained marginal utility.

6.3.4 The discovering consumer

What is the subjective demand price in which each consumer calculates? The price that functions as an intermediary (*die Vorgestalt des Preises*) between the price which prevails on the market and the incalculable marginal utility (Schönfeld-Illy, 1948, pp. 40-41 and 194). First, the subjective demand price is an expected price. The combined actions of consumers and other factors lead to the actual price on the market (Schönfeld-Illy, 1924, pp. 6 and 62; 1948, p. 238). There are for the consumer no unchangeable, unambiguous data (Schönfeld-Illy, 1948, pp. 210 and 237). The consumer lives and learns (o.c., pp. 210 and 237) from his experiences and adapts his behavior (o.c., pp. 222-223 and 264). Second it is a dynamic price. While determining the price, the consumer focuses on the existing market. The price with which the consumer operates on the market is not the maximum subjective price he is willing to pay. He might not even be aware of the highest price, a price that would not let him any 'profit'. (o.c., p. 241) Just like the producer bases his price on the prices presently charged by his competitors and the probable changes thereof (o.c., p. 229), the consumer bases his price on the circumstances of the marginal buyer on the market (o.c., p. 244). The rich buyer pays after the measuring-rod of the poor buyer (o.c., pp. 245 and 289).

Schönfeld-Illy's view about the dynamic, expected demand price is—as said before—analogous to Kirzner's discovery and related price concept. Kirzner endorses Mises's thesis that "there is nothing automatic or mechanical in the operation of the market" (Mises, 1966, p. 335). "The idea of a price that does not

reflect and express entrepreneurial judgment and hunch is virtually a contradiction in terms" (Kirzner, 1988, p. 6).

The (dynamic) expected demand price is not only relevant for the economic calculations of the consumer per se, but for the market as a whole, too. On the market level the expected price solves the problem of the so-called economic determination circle: the mutual, reciprocal dependence of the variables in the functional equilibrium theories (*Preisveränderungstheorie*). The circular reasoning occurs because on the one hand market prices follow from the value estimations of the economic subjects, but on the other hand these value estimations presuppose given prices. The utility of a good depends on the amount of other goods one consumes. The consumption of these goods in its turn depends on the prices of these goods (Schönfeld-Illy, 1948, p. 184). In other words, in the special theory about consumer behavior prices are given, in the general price theory (of which the special theory forms a part) the prices are the unknowns of the system (o.c., p. 187). This Gordian Knot is due to confusion between the expected and the actual price (o.c. p. 214). The market is a causal-genetic process (*Preisbildungstheorie*). On the bases of actual prices, producers and consumers are calculating with dynamic, expected prices. To start with a world without prices is completely unreal. "The aim, which is actually realized only later, is placed in the form of its subjective expectation causally in the economic thinking and action of the actor" (o.c., p. 213). Both parties learn from their market experiences (e.g., the good cannot be bought by the consumer at the expected price; the producer cannot sell all the goods he wants to sell) and revise their conduct. This leads to a process in time which is similar to "the modern Austrian view of the market as a competitive-entrepreneurial process of discovery" (Kirzner, 1988, p. 1).

To conclude, the dynamic, expected demand price of the consumer gets around two consumer calculation problems (1) the multiplicity of all the necessary calculations, and (2) the impossibility of stating all the necessary utilities. Problems situated within a, in a certain sense, given ends relationship. This dynamic, expected demand price is the result of entrepreneurship: to conceive the ends-means relationship. The consumer is alert towards monetary profits and utility gains.

6.4 What characterizes the market process?

Competition characterizes the market process. So, a lack of competitiveness is a central problem for the economy. Competitiveness, as the Cuomo Commission on Competitiveness says, "is the primary determinant of our ability to maintain our standard of living and our traditions of opportunity and inclusion" (Cuomo, 1992, p. 5). Whatever competitiveness means, for sure it has to do with entrepreneurship. So, to rebuild economic strength, the government focuses on the business sector. But why focus on the businessman, why not look at the consumer too? For in the market the consumer matters. James Steuart, a predecessor of Adam Smith, described this back in 1767 as double competition. "Double competition is what is understood to take place in almost every operation of trade; it is this which prevents the excessive rise of prices; it is this which prevents their excessive fall. While double competition prevails, the balance is perfect, trade and industry flourish" (p. 264). Or as Smith himself remarked in 1776, next to competition among sellers there's competition among buyers. "When the quantity of any commodity which is brought to market falls short of the effectual demand, all those who are willing to pay the whole value of the rent, wages, and profit, which must be paid to bring it thither, cannot be supplied with the quantity which they want. Rather than want it altogether, some of them will be willing to give more. A competition will immediately begin among them, and the market price will rise" (o.c., p. 159). In sum, the market in a capitalistic economy is a two-sided process. When producers don't compete it is like a planned economy, e.g., communism in the former Soviet Union. When consumers don't compete, it is a bit like the old caste society in India. Free entry among different groups of consumers is absent. When one side of the market process fails the economy becomes rigid and less competitive.

6.4.1 Competition among consumers: the why not

But what can we say of our modern Western world? Steuart and Smith wrote more than two hundred years ago. Do consumers still compete? I see producers "attempt to outdo, outprice, outproduce, and outmaneuver each other" (Kamerschen, cs., 1989, pp. 47-8). Doubtless, producers behave rivalrously. But what to say about rivalry among consumers? I see fellow—not rival—consumers. Rivalry among consumers seems to have disappeared from the economic scene. In

today's mass-markets I never get the feeling I bid up the price of a limited supply. The bidding up of prices is confined to, often only once-in-a-lifetime, buying a house or a piece of antique at an auction.

Maybe the most obvious reason for the absence of competition among consumers is consumer sovereignty. Consumer sovereignty is a basic normative idea of economics. "[It] is the principle that what is produced, how it is produced, and how it is distributed are to be determined by consumer preferences expressed through individual choices in a free market" (Penz, 1986, p. 5). Compare economic and noneconomic competition. What do they have in common? Both involve contestants and judges. In noneconomic competition, e.g., in democratic politics, an election is a competition in which the candidates are contestants and the voters are judges. Similarly, "in most markets, the sellers are the contestants—they take the initiative in offering bargains—while the buyers act as judges, selecting bargains they consider superior and rejecting those believed to be inferior" (Abbott, 1955, p. 105). So, in economic competition too, only the contestants, the producers, compete. The judges, the consumers, select. In mainstream neoclassical theory the consumer is the sovereign king—way above all down-to-earth competition.

But, maybe, the opposite: the consumer is no king, explains the absence of competition. Parts of our society, says Lester Thurow, are no longer consumer but producer driven. We must no longer speak of consumer but of producer economics. For men the goal isn't maximizing consumption. "Individuals may rationally decide to have fewer consumption goods in their home environment to have more production goods in their work environment. [...] A higher standard of living at work may even be more important than a higher standard of living at home." [Men compete at work.] "Belonging, esteem, power building, winning, and conquering are all human goals just as important as maximizing consumption and leisure. Work is where one achieves such goals" (1992, pp. 118-119). In the producer society consumers compete less.

For Alvin Toffler, however, we live neither in a consumer nor a producer society; we live in the middle. We are at the threshold of a prosumer society: the reintegration of the consumer into production. "And wherever the gap between consumer and producer narrows, the entire function, role, and power of the market is brought into question" (1980, p. 276). Toffler speaks of a trans-market civilization. New forms of competition will arise, for instance, between a traditional, licensed electrician producing for exchange and an unlicensed prosumer

producing for use. The consumer has no role because he doesn't exist anymore. He has changed into a prosumer.

Next to these broad cultural notions there are some more down-to-earth market reasons for the absence of competition among consumers. Suppose competition has run its full course. Then prices are in equilibrium; we do not have to compete. When, however, prices are above equilibrium surpluses prevail; the layman's impression when walking through a supermarket. And whenever a surplus exists the producer competes—not the consumer. What, however, if there is excess demand. Then the consumer should compete. This needn't be so. Even when prices are below equilibrium, causing excess demand, the producer competes. Why? The consumer is a jack-of-all-trades buyer, the producer a specialized seller. Their degree of specialization differs. So, when producers and consumers exchange information, the producer "enjoys far more scale economics in the communication process than the buyer. A single advertisement can get a message to numerous potential buyers at a very small cost per recipient" (Heflebower, 1967, p. 179). In contrast, who will notice the ad of a single consumer for all the goods he wants in the midst of the total demand? As a result the search costs are higher for the consumer than for the producer. For the consumer they could be too high; the producer searches and competes.

It is also true that in modern markets competing products are nonhomogeneous. Since the days of Smith, consumer products have changed. Then they were simple and basic, now they are varied and manufactured. Producers have learned to control quality. "[I]n the economy of today, at any rate the advanced economies, most of the products sold to the consumer [...] are largely supplied on customer markets, not the auction markets of classical theory or anything like them" (Phelps, 1985, pp. 383-4). The producer has to discover the diversity of buyers' preferences. The raw materials producer of the old days didn't have to do that. Today, producers take the initiative and compete; consumers gain by waiting for prices to be formed.

But there is more. Not only quality per se but also quality uncertainty is a reason. Goods can be subject to contested exchange. "An exchange is contested when some aspect of the good exchanged possesses an attribute which is valuable to the buyer, is costly to provide, is contractually unspecifiable, and hence requires endogenous enforcement" (Gintis, 1989, p. 68). In markets of consumer goods the noncontractual aspect of the good is its quality. How can the consumer assure it? The consumer has the power of nonrenewal of exchanges through time.

For the threat of nonrenewal to be effective he must offer the producer an enforcement rent: a premium added to the price paid. Prices of consumer goods are above equilibrium. The price isn't bid down; the producer competes again.

Otherwise, you do not doubt there's competition: active rivalry, among producers. But among consumers? Of course when you—as a consumer—look in the mirror you see things you do and don't like. And, maybe, one of the things you don't like, is that urge to keep up with the Joneses. That's rivalry for sure. And then there's how you behave when you buy your weekly groceries: you try to get in the shortest line with your shopping cart. That's rivalry too. The first form of rivalry is well known. It is studied by the sociologist and is one of the principles of marketing. Doesn't advertising heighten conspicuous consumption? Economists since the days of Smith study the second form: the laws of supply and demand. If there's a shortage, you bid up the price—or what ever it takes to compete: a quick move with your shopping cart for instance. That second form of rivalry—is it still active today? I want to look at economics: the market, not sociology: the behavior of conspicuous consumers. Except for my shopping cart behavior every Thursday, and when buying or selling a house once or twice in my life, I hardly ever feel that I have to compete. Surpluses prevail, the layman's impression when walking through a supermarket. The producer competes (Udell, 1964, p. 45; Dickson, 1992, p. 71; Hunt and Morgan, 1995, p. 8). But then again, what if there is or isn't competition among consumers? First, suppose there isn't. Is, in the modern market, competition one-sided? Do, as a rule, only producers compete? Second, suppose consumers do compete. If we know the why and wherefore, maybe we can use it. And what's more, if competition is two-sided, public policies, based on a one-sided view, may distort the market.

6.4.2 Competition among producers and consumers

There also seems to be a ground for a lack of competition among consumers. But maybe we are looking for the answer at the wrong place. We started with the notion of competition as rivalry. This notion is used by the man in the street. For the answer, however, we looked at the way a neoclassical describes it. He describes it as perfect competition: the purchases or sales of a single agent cannot influence prices. The approach reminds one of the old joke about the man who is standing under a streetlight looking for his keys when another man offers to help

him. "Where did you drop them," the helper asks. "Across the street," the man answers. "Then why are you looking here?" "The light is better." So, to answer our question, "Do consumers compete?" let us stick to the notion of competition as rivalry and see where it takes us.

For an Austrian, competition—defined as rivalry—and entrepreneurship are the two sides of the same coin. By looking at competition and entrepreneurship in this way, we emphasize the importance of the specific knowledge, possessed by everyone, of time and place. We also emphasize the importance that every individual—consumer and producer alike—can take advantage of it. In other words, we take Hayek's notion of competition and his emphasis on knowledge of time and place serious for the consumer. For it seems—as far as the circumstances of time and place go—the consumer is the expert. But we must be warned. It is an elusive guy we are looking for. As soon he becomes entrepreneurial he often changes from an entrepreneurial consumer to an entrepreneurial producer. The last, however, is only one form of innovation: the commercial exploitation of a new idea. We, however, look at entrepreneurship in general: the successful exploitation of new ideas (cf. Swann, 1999, p. 98). In sum, since entrepreneurial opportunities tend to appear within the context of a specific time and place, after Hayek, a decentralized economy is the place to look at. Why? Since it allows individuals to act on their entrepreneurial insights, and rewards them for doing so; it produces an environment where entrepreneurship is stimulated. And since entrepreneurial insights lay also the foundation for additional entrepreneurial insights the growth process of the economy is sustained (Holcombe, 1998, p. 46). So it seems the Austrian tradition is the place to look for an answer to the problem of the Cuomo commission we started Chapter 6.4 with.

Let us start at the beginning. Why is competition a problem among consumers but isn't among producers? For the producer the question isn't difficult to answer—if he doesn't, he's out of business in no time. He offers a product that competes with others. Something we can see and is independent of the market situation. A shortage, a surplus, or an equilibrium—the producer competes. To sell a product in a world of scarcity and change it has to be the best. And if there's free entry, the why implies "the is" of competition. "The exclusive privileges," Smith already said, "of corporations, statutes of apprenticeship, and all those laws which restrain, in particular employments, the competition to a smaller number than might otherwise go into them, have

the same tendency, though in a less degree. They are a sort enlarged monopolies" (1974, p. 164).

I give another answer to the question why producers compete. It isn't based on something we can see, but on a deduction from a self-evidence: man act—we try to improve our situation. What's otherwise the use of acting? We search for new ends and means—the entrepreneurial element in human action. The self-evidence is the fundamental axiom of Austrian economics. But "[e]ntrepreneurial activity," Kirzner says, "is always competitive and [...] competitive activity is always entrepreneurial" (1973, p. 94). For, what would stop entrepreneurial activity from being competitive? "Competition [...] is at least potentially present so long as there exist no arbitrary *impediments to entry*. So long as others are free to offer the most attractive opportunities they are aware of, no one is free from both the urge and the need to compete" (o.c., p. 97). And if a competitor seeks to outdistance his rivals this means transcending, entrepreneurially, a given ends-means relation.

But competition among consumers—as we saw before—isn't that obvious. The billboards on Times Square show the consumer as a sovereign king, above all down-to-earth competition. To speak of a chocolate or steel king, however, is misleading. For the producer, pride comes before a fall. The producer competes, the consumer chooses. Serving-the-customer is a basic normative idea of our society. In other words, if the consumer doesn't compete, he isn't out of 'business' in no time. "[T]he masterful housewife," as Wesley Mitchell said, "cannot win away the husbands of slack managers as the masterful merchant can win away the customers of the less able" (1912, p. 274). The Amish in Pennsylvania, living the way their ancestors did, are still alive. The producer has to please someone else the consumer only himself. If no one may steal a march on me, free entry is absent. For some this is the reason to describe the consumer as a monopolist. "[M]odern consumer theory treats the consumer as a monopolist." [...] "[T]he consumer [...] 'sells' his or her output (i.e., its utility) as a monopolist to a captive market (him- or herself)" (Swann, 1999, p. 103). Though, in modern economics, the consumer is described as a perfect competitor or as an oligopolist too. As for the first, this description would be suitable for the consumer envisaged by John Kenneth Galbraith. Advertising shapes the wants of the consumer. He "is so servile, so anxious to depart from the norm, that he is more or less *perfectly competitive*." [...] "There is only one way of consuming, and failure to adopt that consumption process will lead to social failure. The innovator does not gain any

benefit, but instead faces ridicule" (o.c., p. 106). As for the second (the consumer as an oligopolist), that description would be suitable to Marshall's consumer. For Marshall consumption is a social activity. As if in a joint venture, the consumer is a collaborator. The consumer, however, does not have to compete against every one, just a limited few (o.c., p. 104).

So again, what is the answer of the Austrians—making a deduction from a self-evidence? Acting implies, as we saw, entrepreneurship: choosing ends and means. But the ends and means aren't given, they have to be discovered. Being human, however, both producer and consumer err. What errors are there? An error can be a calculation mistake, solved with better calculation. It can also be the result of a lack of knowledge, solved with knowledge that exists and we can search for. There's, however, the possibility of an entrepreneurial error, too. An opportunity—costlessly available—is overlooked. We don't see the ten-dollar bill laying in front of us—for free. It's the correction of the last errors that interests the Austrians. Errors solved with the entrepreneurial element in each of us: alertness. Alertness is "the propensity [...] toward fresh goals and the discovery of hitherto unknown resources" (Kirzner, 1973, p. 34).

But now the Austrians have the same problem. Though the consumer discovers, errs, and is alert, the question still is "Why should he do this rivalrously?" The answer isn't as obvious as it was for the producer. There are differences in free entry. In theory the producer can fulfil his entrepreneurial role without means. He acts in between a buying and a selling market. Pure arbitrage is possible. Entry is free; rivalry is fierce. The consumer, on the other hand, acts in a buying market only. He has to possess means; entry isn't free. Let's not give up our discussion on the market. There's rivalry when a consumer looks over his shoulder. He wants to know what opportunities others are about to embrace—to embrace an at least as attractive one. Discovery and adjustment are two-fold. It is explicit rivalrous behavior: I try to steal a march on my fellow consumers. But it also includes—as is said for the producer—various, hardly secondary, degrees of cooperation and copycat behavior. "[I]mitation can be an extremely entrepreneurial act, particularly if it entails the opening of new markets for the innovative product" (Baumol, 1993, p. 157; cf. Hunt and Morgan, 1995, p. 8). "I remember him [Sam Walton, the founder of Wal-Mart] saying over and over again: go in and check our competition. [...] If you get one good idea, that's more than you went into the store with, and we must try to incorporate it into our company" (Walton, 1993, p. 81). Why is this true for the consumer as well?

First, if I look at what others do, and at least not make a worse offer, I increase my chances to gain. I use the knowledge of others and gain by buying what everyone else does, through lower prices, a greater efficiency. Second, I am not only hopeful of the gains I get if I imitate, but, just as important, fearful of the losses if I don't. Suppose I stick to my consumption pattern. Consumption patterns, however, change. Heating is no longer done by coal but by gas. Getting coal becomes difficult and expensive. Third, I feel a certain urge to watch others. If I don't, the gains are lower: I will give up potential utility. Still not to use a washing machine is an example. In general also we can say competition among consumers doesn't only help the producer. It helps the consumer to compete: to correct errors, too. Just as competition among producers helps the producer. "[I]f our story," Walton says in his autobiography, "doesn't prove anything else about the free market system, it erases any doubt that spirited competition is good for business—not just customers, but the companies which have to compete with one another too. Our competitors have honed and sharpened us to an edge we wouldn't have without them" (1993, p. 242).

Otherwise, consumers cooperate and imitate. If you want to survive, you have if not to set, at least to confirm a trend. Trends are the expression of a competitive error-solving process. They are the work of the producer as well as of the consumer. For the producer, "imitation may be able to achieve a given increase in productivity far more cheaply, in terms of real resources consumed in the process, than can be done by innovative effort" (Baumol, 1993, p. 165). For the consumer, imitation replaces single high-cost consumers by groups of low-cost consumers. Consumers join retail cooperatives or different competing trends. It's a sorting process not much different from what the producer does. "[S]orting out," for the producer, "represents the breaking down of heterogeneous collections into homogeneous sub-lots to take advantage of economies of production or handling" (Reekie and Savitt, 1982, p.58). Competition isn't a contest with one winner. Less successful consumers aren't eliminated: they are removed to a more modest place. Competition among consumers is niche competition. Which isn't much different from what the producer does when he "actively strive[s] to secure a 'unique niche' in the market in pursuit of profits" (o.c., p.57). There's a place for everyone—even for the Amish.

6.4.3 The competing consumer

Now we know why consumers compete. They do it because they make errors and try to correct them—disequilibrium phenomena. Disequilibrium points to market ignorance. From the ignorance emerge profitable opportunities that competitive-entrepreneurial alertness exploits (Kirzner, 1979, p. 30). All that's necessary to let this happen is that we live in a disequilibrium: a world of change. Which of course we do. So the why and is of competition among consumers are the same. There's competition at all times and places. Competition among consumers isn't bound up with a shortage. Just as competition among producers isn't with a surplus.

What about free entry? Is there no role for it here as there was for it in competition among producers? It all depends. Though for the producer entry is free for pure arbitrage it isn't for imitation. For the producer imitation is stifled by patent protection—patent litigations enough. This is all unknown to the consumer. The producer has an advantage in arbitrage, equalizing prices, the consumer in imitation, equalizing utilities.

Moreover, the idea of competition has changed. The alertness concept in the beginning of this chapter focused on the relaxation of the postulate of full knowledge in the traditional neoclassical market model. But there is more. The alertness concept as shaped in the consumer's goods concept focuses on the relaxation of the postulate of homogeneous goods. At the center of the analysis is goods quality. So, competition for a consumer, the entrepreneurial appraisal of a consumer good, does not only give rise to price competition, price behavior, but also to goods competition, goods behavior. "[T]he study of competitive exchange, in order to be significant, must concern itself with the quos as well as the quids of an economy's quid pro quo transactions—that is, not only with the prices paid but with the things for which the payments have been made" (Abbott, 1955, p. 24). And goods, i.e., quality, competition, it must be said, is not always an inverted form of price competition. Of course, a different quality good for the same price is often equivalent to a different price for the same good. "For example, a restaurant that wishes to raise the price of its cup of coffee without actually altering the price on the menu can either serve the coffee in smaller cups or use a cheaper grade of coffee. The first is a change in size, the second a change of quality. But both have the same end in view as a price increase: to give less for the money" (o.c., p. 126). But in some matters of quality no clear-cut agreement exists.

Different people will rank qualities in different order: aesthetic considerations (the cut of a woman's dress) or matters of convenience (the arrangement of the shelves in a refrigerator). What attracts some buyers may repel others. "It will be useful to label such differences as horizontal differences—as opposed to vertical differences, which may properly be thought of in terms of 'higher' or 'lower'" (o.c., p. 127). For most modern Austrians with their emphasis on the producer and higher order goods, quality competition is connected with vertical quality. So, competition can be reduced to price competition. For the consumer, on the other hand, this is not a viable option. There is horizontal quality differentiation at the level of consumer goods. The entrepreneurship of the consumer is not only directed at prices but also at goods. The consumer discovers new unexpected ends, new forms of utility, to (old) means (cf. Kirzner, 1989b, p. 107). Consequently, it is not always the case that the role of the producer "consists in relieving the consumer of the necessity to be his own entrepreneur" (Kirzner, 1973, p. 136). The situation can also be the other way around. The producer hires his trendwatcher. Someone who looks out for what a trendy consumer discovers.



“The whole organization of the market serves mainly the need of spreading the information on which buyers act.”
—Friedrich Hayek

7 SUMMARY AND CONCLUSIONS OF PART II

Part II examines the place of the competitive-entrepreneurial consumer in Austrian economic thought. Chapter four puts forward the fact that although an Austrian believes everyone—the consumer included—acts entrepreneurially, in his elucidation of the market he gives the role of entrepreneur to the producer. The chapter looks at the reason why the consumer is missing from Austrian economics. By emphasizing the importance of (often hidden) dispersed knowledge and the feasibility of the producer being able to calculate in a market economy—as against a government's ability to calculate and collect all the necessary data in a centralized economy—the consumer got lost. This all took place in the so-called socialist-calculation debate that raged between the two world wars. The consumer was never to be found again in Austrian economics. He is absent in the elucidation of the market as a dynamic process of entrepreneurial discovery. He is absent, too, in the analysis of the possibility of economic calculation in monetary terms. The latter is discussed only in terms of production. And in the former, modern Austrian economics uses the methodological makeshift of an entrepreneurial producer and a non-entrepreneurial consumer. Just like the classical economists before them, the Austrians neglect the rationality of the consumer.

Chapter five looks at the method of Austrian economics: praxeology. It is the verbal elaboration of the logical implications that men act. The title of Mises's book *Human Action* sums it up. Purposes direct all conscious human action.

Every human act exchanges something possessed for something preferred. All human action tries to change the future. The chapter examines what this means for (the Austrian perspective on) the basic economic notions of human action (preference/valuation) and non-action (indifference curves), and economic laws (the law of decreasing returns). Economists use—only—their minds to deduce conclusions; experience in human action is only history. So, a sharp difference between Austrian and mainstream neoclassical economics exists. The latter is often mathematically molded and econometrically tested, the former never.

Chapter six examines the question "What does the calculative and entrepreneurial consumer look like?" In three sections we answer the questions—as far as the consumer goes—"What drives, what constitutes, and what characterizes the market process?" The chapter starts (6.1) by elaborating the distinction between neoclassical equilibrium states and Austrian disequilibrium processes. The two sesame keys to the distinction—and which capture it all—are ignorance and alertness.

In chapter 6.2 we recompose market phenomena in terms of the typical components of everyday decision making. This is done for the ordinary businessman as well as for the average consumer. It discusses a lesser-known theme of the Austrians. Menger in his *Grundzüge* gave four characteristics of goods as an answer to the question of what makes something a good (need, useful properties, knowledge, and power of disposal). Böhm-Bawerk in his *Rechte und Verhältnisse* added a fifth: individuals should also know how to use a thing. I use this fifth characteristic to throw light on the consumer: his form of alertness and entrepreneurship inside the market process. With the help of Ryle, I look at a notion of alertness that suits the producer and at one that suits the consumer. Alertness is a form of knowing-how that can be differentiated for the producer as a capacity (competence) and for the consumer as a tendency (proneness). Since both can be simulated, on the one hand, we use the abusive word "charlatan" for the fraud who pretends to be able to bring things off. On the other hand, we use the abusive word "hypocrite" for the one who pretends to have certain motives and habits.

Chapter 6.3 draws on the work of Schönfeld-Illy. Kirzner distinguishes maximization inside a given ends-means framework from its determination. The Robbinsian maximizer can perform only the first role. Mises's *homo agens* can do both. In Kirzner's methodological makeshift, the consumer acts as a pure Robbinsian maximizer. However, inside a Robbinsian framework of given ends

and means, the consumer needs the same element of alertness Kirzner locates in the determination of the framework. To prove this, the chapter expands on the calculation process of the consumer. It addresses the question of how the maximizing process of the consumer can be described from the subjective point of view of everyday decision-making. The mathematical mould of neoclassical theory means that for the neoclassical the problem is a mathematical one: the solving of a Lagrangean function. From a theoretical point of view, however, a consumer has a lot of work to do in computing the marginal utilities. First, he has to line up all the alternative combinations of goods available, then he has to assess the needs successive units of the various goods can satisfy, and finally he has to find out at what point in the row of units satisfaction breaks off. In practice, however, it is impossible to make all the theoretically necessary calculations. The consumer has to take a short cut. He avoids the problem of the immeasurability of utility and shortens the calculation process with the help of three principles. The first principle is that of the separate utility of a good. Though the consumer's aim is to reach the greatest utility, he does not and cannot calculate total utility as such. What he knows, however, are the changes in total utility. Adding goods to the ones already used, brings about those changes. They give the utility of each good separately. The second principle is *quid pro quo*. Changes in total utility do not give the consumer numbers in which he can calculate. What he can do is compare the changes with other changes. The third is economic relevance. The price relevant for the marginal part has an economic relevance for all other units of the stock of goods. These three principles form the basis of Schönfeld-Illy's theory on the role of prices (that is alertness) in the calculation process of the consumer.

In sum, the chapter answers the question: "How does a consumer calculate the total value of a divisible amount of goods?" To answer the question we do focus on the notion of marginal utility. Wieser's *Multiplicationstheorem des Wertes* says that to get the total value, all units of a stock of good have to be multiplied by the attained marginal utility. Böhm-Bawerk's *Integrationstheorem des Wertes* says that the total value of a stock of goods is the sum of the utilities of the different units. Because Wieser underestimated the total utility of a stock of goods, his formulation found few followers. Schönfeld-Illy's interpretation of marginal utility, that of the economic relevance of a margin for the whole, gives an answer as to why Wieser's description could be true. Schönfeld-Illy solves an inconsistency in Wieser's theory. Wieser took the description of marginal utility from the situation in which the calculation was already completed. However, he

draws the description of the *function* of marginal utility from the situation in which calculation begins. Schönfeld-Illy wonders whether the last stage contains all the things used during actual calculation, and consequently is contained in a conceptual description grafted upon the final stage.

Chapter 6.4 looks at competition among consumers. For a neoclassical economist, competition among consumers is hard to find. For an Austrian economist, however, it is a necessity. Indeed, actually bidding-up of prices by consumers as Smith could see in his days is almost gone in the modern Western world. However, as long, as they make entrepreneurial errors, which by definition they do, consumers try to solve them competitively. Full knowledge excludes errors in buying; it is the consumer's nirvana. However, if the Austrian is right, this would mean the end of human action (and economics). The basic premise of the Austrians is "man act". We act if we are dissatisfied; when satisfied, action stops. "Some people sometimes say that they would like to know [...] what the prices are going to be in the stock market next week. Actually, we do not want to know the future. If you, or I, or anyone could know the future, this would mean it was set and we could no longer act to change it. All human activity is an attempt to change the future. [...] if we had everything we wanted, there would be no reason to live. When the day comes that you have everything you want, let me know, I shall make arrangements to come to your funeral, because you will be dead" (Greaves, 1984, p. 6; cf. Mises, 1981, p. 40). Or, in the words of Benjamin Franklin, "When you're finished changing, you're finished".

A perfect public policy would therefore solve the problem of the consumer for both neoclassical and Austrian. Either he would be in the consumer's nirvana or be vegetating in a state of non-action like a plant. This does not make much of a difference: in both cases he would be dead. We are back at the essence of Austrian economics: the subjectivistic character of choice. For a neoclassical, a fully informed and satisfied consumer is possible. For an Austrian, since choice is essentially purposeful and entrepreneurial, it is impossible. Human choices, if real (that is inherently creative) could have been different and have different effects. A situation of full knowledge, a given framework of ends and means, excludes this. "[I]ndividual choice," says Kirzner, "is always made with one's antennae alertly switched on to notice opportunities (that already 'exist', or that may be created) worth pursuing even through the mists of an uncertain future" (1982, p. 21).

To conclude, the consumer is not only the alpha and the omega of the market process but plays its (praxeological) role in the middle too. Part II shows us that Kirzner's characterization of the market as a competitive-entrepreneurial process of discovery counts not only for the producer but also for the consumer. By doing this we accomplished three goals. First, we made Austrian economics from a praxeological point of view more consistent: we solved the praxeological failure of the market as a one-sided discovery process. The market is and always has been a two-sided process of discovery. Second, we accomplished (and did not only pay lip service) to explain not only the actions of the businessman but also of the consumer—the one who started the whole Austrian revolution in economic thought. And third, we gave the consumer his position back, as the sovereign king of the market: consumer policy to protect him is unnecessary. In all, we adhered to what Tullock once said: “We all make mistakes. Correcting them is part of the dialog of science. Mises pushed economics a great distance ahead. Kirzner [...] has pushed it even further. Let us all try to implement the scientific process and make still further gains” (1999, p. 231).



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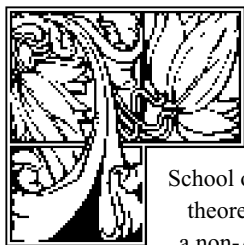
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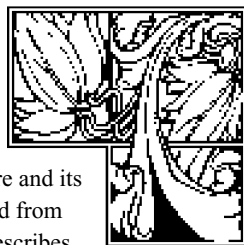


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