

## 2 The ongoing *Methodenstreit* of the Austrian School<sup>1</sup>

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<sup>2</sup>

### Introduction

The fall of real socialism a few years ago and the crisis of the welfare state has meant a heavy blow for the mainly neoclassical research programme that has supported social engineering to date, at the same time as the conclusions of the Austrian theoretical analysis on the impossibility of socialism seem to be largely confirmed. In addition, 1996 was the 125th anniversary of the Austrian School, which, as we know, came into official existence in 1871 with the publication of Carl Menger's *Grundsätze*.<sup>3</sup> It seems, therefore, that this is the appropriate moment to return to an analysis of the differences between the two approaches, Austrian and neoclassical, together with their comparative advantages, in the light of both the latest events and the most recent evolution of economic thought.

This article is divided into the following sections. First, the characteristics that distinguish the two approaches (Austrian and neoclassical) will be explained and discussed in detail. Second, a summarized account of the *Methodenstreit* which the Austrian School has been maintaining from 1871 to date will be presented discussing its different 'rounds' and implications. A reply to the most common criticisms made of the Austrian approach, together with an evaluation of the comparative advantages of the two points of view, will conclude the article.

### The essential differences between the Austrian and Neoclassical Schools

Perhaps one of the main features which is lacking in the study programmes of the schools of economics is that, to date, they have not given a complete integrated view of the essential elements of the modern Austrian paradigm *vis-à-vis* the mainstream neoclassical approach. In Table 2.1, I have tried to

Table 2.1 Essential differences between the Austrian and Neoclassical Schools

| <i>Points of comparison</i>  | <i>Austrian paradigm</i>   | <i>Neoclassical paradigm</i>   |
|--|--|--|
| 1 Concept of the economic point of view (essential principle)                          | Theory of human action understood as a dynamic process ( <i>praxeology</i> )   | Theory of <i>decision</i> : rational and based on constraint maximization  |
| 2 Methodological starting point  | <i>Subjectivism</i>  | Stereotype of <i>methodological individualism</i> (objectivist)  |
| 3 Protagonist of the social processes  | Creative <i>entrepreneur</i>   | <i>Homo oeconomicus</i>  |
| 4 Possibility that the actors err <i>a priori</i> and nature of entrepreneurial profit | Pure or sheer entrepreneurial error and <i>ex post</i> regret exist; pure entrepreneurial profits arise from alertness   | There are no regrettable errors because all past decisions are explicable in terms of cost–benefit analysis; profits are considered the payment for the services of a factor of production |
| 5 Nature of information  | Knowledge and information are <i>subjective, disperse</i> and <i>change</i> constantly (entrepreneurial creativity); radical distinction between scientific knowledge (objective) and practical knowledge (subjective) | Complete, objective and <i>constant</i> information on ends and means is assumed; there is no distinction between practical (entrepreneurial) knowledge and scientific knowledge           |
| 6 Reference point  | General process with a coordinating tendency; there is no distinction between micro and macro: all economic problems are studied in relation to each other   | Model of <i>equilibrium</i> (general or partial).; separation between microeconomics and macroeconomics  |
| 7 Concept of ‘competition’   | Process of entrepreneurial rivalry   | Situation or model of ‘perfect competition’  |
| 8 Concept of cost  | <i>Subjective</i> (depends on the alertness of the entrepreneur for the discovery of new alternative ends)   | Objective and constant (it may be known by a third party and measured)   |
| 9 Formalism  | <i>Verbal</i> logic (abstract and formal) which allows the integration of subjective time and human creativity   | <i>Mathematical</i> formalism (symbolic language typical of the analysis of constant atemporal phenomena)  |
| 10 Relation with the empirical world   | <i>Aprioristic-deductive</i> reasoning; radical separation and, at the same time, coordination between theory (science) and history (art); history cannot prove theories   | <i>Empirical</i> falsation of hypotheses (at least rhetorically)   |

Table 2.1 continued.

| <i>Points of comparison</i>               | <i>Austrian paradigm</i>   | <i>Neoclassical paradigm</i>  |
|---|--|---|
| 11 Possibilities of specific prediction   | Impossible, since what will happen depends on future entrepreneurial knowledge which has not yet been created; only qualitative and theoretical 'pattern predictions' on the disordinating consequences of interventionism may be made   | Prediction is a deliberately sought objective   |
| 12 Who is responsible for the prediction  | The entrepreneur   | The economic analyst (social engineer)  |
| 13 Present situation of the paradigm      | Notable <i>re-emergence</i> over the last thirty years (especially after the crisis of Keynesianism and the fall of real socialism)  | Situation of accelerated <i>crisis and change</i>   |
| 14 Amount of 'human capital' invested     | <i>Minoritary</i> , but growing.   | <i>Majority</i> , although it shows signs of dispersal and division   |
| 15 Type of 'human capital' invested       | Multidisciplinary theorists and philosophers; radical libertarians   | Specialists in economic intervention (piecemeal social engineering); very variable degree of commitment to freedom  |
| 16 Most recent contributions              | <ul style="list-style-type: none"> <li>• Critical analysis of institutional coercion (socialism and interventionism)</li> <li>• Theory of free banking and economic cycles</li> <li>• Evolutionary theory of institutions (juridical, moral)</li> <li>• Theory of entrepreneurship</li> <li>• Critical analysis of 'Social Justice'</li> </ul> | <ul style="list-style-type: none"> <li>• Public Choice theory</li> <li>• Economic analysis of the family</li> <li>• Economic analysis of Law</li> <li>• New classical macroeconomics</li> <li>• Economics of 'information'</li> </ul> |
| 17 Relative position of different authors | Rothbard, Mises, Hayek, Kirzner  | Coase<br>Demsetz-Blaug<br>Buchanan-Samuelson<br>Stiglitz-Friedman-Becker  |

fill this gap in a way that is complete but, at the same time, clear and concise, so that it is possible to understand at a glance the different opposing points between the two approaches, which I then discuss briefly.

***Theory of action (Austrians) versus theory of decision (neoclassicals)***

For the Austrian theorists, economic science is conceived as a theory of action rather than a theory of decision and this is one of the features that most clearly distinguishes them from their neoclassical colleagues. In fact, the concept of human action covers the concept of individual decision and much more. In the first place, for the Austrians, the relevant concept of action includes not only the hypothetical process of decision in an environment of ‘given’ knowledge of the ends and means but, above all, and this is the most important point, ‘the very perception of the ends–means framework within which allocation and economizing is to take place’.<sup>4</sup> Moreover, the most important factor for the Austrians is not that a decision is taken, but that it is taken in the form of a human action in the *process* of which (that may or may not be culminated) there is a series of interactions and processes of coordination the study of which constitutes, for the Austrians, precisely the research subject of economic science. Therefore, for the Austrians, economics, far from being a theory on choice or decision, is a theory on the processes of social interaction, which may be coordinated to a greater or lesser extent depending on the alertness shown by the different actors involved in each entrepreneurial action.<sup>5</sup>

Consequently, the Austrians are especially critical of the narrow conception of economics that originates from Robbins and his well-known definition of it as a science which studies the utilization of scarce resources which may be put to alternative uses in order to satisfy human needs.<sup>6</sup> Robbins’ conception implies given knowledge on ends and means, and therefore the economic problem is reduced to a mere technical problem of allocation, maximization or optimization, subject to known constraints. In other words, the conception of economics in Robbins corresponds to the core of the neoclassical paradigm and is completely foreign to the methodology of the Austrian School as it is understood today. In fact, the Robbinsian man is an automaton or caricature of the human being, who merely reacts passively to events. As opposed to Robbins’ conception, the position of Mises, Kirzner and the rest of the Austrians should be highlighted. They consider that what man really does, rather than allocating given means to given ends, is to constantly seek new ends and means, learning from the past and using his imagination to discover and create (by action) the future. Therefore, for the Austrians, economics is subsumed under or integrated into a much more general and broad science, a general theory of human *action* (not of human decision). 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’.<sup>7</sup>

***Subjectivism (Austrians) versus objectivism (neoclassicals)***

A second aspect which is of capital importance for the Austrians is *subjectivism*.<sup>8</sup> For the Austrians, the subjectivist conception consists of the attempt to build economic science on the basis of the real human being of flesh and blood, considered as the creative and leading actor in all social processes. This is why, for Mises,

economics is not about things, tangible material objects. It is about men, their meanings and actions. Goods, commodities and wealth and all other elements 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.<sup>9</sup>

Therefore, for the Austrians, and to a great extent unlike the neoclassicals, the constraints in economics are not imposed by objective phenomena or material factors of the external world (for example the oil reserves), but by human entrepreneurial subjective knowledge (the discovery, for example, of a carburettor that doubles the efficiency of the internal combustion engine *has the same economic effect* as the duplication of all the physical oil reserves).

***Entrepreneur (Austrians) versus homo oeconomicus (neoclassicals)***

Entrepreneurship is the force which plays the leading role in Austrian economic theory, while, on the contrary, it is conspicuous by its absence in neoclassical economic science. In fact, entrepreneurship is a typical phenomenon of the real world, which is always in disequilibrium and cannot play any part in the models of equilibrium that absorb the attention of the neoclassical authors. Furthermore, the neoclassicals consider entrepreneurship as simply one more production factor which may be allocated in accordance with its expected costs and benefits, without realizing that, when analysing the entrepreneur in this way, they make an insoluble logical contradiction: to demand entrepreneurial resources in accordance with their expected benefits and costs implies the belief that some information is available today (the probable value of the future costs and benefits) *before it has been created* by entrepreneurship itself. In other words, the main function of the entrepreneur consists in creating and discovering new information that did not previously exist and cannot be known, meaning that it is humanly impossible to make any neoclassical prior decision on allocation on the basis of expected costs and benefits.

In addition, today there is unanimity among all Austrian economists in classifying the belief that entrepreneurial profit arises from the simple assumption of risks as a fallacy. Risk, to the contrary, merely gives rise to

another cost of the production process, which has nothing to do with pure entrepreneurial profit.<sup>10</sup>

***Entrepreneurial error (Austrian) versus ex post rationalization of all past decisions (neoclassical)***

The very different role played by the concept of *error* in the Austrian and Neoclassical Schools is not usually appreciated. For the Austrians, it is possible to commit sheer entrepreneurial errors<sup>11</sup> whenever an opportunity for gain remains undiscovered by the entrepreneurs in the market. It is precisely the existence of this type of error that gives rise to pure entrepreneurial profit. On the contrary, for the neoclassicals, there are never pure entrepreneurial errors which may subsequently be regretted (*regrettable errors*). This is due to the fact that the neoclassicals rationalize all decisions taken in the past in terms of a supposed cost–benefit analysis made within the framework of a constrained maximization. Therefore, pure entrepreneurial profits have no reason to exist in the neoclassical world and, when they are mentioned, are considered merely as payment of the services of a production factor or as income arising from the assumption of a risk.

***Subjective information (Austrians) versus objective information (neoclassicals)***

Entrepreneurs are constantly generating new *information*, which is essentially subjective, practical, disperse and difficult to articulate.<sup>12</sup> Therefore, the subjective perception of information is an essential element in Austrian methodology that is absent in neoclassical economics, since the latter always tends to handle information objectively. In fact, most economists do not realize that, when Austrians and neoclassicals use the term *information* they are referring to radically different things. In effect, for the neoclassicals, information, like commodities, is something that is objective and is bought and sold in the market as a result of a maximizing decision. This ‘information’, which may be stored on different supports, is not in any way *information in the subjective sense* of the Austrians: relevant practical knowledge that is created, interpreted, known and used by the actor in the context of a specific action. This is why the Austrians criticize Stiglitz and other neoclassical theorists of information for not having been able to integrate their information theory with entrepreneurship, which is always its source protagonist, as the Austrians have done. Furthermore, for the Austrians, Stiglitz does not fully understand that *information* is always subjective and that the markets he calls ‘imperfect’, rather than generating ‘inefficiencies’ (in the neoclassical sense), give rise to the formation of potential opportunities of entrepreneurial gain, which tend to be discovered and made use of by the entrepreneurs in the coordination process that they are continually stimulating in the market.<sup>13</sup>

***Entrepreneurial coordination (Austrian) versus general and/or partial equilibrium (neoclassical)***

The models of equilibrium of the neoclassical economists usually ignore the coordinating force that entrepreneurship has for the Austrians. In fact, this force not only creates and transmits information but, more importantly, also drives the coordination between the unadjusted behaviours of agents in society. Effectively, all social discoordination materializes in an opportunity for gain which remains latent until it is discovered by the entrepreneurs. Once the entrepreneur realizes that the profit opportunity exists and acts to take advantage of it, it disappears and there is a *spontaneous process of coordination*, which explains the trend towards equilibrium that exists in any market economy. Moreover, the coordinating nature of entrepreneurship is the only factor which makes it possible for economic theory to exist as a science, understood as a theoretical *corpus* of laws of coordination which explain the social processes.<sup>14</sup> This approach explains why the Austrian economists are interested in studying the *dynamic* concept of competition (understood as a process of *rivalry*), while the neoclassical economists concentrate exclusively on the models of equilibrium which are typical of the comparative *statics* ('perfect' competition, monopoly, 'imperfect' or monopolistic competition).<sup>15</sup> For Mises, as we see in the quotation at the beginning of this article (see p. 31), there is no sense in the construction of economic science based on the model of equilibrium, in which it is assumed that all the relevant information for drawing the corresponding functions of supply and demand is considered 'given'. The basic economic problem for the Austrians is quite different: to study the dynamic process of *social coordination* in which the different individuals are continually generating new information (which is never 'given') when they seek the ends and means that they consider relevant in the context of each action in which they are involved, thus establishing, without realizing it, a spontaneous process of coordination. For the Austrians, therefore, the basic economic problem is not technical or technological, as it is usually conceived by the theorists of the neoclassical paradigm when they assume that the ends and means are 'given' and pose the economic problem as if it were a mere technical problem of maximization. In other words, for the Austrians, the basic economic problem does not consist of the maximization of a known target function subject to constraints that are also known. It is, on the contrary, strictly economic: *it emerges when there are many ends and means competing among themselves, when knowledge of them is neither given nor constant, but is dispersed over the minds of innumerable human beings who are continually creating and generating it ex novo and, therefore, all the possible alternatives which exist, all those which will be created in the future and the relative intensity with which each of them will be pursued cannot even be known.*<sup>16</sup>

Moreover, it is necessary to realize that even what appear to be merely maximizing or optimizing human actions always have an entrepreneurial component,

since the actor involved in them must have realized previously that this course of action, which is so automatic, mechanical and reactive, is the most advisable in the specific circumstances in which s/he has found him/herself. *In other words, the neoclassical approach is merely a specific case, of relatively minor importance, which is included and subsumed under the Austrian conception, which is much more general, richer and more explicative of the real world.*

Furthermore, for the Austrians, there is no sense in separating micro-economics and macroeconomics into two watertight compartments as the neoclassical economists do. On the contrary, economic problems should be studied together on an interrelated basis, without distinguishing between their micro and macro components. The radical separation between the 'micro' and 'macro' aspects of economic science is one of the most characteristic insufficiencies of modern introductory manuals and textbooks on political economy. Instead of providing a unified treatment of economic problems, as Mises and the Austrian economists try to do, they always present economic science as divided into two different disciplines ('micro-economics' and 'macroeconomics') with no connection between them and which, therefore, can be studied separately. As Mises rightly says, this separation originates from the use of concepts which, like the *general price level*, ignore the application of the subjective and marginalist theory of value to money and continue anchored in the pre-scientific stage of economics, when it was still attempted to make analyses in terms of global classes or aggregates of goods, rather than in terms of incremental or marginal units of them. This explains the fact that, to date, a whole 'discipline' based on the study of the mechanical relationships which supposedly exist between macroeconomic aggregates has been developed, the connection of which with individual human action is difficult, if not impossible, to understand.<sup>17</sup>

In any case, the neoclassical economists have converted the model of equilibrium into the focal point of their research. In this model, they assume that all information is 'given' (either in certain or probabilistic terms) and that the different variables are perfectly adjusted. From the Austrian point of view, the main disadvantage of this methodology is that, as it assumes that all the variables and parameters are perfectly adjusted, it is easy to draw erroneous conclusions on the cause and effect relationships between different economic concepts and phenomena. *Thus, the equilibrium would act as a sort of veil that would prevent the theorist from discovering the true direction that exists in the cause and effect relationships of economic laws.* For the neoclassical economists, rather than laws of tendency that go in a single direction, what exists is a mutual (circular) determination between the different phenomena, the initial origin of which (human action) remains concealed or is considered of no interest.<sup>18</sup>

### ***Subjective costs (Austrians) versus objective costs (neoclassicals)***

Another essential element of Austrian methodology is its purely subjective conception of costs. Many authors believe that it would not be very difficult

to incorporate it into the mainstream neoclassical paradigm. However, the neoclassicals only include the subjective nature of costs rhetorically and, in the final analysis, although they mention the importance of the concept of cost of opportunity, they always incorporate it into their models in an objectivized form. However, for the Austrians, cost is the subjective value that the actor places on the ends which he renounces when he decides to undertake and follow a certain course of action. In other words, there are no objective costs. Costs must, rather, be discovered through the entrepreneurial alertness of each actor. In fact, many possible alternatives may go unnoticed but, once they are discovered, they radically change *the subjective perception* of costs on the part of the entrepreneur. Objective costs which tend towards determining the value of the ends do not, therefore, exist. The real situation is the exact opposite: costs are assumed as subjective values (and, therefore, are determined) depending on the subjective value of the ends really sought (consumer goods) by the actor. Therefore, for the Austrian economists, it is the final prices of consumer goods, as the materialization of subjective valuations in the market, that determine the costs which the actor is willing to incur in order to produce them and not, as the neoclassical economists so often imply, the opposite.

***Verbal formalism (Austrians) versus mathematical formalism (neoclassicals)***

Another aspect of interest is the different position of the two schools regarding the utilization of mathematical formalism in economic analysis. From the origins of the Austrian School, its founder, Carl Menger, took care to point out that the advantage of verbal language is that it can express the essences (*das Wesen*) of economic phenomena, something that mathematical language cannot do. 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?'<sup>19</sup> Mathematical formalism is especially adequate for expressing the states of equilibrium that the neoclassical economists study, but it does not allow the inclusion of the subjective reality of time and, much less, the entrepreneurial creativity which are essential features of the analytical reasoning of the Austrians. Perhaps Hans Mayer summed up the insufficiencies of mathematical formalism in economics better than anyone when he said that:

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.<sup>20</sup>

This means that, for the Austrians, many of the theories and conclusions of the neoclassical analysis of consumption and production do not make sense. This is true, for example, of what is called the ‘law of equality of weighted (by prices) marginal utilities’, the theoretical foundations of which are very doubtful. In fact, this law assumes that the actor is capable of *simultaneously* valuing the utility of all the goods at his disposal, ignoring the fact that any action is *sequential* and creative and that goods are not valued at the same time, making their supposed marginal utility equal, but rather one after another, in the context of different stages and actions for each of which it is not only that the corresponding marginal utilities may be different, but that they are not even comparable.<sup>21</sup> In short, *for the Austrians, the use of mathematics in economics is defective because they synchronically bind together magnitudes which are heterogeneous from the points of view of time and entrepreneurial creativity.* For the same reason, for the Austrian economists, neither do the axiomatic criteria of rationality often used by the neoclassical economists make sense. In effect, if an actor prefers A to B and B to C, it is perfectly possible that s/he prefers C to A, which does not make him or her ‘irrational’ or inconsistent if s/he has simply changed his/her mind (even if this only lasts the hundredth part of a second that posing this problem lasts in his/her own reasoning).<sup>22</sup> For the Austrians, the neoclassical criteria of ‘rationality’ tend to confuse the concepts of constancy and consistency.

### ***Relation with the empirical world: the different meaning of ‘prediction’***

Lastly, the different relationship with the empirical world and the differences regarding the possibilities of prediction place the paradigm of the Austrian School in radical opposition to that of the neoclassicals. Effectively, the fact that the ‘observing’ scientist cannot obtain the practical information which is being constantly created and discovered in a decentralized way by the ‘observed’ actors-entrepreneurs explains the theoretical impossibility of any type of empirical verification in economics. In fact, the Austrians consider that the same reasons that determine the theoretical impossibility of socialism explain that both empiricism and the cost–benefit analysis or utilitarianism in its strictest interpretation are not viable in our science. It is irrelevant whether it is a scientist or a governor who vainly tries to obtain the practical information that is relevant to each case in order to verify theories or endow his commands with a coordinating nature. If this were possible, it would be viable to use this information either to coordinate society through coercive commands (socialism and interventionism) or to empirically verify economic theories. However, for the same reasons, first, in view of the immense volume of information in question; second, due to the nature of the relevant information (disseminated, subjective and tacit); third,

because of the dynamic nature of the entrepreneurial process (information which has not yet been generated by the entrepreneurs in their process of constant innovating creation cannot be transmitted); and, fourth, due to the effect of coercion and of scientific 'observation' itself (which distorts, corrupts, impedes or simply makes the entrepreneurial creation of information impossible), both the socialist ideal and the positivist or strictly utilitarian ideal are impossible from the point of view of Austrian economic theory.

These same arguments are also applicable in order to justify the Austrians' belief that it is theoretically impossible to make *specific predictions* (i.e. referring to determined coordinates of time and place with a quantitative empirical content) in economics. What will happen tomorrow can never be scientifically known today, as it largely depends on knowledge and information which have not yet been entrepreneurially generated and which, therefore, cannot yet be known.

In economics, therefore, only general 'trend predictions' can be made (what Hayek calls *pattern predictions*). These are of an essentially theoretical nature and relative, at most, to the forecast of the disorders and effects of social discoordination produced by institutional coercion (socialism and interventionism) on the market.

Moreover, we must remember that objective facts which may be directly observed in the external world do not exist, due to the circumstance that, according to the Austrian subjectivist conception, economic research 'facts' are simply *ideas* that others have on what they pursue and do. They may never be observed directly, but only interpreted in historical terms. In order to interpret the social situation which constitutes history, a prior theory is necessary and, moreover, a non-scientific judgement of relevance (*Verstehen* or understanding) is required. This is not objective but may vary from one historian to another, converting his or her discipline (history) into a true art.

Finally, the Austrians consider that empirical phenomena are constantly variable, so that there are no parameters or constants in social events and everything is a 'variable'. This makes the traditional objective of econometrics difficult, if not impossible, together with any of the versions of the positivist methodological programme (from the most ingenuous verificationism to the most sophisticated Popperian falsationism). As opposed to the positivist ideal of the neoclassicals, the Austrian economists aim to construct their discipline through apriorism and deduction. The question is, in brief, to prepare an entire logical-deductive arsenal<sup>23</sup> on the basis of self-evident knowledge (axioms such as the subjective concept of human action itself, with its essential elements) which arises by introspection in the personal experience of the scientist or is considered evident because nobody can argue the axioms without contradicting him- or herself.<sup>24</sup> This theoretical arsenal is, according to the Austrians, indispensable for an adequate interpretation of the apparently unrelated mass of complex historical phenomena which constitute the social world and for drawing up a history towards the past or predicting events towards the future (which is the typical mission of the

entrepreneur) with a minimum degree of consistency, guarantees and chances of success. It is now possible to understand the great importance that the Austrians in general place on history as a discipline and on their attempt to differentiate it from economic theory while relating it appropriately thereto.<sup>25</sup>

Hayek calls the undue application of the method appropriate for natural sciences to the social science field *scientism*. Thus, in the natural world, there are constants and functional relations that allow the application of mathematical language and the performance of quantitative experiments in a laboratory. However, for the Austrians, in economics, unlike the world of physics and the natural sciences, functional relations (and, therefore, functions of supply, demand, costs or of any other type) do not exist. Let us remember that, mathematically, according to set theory, a function is merely a correspondence between the elements of two sets which are called the 'initial set' and the 'final set'. Given the innate creative capacity of the human being, who is continuously generating and discovering new information in each specific circumstance in which he acts in respect of the ends he aims to pursue and the means to attain them he considers to be within his reach, it is evident that there is none of the three elements necessary for a functional relationship to exist: (1) the elements of the initial set are not given or constant; (2) the elements which constitute the final set are not given or constant; and (3), and this is the most important point, *neither are the correspondences between the elements of the two groups given, but rather they vary continually as a result of the action and creative capacity of the human being*. Thus, in our science, according to the Austrians, the use of functions requires that a *presupposition of constancy* be introduced into the information, radically eliminating the protagonist of the whole social process: the human being endowed with an innate creative entrepreneurial capacity. The great merit of the Austrians consists in having shown that it is perfectly possible to create the whole corpus of economic theory logically,<sup>26</sup> without any need to use functions or to establish assumptions of constancy which are contrary to the creative nature of the human being, who is the sole true protagonist of all the social processes studied by economic science.

Even the most well-known neoclassical economists have had to recognize that there are important economic laws that cannot be empirically verified (such as the theory of evolution and natural selection).<sup>27</sup> The Austrians have placed special emphasis on the insufficiency of empirical studies to drive the development of economic theory. Effectively, at most, empirical studies may provide some information on certain aspects of the results of the social processes which occur in reality. They do not, however, provide information on the formal structure of said processes, the knowledge of which constitutes precisely the research subject of economic theory. In other words, statistics and empirical studies cannot provide any theoretical knowledge (the error of the historicists of the nineteenth century German School consisted precisely of this and is, to a great extent, repeated today by the Neoclassical School economists). Furthermore, as Hayek rightly said in his speech on receiving

the Nobel Prize, aggregates which can be measured in statistical terms often lack theoretical sense and, *vice versa*, many concepts with great theoretical significance cannot be measured or treated empirically.<sup>28</sup>

In short, the main criticisms that the Austrian economists make of the neoclassicals are the following: in the first place, they concentrate exclusively on states of equilibrium through a maximizing model which assumes that the agents have full information on the target functions and their constraints; second, the often random choice of variables and parameters for both the target function and constraints tends to include the most obvious ones and forget others which, although they are of great importance, are more difficult to handle empirically (moral values, customs, etc.); third, they concentrate on models of equilibrium that they treat with the formalism of mathematics and which hide the real cause and effect relationships; fourth, they raise to the level of theoretical conclusions what are merely interpretations of the historical situation and, although they may be relevant in some cases, cannot be considered to have universal theoretical validity, as they only involve historically contingent knowledge. The above considerations do not mean that all the conclusions of the neoclassical analysis are erroneous. On the contrary, a great many of them are probably appropriate and valid. The only matter to which the Austrians wish to draw attention is that there is no guarantee of the validity of the conclusions reached by the neoclassical economists and that those which are valid may perfectly well be drawn from the dynamic analysis that the Austrians advocate. This analysis has, in addition, the advantage that it allows erroneous theories (which are also very numerous) to be isolated, as it shows up the defects and errors that are currently concealed by the empirical method based on the model of equilibrium developed by the neoclassical economists.

### **The rounds of the *Methodenstreit***

The Austrian School has been refining its methodological positions from its foundation in 1871 until today – in other words, over a very long time period – almost always driven by the numerous doctrinal polemics in which it has taken part. In fact, it may be considered that the *Methodenstreit*, or polemic concerning the methods, has been evolving since the very beginning of the Austrian School and has affected and continues to affect very significantly the development of economic science. We will now study the most important stages of the *Methodenstreit* of the Austrian School which have taken place to date.

#### ***First round: Carl Menger versus the German Historical School***<sup>29</sup>

There is no doubt that the Austrian School of Economics was born in 1871 with the publication of Menger's *Principles of Economics*. The most original and important distinctive idea of Menger's contribution consisted in trying

to construct economics using the human being, considered as the creative actor and protagonist in all social processes, as a starting point (*subjectivism*). The fruits of this conception were Menger's two most important ideas. In the first place, and for the first time in economic science, Menger theorized on the basis of a process of action formed by a series of *intermediate stages* ('economic goods of higher order') that the actor undertakes, carries out, and tries to culminate until the end or final consumer good is attained ('economic goods of first order'). Specifically, Menger concludes:

when we have the complementary goods of some particular higher order at our command, we must transform them first into goods of the next lower order, and then by *stages* into goods of successively still lower orders until they have been fashioned into goods of first order, which alone can be utilized directly for the satisfaction of our needs.<sup>30</sup>

Menger's second essential contribution is his economic theory on the emergence of *social institutions*. Menger discovered that institutions result from a social process formed by multiple human actions and led by a series of human beings (entrepreneurs) who, in their particular historical circumstances of time and place, are able to discover before other people that they attain their ends more easily if they adopt certain guided behaviours. In this way, a decentralized trial and error process is put into action, in which the forms of behaviour that best coordinate the social disorders tend to prevail, so that, through an unconscious social process of learning and imitation, the leadership initiated by the human beings who are most creative and successful in their actions extends and is followed by the rest of the members of society. Thus, guided behaviours or *institutions* which make life in society possible emerge in the economic field (money), legal field (rules and moral behaviour) and linguistic field.<sup>31</sup>

The fact that the professors of the German Historical School not only did not understand his contribution but also considered it a dangerous challenge to historicism must have caused Menger great frustration. Effectively, instead of realizing that Menger's contribution was the theoretical support that the evolutionist conception of social processes needed, they considered that the abstract and theoretical nature of the analysis was incompatible with the narrow historicism they advocated. This was the beginning of the first and perhaps most famous polemic in which the Austrians have been involved, the *Methodenstreit* (polemic I), which occupied Menger's intellectual energy for several decades.<sup>32</sup>

One of the most important by-products of the *Methodenstreit* was Menger's incipient articulation of the methodology appropriate to economic science. This is made up of a series of theories that constitute the 'form' (in the Aristotelian sense) which expresses the essences of economic phenomena and is discovered by a process of internal reflection (*introspection*) in the course of a logical process based on deductive reasoning. History accompanies

theory and is made up of the empirical facts that form ‘matter’ (in the Aristotelian sense). No theories may be extracted directly from history but, on the contrary, a prior theory is necessary in order to interpret it appropriately. In this way, Menger established the foundations of what was to be the traditional methodology of the Austrian School.<sup>33</sup>

A number of recent studies have shown how, in fact, what Menger did was to take up, through Say, a much older tradition of thought that had been cut short precisely as a consequence of the negative influence of Adam Smith and the English Classical School. I refer to the continental Catholic tradition which, on a secular basis, had constructed all the essential elements that constitute the paradigm of the present Austrian School. Thus, with regard to the spontaneous emergence of institutions, we can, as Bruno Leoni has shown, go back to the juridical tradition of the Romans,<sup>34</sup> the Spanish scholastics,<sup>35</sup> like Juan de Lugo and Juan de Salas,<sup>36</sup> and the French theorists: Balesbat in 1692, the Marquis D’Argenson in 1751 and above all Turgot, who, long before Adam Smith, had already articulated the disperse nature of the knowledge incorporated into social institutions understood as spontaneous orders. Thus, in 1759, Turgot concluded that

there is no need to prove that each individual is the only competent judge of the most advantageous use of his lands and of his labour. He alone has the particular knowledge without which the most enlightened man could only argue blindly. He learns by repeated trials, by his successes, by his losses, and he acquires a feeling for it which is much more ingenious than the theoretical knowledge of the indifferent observer because it is stimulated by want.

Likewise, Turgot refers to the ‘complete impossibility of directing, by invariant rules and continuous inspection a multitude of transactions which by their immensity alone could not be fully known, and which, moreover, are continually dependent on a multitude of ever changing circumstances which cannot be managed or even foreseen’.<sup>37</sup> The subjective theory of value is also developed by the Spanish scholastics in the sixteenth century, particularly by Diego de Covarrubias y Leyva.<sup>38</sup> Luis Saravia de la Calle was the first of them to expressly demonstrate that prices determine costs, not *vice versa*. The Spanish scholastics also apply this subjectivist concept to the theory of money (Azpilcueta Navarro and Luis de Molina), likewise including the concept of entrepreneur which had earlier been developed by San Bernardino of Siena and Sant’ Antonino of Florence and would later become the centre of the research of Cantillon, Turgot and Say.

This whole tradition was cut short by the negative effects of the Protestant reform, which, to a certain extent, explains the regression that was implied by Adam Smith and that has recently been summarized by Leland B. Yeager in his ‘Review’ of Rothbard’s posthumous book on the history of economic thought with the following words:

Smith dropped earlier contributions about subjective value, entrepreneurship and emphasis on real-world markets and pricing and replaced it all with a labour theory of value and a dominant focus on the unchanging long run ‘natural price’ equilibrium, a world where entrepreneurship was assumed out of existence. He mixed up Calvinism with economics, as in supporting usury prohibition and distinguishing between productive and unproductive occupations. He lapsed from the laissez-faire of several eighteenth century French and Italian economists, introducing many waffles and qualifications. His work was unsystematic and plagued by contradictions.<sup>39</sup>

***Second round: Böhm-Bawerk versus John Bates Clark (and also versus Marshall and Marx)***

The leading player in the second round in the Austrian School’s *Methodenstreit* was Böhm-Bawerk. This second round materialized in a polemic which was, for our purposes, extremely significant (the polemic with John Bates Clark, polemic II) and the debates of lesser importance with Marshall (polemic III) and Marx (polemic IV).

John Bates Clark was radically opposed to the dynamic concept of action introduced by Menger and, above all, to the Mengerian concept of action formed by a series of successive stages. As a consequence, Clark considered that capital was a homogeneous fund that reproduced itself alone, so that production (i.e. human action) was instantaneous and did not involve time. Clark’s thesis is indispensable in order to justify his conclusion that the interest rate is determined by the marginal productivity of capital. This requires not only that the latter be considered as a fund that reproduces itself alone instantaneously, but also a perfectly adjusted static environment (in equilibrium), together with the determination of the values of capital goods by their historical cost of production. Clark himself explicitly acknowledges that his thesis only makes sense in a perfectly adjusted static environment in equilibrium when he says that

in a dynamic condition of society ... time is required before any goods are ready for consumption, and during this interval owners must wait for their expected products. After the series of goods in various stages of advancement has once been established, the normal action of capital is revealed.<sup>40</sup>

Böhm-Bawerk criticized Clark’s thesis,<sup>41</sup> describing it as *mystical* and *mythological* and showing that it meant, apart from a radical attack on Menger’s dynamic conception, the definitive enthronement of the static paradigm of equilibrium in the world of economics. In Böhm-Bawerk’s opinion, which was subsequently confirmed by the facts, this would have very serious consequences for the future development of economics. Subsequently,

the neoclassical authors, following Clark, again realized that, in order to maintain their whole theoretical edifice, it was indispensable to eliminate the dynamic concept of action constituted by a series of temporal stages introduced by Menger. This happened, for example, to the founder of the School of Chicago, Frank H. Knight, who, in the 1930s, reproduced with Hayek and Machlup the polemic that had taken place between Clark and Böhm-Bawerk at the end of the nineteenth century.<sup>42</sup> Clark's influence was very negative for the subsequent evolution of economic thought because he upheld a position against the American institutionalists which appeared to acknowledge that the Austrians were right in their polemic with the German Historical School. However, *in reality, his defence of the paradigm of equilibrium and frontal attack on Menger's dynamic conception of action meant that the mainstream of our science forked off in a direction which was radically opposed to the path that the Austrians had initiated.*

Apart from the polemic with Clark (which we will call polemic II to distinguish it from polemic I between Menger and the historicists), Böhm-Bawerk was involved in two other polemics, one with Marx and another with Marshall, that also reflected different aspects of the Austrian School: with Marx, due to the fact the latter did not take the subjectiveness of *time preference* into account, which eliminated the potentiality of the Marxist analysis of surplus-value or exploitation;<sup>43</sup> with Marshall, because he tried to rehabilitate Ricardo, at least with regard to the supply side, defending the idea that the latter was determined above all by considerations related to the *historical cost of production* and being incapable of incorporating the Austrian concept of the subjective cost of opportunity, with all its implications.<sup>44</sup>

### ***Third round: Mises, Hayek and Mayer versus socialism, Keynes and the neoclassicals***

The third round of the Austrians' methodological controversies commenced with the third generation of Austrian School economists led by Mises. In this phase, the most important polemic was the one initiated by Mises on the *theoretical impossibility of socialism* (polemic V). Effectively, for Mises, the theorem of the theoretical impossibility of socialism was an immediate consequence of the subjectivist and dynamic conception developed by the Austrians. In fact, if the source of all wants, valuations and knowledge is to be found in the creative entrepreneurial capacity of the human being, any system which, like socialism, is based on the use of violent coercion against free human action will prevent the creation and transmission of the information necessary to coordinate society. Moreover, Mises is perfectly aware that, if the neoclassical economists are not capable of understanding the theorem of the impossibility of socialism, this is due to the fact that they have not been capable of accepting the Austrians' subjectivist and dynamic conception. Effectively, for Mises,

the illusion that a rational order of economic management is possible in a society based on public ownership of the means of production owed its origin to the value theory of the classical economists and its tenacity to the failure of many modern economists to think through consistently to its ultimate conclusions the fundamental theory of the subjectivist theory. ... In truth it was the errors of these schools that made the socialist ideas thrive.<sup>45</sup>

Thus, as an example, we can again mention the founder of the School of Chicago, Frank H. Knight, who even said that ‘socialism is a political problem to be discussed in terms of social and political psychology, and economic theory has relatively little to say about it’.<sup>46</sup> And, in fact, even today, the neoclassical economists still do not understand the profound theoretical reasons for the impossibility of socialism and, at most, have tried to explain the fall of socialism *a posteriori*, either by resorting to the ‘error’ committed in the interpretation of the statistical data which came from the real socialist systems and was accepted by the ‘profession’ with insufficient critical spirit, or by the argument that the role played by ‘incentives’ in economic life had been assessed unsatisfactorily.<sup>47</sup> Fortunately, the former socialist economists have seen the facts better than their Western neoclassical colleagues and have realized that Oskar Lange and the other neoclassical socialists ‘never succeeded in confronting the Austrian challenge’.<sup>48</sup> It is, however, hopeful to mention how, more recently, a neoclassical author of the level of Joseph E. Stiglitz has finally recognized that ‘the standard neoclassical models were partly to blame for the disastrous situation in which so many Eastern European countries found themselves. A strong case could be made for the proposition that ideas about economics have led half the world’s population to untold suffering’.<sup>49</sup>

The polemic with the macroeconomists, particularly against Keynes and the theorists of Cambridge (polemic VI), which was basically led by Hayek on the Austrian side, also arose naturally from placing the conceptions belonging to the analysis made exclusively in terms of macroeconomic aggregates in opposition to the dynamic conception of the market developed by the Austrians. Logically, we cannot deal with the specific development of this whole polemic here,<sup>50</sup> but Table 2.2 shows a summary of the different distinguishing aspects which exist between the Austrian School and the Neo-classical School (constituted, for our purposes, by the monetarists, the Keynesians and all their different successors) with regard to macroeconomics.<sup>51</sup>

These theoretical discussions, which took place in the period between the two world wars, finally convinced the Austrians that their supposed victory in the *first round of the Methodenstreit* with the German Historical School had been a pyrrhic, or even strictly nominal, victory, as occurred to the Currency School theorists with Peel’s Law in 1844. So, as Kirzner has said, one of the most important by-products of the controversy on the impossibility of socialism was that it forced the Austrians to refine their methodological position even further, realize its profound implications and, above all,

Table 2.2 Two different ways of conceiving macroeconomics

| Austrian School  | Neoclassical School ( <i>Monetarists and Keynesians</i> )   |
|--|---|
| 1 <i>Time</i> plays an essential role  | 1 The influence of time is ignored  |
| 2 ‘Capital’ is considered as a <i>heterogeneous</i> set of capital goods that are constantly being used up and must be <i>reproduced</i>   | 2 Capital is considered as a <i>homogeneous</i> fund that reproduces itself alone   |
| 3 The productive process is <i>dynamic</i> and broken down into multiple <i>vertical</i> stages  | 3 There is considered to be a <i>horizontal</i> and <i>one-dimensional</i> productive structure in <i>equilibrium</i>   |
| 4 Money affects the process by modifying the structure of <i>relative</i> prices   | 4 Money affects the <i>general</i> price level; changes in relative prices are not considered   |
| 5 Explains macroeconomic phenomena in <i>microeconomic</i> terms (changes in relative prices)  | 5 The <i>macroeconomic aggregates</i> prevent the analysis of the underlying micro-economic situations  |
| 6 Has a theory on the <i>endogenous</i> causes of economic crises that explains their <i>recurring</i> nature  | 6 Has no endogenous theory of cycles; crises occur due to <i>exogenous</i> reasons (psychological and/or errors in monetary policy)   |
| 7 Has a developed <i>theory of capital</i>   | 7 Has no theory of capital  |
| 8 Saving plays a leading role and determines a <i>longitudinal</i> change in the productive structure and the type of technology that will be used   | 8 Saving is <i>not</i> important; capital reproduces itself <i>laterally</i> (more of the same thing) and the <i>production function</i> is fixed and is given by the state of the art  |
| 9 The demand for capital goods varies <i>inversely</i> to the demand for consumer goods (any investment requires saving and therefore a sacrifice of consumption over time)  | 9 The demand for capital goods varies in the <i>same</i> direction as the demand for consumer goods   |
| 10 It is assumed that production costs are <i>subjective</i> and are not given   | 10 Production costs are <i>objective</i> , real and are considered to be given  |
| 11 Market prices are considered to tend to determine production costs, not <i>vice versa</i>   | 11 It is considered that historical production costs tend to determine market prices  |
| 12 The interest rate is considered as a market price determined by subjective valuations of time preference; it is used to discount the present value of the future flow of yields towards which the market price of each capital good tends | 12 The interest rate is considered to tend to be determined by the marginal productivity or efficiency of capital and is conceived as the internal return rate which makes the expected flow of yields equal to the historical production cost of capital goods (which is considered given and invariable); the rate of interest is considered to be a mainly monetary phenomenon |

become fully aware of the methodological abyss that separated them from the neoclassicals.<sup>52</sup> Thus, little by little, the Austrian economists commenced a second version of the *Methodenstreit*, this time against the emerging neo-classical paradigm, and began a redefinition of their methodological positions, set forth basically in the works of Mises, Mayer and Hayek which came out in the 1930s, 1940s and 1950s (polemic VII). Thus, Mises specified and established the methodology opposed to the use of mathematics in economics and to positivism in the different methodological works that are summarized in the first part of his *Human Action*. Hans Mayer, in an extensive work that has still not been answered, made a devastating criticism of the functional and mathematical analysis of the neoclassical theory of prices. Mayer's article has only recently been published in English, thanks to Israel M. Kirzner, with the title 'The Cognitive Value of Functional Theories of Price: Critical and Positive Investigations Concerning the Price Problem'.<sup>53</sup> Finally, Hayek summarizes and articulates his methodological criticisms of both the empiricism originating from Saint Simon and the narrow utilitarianism of the neoclassical cost-benefit analysis in his book *The Counter-Revolution of Science*, published in 1952.<sup>54</sup> Unfortunately, the following year, Milton Friedman's work *Essays in Positive Economics*<sup>55</sup> was published and achieved great popularity, providing the use of positivist methodology in our science with a great impetus.

Although Hayek's abovementioned work anticipated, answered and criticized the most important points of Friedman's almost simultaneous book to a great extent, Hayek later said:

one of the things I often have publicly said is that one of the things I most regret is not having returned to a criticism of Keynes' treatise (*The General Theory*), but it is as much true of not having criticized Milton Friedman's *Essays in Positive Economics*, which in a way is quite as dangerous a book.<sup>56</sup>

#### ***Fourth round: neo-Austrians versus the mainstream and methodological nihilism***

The last round of the methodological discussion has been taking place over the last twenty-five years. In this round, the Austrian economists have become convinced that their position is correct, having confirmed how the neoclassical models (of general equilibrium) have been used to justify the theoretical possibility of socialism. Moreover, many positivist neoclassical theorists have believed that, in the final analysis, only empirical considerations could move the balance definitively in favour of either the capitalist economic system or the socialist one,<sup>57</sup> utterly disregarding all the *a priori* theoretical teachings of the Austrian School that demonstrate the impossibility of socialism and unnecessarily condemning a large part of humankind to enormous suffering for many of the decades of the last century. For the

Austrians, not only were a large number of the members of the Neoclassical School especially responsible for this suffering because they ignored the content of the Austrian analysis on the impossibility of socialism, but the positivism that continues to influence our science and which preaches that only experience, regardless of any theory, is able to demonstrate the chances of survival of any social system was also to blame.

The notable re-emergence of the Austrian School over the last twenty-five years is, therefore, explained, together with the effort made by its members to rework the most important contributions of our discipline in accordance with the subjectivist methodology and dynamic approach initiated by Menger, purifying it of the errors that the positivist paradigm of equilibrium tends to surreptitiously introduce into the *corpus* of our science. Furthermore, the extension of the refined methodological nihilism that originated since the teachings of Karl Popper has given rise to a new polemic (polemic VIII) which, this time, has taken place even within the sphere of the Austrian School itself. The triumph of methodological pluralism appeared, at the beginning, to favour the Austrians, since their method, which had been almost cast into oblivion by a large part of the scientific community, again began to be 'respected' (like any other). However, many Austrians have finally realized that the 'anything goes' in methodological terms which has come so much into fashion today radically contradicts the criteria of methodological rigour and the research agenda for the scientific truth that the Austrians have traditionally defended. This explains the recent reaction of many Austrian economists against the nihilism and methodological pluralism originating from the hermeneutical post-modernist position of authors who, like Deirdre McCloskey and Don Lavoie, believe that the scientific truth depends to a great extent on the cultural context in which the argument between its leading players takes place. Israel Kirzner<sup>58</sup> and Hans-Hermann Hoppe<sup>59</sup> have even mentioned the fact that the extension of hermeneutics in economic methodology means, in a certain way, a resurrection of the old errors of the German Historical School, as it makes the criteria for scientific truth depend on contingent external situations.

### **Replies to some criticisms and comments**

We are now going to reply to some of the critical comments on the Austrian paradigm that are habitually made and which, for the reasons we will set forth, we believe to be unfounded. The most common criticisms against the Austrians are as follows:

The two approaches (Austrian and neoclassical) do not exclude each other but are, rather, complementary.

This is the thesis upheld by many neoclassical authors who would like to maintain an eclectic position which does not enter into open conflict with

the Austrian School. However, the Austrians consider that, in general, this thesis is merely an unfortunate consequence of the nihilism typical of methodological pluralism, according to which any method is acceptable and the only problem of economic science is to choose the most appropriate method for each specific problem. We consider that this thesis is merely an attempt to immunize the neoclassical paradigm against the powerful critical arguments launched against it by Austrian methodology. The compatibility thesis would be founded if the neoclassical method (based on equilibrium, preference constancy and the narrow concept of rationality) corresponded to the real way in which human beings act and did not tend to invalidate, to a great extent, the theoretical analysis, as the Austrians believe. This is the reason for the great importance of reworking the neoclassical theoretical conclusions using the subjectivist and dynamic methodology of the Austrians, in order to see which of the neoclassical theoretical conclusions continue to be valid and which should be abandoned due to theoretical defects. The neoclassical method is essentially erroneous from the Austrian point of view and, therefore, creates serious risks and dangers for the analyst, which tend to lead him or her further away from the truth.<sup>60</sup>

Finally, we should remember that, according to Hayek's theory on the hierarchy of spontaneous orders depending on their degree of complexity, a certain order may explain, include and give account of relatively simpler orders. But what cannot be conceived is that a relatively simple order can include and give account of others that are composed of a more complex system of categories.<sup>61</sup>

If this Hayekian insight is applied to the methodological field, it is possible to conceive that the Austrian approach, which is relatively richer and more complex and realistic, could subsume and include the neoclassical approach, which could be accepted at least in the relatively infrequent cases where human beings choose to behave in the more reactive and narrowly maximizing way considered by neoclassicals. But what cannot be conceived is that human realities, like creative entrepreneurship, which far exceed the conceptual scheme of neoclassical categories, can be incorporated into the neoclassical paradigm. The attempt to force the subjective realities of the human being that the Austrians study to fit within the neoclassical straitjacket leads inevitably to either a clumsy characterization of them or to the healthy failure of the neoclassical approach itself, overcome by the more complex, richer and more explicative conceptual scheme of the Austrian point of view.

The Austrians should not criticize the neoclassicals for using simplified assumptions which help to understand reality.

The Austrian economists reply to this so commonly used argument by saying that it is one thing to simplify an assumption and another to make it completely unreal. What the Austrians really object to in the neoclassicals is not

that their assumptions are simplified but, precisely, that they are contrary to the empirical reality of how the human being reveals himself to be and acts (dynamically and creatively). It is, therefore, the essential unreality (not the simplification) of the neoclassical assumptions which tends, from the Austrian point of view, to endanger the validity of the theoretical conclusions that the neoclassicals believe they reach in the different applied economics problems they study.

The Austrians fail when formalizing their theoretical propositions.

This is, for example, the only argument against the Austrian School that Stiglitz sets forth in his critical treatise on the models of general equilibrium.<sup>62</sup> We have already explained (pp. 39–40) the reasons why, from the start, the majority of Austrian economists have been very distrustful of the use of mathematical language in our science. For the Austrian economists, the use of mathematical formalism is a vice rather than a virtue, since it consists of a symbolic language that has been constructed in accordance with the demands of the worlds of natural sciences, engineering and logic, in all of which subjective time and entrepreneurial creativity are noticeably absent. It therefore tends to ignore the most essential characteristics of the human being, who is the protagonist of the social processes that economists should study. Thus, for example, Pareto himself reveals this serious disadvantage of mathematical formalism when he acknowledges that all his analysis is made without taking the real protagonist of the social process (the human being) into account and that, for the purpose of his mathematical economics analysis, ‘the individual can disappear, provided he leaves us his photograph of his tastes’.<sup>63</sup> In the same error falls Schumpeter when he states that ‘one needs only “enquire” of individuals the value functions of the consumption goods, and one thereby obtains everything else’.<sup>64</sup>

In any case, the mathematicians’ response (if they can provide one) to the challenge of conceiving and developing a whole new ‘mathematics’ able to include and allow the analysis of the human being’s creative capacity with all its implication, without resorting, therefore, to the assumptions of constancy that come from the world of physics and which have been the driving force behind all the mathematical languages known to date, is still pending. In our opinion, however, the ideal scientific language for including this creative capacity is precisely the language that human beings have spontaneously created in their day-to-day entrepreneurship, which materializes in the different verbal languages and forms of speech which prevail in the world today.

The Austrians carry out very little empirical work.

This is the most common criticism that the empiricists make of the Austrians. Although the Austrians place an extraordinary importance on the role of history, they recognize that their field of scientific activity-theory, which it

is necessary to know before it is applied to reality or illustrated by historical facts – is very different. For the Austrians, there is, on the contrary, an excess production of empirical works and a relative lack of theoretical studies that enable us to understand and interpret what really happens. Moreover, the methodological assumptions of the Neoclassical School (equilibrium, maximization and preference constancy), although they appear to facilitate empirical studies and the ‘verification’ of certain theories, often conceal the correct theoretical relations and, therefore, may induce serious theoretical errors and an erroneous interpretation of what is really happening at any given moment or under any historical circumstance.

The Austrians renounce prediction in the economic field.

We have already seen that the Austrian theorists are very humble and prudent with regard to the possibilities of making scientific predictions of what will happen in the economic and social fields. They are, rather, concerned with constructing a scheme or arsenal of theoretical concepts and laws that allow reality to be interpreted and help acting human beings (entrepreneurs) to make decisions with a greater chance of success. Although the Austrians’ ‘predictions’ are only qualitative and are made in theoretical terms, there exists the paradox that, in practice, as the assumptions of their analysis are much more realistic (dynamic and entrepreneurially creative processes) their conclusions and theories greatly increase the chances of making successful predictions in the field of human action in comparison with the possibilities of the Neoclassical School.<sup>65</sup>

The Austrians do not have empirical criteria to validate their theories.

According to this criticism, often made by the empiricists affected by the complex of St Thomas the Apostle that ‘if I don’t see it, I don’t believe it’, only through the empirical reality can one become certain of which theories are correct or otherwise. As we have seen, this point of view ignores the fact that, in economics, the empirical ‘evidence’ is never indisputable as it refers to complex historical phenomena that do not permit laboratory experiments in which the relevant phenomena are isolated and all aspects which could have an influence are left constant. In other words, economic laws are always laws *ceteris paribus* but in reality the other things never remain equal. According to the Austrians, the validation of theories is perfectly possible through the continual elimination of defects in the chain of logical-deductive reasoning of the different theories and by taking the greatest care when, at the moment of applying the theories to reality, it is necessary to evaluate whether the *assumptions* contained in the theory therein exist or not in the specific historical case analysed. Given the uniform logical structure of the human mind, this continual validation activity proposed by the Austrians is more than sufficient to reach an agreement between the different protagonists

of scientific labour. Moreover, in spite of appearances, in practice, this agreement is usually more difficult to reach in relation to empirical phenomena, which, in view of their very complex nature, are always subject to the most widely differing interpretations.

The Austrians are dogmatic.

This is an accusation which, to a great extent, thanks to the notable re-emergence of the Austrian School and the fact that it is better understood by the economics profession, is fortunately being employed less often. However, in the past, many neoclassical economists fell into the easy temptation of globally discrediting the whole Austrian paradigm and describing it as ‘dogmatic’, without making any detailed study of its different aspects or attempting to answer the criticisms it raised.<sup>66</sup>

Bruce Caldwell is especially critical of this neoclassical attitude of disdain and not even considering the positions of the Austrian methodologists, describing it, likewise, as dogmatic and anti-scientific and reaching the conclusion that it is in no way justified from a scientific point of view. In fact, and in relation to Samuelson’s position, Caldwell wonders:

What are the reasons behind this almost anti-scientific response to praxeology? There is, of course, a practical concern: the human capital of most economists would be drastically reduced (or made obsolete) were praxeology operationalized throughout the discipline. But the principal reason for rejecting Misesian methodology is not so self-serving. Simply put, the preoccupation of praxeologists with the ‘ultimate foundations’ of economics must seem mindless, if not perverse, to economists who dutifully learned their methodology from Friedman and who therefore are confident that assumptions do not matter and that prediction is the key. ... Regardless of its origins, such a reaction is itself dogmatic and, at its core, anti-scientific.<sup>67</sup>

The habitual way in which the neoclassical economists present what they consider to be the essential point of view of economics is much more arrogant and dogmatic. They base it exclusively on the principles of equilibrium, maximization and constancy of preferences. Thus, they intend to take on a monopoly of the conception of the ‘economic point of view’, extending the law of silence to the other alternative conceptions that, like the one represented by the Austrians, dispute the field of scientific research with them with a much richer and more realistic paradigm. We hope that, for the good of the future development of our discipline, this disguised dogmatism will gradually disappear in the future.<sup>68</sup>

Fortunately, some neoclassical authors have recently begun to recognize the narrowness and constraints of their traditional conception of the ‘economic point of view’. Thus, Stiglitz has said that

the criticism of neoclassical economics is not only that it fails to take into account the broader consequences of economic organization and the nature of society and the individual, but that it focuses too narrowly on a subset of human characteristics – *self-interest, rational behaviour*.<sup>69</sup>

However, this more open conception has not yet become general and therefore most of the neoclassicals are earning the well-deserved accusation of ‘scientific imperialism’ when they try to extend their narrow concept of rationality to spheres which, like the family, criminality and the economic analysis of law, are becoming increasingly broad. In this respect, Israel M. Kirzner has recently said that ‘modern economists have seemed to permit the narrowest formulations of the rationality assumption to dictate social policy in what critics could easily perceive to be a highly dangerous fashion. It is not surprising that all this has stimulated sharply critical reaction’.<sup>70</sup>

### **Conclusion: evaluating the successes and failures of the two approaches**

What we have said up to now does not mean that all, or even the majority, of the theoretical conclusions of the neoclassical economists should be rejected. Our recommendation should rather lead to a review and, if appropriate, a reworking of the neoclassical doctrines using the Austrian approach. In this way, the important valid conclusions contributed by the theorists of the Neoclassical School would be reinforced, while the errors which have remained latent and have surreptitiously been concealed from the theoretical ‘spectacles’ of the neoclassical researcher would come to light.

We have not yet mentioned what is a very relevant aspect, especially for all libertarian economists interested in stimulating research into the theory and practice of human liberty. The fact is that the neoclassical methodology based on a narrow concept of rationalism, the utilitarian cost–benefit analysis and the assumptions of constancy and full availability of the necessary information (in determinist or probabilistic terms), one way or another, very easily ends up justifying coercive measures of state intervention. In other words, the typical ‘social engineering’ approach that the neoclassicals naturally adopt leads them, almost without realizing it, to become ‘analysts’ who are easily prone to giving an interventionist prescription to the different specific problems they diagnose in the real world. This, which is precisely what gives the appearance of greater ‘operational’ success to the Neoclassical School, is also what, on many occasions, usually ends up justifying important measures of state interventionism. The problem is posed now with special virulence among our neoclassical allies of the School of Chicago, whose devotion and effort in the defence of liberty are indisputable, although their theoretical conclusions are often far from what would be considered desirable from the libertarian point of view, as they are influenced by the scientific conception of the Neoclassical School, which they follow with what is,

if possible, even greater devotion. Thus, as early as 1883, Menger, in his criticism of Adam Smith, showed how those who tried to scientifically create and improve the social institutions were headed towards interventionist conclusions.<sup>71</sup> And more recently, one of the distinguished members of the libertarian Mont Pelèrin Society regretted that ‘it is frustrating when our Chicago allies employ their manifest talents in helping the state do more efficiently that which it either shouldn’t be doing or of which it should be doing much less’.<sup>72</sup> The fact is that the neoclassical theorists who want to be libertarians are often victims of what we could call the ‘paradox of the libertarian social engineer’: effectively, they fully share the scientific paradigm of the neoclassical social engineers and, at the same time, try to justify, with the same analytical perspective and instruments, supposedly more ‘libertarian’ policies, which are frequently in contradiction with the essential principles of freedom. In the long run, they end up, often without realizing it or wanting to, encouraging the institutional coercion which is typical of state intervention. This happens not only because the analytical innovations which they stimulate, in the hands of theorists who are less scrupulous or have a lower commitment to freedom, are easy to use to justify measures of intervention, but also because, as in the case mentioned by Crane, they themselves propose recipes that, although they appear to lead in the right direction, often finally reinforce the interventionist role of the State. This tension between the scientific approach of the neoclassicals and libertarianism arises time and again throughout the history of economic thought and perhaps the most illustrative example is Jeremy Bentham, who, in spite of his initial libertarian sympathies, ended up justifying important measures of interventionism.<sup>73</sup> In any case, it is evident that the social engineering approach which the mainstream neoclassical paradigm has been encouraging has, to a large degree, been responsible for the extension of the State in the last century. We should, therefore, consider that Hans-Hermann Hoppe is right when he says that the neoclassical-positivist methodology has often ended up by becoming ‘the intellectual cover of socialism’.<sup>74</sup>

The fall of real socialism and the crisis of the welfare state, considered the most ambitious social engineering attempts made by the human being in the twentieth century, will have a profound impact on the future evolution of the neoclassical paradigm. It is obvious that something critical had failed in neoclassical economics when it was not able to analyse or predict such a significant historical event previously. Thus, the neoclassical Sherwin Rosen has had to acknowledge that ‘the collapse of central planning in the past decade has come as a surprise to most of us’.<sup>75</sup> And we have already seen the critical comments on the standard neoclassical models made by Stiglitz in his *Whither Socialism?* Fortunately, it is not necessary to start methodologically from scratch: a large part of the analytical instruments necessary to reconstruct economic science along a more realistic path have already been articulated and perfected by the theorists of the Austrian School, who have prepared, explained, defended and refined them throughout the successive

controversies in which we have seen they were in dispute with the theorists of the neoclassical paradigm. Some of the latter, like Mark Blaug, have shown a great deal of courage and have recently declared their abandonment of the model of general equilibrium and the static neoclassical-Walrasian paradigm, concluding: 'I have come slowly and extremely reluctantly to view that they (the Austrian School) are right and that we have all been wrong'.<sup>76</sup> Furthermore, the healthy influence of the present circumstances has begun to make itself felt in the mainstream paradigm in a series of research (the theory of auctions, the theory of financial markets, the economic analysis of information, the theory of industrial organization and the theory of games and strategic interactions). However, some words of warning on these more or less recent developments are necessary: to the extent that they merely introduce somewhat more realistic assumptions while maintaining the neo-classical methodology intact, it is possible that we will see the replacement of one series of methodologically defective models by others which are equally erroneous. In our opinion, only the introduction into the new fields of the dynamic approach based on the market processes, subjectivism and entrepreneurial creativity that the Austrians have developed will allow the development of economic science to be fruitfully stimulated in the new era that is commencing.

The evaluation of the comparative success of the different paradigms is usually made by the neoclassical economists in strictly empirical and quantitative terms, in line with the essence of their methodological point of view. Thus, for example, they usually consider that the *number* of scientists who follow a methodological point of view is a criterion which determines its 'success'. They also often refer to the *quantity* of specific problems that have apparently been 'solved' in operational terms by the point of view in question. However, this 'democratic' argument relative to the number of scientists who follow a certain paradigm is not very convincing. It is not only the fact that, in the history of human thought, even in the natural sciences, a majority of scientists have often been wrong, but, in the economic field, there is the additional problem that empirical evidence is never indisputable and therefore erroneous doctrines are not immediately identified and cast aside.

Moreover, when the theoretical analyses based on equilibrium receive an apparent empirical confirmation, even if their underlying economic theory is erroneous, they may be considered valid for very long periods of time. Even if the theoretical error or defect they include finally comes to light, given that they were prepared in relation to the operational solution of specific historical problems, the theoretical error committed in the analysis goes unnoticed or remains, to a great extent, concealed for the majority when the problems are no longer current.

If we add to the foregoing the fact that, to date, there has existed (and will continue to exist in the future) an ingenuous but significant demand on the part of many social agents (above all, the public authorities, social leaders and citizens in general) for specific predictions and empirical and 'operational'

analysis relative to the different measures of economic and social policy which may be taken, it is obvious that this demand (like the demand for horoscopes and astrological predictions) will tend to be satisfied in the market by a supply of analysts and social engineers who give their clients what they want with an appearance of scientific respectability and legitimacy.

As Mises rightly says,

the development of a profession of economists is an offshoot of interventionism. The professional economist is the specialist who is instrumental in deciding various measures of government interference with business. He is an expert in the field of economic legislation, which today invariably aims at hindering the operation of the market economy.<sup>77</sup>

If the behaviour of the members of a profession of specialists in intervention is, in the final analysis, the definitive judge who must pass judgement on a paradigm which, like the Austrian one, shows that their interventionist measures are not legitimate, it invalidates the 'democratic' argument. If, furthermore, it is recognized that, in the economics field, unlike the engineering and natural sciences fields, rather than a continual advance, there are sometimes important regressions<sup>78</sup> and errors which take a long time to be identified and corrected, then neither can the number of apparently successful 'operational' solutions be accepted as a definitive criterion, since what today appears 'correct' in operational terms may tomorrow be seen to be based on erroneous theoretical formulations.

As opposed to the empirical success criteria,<sup>79</sup> we propose an alternative *qualitative* criterion. According to our alternative criterion, a paradigm will have been more successful if it has give rise to a greater number of correct theoretical developments which are important for the evolution of humanity. In this respect, it is evident that the Austrian approach is clearly superior to the neoclassical approach. The Austrians have been capable of drawing up a theory on the impossibility of socialism which, if it had been taken into account in time, would have avoided enormous suffering for humankind. Moreover, the historical fall of real socialism has illustrated the accuracy of the Austrian analysis. Something similar occurred, as we have seen, in relation to the Great Depression of 1929 and also in many other areas in which the Austrians have developed their dynamic analysis of the discoordinating effects of state intervention. This is the case, for example, in the monetary and credit field, the field of the theory of economic cycles, the reworking of the dynamic theory of competition and monopoly, the analysis of the theory of interventionism, the search for new criteria of dynamic efficiency to replace the traditional Paretian criteria, the critical analysis of the concept of 'social justice' that has been constructed on the basis of the static neoclassical paradigm and, in short, of the better understanding of the market as a process of social interaction driven by entrepreneurship. All these are examples of significant qualitative successes of the Austrian approach that contrast

with the serious insufficiencies (or failures) of the neoclassical approach, among which its confessed inability to recognize and make provision for the impossibility and harmful consequences of the socialist economic system in time should be highlighted.

What is clear is that, in order to overcome the inertia implied by the constant social demand for specific predictions, recipes for intervention and empirical studies, which are easily accepted in spite of the fact that they include significant defects from the theoretical point of view, hidden in an empirical environment in which it is very difficult to obtain indisputable proof of the conclusions presented, it will be necessary to continue to extend and deepen the subjective and dynamic approach proposed by the Austrian School in the field of our science. In this respect, we should recall the much quoted phrase of Hayek that 'it is probably not exaggeration to say that every important advance in economic theory during the last hundred years was a further step in the consistent application of subjectivism'.<sup>80</sup> If Hayek is right, only the consistent application of the Austrian subjectivist method can make economic science advance in the future.

The ongoing *Methodenstreit* will continue while human beings still prefer doctrines that satisfy them to those that are theoretically true and while the rationalist fatal conceit of the human being, which leads him to believe that he has, in each specific historical circumstance, information which is much greater than that he can really possess, prevails. Against these dangerous trends in human thought, which inevitably will appear time and time again, we only have the much more realistic, richer and more humanistic methodology developed by the theorists of the Austrian School, which I, here today, cordially invite the maximum number of freedom-loving scientists possible to join.