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Essential Principles of the Austrian School

One of the chief shortcomings of the study programs offered by economics departments at Spanish universities is that up until now they have not given students a complete, integrated view of the essential theoretical elements in the contributions of the modern Austrian school of economics. In this chapter, we aim to rectify this notable omission, to provide an overall view of the fundamental distinguishing features of the Austrian school, and thus to shed light on the historical evolution of Austrian thought, which we will consider in subsequent chapters. To this end, in Table 1.1 we clearly and concisely list the crucial differences between the Austrian school and the prevailing (neoclassical) paradigm, which is generally the one taught at Spanish universities. In this way, it will be possible to understand at a glance the different points of conflict between the two approaches, which we will then discuss in detail.

Table 1.1
Essential Differences between the Austrian and Neoclassical Schools

<i>Points of Comparison</i>	<i>Austrian Paradigm</i>	<i>Neoclassical Paradigm</i>
1. Concept of economics (essential principle):	A theory of human action, understood as a dynamic process (praxeology).	A theory of <i>decision</i> : maximization subject to restrictions (narrow concept of “rationality”).
2. Methodological outlook:	<i>Subjectivism</i> .	Stereotype of <i>methodological individualism</i> (objectivist).
3. Protagonist of social processes:	Creative <i>entrepreneur</i> .	<i>Homo economicus</i> .
4. Possibility that actors may err <i>a priori</i> , and nature of entrepreneurial profit:	Actors may conceivably commit pure entrepreneurial errors they could have avoided had they shown greater entrepreneurial alertness to identify profit opportunities.	Regrettable errors are not regarded as such, since all past decisions are rationalized in terms of costs and benefits. Entrepreneurial profits are viewed as rent on a factor of production.
5. Concept of information:	Knowledge and information are	Complete, objective, and <i>constant</i>

	<i>subjective</i> and <i>dispersed</i> , and they <i>change</i> constantly (entrepreneurial creativity). A radical distinction is drawn between scientific knowledge (objective) and practical knowledge (subjective).	information (in certain or probabilistic terms) on ends and means is assumed. Practical (entrepreneurial) knowledge is not distinguished from scientific knowledge.
6. Reference point:	General process which tends toward coordination. No distinction is made between micro and macroeconomics: each economic problem is studied in relation to others.	Model of <i>equilibrium</i> (general or partial). Separation between micro and macroeconomics.
7. Concept of "competition":	Process of entrepreneurial rivalry.	State or model of "perfect competition."
8. Concept of cost:	<i>Subjective</i> (depends on entrepreneurial alertness and the resulting discovery of new, alternative ends).	Objective and constant (such that a third party can know and measure it).
9. Formalism:	<i>Verbal</i> (abstract and formal) logic which introduces subjective time and human creativity.	<i>Mathematical</i> formalism (symbolic language typical of the analysis of atemporal and constant phenomena).
10. Relationship with the empirical world:	<i>Aprioristic-deductive</i> reasoning: Radical separation and simultaneous coordination between theory (science) and history (art). History cannot confirm theories.	<i>Empirical</i> confirmation of hypotheses (at least rhetorically).
11. Possibilities of specific prediction:	Impossible, since future events depend on entrepreneurial knowledge which has not yet been created. Only qualitative, theoretical <i>pattern predictions</i> about the discoordinating consequences of interventionism are possible.	Prediction is an objective which is deliberately pursued.
12. Person responsible for making predictions:	The entrepreneur.	The economic analyst (social engineer).
13. Current state of the paradigm.	Remarkable <i>resurgence</i> over the last twenty-five years (particularly following the crisis of Keynesianism and the collapse of real socialism).	State of <i>crisis</i> and rapid <i>change</i> .
14. Amount of "human capital" invested.	A <i>minority</i> , though it is increasing.	The <i>majority</i> , though there are signs of dispersal and disintegration.
15. Type of "human capital" invested.	Multidisciplinary theorists and philosophers. Radical libertarians.	Specialists in economic intervention (<i>piecemeal social engineering</i>). An extremely variable degree of commitment to freedom.
16. Most recent contributions:	<ul style="list-style-type: none"> • Critical analysis of institutional coercion (socialism and interventionism). • Theory of free banking and economic cycles. • Evolutionary theory of (juridical, moral) institutions. • Theory of entrepreneurship. • Critical analysis of "social justice." 	<ul style="list-style-type: none"> • Public choice theory. • Economic analysis of the family. • Economic analysis of law. • New classical macroeconomics. • Economics of information. • New Keynesians.
17. Relative position of different authors:	Rothbard, Mises, Hayek, Kirzner.	Coase, Friedman, Becker, Samuelson, Stiglitz.

1.1. The Austrian Theory of Action versus the Neoclassical Theory of Decision

Austrian theorists conceive economic science as a theory of action, rather than of decision, and this is one of the traits which most distinguishes Austrians from their neoclassical colleagues. In fact, the concept of human action includes and far exceeds, in scope, that of individual decision. For the Austrian school, the vital concept of action incorporates not only the hypothetical process of decision in a context of “given” knowledge about ends and means, but also, and especially, “the very perception of the ends-means framework within which allocation and economizing [which neoclassicals tend to exclusively focus on] is to take place” (Kirzner 1973, 33). Moreover, what concerns Austrians is not the fact that a decision is made, but that it is embodied in a human action, which is a *process* (that may or may not be completed) involving a series of interactions and acts of coordination. It is precisely these which Austrians view as the object of research in economics. Thus, for Austrians, economics is not a set of theories on choice or decision at all, but instead it is a theoretical *corpus* which deals with the processes of social interaction, processes which vary in their degree of coordination, depending upon the alertness actors show in their entrepreneurship.

Austrians are particularly critical of the narrow concept of economics which originated with Robbins and his well-known definition of the subject. In his own words, “economics is the science which studies human behavior as a relationship between given ends and scarce means which have alternative uses” (Robbins 1932). Robbins’s conception implicitly presupposes a given knowledge of ends and means and reduces the economic problem to a technical problem of mere allocation, maximization, or optimization, subject to certain restrictions which are also assumed known. In other words, Robbins’s concept of economics reflects the essence of the neoclassical paradigm and can be considered completely foreign to the methodology of the Austrian

school as it is understood today. Indeed, Robbins portrays man as an automaton, a simple caricature of a human being, who may only react passively to events. In contrast with this view, Mises, Kirzner, and the rest of the Austrian school hold that man does not so much allocate given means to given ends, as constantly seek new ends and means, while learning from the past and using his imagination to discover and create the future (via action). Thus, for Austrians, economics forms part of a much broader and more general science, a general theory of human action (and not of human decision or choice). According to Hayek, if for this general science of human action “a name is needed, the term *praxeological* sciences now clearly defined and extensively used by Ludwig von Mises, would appear to be most appropriate” (Hayek 1955, 209).

1.2. Austrian Subjectivism versus Neoclassical Objectivism

Another matter of key importance to Austrians is *subjectivism*. For the Austrian school, the subjectivist conception is essential and consists precisely of an attempt to construct economic science based on real, flesh-and-blood human beings, viewed as creative actors and the protagonists of all social processes. Hence, Mises states: “Economics is not about things and tangible material objects; it is about men, their meanings and actions. Goods, commodities, and wealth and all the other notions of conduct are not elements of nature; they are elements of human meaning and conduct. He who wants to deal with them must not look at the external world; he must search for them in the meaning of acting men” (Mises 1996, 92). Thus, we clearly see that Austrian theorists, largely unlike neoclassicals, believe restrictions in the economy are imposed not by objective phenomena or material factors of the outside world (for example, oil reserves), but by human entrepreneurial knowledge (the discovery of a carburetor capable of doubling the efficiency of internal combustion engines *would*

exert the same economic effect as a doubling of all physical oil reserves). Therefore, Austrians do not consider production a natural, physical, external event, but on the contrary, an intellectual, spiritual phenomenon (Mises 1996).

1.3. The Austrian Entrepreneur versus the Neoclassical *Homo Economicus*

Entrepreneurship, to which much of the next chapter is devoted, is the driving force behind Austrian economic theory, yet, by contrast, it is conspicuously absent in neoclassical economics. In fact, entrepreneurship is a distinctive phenomenon of the real world, which is in a perpetual state of disequilibrium and cannot play any role in the equilibrium models that absorb the attention of neoclassical authors. Moreover, neoclassical theorists view entrepreneurship as an ordinary factor of production which can be allocated depending on expected costs and benefits. They fail to realize that when they analyze the entrepreneur in this way, their thinking involves an insoluble logical contradiction: to demand entrepreneurial resources based on their expected costs and benefits entails the belief that one has access today to certain information (the probable value of future costs and benefits) *before this information has been created* by entrepreneurship itself. In other words, the main task of the entrepreneur, as we shall see, is to create and discover new information which did not exist up to that point, and until this process of creation is complete, the information does not exist nor can it be known, and thus it is not humanly possible to make in advance any neoclassical, allocative decision based on expected costs and benefits.

In addition, today Austrian economists almost unanimously view as a fallacy the belief that entrepreneurial profit derives from the simple assumption of risks. On the contrary, risk represents merely another cost of the production process and is completely unconnected with the pure entrepreneurial profit that emerges when an

entrepreneur discovers a profit opportunity he was unaware of before and acts accordingly to take advantage of it (Mises 1996).

1.4. The Possibility of Pure Entrepreneurial Error (Austrians) versus the *A Posteriori* Rationalization of All Decisions (Neoclassicals)

The very different role the concept of *error* plays in Austrian, as opposed to neoclassical, economics is usually overlooked. For Austrians, “pure” entrepreneurial errors may be committed whenever a profit opportunity remains undiscovered by entrepreneurs in the market. It is precisely the existence of this type of error that gives rise to “pure entrepreneurial profit,” when the error is discovered and eliminated. In contrast, for neoclassical authors, genuine entrepreneurial errors that one should regret *a posteriori* never exist. This is because neoclassicals rationalize all past decisions in terms of a supposed cost-benefit analysis carried out within the framework of constrained mathematical maximization. Thus, it is clear that pure entrepreneurial profit has no purpose in the neoclassical world, and that when such profit is mentioned, it is deemed to be simply payment for the services of an ordinary factor of production, or income derived from the assumption of a risk.

1.5. The Subjective Information of the Austrians versus the Objective Information of the Neoclassicals

Entrepreneurs constantly generate new information which is fundamentally subjective, practical, dispersed, and difficult to articulate (Huerta de Soto 1992, 52-67, 104-110). Therefore, the subjective perception of information is an essential element in Austrian methodology, one that happens to be missing in neoclassical economics, since neoclassical theorists invariably tend to treat information objectively. Most economists do not realize that when Austrians and neoclassicals use the term *information*, they are

referring to radically different realities. In fact, neoclassicals view information as an objective entity which, like merchandise, is bought and sold in the market as a result of a maximizing decision. This “information,” which is storable in various media, has nothing at all to do with the *subjective information* Austrians write about, which is practical and vital, and which the actor subjectively interprets, knows, and uses within the context of a specific action. Austrian economists criticize Stiglitz and other neoclassical information theorists for failing to integrate their theory of information with entrepreneurship, which is always the source and protagonist of knowledge. As we will see, Austrian economists have succeeded in this area. Furthermore, from the Austrian perspective, Stiglitz has not managed to grasp that *information* is always fundamentally subjective and that the markets he considers “imperfect” do not so much generate “inefficiencies” (in the neoclassical sense), as give rise to potential opportunities for entrepreneurial profit, opportunities entrepreneurs tend to discover and seize in the process of entrepreneurial coordination they continually drive in the market (Thomsen 1992).

1.6. The Entrepreneurial Process of Coordination (Austrians) versus General and/or Partial Equilibrium Models (Neoclassicals)

In their equilibrium models, neoclassical economists usually overlook the coordinating force Austrians attribute to entrepreneurship. In fact, entrepreneurship not only prompts the creation and transmission of information, but even more importantly, it fosters *coordination* between the maladjusted behaviors which occur in society. As we will see in the next chapter, all social discoordination materializes as a profit opportunity which remains latent until entrepreneurs discover it. Once an entrepreneur recognizes the opportunity and acts to take advantage of it, the opportunity disappears and a *spontaneous process of coordination* is triggered. This process explains the

tendency toward equilibrium that is reflected in every real market economy. Moreover, it is the coordinating nature of entrepreneurship which alone makes possible economic theory as a science, understood as a theoretical *corpus* of laws of coordination which elucidate social processes.

This approach explains why Austrian economists are interested in studying the *dynamic* concept of competition (a process of *rivalry*), whereas neoclassical economists focus exclusively on the equilibrium models typical of comparative *statics* (“perfect” competition, monopoly, “imperfect” or monopolistic competition). Hence, for Austrians, it is absurd to construct economic science based on the equilibrium model, which presupposes that all information crucial for drawing the corresponding supply and demand functions is “given.” In contrast, Austrians prefer to study the market process which leads toward a state of equilibrium that is never ultimately reached. There has even been discussion of a model called the social *Big Bang*, which permits unlimited growth of knowledge and civilization in a manner as adjusted and harmonious (i.e. coordinated) as humanly possible in each set of historical circumstances. This is because the entrepreneurial process of social coordination never ends nor is exhausted. In other words, the entrepreneurial act consists basically of the creation and transmission of new information which necessarily modifies the general perception of each actor in society concerning potential ends and means. This modification in turn gives rise to the appearance of countless new maladjustments which represent new opportunities for entrepreneurial profit, opportunities entrepreneurs tend to discover and coordinate. And so the process continues. It is a dynamic, never-ending process which constantly spreads, and furthers the advancement of civilization (coordinated social *Big Bang* model) (Huerta de Soto 1992, 78-79).

Thus, Austrians disagree strongly with neoclassical economists on the nature of the essential economic problem. Austrians study the dynamic process of *social coordination* in which individuals constantly and entrepreneurially generate new information (which, therefore, is never “given”) as they seek the ends and means they consider relevant within the context of each action they are immersed in, and by so doing, they inadvertently set in motion a spontaneous process of coordination. Hence, for Austrians, the fundamental economic problem is not technical nor technological, though neoclassical theorists usually conceive it that way, since they assume that ends and means are given and view the economic problem as simply a technical problem of optimization. In other words, for the Austrian school, the essential economic problem is not the maximization of a known, objective function subject to known restrictions, but on the contrary, it is strictly economic in nature: *it emerges when ends and means are numerous and compete, and knowledge of them is not given, but instead is dispersed throughout the minds of countless human beings who are constantly creating it ex novo, and thus, one cannot know even all the existing possibilities and alternatives, nor the relative intensity with which each is desired.*

Furthermore, we must realize that even those human actions which appear to be solely maximizing or optimizing invariably possess an entrepreneurial component, since the actor involved must first have recognized that such a robotic, mechanical, and reactive course of action was the most advantageous in the concrete circumstances in which he found himself. In other words, *the neoclassical approach is merely a relatively unimportant particular case within the Austrian model, which is much richer and more general, and explains real society much better.*

Moreover, Austrian theorists see no sense in maintaining a radical division between micro and macroeconomics, as neoclassical economists usually do. On the

contrary, economic problems must be studied together as interrelated issues, without distinctions between micro and macro aspects. The radical separation of “micro” and “macro” in economics is one of the most typical inadequacies of modern, introductory Political Economics textbooks and manuals, which do not provide unitary treatment to economic problems, as Mises and other Austrian economists continuously attempt to do, but instead invariably present economic science as divided into two distinct disciplines (“micro” and “macroeconomics”) which share no connection and thus can be studied, and in fact are studied, separately. As Mises clearly indicates, this separation springs from the use of concepts which, like the *general price level*, overlook the application of the subjective, marginalist theory of value to money and continue rooted in the pre-scientific stage of economics when theorists were still attempting to perform their analyses in terms of overall classes or aggregates of goods, rather than in terms of incremental or marginal units of them. This explains the development of an unfortunate “discipline” which centers around examining the supposed mechanical relationships between macroeconomic aggregates, while the connection of these with human action is very difficult, if not impossible, to comprehend (Mises 1996).

At any rate, neoclassical economists have chosen the equilibrium model as the focal point of their research. This model presupposes that all information is given (either in certain or probabilistic terms) and that perfect adjustment exists between the different variables. From the Austrian perspective, the main disadvantage of neoclassical methodology is that this assumption of perfect adjustment can quite easily lead to erroneous conclusions regarding the cause-effect relationships between different economic concepts and phenomena. In this way, Austrians maintain, *equilibrium acts as a sort of veil which prevents the theorist from discovering the true direction of the cause and effect relationships reflected in economic laws*. In fact, more than

unidirectional laws of tendency, neoclassical economists see a mutual (circular), functional relationship of cause and effect between the different phenomena, the initial origin of which (human action) remains hidden or is deemed unimportant.

1.7. Subjective Costs (Austrians) versus Objective Costs (Neoclassicals)

Another essential element of Austrian methodology is the purely subjective conception of costs. Many authors believe this idea can be incorporated into the prevailing neoclassical paradigm without much difficulty. Nevertheless, neoclassical theorists only rhetorically incorporate the subjective nature of costs into their models, and in the end, though they mention the importance of “opportunity cost,” they always present it in an objectified manner. For Austrians, *cost is the subjective value the actor attaches to those ends he gives up when he decides to pursue a certain course of action.* In other words, there are no objective costs, but instead, every actor must use his entrepreneurial alertness to continually discover costs in each set of circumstances. Indeed, an actor may fail to notice many alternative possibilities which, once entrepreneurially discovered, radically change the actor’s *subjective conception of costs.* Hence, there are no objective costs which tend to determine the value of ends, but instead, quite the opposite is true: costs as subjective values are borne (and thus, determined) based on the subjective value the actor places on the ends he actually pursues (final consumer goods). Therefore, Austrian economists hold that the prices of final consumer goods, as an expression in the market of subjective valuations, are what determine the costs an actor is willing to incur to produce such goods, and not the other way around, as neoclassical economists so often assert in their models.

1.8. The Verbal Formalism of the Austrians versus the Mathematical Formalism of the Neoclassicals

Austrians and neoclassicals disagree on the use of mathematical formalism in economic analysis. From the beginning, the founder of the Austrian school, Carl Menger, carefully pointed out the advantage of verbal language, namely that it can capture the essence (*das Wesen*) of economic phenomena, while mathematical language cannot. In fact, in a letter he wrote to Walras in 1884, Menger wondered: “How can we attain to a knowledge of this essence, for example, the essence of value, the essence of land rent, the essence of entrepreneurs' profits, the division of labour, bimetallism, etc., by mathematical methods?” (Walras 1965, 2:3). Mathematical formalism is particularly suitable for expressing the equilibrium states neoclassical economists study, but it does not permit us to incorporate the subjective reality of time, much less entrepreneurial creativity, both of which are essential features of the analytical discourse of Austrian theorists. Perhaps it was Hans Mayer who best summed up the inadequacies of the use of mathematical formalism in economics, when he wrote: “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” (Mayer 1994, 92).

For the above reasons, members of the Austrian school find that many of the theories and conclusions neoclassicals form in their analysis of consumption and production make no sense in terms of economics. One example is the “law of equality of price-weighted marginal utilities,” which rests on very shaky theoretical foundations.

In fact, this law presupposes that the actor is able to *simultaneously* assess the utility of all goods at his disposal, and it overlooks the fact that every action is *sequential* and creative, and that goods are not assessed at the same time, by equalizing their supposed marginal utilities, but rather one after the other, within the context of different stages and actions, for each of which the corresponding marginal utility may be not only different, but incomparable (Mayer 1994, 81-83). In short, *Austrians view the use of mathematics in economics as unsound because this method synchronizes magnitudes which are heterogeneous from the standpoint of time and entrepreneurial creativity.* For the same reason, Austrians also regard neoclassical economists' axiomatic criteria of rationality as senseless. Indeed, if an actor prefers A to B and B to C, he may very well prefer C to A, without ceasing to be "rational" or consistent, if he has simply changed his mind (even if only during the hundredth of a second that he thinks about the issue). For Austrian economists, the usual neoclassical criteria of rationality confuse the concepts of constancy and consistency (Mises 1996).

1.9. The Link between Theory and the Empirical World: The Different Concept of "Prediction"

Finally, on the relationship between theory and the empirical world, and on the sense in which predictions can be made, the Austrian paradigm differs radically from the neoclassical view, which is widely taught at Spanish universities. Indeed, for Austrians, the fact that a scientific "observer" cannot obtain subjective information, which "observed" actors-entrepreneurs who are the protagonists of the social process continually create and discover in a decentralized manner, justifies their belief that empirical verification is theoretically impossible in economics. Actually, Austrians maintain that the factors which make socialism theoretically impossible, and which we will analyze in chapters 5 and 6, are the very factors which explain why *empiricism*,

cost-benefit analyses, and utilitarianism in its strictest interpretation are not feasible in our science. Moreover, it is irrelevant whether it be a scientist or a political leader who vainly tries to obtain the vital practical information in each case, either to confirm theories or coordinate via commands. If such information could be obtained, it could just as feasibly be used for one purpose as for the other: to coordinate society through coercive commands (social engineering typical of socialism and interventionism) or to empirically confirm economic theories. Nevertheless, both the socialist ideal and the positivist or strictly utilitarian ideal are unattainable from the perspective of Austrian economic theory for the following reasons: *first*, the huge volume of information involved; *second*, the nature of the crucial information (scattered, subjective, and tacit); *third*, the dynamic quality of the entrepreneurial process (it is impossible to transmit information which entrepreneurs have not yet generated in their process of constant, innovative creation); and *fourth*, the effect of coercion and of scientific “observation” itself (which distorts, corrupts, hinders, or simply precludes the entrepreneurial creation of information).

These very arguments, which we will later analyze in greater detail when we discuss the history of the debate concerning the impossibility of socialist economic calculation, can also be employed to justify the Austrian belief that in economics, *specific predictions* are theoretically impossible (i.e. those which refer to specific coordinates of time and place and are of a concrete, empirical nature). The events of tomorrow cannot be scientifically known today, since they depend mainly on knowledge and information which have not yet been entrepreneurially generated and cannot yet be known. Thus, in economics, at most we can make general predictions of trends, which Hayek calls *pattern predictions*. Such predictions are exclusively qualitative and theoretical, and at most, they forecast the maladjustments and social

discoordination which result from institutional coercion (socialism and interventionism) applied to the market.

Furthermore, we must bear in mind that there are no directly observable, objective events in the outside world. According to the Austrian subjectivist conception, the objects of research in economic science are simply the *ideas* others hold about what they do and the ends they pursue. Such ideas are never directly observable, but instead can only be interpreted in historical terms. To interpret the social reality which is history, one must first have a theory, and one must make a non-scientific judgment of relevance (*verstehen* or understanding). This judgment is not objective, but rather may vary from one historian to the next, making the discipline of history a true art.

Finally, Austrians maintain that empirical phenomena vary constantly, such that there are no parameters nor constants in social events, but only “variables,” and thus the traditional aim of econometrics and any version of the positivist methodological program (from the most naïve verificationism to the most sophisticated Popperian falsationism) are very difficult, if not impossible, to fulfill. In contrast to the positivist ideal of the neoclassicals, Austrian economists strive to construct their discipline in an aprioristic, deductive manner. In short, this involves developing a full-fledged arsenal of logical-deductive reasoning, based on self-evident knowledge (axioms like the subjective concept of human action itself, the essential elements of which either emerge through the introspection and personal experience of the scientist, or are considered self-evident because no one can dispute them without contradicting himself) (Hoppe 1995; Caldwell 1994, 117-138). This theoretical arsenal is indispensable, according to Austrians, if one is to adequately interpret the apparently unconnected mass of complex historical phenomena which constitutes the social world, or to compile a history of the

past or define prospects for the future (the mission of the entrepreneur) with at least minimum consistency, security, and chances for success. Thus the great importance which Austrians in general attach to history as a discipline and to their attempt to distinguish it from, and adequately relate it to, economic theory (Mises 1957).

Hayek uses the term “scientism” to refer to the unjustified application of the methodology of the natural sciences to the field of the social sciences (Hayek 1955). In the natural world, constants and functional relationships exist which permit the application of mathematical language and the performance of quantitative experiments in a laboratory. However, in economics, as opposed to physics, engineering, and the natural sciences, Austrians see no functional relationships (and hence, no supply, demand, nor cost functions, nor functions of any other type). Let us recall that in mathematics, according to set theory, a function is simply a bijective correspondence between the elements of two sets, the “original set” and the “image set.” Given the innate creative capacity of human beings, who are continually generating and discovering new information in each specific set of circumstances in which they act about the ends they seek and the means they deem available to achieve them, it is obvious that in economics, none of the three elements necessary for a functional relationship to emerge are present: *a) The elements of the original set are neither constant nor given; b) The elements of the image set are neither constant nor given; and most importantly, c) correspondences between the elements of the two sets are not given, but instead vary constantly as a result of the action and creative capacity of human beings.* Therefore, Austrians assert that in economic science, the use of functions requires an *assumption of constancy* in information which completely eliminates the protagonist of every social process: a human being equipped with an innate, entrepreneurial capacity for creativity. The great merit of the Austrians is to

have demonstrated that it is perfectly possible to develop the entire *corpus* of economic theory in a logical manner, while introducing the concepts of time and creativity (*praxeology*); that is, without any need of functions nor assumptions of constancy which do not fit in with the creative nature of human beings, who are the only true protagonists of social processes, the object of research in economics.

Even the most prominent neoclassical economists have had to admit that important economic laws exist (like the theory of evolution and natural selection) which cannot be empirically verified (Rosen 1997). Austrian theorists have particularly stressed that empirical studies are inadequate to stimulate the development of economic theory. In fact, empirical studies can at most provide some historically contingent information about certain aspects of outcomes real-life social processes have produced, but they do not provide information about the formal structure of those processes, the knowledge of which is precisely the object of research in economic theory. To put it another way, statistics and empirical studies cannot provide any theoretical knowledge. (To believe the opposite was, as we shall see, precisely the error which the historicists of the nineteenth-century German school committed and which today the economists of the neoclassical school are largely repeating.) Furthermore, as Hayek clearly showed in his Nobel prize acceptance speech, often aggregates which are measurable in statistical terms are of no theoretical use, and vice versa: many concepts of paramount theoretical importance cannot be measured or handled empirically (Hayek 1989).

1.10. Conclusion

The main criticisms which Austrian economists level against neoclassicals and which, at the same time, highlight the basic distinguishing features of the Austrian viewpoint are as follows: *first*, neoclassicals focus exclusively on equilibrium states via

a maximizing model which presupposes that the information agents need regarding target functions and their restrictions is “given;” *second*, neoclassicals often arbitrarily select variables and parameters for both the target function and the restrictions, and in doing so, they tend to include the most obvious aspects and overlook others which, though of vital importance, are more difficult to handle empirically (moral values, habits and traditions, institutions, etc.); *third*, neoclassicals concentrate on equilibrium models which treat true cause-effect relationships with mathematical formalism and thus conceal them; and *fourth*, neoclassicals raise mere interpretations of historical reality to the level of theoretical conclusions, interpretations which may be significant in certain specific situations, but which cannot be considered theoretically valid on a universal scale, since they reflect only knowledge which is historically contingent.

The above comments do not mean all neoclassical conclusions reached thus far are erroneous. On the contrary, a large number of them can be recovered and deemed valid. Austrian theorists simply wish to point out that the validity of neoclassical conclusions cannot be guaranteed. The dynamic analysis Austrians advocate provides a surer and more fruitful way of arriving at those conclusions which are valid. In addition, the dynamic analysis offers the advantage of permitting the isolation of untenable theories (also very numerous), since it reveals the defects and errors which are currently concealed by the empirical method rooted in the equilibrium model, on which mainstream economists base their theories.