

# Popperian Hayek or Hayekian Popper?

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**Abstract:** Friedrich Hayek was a fervent advocate of the methodological specificity of the social sciences. However, given his contact with Karl Popper, several historians and philosophers have characterized his final position as Popperian, that is, a position that would have accepted the unity of the scientific method. A closer look to Hayek's philosophy and Popper's own intellectual course shows that such a thesis is based on some misconceptions that can be overcome by taking the Hayekian concept of "spontaneous order" as the foundation of a methodology immune to any kind of methodological monism and Popper's late works that reveal a loosening of his defense of methodological unity.

**Keywords:** Hayek; Popper; Spontaneous Order; Methodological Monism; Social Sciences

## *I. A Tale of Two Hayeks*

Friedrich August von Hayek was one of the most fruitful minds of the twentieth century and undoubtedly the most prominent member of the Austrian School of Economics. In 1974, he was awarded the Nobel Prize in Economics in Memory of Alfred Nobel, and although graduated in economics, he had a multidisciplinary taste. Hayek wrote about Philosophy, Politics, Law and even Psychology. This multidisciplinary bequeathed a long and complex work where the themes intertwine and form a unique fabric.

As for his methodological proposals, the Austrian remains in an eternal stalemate: everyone has a "Hayek" to call his own. The more orthodox followers of von Mises trace a Hayek closer to his master and praxeology. On the other hand, some historians of ideas characterize Hayek through Popper, presenting its methodology as an

appendage of Popperian falsificationism. However, his methodology is seldom studied in and on itself.

According to Gabriel J. Zanotti, Hayek operated a Copernican revolution in economic theory and in the methodology of the social sciences (Zanotti 2011: chapter 6) in thinking the economic problem not as a resource problem but as a problem of knowledge and information distribution. This goes unnoticed when Hayek is treated as a subordinate of von Mises or as a footnote to Popperian thought.

I intend, in this essay, to delineate Hayek's methodological dualism through the concept of "spontaneous order", which I believe makes him immune to any pretension of scientific unity and thus immune to Popperian falsificationism.

## ***II. Spontaneous Order: A New Methodology Begins***

The recognition of the insuperable limits to his knowledge ought indeed to teach the student of society a lesson of humility which should guard him against becoming an accomplice in men's fatal striving to control society – a striving which makes him not only a tyrant over his fellows, but which may well make him the destroyer of a civilization which no brain has designed but which has grown from the free efforts of millions of individuals. (Hayek 1974: 34)

The problem of economic calculation was one of the most important debates of the first half of the twentieth century. It is during this debate that, in the face of Lange-Lerner's model, Hayek begins to elaborate his theory of the market as a spontaneous process and, in turn, the first sketches of what the Austrian would coin as a spontaneous order. We can begin to chart the path to spontaneous order in *Economics and Knowledge*, where Hayek poses the following question:

[...] how can the combination of fragments of knowledge existing in different minds bring about results which, if they were to be brought about deliberately, would require a knowledge on the part of the directing mind which no single person can possess? (Hayek 1937: 52)

Hayek was not the first to formulate this problem. Indeed, as he himself noted, this problem is part of a long tradition of thought which seeks a third way in the Greek distinction between natural and artificial phenomena, between *physei* and *thesei* (or *nomo*)<sup>1</sup>. This essentially sophist distinction - and later adopted by Aristotle - begins to conceive two types of objects: it is a distinction “between objects which existed independently and objects which were the results of human *action*, or between objects which arose independently of, and objects which arose as the result of, human *design*” (Hayek 1973:20). Hayek and the preceding tradition insist on the need to devise an “intermediate category of phenomena that were 'the result of human action but not of human design'” (Hayek 1973:21). We are then in the presence of a sort of order - in the face of "standards" or "regularities" - but an unintended or non-designed order<sup>2</sup>. Hayek will use the Greek term *kosmos*- which designates, as opposed to the term *taxis*, any order that is formed independently of the human will- to speak of this kind of spontaneous social order. These processes, it is worth noting, do not presuppose in any way the notion of purpose or finality, since end refers to intelligent planning entities, which are contrary to the spontaneity of these processes.

According to Hayek, these processes are the ultimate object of the social sciences. However, the novelty of Hayek does not lie in the assertion that the social sciences study spontaneous orders. Rather, it consists of the method proposed by the Austrian to approach them: the *compositive method*, which combines the methodological subjectivism with the methodological individualism.

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<sup>1</sup> The natural/artificial dichotomy had already been denounced as insufficient by thinkers prior to Hayek. Adam Ferguson, for example, had already realized that there are institutions that are “...the result of human action but not of human design” (Hayek 1973: 20). The roots of Hayekian thought are more deeply analyzed in the article *Tradición del Orden Social Espontáneo: Adam Ferguson, David Hume y Adam Smith* (1987) by Ezequiel Gallo. The classical *physei/thesei* dichotomy was also rejected by the late Iberian scholastic tradition before the eighteenth century (the School of Salamanca - considered by Murray Rothbard, for example, as proto-Austrian (Rothbard 1976: 71) - used the term *naturalis* to describe social phenomena that are not the result of a deliberate design, for example (Hayek 1973: 20-21)).

<sup>2</sup> The unintended nature of this type of order is linked to the theory of dispersed knowledge that Hayek begins to explore in *Economics and Knowledge* (1937). This, in turn, is anchored in the concept of *tacit knowledge*, coined by Michael Polanyi. For Hayek and Polanyi, all knowledge is personal and, since some knowledge is not articulable, "we can know more than we tell" (Polanyi 1966: 10). It is distinguished from *explicit knowledge*, then, because it is intuitive and disjointed (impossible to be codified) and is always generated through practical experience (it cannot be generated by logical deduction as *explicit knowledge*) and because it cannot be aggregated in one place or in one mind (that is, it is always personal and dependent on contexts) (Polanyi 1962: cap. 2).

Methodological subjectivism arises from the understanding that when studying spontaneous orders, social scientists are dealing with intentional objects - objects that are the product of human action. Thus, in order to be able to theoretically explain any such object, before building conjectures, social scientists must have behaved before as human agents. This is because a social object can only be scientifically understood insofar as social scientists are able to give it meaning and this is only possible if social scientists have already had contact with the set of phenomena that they intend to explain by means of theoretical models. Any social reality can be precisely objectified only by those who are able to understand it meaningfully for themselves. There is, then, a pre-theoretical relationship of the scientist with social institutions which represents a necessary condition for acquiring scientific knowledge about them<sup>3</sup>.

Methodological subjectivism is the underlining of the human factor: as Hayek makes clear, the objects of the social sciences cannot be defined independently of the purposes of human actions and what people think about the described object (Hayek 1948:61,62). As we can understand through the example of Wittgenstein's wood-sellers (Wittgenstein 1983: 83-85), there is no way to enter into the mind of a third party to understand his preferences. Thus, it is quite possible that many acts that may seem to us to be examples of madness simply come out to be an erroneous projection of preferences that we have made. A piece of metal, for example, may be currency or not, depending on the purpose for which people use it; paying millions of dollars for pigments scattered on pieces of cloth can be a perfectly rational economic behavior - depending on the preferences of the subject. It all depends on human action.

Social institutions are by no means natural: they exist insofar as a group of individuals interact, while participating in a given community of representations, which for the most part are acquired and unconsciously developed by its members through habits and traditions. Unlike an atomic particle or a process of genetic mutation, human

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<sup>3</sup> Hayek believes, as his lecture *The Primacy of the Abstract* makes clear, that any epistemological relationship always has a pre-theoretical element: the ability, even at the pre-scientific level, to unite isolated data under a common interpretive criterion implies a prior epistemological structure. To prove his point, he uses several examples: our innate capacity for linguistic articulation or, based on studies of animal behavior, patterns of behavior in animals that imply a series of innate dispositions of behavior that allow them very precise actions in specific circumstances (Hayek 1978: 37-42).

Hayek notes his relation to Kant's categories because he affirms that there are some *a priori* categories, general and abstract, which are preconditions to the very interpretation of reality (Hayek 1978: 45). However, his theory does not necessarily imply a formulation of *a priori* categories interpreted in a Kantian sense. The point drawn here is this: given the infinity of data to which we are exposed, a proto-theory is absolutely necessary for any kind of empirical observation.

institutions are historically constructed systems of beliefs and, above all, interrelated individual representations. However, the social scientist is not limited to studying these individual representations. Rather, he seeks to synthesize and model unobservable macro-objects through the observation of micro-objects: individuals. The social sciences construct models and theories of *complex phenomena* from simpler elements.

We then see the outline of Hayek's methodological individualism:

1. There is no direct observation: social scientists must have a pre-theoretical understanding of institutions in terms of their own personal actions as individual beings. Social phenomena can only be explained by interpreting the behaviors and beliefs of other agents in terms of their own.

2. Social phenomena are nothing more than results of human interaction, with most of the results being spontaneous and unspoken/desired.

3. Social institutions are processes of exchanging information between basic individual units and an isolated individual agent can never total this information. As Hayek seeks to demonstrate since 1937, with *Economics and Knowledge*, there is no way to locate total information in a particular place of social structure because it is by definition always distributed among individual agents - and we may be standing before thousands or millions of agents. Social institutions must then be seen as products of spontaneous order that emerge from innumerable individual actions.

Thus, the *compositive method* must pass through an understanding ranging from the interactions between individuals to the general model of the spontaneous order in question. Hence, Hayek concludes, when we designate something as a market, we must know that this word simply designates the interaction of a group - of thousands or millions at times - of individuals. The market, the state or any other institution does not "think" or "act". Only individuals think and act<sup>4</sup>.

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<sup>4</sup> However, as Gabriel Zannotti notes, there are processes that occur in spontaneous orders that cannot be predicated on particular individuals - using an example of his own, there are situations where it is "the market" that saves resources, not an isolated individual. Zannotti argues that a universal term is not a collective term. A shoal is a set of fishes, but each fish is not a shoal. But a universal term, as "human being", is predicated of its individuals: João Pedro is a human being, Joana is a human being. What may occur in the social sciences is that collective terms are used to designate a certain interaction without, however, necessarily meaning an ontological collectivism. I can talk about this or that market, but the individuals who compose it are not themselves "market". One can speak of a process that is not intelligible, but rather a certain interaction of people. In this case, there are predicates that are specific to

## *Humility in The Face of Complexity*

Because our minds need to reduce information, we are more likely to try to squeeze a phenomenon into the Procrustean bed of a crisp and known category (amputating the unknown), rather than suspend categorization, and make it tangible (Taleb 2011: Postface)

In order to clarify the social scientist's task, Hayek draws an analogy with the work of the physicist:

The physicist who wishes to understand the problems of the social sciences with the help of an analogy from his own field would have to imagine a world in which he knew by direct observation the inside of the atoms and had neither the possibility of making experiments with lumps of matter nor the opportunity to observe more than the interactions of a comparatively few atoms during a limited period. From his knowledge of the different kinds of atoms he could build up models of all the various ways in which they could combine into larger units and make these models more and more closely reproduce all the features of the few instances in which he was able to observe more complex phenomena. (Hayek 1942:105)

This passage is peculiarly elucidative because, in addition to synthesizing the points described above, it shows how the object of the social sciences is essentially different from the object of the physical sciences. Hayek's analogy, however, far more than clarifying physics about the methodology of the social sciences, seeks to criticize those who try to apply the methodology of the physical sciences to the social sciences. Hayek will use the term *scientism* to describe such phenomenon – “a slavish imitation of the method and language of Science” (Hayek 1942:80)<sup>5</sup>. More specifically, *scientism* is

[...] a mechanical and uncritical application of habits of thought to fields different from those in which they have been formed. The scientific as distinguished from the scientific view is not an unprejudiced but a very prejudiced approach which, before it

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certain "processes" or interactions, and other predicates are specific to people. We can say that a market "establishes" prices, but in this case we refer to the result of the process (**Zanotti 2004: 37-38**).

<sup>5</sup> Michael Polanyi was particularly dissatisfied with Hayek's concept of *scientism*: “[...] what bothered Polanyi more was the tendency to tar all scientists and engineers with the same brush, accusing them of narrow technical training and a predilection for mechanical rationalist prediction and control” (Mirowski 1998: 34). Polanyi's reaction is one of several examples of how this concept was misunderstood. With the term *scientism*, Hayek never intended to belittle the work or methodology of the physical sciences (about which, as he admits, he knew very little - and Popper will be influential in his view of them), he only condemned the attempt to transpose their method into the social sciences.

has considered its subject, claims to know what is the most appropriate way of investigating it (Hayek 1942: 80)

With this sentence, Hayek describes what he believed to be the greatest mistake of the social scientists of his day: a fascination with the conquests and the method of the physical sciences which was embodied in a puerile attempt to apply it to the other areas of knowledge, ignoring all the characteristics of spontaneous orders and of social science itself. We can then understand *scientism* as the philosophical attitude of those who wish to adhere to methodological monism and who, according to the Austrian, are not prepared to take into account the fundamental differences of the social sciences. His *Lecture to the memory of Alfred Nobel* typifies his hostility towards the scientist attitude<sup>6</sup>.

According to Robert Nadeau, the central question is: “as far as scientific knowledge is concerned, are those differences in objects to be interpreted as differences in degree or as differences in nature?” (Nadeau 1987: 2,3). As we have seen, in Hayek, the objects of the social sciences are essentially different from those of the physical sciences, and this occurs in function of the very object of study of the social sciences: spontaneous orders. Therefore, we must always recognize at least a difference of degree which means that any association of Hayek with a philosophy that implies methodological monism is erroneous.

The analogy goes on to describe the experimental difficulties of the social sciences:

But the laws of the macrocosm which he could derive from his knowledge of the microcosm would always remain ‘deductive’; they would, because of his limited knowledge of the data of the complex situation, scarcely ever enable him to predict the precise outcome of a particular situation; and he could never confirm them by controlled experiment—although they might be disproved by the observation of events which according to his theory are impossible (Hayek 1942: 105)

We find here a good summary of a proposal that Hayek began to draw in *Monetary and the Trade Cycle*. Here, Hayek demonstrates the limitations of empirical

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<sup>6</sup> “[...] as a profession we have made a mess of things”, says Hayek about the economists who had surrendered to scientism. “It seems to me that this failure of the economists to guide policy more successfully is closely connected with their propensity to imitate as closely as possible the procedures of the brilliantly successful physical sciences – an attempt which in our field may lead to outright error.” (Hayek 1974: 23).

and static tests when applied to economic theory. The Austrian rejects the idea that econometric analysis can lead to the verification of a theory:

It is therefore only in a negative sense that it is possible to verify theory by statistics. Either statistics can demonstrate that there are phenomena which the theory does not sufficiently explain, or it is unable to discover such phenomena. It cannot be expected to confirm the theory in a positive sense. The possibility is completely ruled out by what has been said above, since it would presuppose an assertion of necessary interconnections, such as statistics cannot make.<sup>7</sup>(Hayek 1933: 34-35).

In *Scientism and the Study of Society*, Hayek advances a way of establishing models that cannot be “confirmed”, but only “disproved” by the observation of phenomena that, according to the model, would be impossible: *pattern predictions*. Given the specificity of the phenomena that the social sciences are studying - spontaneous orders - they can only affirm general and negative tendencies because the potential counter-instances of such a model are singular and negative propositions<sup>8</sup>.

His proposal is best formulated from the 1950s onwards with *Degrees of Explanation* (1955) and *Theory of Complex Phenomena* (1964), when Hayek begins to distinguish between the *simple phenomena* - typical of physics - and the *complex phenomena* - typical of the social sciences. The Austrian begins by proposing a criterion for identifying the degree of complexity of a phenomenon. This criterion consists of a minimum number of elements that some specific occurrence of a pattern needs to possess in order to reproduce its characteristics (Hayek 1969: 25,26). That is, the degree of complexity of an area of knowledge increases or decreases according to the minimum number of variables required for the reproduction of the patterns in question. Hayek believes that the increasing complexity of phenomena when we distance ourselves from the inanimate towards the more highly organized structures of the animate and social realm would be apparent - this is due to the human factor itself: the uncertainty inherent in the purposes of human actions and the intentional content, that is, what people think about the described object. Hayek's point is proved by economists

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<sup>7</sup> Hayek, however, is skeptical of the possibility of making crucial experiments: “: It might be shown, for instance, by statistical investigation that a general rise in prices is followed by an expansion of production, and a general fall in prices by a diminution of production; but *this would not necessarily mean* that theory should regard the movement of price as an independent cause of movements of production. So long as a theory could explain the regular occurrence of this parallelism in any other way, *it could not be disproved by statistics*, even if it maintained that the connection between the two phenomena was of a precisely opposite nature.” (Hayek 1933: 33-34 [emphasis added])

<sup>8</sup> For example, an "All S is P" whose potential counterfeiter is "some S is not P".

and social scientists themselves: in order to eliminate the complex character of their areas of research, apply a series of *ceteris paribus* assumptions without which the theory would cease to be simple.

The multiplicity of the minimum number of variables needed to explain a *complex phenomena* makes it difficult to effectively determine all the initial conditions involved in the particular manifestation of the phenomenon in question. This difficulty, he concludes, translates into the practical impossibility of predicting the occurrence of specific events in these areas. The predictive capacity in the social sciences is restricted to the “general characteristics of the events to be expected and not include the capacity of predicting particular individual events” (Hayek 1974: 28). Scientific explanations are made with the help of modes and it is possible to construct models in the social sciences. However, the expectation of the scientists of different areas in relation to these must be different. For the physician, for example, the value of a mathematical model consists in the fact that it is possible to change the values of the individual variables in the equations by numerical quantities (individual constants) and thus derive quantitative values of the events that are to be explained or predicted<sup>9</sup>. On the other hand, scientists from other spheres would be unable to determine the values of some (or many) of the system variables, which rule out the possibility of predicting whether a given event will occur at a particular time and place<sup>10</sup>.

With all these problems in mind, Hayek creates the concept of *pattern predictions*, necessary to the extent that one studies a situation of restriction that is evidenced when the scientist leaves a sphere dominated by phenomena of simple regularities, towards another one governed by structures of complex regularities. These *pattern predictions* will mostly be negative, in the sense of telling us what facts should not occur, or otherwise, facts that cannot be verified simultaneously. Such theories will

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<sup>9</sup> “More particularly, what we regard as the field of physics may well be the totality of phenomena where the number of significantly connected variables of different kinds is sufficiently small to enable us to study them as if they formed a closed system for which we can observe and control all the determining facts...” (Hayek 1969: 3-4)

<sup>10</sup>“The situation is different, however, where the number of significantly interdependent variables is very large and only some of them can in practice be individually observed. The position will here frequently be that if we already knew the relevant laws, we could predict that if several hundred specified factors had the values  $x_1, x_2, x_3, \dots, x_n$ , then there would always occur  $y_1, y_2, y_3, \dots, y_n$ . But in fact, all that our observation suggests may be that if  $x_1, x_2, x_3$ , and  $x_4$ , then there will occur either ( $y_1$  and  $y_2$ ) or ( $y_2$  or  $y_3$ ), or some similar situation - perhaps that if  $x_1, x_2, x_3$ , and  $x_4$ , then there will occur some  $y_1$  and  $y_2$  between which either the relation P or the relation Q will exist. There may be no possibility of getting beyond this means of observation. because it may in practice be impossible to test all the possible combinations of the factors  $x_1, x_2, x_3, \dots, x_n$ .” (Hayek 1969: 8)

always be fruitful, since we can at least know what effects are related to each other and will appear connected, while we exclude other eventualities. These theories could be falsified - albeit to a much lesser degree than the physical sciences, given their lower empirical content as compared to those capable of providing predictions of specific events. Such theories, dedicated exclusively to the explanation and prediction of patterns of occurrence of complex type phenomena are called *algebraic theories* (Hayek 1969: 28-29) – these would have as their most remarkable characteristic, in comparison with theories of the physical sciences, the impossibility of replacing by numerical values all the variables involved in their models, since our access to these magnitudes is quite restricted.

However, even with respect to pattern predictions, Hayek rejects the possibility of crucial experiments, on the one hand, by the nature of complex phenomena and, on the other, by the hermeneutical consequences of his methodological proposal<sup>11</sup>:

Because such theories are difficult to disprove, the elimination of inferior rival theories will be a slow affair, bound up closely with the argumentative skill and persuasiveness of those who employ them. There can be no crucial experiment which decide between them. (Hayek 1969: 19)

### ***III. Hayek: The Virtue of Consistency***

“Popper's methodology and mine do not quite coincide, even though they share a lot ... I do not see at times if he is able to see to what degree his principles should be relativized in dealing with the [social] sciences.” (Hayek interview in Madrid (Silva Moreira 1994))

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<sup>11</sup> About this point, Zanotti's work on Hayek's methodology is particularly elucidative because it allows one to understand such consequences through hermeneutics and phenomenology (Zanotti 1999). A general model contains several assumptions that work as initial conditions in each specific case. The thesis that Hayek had advocated since *Economics and Knowledge*, in 1935, that free markets tend to equilibrium, starts from certain assumptions: free access to the market, absence of state intervention, absence of central bank, etc. Suppose such assumptions were met in 1929. Then, this question would arise: did this happen because of or despite the free market? A supporter of Hayek would say that it happened despite the free market. But suppose he is intellectually honest and cannot find any evidence of it. So, somehow, he's being falsified. This, however, like any falsification, is not absolute. This would only mean that "for now, my theory has a problem". Such a situation happens with all the social sciences, since they all interpret, because the meaning of their theories depends on motivations attributed to the acting subjects. The social sciences work with human behavior whose meaning depends on a motivation that defines them as such or as behavior. Therefore, their corroborations or falsifications are hermeneutic and qualitative. Quantitative data only makes sense in the context of a global hermeneutics.

It is obviously impossible to reduce Hayek's methodological proposal to a dozen pages. My aim with the previous chapter is simply to show that we can have a better understanding of the Hayekian proposal through the concept of spontaneous order. The *compositive method*, the methodological dualism, the falsificationism, and all the other characteristics of Hayek's methodology, arise in function of this peculiar object of study of the social sciences. Thus, by understanding the centrality of spontaneous orders in Hayek's thought, it is possible to conceive of a much more innovative and, above all, consistent thinker.

As I said in the first part of this essay, Hayek's methodological proposals remain in an eternal stalemate. One conceives an excessively plastic Hayek, rendered to von Mises or to Popper, according to the phase of its life. T. W. Hutchison perfectly exemplifies this phenomenon by using the *Economics and Knowledge* essay to draw a division between a Hayek I, a Misesian, and a Hayek II, a Popperian (Hutchison 1992: 57, 192). This opinion also appears in Norman Barry who, while recognizing "a basic continuity in Hayek's writings on methodology" (Barry 1979: 41), reiterates the idea that some kind of contradiction "lies in Hayek's attempt to combine two rather different philosophies of social science; the Austrian praxeological school with its subjectivism and rejection of testability in favour of axiomatic reasoning, and the hypothetico-deductive approach of contemporary science with its emphasis on falsifiability and empirical content. This was not really a problem for Mises since he did not endorse the Popperian approach but it is something of a problem for Hayek." (Barry 1979: 40). Mark Blaug also states that Hayek "has backtracked on much of his earlier opposition to methodological monism and now takes up a stance that is Popper-with-a-difference." (Blaug 1992: 45).

These are just a few examples of a vision that has been consolidating. And it departs, in my opinion, from two mistakes. First, it assumes that Hayek was a Misesian or an advocate of praxeology under von Mises. Secondly, it reflects an erroneous analysis of the fruitful relationship between Hayek and Popper.

The first error, in addition to contradicting what Hayek himself stated<sup>12</sup>, was already set out by John Gray in one of the earliest works on Hayek's philosophy, *Hayek*

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<sup>12</sup> Hayek said in an interview in Madrid that: "The impact of Ludwig von Mises in the United States led to the fact that for a long time Austrian and Misesian were considered synonymous. I owe a lot to Mises, but I'm not originally one of his disciples, and I'm critical of him. Mises belonged to a tradition that was not

on *Liberty*. Gray notes that “Hayek always differed from the Austrian School, especially as that was embodied in the person of von Mises”. (Gray 1984: 16). In addition, “Hayek never accepted this apodictic—deductive or (as von Mises called it) praxeological conception of economic theory” (Gray 1984: 17). Gray does not ignore, at all, von Mises's enormous influence on Hayek. He only asserts that the latter never accepted von Mises's *a priori* method as a whole, although he worked with the concept of human action and absorbed the Misesian subjectivism in his proposals. Hayek distinguishes the *a priori* elements of economic theory, but always, even in his writings of youth, as postulates and never as axioms. According to Gray, the essay *Economics and Knowledge* (1937) - Hayek's contribution to a debate between von Mises and Lange - is even an attempt to show von Mises a more empirical conception of the role of theory in economics. However, even in *Monetary and the Trade Cycle* (1933), as we have seen, the Austrian introduces an empirical element in economic theory, even if extremely limited. With this, Gray does not intend to state that Hayek does not respect the Austrian tradition - on the contrary. He is only trying to show that he is closer to Menger than to von Mises.

### ***A Non-Unilateral Relationship***

The relations between Hayek and Popper configure one of the most interesting dialogues of twentieth-century philosophy. Born in Austria with only three years of difference, the two thinkers had somewhat different intellectual backgrounds in their youth. While Popper was attending Vienna's positivist circles, Hayek attended the seminars of some of the fiercest critics of positivism. Although they have crossed different paths, the two will meet for the first time in the LSE in 1935 and soon understand that many of their methodological conclusions coincided. From now on, the two thinkers remain in a permanent dialogue that intensifies in the 50's and 60's. More than a mere professional relationship, a deep friendship developed, as Popper notes throughout his autobiography.

The references they make to each other throughout their methodological writings are numerous, and we are thus quite capable of understanding the dynamics of this relationship. Unfortunately, this has been reduced to a unilateral relationship in which

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compatible with the liberal. He was a rigid utilitarian, who believed that our intelligence could redefine our morals, our conduct." (Silva Moreira 1994)

Hayek is completely absorbed. A typical example of this analysis can be found in the biography of Hayek where Hans Jörg Hennecke states that already in *Monetary and the Trade Cycle*, Hayek independently arrived at a falsificationist position (Hauwe 2007: 4). Now this statement is, as I have tried to make clear, true. In this essay, Hayek begins to outline his falsificationism by stating that “only in a negative sense that it is possible to verify theory by statistics” (Hayek 1933: 34). The error lies in assuming that the falsificationism advocated by Hayek is a Popperian falsificationism. That statement is doubly wrong.

First, it is chronologically wrong. Hayek's falsificationism began to be drawn in 1929 and we can find it systematized in *Scientism and the Study of Society*, in 1944. Although Hayek was already familiar with Popper's work in 1944, it is difficult to find his influence on the Austrian economist – other than a reference to Popper in *Economics and Knowledge* - before the 1950s. This is easily verifiable since, after Popper's influence, Hayek will, as we shall see, reject the definition of scientism that advances in *Scientism and the Study of Society*. It is possible, then, to conclude that all the claims that Hayek had converted to Popperian falsificationism before the 1950s are wrong, above all, chronologically.

To understand the second reason why such an assertion is erroneous - the theoretical reasons why I reject the association of Hayek's falsificationism with Popper (at least that of a "first Popper") - we must study Popper's methodological proposal.

### ***A First Popper***

Hayek's associations with Popper's falsificationism refer, usually, to the falsificationism that Popper theorizes in *The Poverty of Historicism* (1944), *The Open Society and Its Enemies* (1945) and *The Logic of Scientific Discovery* (1934). I will briefly summarize the proposal that Popper outlines in these works.

Popper notes that universal statements cannot be derived from singular statements, but can be contradicted by singular statements. That is, it is possible, through a simple *modus tollens*, to argue from the truth of the singular statements to the falsity of universal declarations. This is, he warns, the only argument that proceeds from the singular to the universal. So, there is no induction, no way to deduce universal

statements from singular statements. With this, science is not done through induction, but through falsification by potential negative instances.

In these essays, Popper's methodological position can be characterized as a variant of methodological monism. We can see this clearly in *The Poverty of Historicism*:

In this section I am going to propose a doctrine of the unity of method; that is to say, the view that all theoretical or generalizing sciences make use of the same method, whether they are natural sciences or social sciences. (Popper 1944: 130)

Scientific explanation and prediction are always of the same logical structure, no matter what science it is. Popper does not deny that there may be some differences between the method of the theoretical sciences of nature and society<sup>13</sup>, however, he asserts that the methods in the two fields are fundamentally the same: they always consist in offering deductive causal explanations and in testing them by means of predictions, never reaching the absolute certainty of any of the scientific statements which it tests; rather, such statements always hold the character of provisional hypotheses, although their testability may not be obvious after having undergone a large number of severe tests.

Popper also adopts a very specific view of explanation - causality. The methods of both sciences, he argues, should offer causal deductive explanations and test them through predictions. The causal explanation consists in the subsumption of individual cases under general hypothetical laws. This is where the *hypothetical-deductive method* arises. In defending monism and the need to seek causal explanations, Popper automatically includes predictions of specific events as part of the scientific work given the logical equivalence between explanation and prediction and the need to subject theories to evidence.

Although the falsificationist conception is already present in Popper's proposal for methodological unity, the emphasis at this moment lies mainly on the causal character of scientific explanations, and not on the need to falsify theories, because he

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<sup>13</sup> Popper even cites *Scientism and the Study of Society*, and notes the difficulties in applying quantitative methods to the social sciences that Hayek describes (Popper, K. (1944): 136-140). However, he argues that, unlike Hayek, he considers that the differences between the social sciences and the physical sciences are differences of degree and not of nature, and therefore, surmountable.

considers the *hypothetical-deductive* method a prerequisite for the possibility of falsifying theories.

### ***Spontaneous Order Against the First Popper***

As we can easily deduce, Hayek's methodological proposal is - initially - radically opposed to that of Popper, at least on some points. The fact that Hayek came (independently) to a falsificationist position does not imply that he has adopted Popperian falsificationism. In fact, Hayek would even be in tune with some of Popper's biggest critics.

Duhem-Quine's criticism of Popper's method shows that if a group of scientific theories and hypotheses T1, T2, ..., Tn produces a prediction P that fails to be realized, then what we have is that something is wrong in some place within the family: T1, T2, ..., Tn. However, we have no idea what is particularly wrong. This is in tune with Hayek's thinking. Given the intricate nature of spontaneous orders - of complex phenomena - the Austrian also rejects, as we have seen, the idea of a crucial experiment. Indeed, Hayek already understands the problem posed by the Duhem-Quine critique in *Economics and Knowledge* (1937), by showing the impossibility of satisfying unspecified *ceteris paribus* conditions to which all economic forecasts are subject. Given the complex phenomena of the social sciences, we always know that there is an indefinitely large number of potentially relevant variables that have been left out, Hayek argued since the 1930s. Against Popper, Hayek denies the unity of the method, the ability to make individual predictions in the social sciences and the possibility of crucial experiments.

This is not to say that Hayek's positions remained intact during his relationship with Popper - at all. As I have already stated, the relationship between the compatriots was quite fruitful and much less unilateral than some may think. Let's begin by noticing the revisions that Hayek made in his proposal after contact with Popper.

The term scientism, which Hayek introduced in *Scientism and the Study of Society*, referred firstly to “a slavish imitation of the method and language of Science” (Hayek 1942:80). However, in the preface to *Studies in Philosophy, Politics and Economics*, Hayek recognizes a reformulation of this concept:

Readers of some of my earlier writing may notice a slight change in the tone of my discussion of the attitude which I then called ‘scientism’. The reason for this is that Sir Karl Popper has taught me that natural scientists did not really do what most of them not only told us that they did<sup>14</sup>, but also urged the representatives of other disciplines to imitate. The difference between the two groups of disciplines has thereby been greatly narrowed and I keep up the argument only because so many social scientists are still trying to imitate what they wrongly believe to be the methods of natural sciences. The intellectual debt which I owe to this old friend for having taught me this is but one of many, and it is therefore only appropriate that this volume should be in gratitude inscribed to him. (Hayek 1969: 2)

In reformulating his understanding of the method of the physical sciences, he realizes that their method is actually closer to that which he proposes to the social sciences than he thought. Does this mean that Hayek comes to conceive of the unity of the method? No. Hayek will continue to reiterate that the object of study of the social sciences are spontaneous orders and that the method involved in explaining phenomena with such order of complexity can never be confused with that of the physical sciences. Hayek only acknowledges that the differences between the two disciplinary groups have narrowed, but never asserts the unity of the method. This is reinforced by the discussion that arose between these thinkers, in which Popper claims that the thesis of growing complexity in the social sciences is erroneous - a thesis that he already argued in *The Poverty of Historicism*:

But in fact, there are good reasons, not only for the belief that social science is less complicated than physics, but also for the belief that concrete social situations are in general less complicated than concrete physical situations. (Popper 1944: 140)

Such a statement completely ignores the specificities of spontaneous orders, according to a Hayekian perspective. Moreover, it ignores a teaching that Hayek inherited from von Mises and which he never abdicated: the objects of the social sciences cannot be defined independently of the purposes of human actions and what people think about the object described. The increasing complexity when we distance ourselves from the inanimate towards the more highly organized structures of the animate and the social realm is only fully understood when we understand the human

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<sup>14</sup> Here he refers to the erroneous and widely held belief that in the natural sciences research would begin with the observation of phenomena, and by means of an induction process one would arrive at the elaboration of theories that explain the observed regularities and that are capable of to predict new occurrences of the phenomena.

factor, that is, when we understand the uncertainty inherent in the purposes of human actions and their intentional contents. Hayek thought Popper despised this factor.

### *A New Popper*

The product of this discussion is clear and results, not in a more Popperian Hayek, but in a Hayekian Popper: Popper's defense of methodological monism gradually weakens so that in his essays of the late 1960s he uses concepts such as *situational analysis* and *objective comprehension*, which outline a methodological dualism that is the result of the understanding of the singular objects of the social sciences.

In differentiating *prediction* from *prophecy* in the social sciences, Popper concludes, against historicism, that "the main task of the theoretical social sciences... is to trace the unintended social repercussions of intentional human actions" (Popper 1962: 341). The philosopher extrapolates this analysis to the experimental sciences - something Hayek rejects - but we may begin to notice that Popper draws a methodological approach that culminates in the acceptance of the *pattern predictions*.

This becomes clearer when Popper elaborates the notion of *situational analysis*. It will conclude that, regarding the role of theoretical models:

[...] the Newtonian method of explaining and predicting singular events by universal laws and initial conditions is hardly ever applicable in the theoretical social sciences. They operate almost always by the method of constructing typical situations or conditions - that is, by the method of constructing models. (Popper 1969:166)

With this, Popper surrenders to the Hayekian thesis that in the social sciences there is less *explanation in detail* and more *explanation in principle* (Popper 1969: 166). With regard to the question of the possibility of predicting specific events, Popper's position approaches, even coinciding with that advocated by Hayek. That is, he gives up the prediction of specific events in the context of complex phenomena in favor of a prediction of patterns of these phenomena. The philosopher argues that in the social sciences the explanation and prediction of singular events depends on the analysis of the universal laws involved and the initial conditions relevant in each case. The explanation and prediction of general events would obtain better results by constructing models. In the social sciences it would never be possible to give satisfactory answers as far as the

prediction of particular events is concerned, since in his view, these are almost always using a model-building method. Popper uses the term model in contrast to the term theory. While theories use universal laws that allow predictions of singular events, models depart from initial conditions and seek rather to make statements about the nature or type of event in question. At this stage, Popper himself is moving away from the hypothetical-deductive method and, as such, from methodological monism. The importance he attaches to building models in the social sciences is an example of this. The emphasis on the causal character of explanations, following the scheme of the hypothetical-deductive model - typified in *The Logic of Scientific Discovery* and *The Poverty of Historicism* - is diluted in a growing emphasis on the falsificationist conception of method. The demands of falsificationism in the social sciences bring him closer to Hayek and to the compositional method. Although Hayek never became Popperian, Popper became a Hayekian in what concerns the methodology of the social sciences.

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