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A Cognitive Approach to Law and Economics: Hayek's Legacy

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A Cognitive Approach to Law and Economics: Hayek's Legacy

Angela Ambrosino

Abstract: Hayek's contribution to law has been criticized and disputed. This paper shares the opinion that the significance of Hayek's legal writings and their relevance to law and economics can only be understood by jointly analyzing his economic and legal theories. Moreover, I will argue that both theories must be reconsidered in light of Hayek's theory of mind. This theory represents the key to understanding Hayek's thought in that it provides an insight into the complexity of cognitive and psychological determinants of coordination processes. The latter are essential for understanding the emergence of social institutions. From this perspective, Hayek's theory bears close relevance to current research in law. He suggests a different methodological approach in which the analysis of the micro-foundations of behavior is of central importance. I argue that such multidisciplinary inquiry can contribute to legal theory by explaining perception in decision-making processes. This line of analysis may also contribute to a normative legal theory that reduces errors in legal contexts. Such an interdisciplinary approach seems to be consistent with the OIE requirement – in the tradition of Veblen and Commons – that economic science must deal with a consistent theory of human behavior.

Keywords: cognitive economics, Hayek, law and economics, neuroeconomics, Posner

JEL Classification Codes: B1, B40, B52, B53, D02

In the past few decades, the behavioral approach to law and economics has shown the importance of cognitive biases in legal behavior. Authors like Christine Jolls, Cass R. Sunstein, and Richard Thaler (1998) have emphasized the advantages that may result from introducing important insights of behavioral economics to the economic analysis of law. Moreover, Jolls and Sunstein (2006) argue that both procedural and substantive law should be revised in light of the empirical evidence about the role of cognitive biases in behavior. This new research approach points to the need of new

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economic models for understanding and explaining complex phenomena, including the evolution of social norms and legal rules.

As a co-author and I have argued elsewhere (Ambrosino and Biancone 2013), the debate on the behavioral approach to law and economics (Jolls 2007; Jolls and Sunstein 2006; Mitchell 2002a, 2002b, 2003a, 2003b) creates room for cognitive economics to help explain the complex determinants of legal behavior. Cognitive economics, more than behavioral economics, goes back to the history of economic thought and grounds its inquiry on a multidisciplinary investigation of human behavior. By focusing its inquiry on the micro-foundations of decision-making, cognitive economics may yield better understanding of reciprocal causation connections between legal rules and individual behavior¹. Legal theory must deal with the complexity of real society and must provide an explanation of the mechanisms that produce pattern of regularity in human behavior. Therefore, a proper cognitive approach can aid legal theory in explaining law and institutions on the basis of a consistent theory of human decision-making.²

Friedrich August von Hayek is recognized as one of the founders³ of the cognitive approach to economics (Egidi and Rizzello 2004; Rizzello 1998). The close connection between his theory of mind and his economic theory helped open the way to modern cognitive economics from both theoretical and methodological points of view. His theory of mind (Hayek 1952) shows how agents codify information and use dispersed knowledge to make economic choices. Rules of behavior, resulting from this cognitive process, become settled rules when they allow coordination in social interaction.

Nevertheless, Hayek's legal theory has been widely neglected both by traditional law and economics literature, on one side, and by behavioral law and economics, on the other. R.A. Posner (2003) criticized Hayek's legal theory and his analysis of the

¹ The reciprocal causation processes between human behavior and institutional changes is one of the main research interests of the cognitive approach to economic institutions. Hodgson's ideas (2003a, 2003b) of upward causation and reconstitutive downward causation in the process of institutional change, mainly contribute to developing the idea of a complex dynamic of reciprocal causation in the evolution of economic institutions (Ambrosino 2006, 2012).

² Cognitive economics aims at explaining institutional change and evolution of law on the ground of a multidisciplinary inquiry. There is a strong connection with the original institutionalism in that (Dyer 1998; Parada 2001; Rutherford 1996), which restates the Veblenian critique and points out that standard economics suffers from multidisciplinary incompatibility (Brown 2013).

³ Hayek's (1933, 1937, 1952, 1960, 1962, 1973, 1976, and 1979) as well as Herbert Simon's (1947, 1955) research is considered among the main contributions to the development of cognitive economics. Their work points to the lack of foundation in standard economic assumptions and opens a new debate on the aims of economic research. Economics starts to be considered a science of complex phenomena. Other relevant scholars who contribute to the development of cognitive economics include Daniel Kahneman and Amos Tversky (1979), Vernon Smith (1989), and Thomas Schelling (1960). Part of cognitive economics scholarship focuses on institutions (defined as shared rules of behavior) and – in the tradition of old institutional economics – and describe a process of reciprocal causation that links human behavior and institutions (Hodgson 1993, 2000, 2002, 2003a, and 2003b). Social reality is characterized by an ongoing evolutionary process of change. Cognitive theory of economic institutions suggests a new interdisciplinary approach to investigate such processes (Ambrosino 2006, 2012; Rizzello 1998; Rizzello and Turvani 2000, 2002).

role of the judge as lawmaker. In this paper, I will focus on three main grounds. The first is that Posner considered the role of the judge described in Hayek's theory to be a passive one (Zywicki and Sanders 2008). According to Posner's interpretation, the judge must only enforce the social order instead of consciously pursuing wealth maximization. The second relates to Posner's argument that there is no room for the evolution of law in Hayek's legal theory. The third pertains to Posner's opinion that Hayek makes confusing use of the expression "rule of law."

I will argue that a better answer can be given to Posner's criticisms when Hayek's legal and economic writings are jointly reconsidered in light of his theory of mind. This analysis of Hayek's contributions will precede the discussion of how relevant his theory of mind is to modern legal theory as the main inspiration for developing a proper cognitive approach to an economic analysis of law. Hayek's legal theory has been criticized from within original institutional economics (OIE) (Hodgson 2009), so he cannot be simply classified as an institutional economist in the tradition of Thorsten Veblen and John R. Commons. Nevertheless, Hayek's legal theory regarding how institutions are defined as unplanned outcomes of human actions, and how rules structure social interactions, shows the relevance of cognitive science as a basis for understanding human nature. As I have suggested elsewhere (Ambrosino 2006, 2012), and as William Redmond (2006) and Christopher Brown (2013) argue, the original institutionalism is grounded on the criterion of conceptual integration – meaning, on "the principle that the various discipline within the behavioral and social science should make themselves mutually consistent, and consistent with what is known in the natural science as well" (Cosmides, Tooby and Barkow 1992, 4, in Brown 2013, 211). The cognitive approach to law inspired by Hayek's work may also contribute to the development of institutional economics in the OIE tradition.

I organize the paper into five sections. Sections one and two reconstruct Hayek's theory of mind and legal theory, respectively, referring especially to the "rule of law" and the role Hayek attributes to the judge in civilized systems. Section three discusses the links between two levels of analysis, the mind level of the sensory order and the social level, considering how determinants of human behavior contribute to shaping legal rules. Section four reevaluates Hayek's legal theory with respect to Posner's criticisms. It focuses on the meaning Hayek's work acquires when it is analyzed as part of a complete research program and in light of his theory of mind. Section five discusses the perspective opened by Hayek's approach for current research on law and economics.

Hayek's Theory of Mind, Individual Behavior, and the Role of Institutions

During his career, Hayek moved slowly toward an idea of economics as the study of complex systems in which biology, systems theory, and many other disciplines are involved. In the 1930s, his economic ideas started to change. His article, "Economics and Knowledge" (1937), is regarded as the watershed in Hayek's transformation (Foss 1995). From this essay on, it became clear that Hayek conceived of economic issues as complex phenomena, and that he would deal with them by investigating different

research fields. Nevertheless, an earlier article of his, "The Trend of Economic Thinking" (1933), already furnished important insights into the role of spontaneous institutions and knowledge in solving problems in society (Ambrosino 2006). These two papers marked the beginning of a shift from Hayek's first works on issues of technical economics to ones of social theory, biology, psychology, and systems theory. Hayek's contribution was in placing economics among those sciences that study complex adaptive systems. These economic systems are built by human behavior, and they require institutions.

Hayek's interest in human cognition and the functioning of human mind dates back to the early 1920s when he was still a student. In those years, he worked on a paper, "Contribution to the Theory of the Development of Consciousness," which was never published. However, years later, it formed the basis on which *The Sensory Order* (Hayek 1952) was developed. There has been much discussion on the influence of this study on Hayek's economic theory and the existence of a systematic research program in his work (Egidi and Rizzello 2004; Rizzello 1998). This paper argues that Hayek's theory of mind is also essential for understanding his legal theory as part of his research program, and for appreciating the opportunities offered by his theoretical approach to modern law and economics.

Hayek's theory of mind describes human mind as an adaptive classification system in which external stimuli are ordered and classified so that individuals can act in every circumstance of their ordinary lives. This classification system consists of neural connections that are the result of both biological inheritance and an individual's past experience derived from acting in the external world. The classification process is contextual and complex. The order attributed to each particular input depends on the other inputs that arrive with it, so that there is no one-to-one relationship between each given stimulus and the sensory order. Moreover, the sensory order that arises is idiosyncratic for each individual. It depends on both the external stimuli and the specific neural system involved in the process. Although individuals' neural systems have important features in common, they are also unique to each person. Also unique to individuals are their particular past experiences, which play an important role in the perception process.

The classification process is adaptive because it is modified by both a process of natural selection in forming the organism's set of neural connections and by life experiences. "Map" is the term Hayek used to define the neural connections system that the mind creates over an individual's life span. This map is subject to continuous – though very gradual – change (Hayek 1952, 110) caused by the interplay between the brain's physical structure and particular stimuli experienced by individuals in their life experience. By means of its classification processes, an individual's mind is able to maintain and continuously update a model of the environment as it has been experienced by the individual.

The slow adaptive process characterizing the mind's functioning is what allows behavioral routines to change. The perception and classification of external stimuli are strongly related to rules of action. In each problematic situation, the outcome of the perception and classification process incorporates information about the rules of

action needed to face that situation. Routines are rules of behavior emerging from the classification of external stimuli in order to react to particular circumstances in ways that have proved effective in managing such circumstances. The feedback on their action that agents receive from the external world makes it possible to turn effective behavior into a routine, applied whenever a similar situation arises. Moreover, a negative feedback is required to start a slow process of change in behavioral rules. Once a routine (or habit of behavior) is formed, in Hayek's theory, it is an institution in the sense that it becomes a shared rule of behavior inducing individual action. In that sense Hayek's idea is not far removed from Commons's definition of institutions as "collective action inducing individual action" (Commons 1959, 701). Settled rules of behavior can change over time, and this has been apparent in the history of civilization. When environmental changes and consolidated rules are no longer suitable for the needs of managing agents, a slow evolutionary process begins. In Hayek, this does not mean that human beings are passively permitting environmental changes to remodel their individual habits (Ambrosino 2012).⁴

Hayek's theory of mind shows the importance of cognitive processes and past experiences in shaping individual behavior and the idiosyncrasy of classification processes. These elements acquire even greater importance if they are linked to the problem of knowledge, which Hayek (1937) believed to be the central issue in economics. People in society act to satisfy their own interests, but, in shaping their expectations, they must consider that information is not complete. Rather, information is dispersed. Moreover, agents are able to process the information they do through their peculiar classification system, thereby developing idiosyncratic knowledge. Human action hence reproduces rules of behavior that are not deliberative creations. This idea is also explicit in Veblen (1919; see also Giddens 1984 and Polanyi 1967) who emphasizes the function of habitual and only-partially-deliberative actions in retaining knowledge and skills, and in promulgating them through society (Hodgson 1994, 62). Economic growth depends on whether dispersed knowledge can be fully exploited, so as to convey "to the individuals such additional knowledge as they need in order to enable them to dovetail their plans with those of others" (Hayek 1944, 521).

How can a social order emerge from such dispersed and idiosyncratic knowledge? If the reason people follow certain rules, and not others, can be understood simply by studying the activity of human brain, this would suggest that society is a system in which the combination of elements is important. The simple addition of elements, however, cannot be all the explanation, because "the existence

⁴ Commons (1959) argued something similar. He discussed the modification of institutions and customs due to changes in economic conditions. He argued that "economic change and development result in new social group and classes, new conflict, institutional realignments, and changes in the mix of customs (Commons 1959, 292-293). As pointed out by Alan Gruchy (1947, 164 in Jensen 1987, 1052), this does not necessarily mean that Commons's argument was that human beings are passively permitting their individual habits to be remodeled mechanically by the unfolding power of economically induced changes in customs.

of those relations which are essential for the existence of the whole cannot be accounted for wholly by the interaction of the parts" (Hayek 1967, 71).

There are two conditions for a social order to exist. First, individuals must be able to perceive and classify other people's behavior to understand how to behave. Second, the actions of multiple individuals with idiosyncratic and partial knowledge must coordinate. Agents must give meaning to others' behavior in order to interact with them, to focus their own aims, and to plan their action. They do this through mental processes. It is through perception that the microcosm of the mind builds a model of the external macrocosm (Hayek 1952, 198). An agent classifies others' behavior by referring it to a principle of conformity with the rules of behavior that he himself/she herself applies. In other words, "the perceiving individual's own action patterns provide the master moulds by which the action patterns of other individuals are recognized" (Hayek 1967, 57). This implies that agents, at least partially, share the set of actions that they apply. However, this does not mean that agents must be all identical. Rather, they "must be made up of the same ingredients, however different the mixture may be in particular instances" (Hayek 1967, 59).

The second requirement for a social order is coordination among actors. Hayek (1960) argued that it is the process of civilization that enables the emergence of common rules of behavior. Civilization is what allows agents to manage dispersed knowledge. It "begins when the individual in the pursuit of his ends can make use of more knowledge than he has himself acquired and when he can transcend the boundaries of his ignorance by profiting from knowledge he does not himself possess" (Hayek 1960, 24). Civilization is made by man. It is the product of the actions of hundreds of generations of agents, but it is not the product of human design. Man cannot impose a particular order created by his/her mind upon the world. This is because a human mind is itself an adaptive system which changes in a way that man can adapt to his/her surroundings.

As a consequence of agents' actions, a spontaneous order "of human activities of much greater complexity will form itself than could ever be produced by deliberate arrangement" (Hayek 1967, 162). This does not mean that a society without rules will develop. Rather, it means that society will be based on general, end-independent rules, applying to all individuals. These rules, which guide man's behavior in forming correct expectations about others, are selected in social interaction with others by means of the imitation and evaluation of rules of conduct, habits, and traditions. The process, in which rules are culturally selected, takes place at the social group level. The social groups that apply better rules can achieve better results than other social groups (Ambrosino 2006; Butos and McQuade 2002). Hayek's spontaneous order does not mean that customs and spontaneous rules in modern society are always good enough to coordinate any agents' behavior.

Formal rules and established institutions are necessary in a civilized society. In fact, for Hayek, institutions as well as legal norms constitute the boundaries of individual actions. They enable agents to act and coordinate their behavior toward achieving their purpose. Rules of law and property rights, protecting agents' autonomy against arbitrary interference, are needed to promote the emergence of

spontaneous order and progress in civilization. Nevertheless, this does not imply that a central planner is necessary. As social environment changes, institutions evolve from a process of adaptation to past experience.⁵ Hayek's rejection of rational constructivism is simply stated in the introduction to the first part of his *Law Legislation and Liberty* (1973, 5):

This intellectual tradition can be shown to be false both in its factual and in its normative conclusions, because the existing institutions are not all the product of design, neither would it be possible to make the social order wholly dependent on design without at the same time greatly restricting the utilization of available knowledge. That erroneous view is strictly connected with the equally false conception of the human mind as an entity standing outside the cosmos of nature and society, rather than being itself the product of the same process of evolution to which the institutions of society are due.⁶

Hayek's model of human mind is, therefore, strictly related to his idea of spontaneous evolution of social norms and institutions. Better rules of conduct give an advantage to those social groups that use them, and they are learned and imitated by other social groups or future generations. This process of cultural evolution makes it clear that "our habits and skills, our emotional attitudes, our tools, and our institutions all are in a sense adaptations to past experience which have grown up by selective elimination of less suitable conduct" (Hayek 1960, 26). This process is also what allows the slow change of social norms and institutions as the environment changes.

According to Hayek's theory, institutions arise by a process of spontaneous cultural evolution. It is institutions, as abstract codes of conduct, which allow individuals to satisfy their changing expectations and to reduce uncertainty. Legislators and the state perform an essential role in discovering such spontaneously evolved rules and institutions, as well as in giving them the status of established social institutions.

Hayek's theory of cultural evolution has been widely criticized. Some representative criticisms include those of D.R. Steele (1987), G.M. Hodgson (1993), Ulrich Witt (1994), and P.J. Boettke (1990; for a more complete discussion on Hayek's idea of cultural evolution, see Caldwell 2000, 2002), among others. Despite these criticisms, as I argued in this section of the paper,

⁵ Also, in Commons, institutions create viable social order. What is different between Hayek and Commons is their interpretation of the evolutionary process that generates institutional change (Commons 1924).

⁶ Different from Hayek's judge, who is concerned only with perfecting an existing social order, Commons's judge is guided by the public purpose involved in the case. Commons recognized the influence of personalities of individual judges. Thus, court opinions would change not only when new cases are presented or when economic or political conditions change, but also with changes in the judges (Leathers 1989).

Hayek's theory of cultural evolution of institutions mainly directs scholars in the field to develop a more interdisciplinary approach. His research moves fearlessly into new fields and disciplines in search of consistent explanation to complex phenomena (Caldwell 2002, 2004).

Nevertheless, social order in civilized society needs codified general rules of law and established institutions. Hayek (1973, 1976, and 1979) discussed the way in which spontaneously emerged rules of behavior should be codified in his legal theory. In the next section, I discuss Hayek's legal theory, with particular regard to the role of the judge as lawmaker.

Hayek's Legal Theory and the Role of the Judge

Hayek's legal theory is closely linked with his social and economic theory. Agents face a problem of coordination in social contexts that are characterized by dispersed knowledge. Spontaneous order emerges from their interactions through a process of selection and imitation. This problem raises important questions about what kind of legal rules can enforce such an order and who must establish them.

Civilized society needs legal norms and institutions in order to achieve order and peace (Commons 1925). In fact, agents act in pursuit of their own personal interests. They do so by interacting with other people whom they did not previously know. Hayek described this kind of interaction as a game in which the players must abide by a set of rules. Hence, in order to improve the efficacy of the game, rules (such as contract law and property rights) are slowly developed (Hayek 1978, 73).

It is these rules that allow agents to be free in their choices. Agents should be free under the law. This means that when they obey laws, in the sense of general abstract rules, agents are not subject to another man's will (Hayek 1960, 153). In Hayek's theory (1960), law is a sort of invisible boundary within which the activity of each individual has a secure sphere to unfold.

Important insights into Hayek's legal theory can be drawn from most of his works. In this paper, I pay particular attention to his books, *The Road to Serfdom* (1944), *The Constitution of Liberty* (1960), and *Law Legislation and Liberty* (1973, 1976, and 1979), to show the evolution of Hayek's conception of the "rule of law" and his analysis about the role of the judge in society. In fact, *The Road to Serfdom* (1944) is not greatly concerned with legal theory. Nevertheless, in it, Hayek provides a definition of the "rule of law" and discusses its role in free societies. The rule of law implies that the power of government is limited by previously fixed rules. These rules allow individuals to construct correct expectations on how and when the state would use its coercive power, and then to make their own choices.

Under the rule of law, government should only set general rules to be applied to general situations. Individuals should be completely free to evaluate time and space circumstances. Only agents involved in real decision processes can know the exact circumstances in which they must act and to which they must adapt their behavior. These general rules are translated into formal rules that are not created to favor particular subjects or group of subjects. General rules are means to achieve personal

aims available to everyone in society. They should be conceived of as remaining in force indefinitely as tools enabling agents to build correct expectations about others' behavior.

Hayek was aware that the complete realization of a society based on the rule of law is not possible because governments consist of men liable to make mistakes. He argued that governments should have as few opportunities as possible to apply their coercive power freely. Law can limit the range of tools available to individuals to achieve their purposes, but governments can never frustrate individual efforts with particular purposeful laws.

Another point emphasized by Hayek in *The Road to Serfdom* (1944) is that, in a system based on the rule of law, the direct impact of the state's action in any given case will be less clear. The result will be a social system in which it is not possible to foresee exactly what the outcome of settled rules will be. This is the consequence of a system of general laws (different from specific orders) that must be applied in different circumstances which cannot be predicted in all their aspects. The effect that these general laws will have in each circumstance, and with respect to each individual, cannot be known in advance.

The ideas that Hayek simply enunciated in *The Road to Serfdom* (1944), are better developed in *The Constitution of Liberty* (1960). In this latter book, Hayek (1960, 153) returns to the relationship between freedom and law, reiterating his central idea that "the conception of freedom under the law ... rests on the contention that when we obey laws, in the sense of general abstract rules laid down irrespective to their application to us, we are not subject to another man." Life in society is possible because individuals act in accordance with certain rules. Such rules "tend to develop from unconscious habits into explicit and articulated statements and at the same time to become more abstract and general" (Hayek 1960, 148). The nature of these general rules differs from that of specific commands, which determine solely the action to be performed. Indeed, general rules (law) should be settled "once and for all" (Hayek 1960, 149). They should be directed at unknown people and be extraneous to particular circumstances of place and time. The rationale for these general rules, securing for individuals a known range within which they can make decisions, is to allow them to make the fullest use of available knowledge, especially of such concrete and idiosyncratic knowledge pertinent to the particular circumstance in which people happen to be. Rules are the result of a process of adaptation by the entire society to its environment and to the general characteristics of its members. Law defines the boundaries that agents must take into account when deciding their actions. These boundaries also enable agents to predict the consequences of their behavior (Hayek 1960, 156) and to form plans of action that will be successful (Hayek 1960, 157).

In defining the general rules, which are needed to guarantee the freedom of individuals, Hayek expanded the definition of "the rule of law" that he provided in 1944. As suggested by Paul Cliteur (2000), it is possible to distinguish the following five characteristics of law under the rule of law:

First, "the rule of law" means that government can use its power to encroach upon the freedom of individuals only in enforcing a known rule. It thus constitutes a

limitation on the power of government, including the legislature. The rule of law requires that all laws must conform to certain principles (Hayek 1960, 205). Therefore, it is a rule concerning what the law ought to be (Hayek 1960, 206). According to Hayek, this implies that the rule of law can prevail only if it is part of the moral tradition of the community or a common ideal shared by the majority. Only in this case does the legislator feel bound by it (Hayek 1960, 206).

Second, the law should consist of general and abstract rules referring to unknown cases. These rules must represent the framework within which agents can take their own decisions in pursuit of their own ends. Hayek argued that it is generally the most important aspect of the law. The fact that the lawgiver does not know in advance the particular cases in which rules will apply, and the fact that the judge who applies them can only draw conclusions, which follow from the existing body of rules and the known facts of the case, are guarantee that laws, not men, rule (Hayek, 1960, 153).

Third, the law must be prospective in its effect. It determines only some of the conditions that individuals' actions must satisfy. It applies to unknown people only when certain conditions are present. Therefore, the lawgiver cannot predict what the effect of a particular law will be on particular people, and for what purposes people will use it (Hayek, 1960, 52). The lawgiver confines himself/herself to general rules because of his/her necessary ignorance about the special circumstances under which they will be applied. He/she fixes some firm data for the use of those who have to make plans for particular actions. In so doing, the lawgiver provides opportunities but never certainties about the results of agents' efforts (Hayek, 1960, 58).

Fourth, the law must be known and certain. Certainty is a central feature of the law. It is the factor that has contributed most to the prosperity of the west because it allows for the efficient running of a free society. Hayek underlined that complete certainty is something that can only be approached. "The degree of the certainty of the law must be judged by the dispute which do not lead to litigation because the outcome is practically certain as soon as the legal position is examined" (Hayek 1960, 208).

Fifth, the last requirement of the law is equality. This means that the law should apply equally to all. To do so, the law must refer only to formal characteristics of the persons toward which it is directed. Nevertheless, Hayek argued, classifications always leave room for the possibility of forming classes, consisting only of particular persons. Moreover, equality before the law is the chief safeguard against the possibility that the law will set severe restrictions on liberty. If the only special power given to government is enforcing the law, there will probably be little prohibition of what anybody might reasonably wish to do (Hayek, 1960, 155).

Moreover, in *The Constitution of Liberty* (1960), when dealing with the problem of safeguarding individual liberty, Hayek outlined his theory about the judge's role in a system based on the rule of law. He would subsequently address the issue more thoroughly in *Law, Legislation and Liberty* (1973, 1976, 1979).

I will now discuss the point concerning limitations on the judge's discretion in deciding disputes. Hayek argued that "the task of the judge is to discover the

implications contained in the spirit of the whole system of valid rules of law or to express as a general rule, when necessary, what was not explicitly stated previously in a court or by the legislator” (Hayek 1960, 212). This means that the judge must interpret some formal or informal preexisting rule. Whereas informal rules are customs and shared habits of behavior, formal rules are legal norms guiding agents’ behavior in a given time. The judge cannot follow his/her own will in the pursuit of particular aims, and his/her interpretation of the law can be subject to review by a higher court.⁷ Moreover, “rules must not be made with particular cases in mind nor must particular cases be decided in the light of anything but general rule – though this rule may not yet have been explicitly formulated and therefore have to be discovered” (Hayek 1960, 210). What Hayek argued is that the judge, as a policy-maker, has to follow a discovery procedure like the one in which agents are involved who act within a competitive market (Hayek 1960, 1973). In fact, people acting within a competitive process can progressively discover what wants are worth satisfying, and thus modify their behavior. Hayek considered common law as an effective mechanism for discovering legal rules (Christainsen 1990, 499). It does not mean that Hayek was not aware that, in the real world, the common law process can fail under the pressure of various social and legal purposes to be achieved. Hayek’s idea of common law as a “perfect” mechanism for discovering legal rules is, above all, a description of what it *should be*.⁸

This short discussion of the judge’s role implicitly contains two important topics which Hayek addressed in *Law, Legislation and Liberty* (1973). First, the judge plays the role of a discoverer of law. Second, the legal framework in which he/she performs his/her task is constituted by the outcomes of historical accidents or the application of inherited principles to new situations.

The first part of *Law, Legislation and Liberty* (1973) starts with a critique against constructivism in the process of law creation. The main contention is that most of the rules of conduct that govern human action, and most of the institutions that arise therefrom, are the result of a process of adaptation to the impossibility for anyone to take a conscious account of all facts, entering into the order of society. Moreover, the idea of a developed mind able to design the institutions that should make life in society possible is contradicted by everything one knows about the evolution of man (Hayek 1973, 17). The mind itself is the result of a process of adaptation to natural and social surroundings. It is a product of the social environment in which it has grown. Man lives in a cultural context in which there exist certain practices and rules

⁷ Hayek’s idea of the judge’s role is quite different from Commons’s. As pointed out by C.G. Leathers (1989), Commons’s “[j]udge made law’ evolves through ‘artificial selection’ by the ‘visible hand’ of the court ... In making a decision, the judge reduces common practice to precision and adds an organized legal sanction. Since conflicting precedents build up over time, judges have opportunities to choose among competing customary practices ... Commons’s judges are guided by the public purpose involved” (Leathers 1989, 368).

⁸ G.B. Christainsen (1990) suggests that Hayek did not completely understand common law process deception because he underestimated the extent to which property rights structure governs the process of law creation.

of behavior that have prevailed over time because they have made a group of men successful, but which were not deliberately created to serve particular purposes.

This discussion is crucial also for understanding Hayek's idea of the role of the judge in social systems based on the rule of law. His legal theory draws a distinction between law and legislation. Law came before legislation: Not all the rules that people follow in society are of a legal nature, but individuals use them because they enable society to make decisions in situations of limited information. Social order and the survival of society result from a process in which rules emerge and evolve. Legal systems and authority are needed to command obedience because they enforce laws presumed to exist independently and to rest on a widely-shared opinion of what is right (Hayek 1973, 95). The development of legal systems within which the judge plays a prominent role is, therefore, the outcome of a continuous process of evolution in the course of which the spontaneous growth of customs and deliberate improvements of an existing order have constantly interacted (Hayek 1973, 100). These are systems that select the "right rules" among those that spontaneously emerge. Legal systems need the activity of lawmakers. These may be legislators who enact laws, or judges who play a crucial role in adjudicating laws. In the part of *Law, Legislation and Liberty*, referring to the common law systems, Hayek pays particular importance to the role of the judge.

The role of the judge, who must enforce and improve law, can be better understood by considering that "he is called to correct disturbance of an order that has not been made by anyone and does not rest on the individual having been told what they must do ... The judge is in this sense an institution of a spontaneous order. He will always find such an order in existence as an attribute of an ongoing process in which the individuals are able successfully to pursue their plans because they can form expectations about the actions of their fellows which have a good chance of being met" (Hayek 1973, 95).⁹

Hayek rejected both the idea of the judge as someone who simply applies a given law and as a producer of efficient law. Hayek's judge is an extender and discoverer of law. Indeed, he/she produces law, but does so by extending (or limiting) the existing legal tradition. More than a lawmaker, the judge is a discoverer of rules compatible with the spontaneous order (Deffains 2002; Hayek 1973).¹⁰ Under Hayek's idea of the judge's role, there is a distinction between discovering procedures and efficiency (Christainsen 1990). Hayek's spontaneous order is based on efficiency rules that are able to coordinate agents' behavior. Hence the judge's law-discovering activity is not

⁹ Also, Commons admitted that the judicial process of developing common law works reasonably well in adapting the working rules of governments and private collectivities to changing conditions, although special problem areas remained. Those problems are due to the fact that Commons recognized the large influence of habitual assumptions and personalities of individual judges in their ordinary work (Leathers 1989, 369 and 370).

¹⁰ On the contrary, in the tradition of Commons, judges are guided by public purpose and decide on a case-by-case basis. Each decision must conform to past precedents, but the judge must evaluate the parties involved in the dispute, too. Moreover, the judge will never be able to foresee all the possible consequences of his/her decision. The adequacy of the rule can be tested only through its effects on society. Any new rule can give rise to new conflicts (Commons 1924).

aimed at developing an efficient system of legal rules. As pointed out by G.B. Christainsen (1990), compared with the neoclassical aims of economic efficiency that refers to a hypothetical situation of equilibrium, “[t]he notion of an effective discovery procedure ... refers to an ongoing process whereby information about not-yet-exhausted gains from trade is continually and economically uncovered and disseminated to individuals. It refers to the learning that takes place under perpetual disequilibrium rather than a general equilibrium in which all learning has stopped” (Christainsen 1990, 500).

To say that the judge discovers rules that serve to maintain an existing order implies that there is a difference between these rules and the resulting social order. The judge should create general and abstract rules to be followed by all. A rule of this kind is something that has to be found to prevail. It is not something that a mind can deliberately create (Hayek 1973, 97). The aim of each rule must be to allow the matching of expectations on which individuals depend for their success (Hayek 1973, 98). Hayek suggested that to maintain the existing order, rules should direct individuals’ behavior in two ways. On one hand, individuals’ actions do not unnecessarily interfere with each other. On the other hand, under circumstances where the success of an individual’s action depends on its matching with the action of others, there will be at least a good chance that the matching will occur (Hayek 1973, 99).

As long as the existing rules, both formal and informal, efficaciously enable agents to achieve their purposes, there is no need for intervention by the judge. But when it is not possible to form legitimate expectations about the outcome of a situation, it will be necessary to appeal to the judge, who should be knowledgeable of the established rules. The judge cannot make rules that he/she wants. The judge cannot do so either in situations in which he/she must decide on conflicting expectations, based on already-established rules, or on new situations where there is no known rule to guide him/her. Rather, the judge must discover a rule that fills the gap from among already established rules, or must rule consistently with the existing body of rules so as to maintain and even improve social order. Once pronounced, the judge’s ruling must be recognized as appropriate by the members of society (Hayek 1973, 100).¹¹

Hayek argued that the judge is expected to maintain order. This does not imply that he/she must maintain a particular state of affairs. Rather, Hayek referred to the regularity of the process by which agents form their expectations without interference of others. The process by which the judge contributes to the social order is continual. In deciding a specific case, both the judge and the parties involved should not be interested in the effect of their decision on social order. If the rule established by the

¹¹ Again, Hayek’s position is quite far from the OIE tradition of Commons. In Commons’s opinion, customs are man’s response to the evolving conditions of material scarcity and conflicts of interests (Commons 1924). While customs have a leading role, Commons argued that they are imprecise and imperfectly obeyed. Moreover, they do not exert sufficiently strong sanctions to determine human behavior. Only organized and purpose-oriented institutions can reliably create regularity in behavior (Gonce 1971).

judge proves successful in helping individuals to form correct expectations, it will integrate itself into the existing body of norms, thus contributing to social order on its own.

The judge contributes to the process by which society adapts to new circumstances. This is the process by which social order improves. In fact, the judge is integral to the system of selecting existing norms that leads to social order, wherein only efficacious norms survive. Moreover, when performing his/her function, the judge creates new norms. He/she does not create a new order, but helps maintain and improve the functioning of the existing one (Hayek 1973, 19).

Finally, Hayek was aware that the judge may sometimes err, or be influenced by his/her preference for a particular end when evaluating a case.¹² Nevertheless, there is no room in his/her task for an emotional response or a personal preference (see footnote 9). Most cases that the judge must resolve will have only one appropriate solution. The fact that intuitions may contribute to the judge's ability to formulate the right solution does not mean that emotional factors, rather than rational ones, are the determinants of the result. The task of the judge, in Hayek's theory, is "one of testing hypotheses at which he has arrived by processes only in part conscious. But although he may not know what led him in the first instance to think that a particular decision was right, he must stand by his decision only if he can rationally defend it against all objections that can be raised against it" (Hayek 1973, 20).

Hayek's "Rules, Perception and Intelligibility": The Link Between His Theory of Mind and His Legal Theory

In 1962, Hayek published a paper entitled "Rules, Perception and Intelligibility" in the Proceedings of the British Academy. In it, he sought to explain the relationship between the rules governing perception and those governing action. The paper does not seem to explicitly relate to the rule of law idea and to the role of the judge in modern society. Nevertheless, it is of great importance to understanding the relationship between the sensory and social order regarding the capacity of individuals to perceive their own behavior as consistent with existing classifications, and to follow rules of behavior that they recognize as shared by the social community to which they belong. The same paper, published after *The Constitution of Liberty* and before *Rules Legislation and Liberty*, is the key to understanding Hayek's legal theory in light of his theory of mind. In it, he conducted an inquiry into the links between the rules of perception governing the mind as a classification system and the development of individual behavior consistent with shared general rules. The relationship between the two levels of rules – the rules governing perception and action – is a crucial point to understand in order to evaluate the connection between Hayek's theory of mind, set out in sensory order, and his legal theory.

¹² Hayek was aware that, in real life, the common law process can be defective. However, he believed that the mechanism for discovering legal rules allows a better transmission of information than a legislative process aimed at shaping an efficient system of legal rules (Ambrosino 2006).

The main idea developed in Hayek's article is that there is a certain level of general rules governing human action that are of the same kind as those governing perception. It is this connection that enables Hayek to argue for the existence of rules "implicit" in human behavior. This is often referred to as the latency of rules in the philosophy of law. Such rules consist of behavioral regularities that are followed by actors, but cannot be explicitly stated by them (Hayek 1962, 43).

Hayek observes that, as in the case of language, agents act and acquire skills with unexpected ease, but characteristic of these skills is that individuals are usually unable to explicitly state the rule that governs their action (Hayek 1962, 43). He argued that a better term for skills of this kind is "know-how," which consists exactly of the capacity to act according to rules that agents are able to discover, but which they are not (required to be) able to state in order to follow them. As the first insight relevant to my purpose here, Hayek stated that the sense of justice pertains to those cases of a capacity to obey rules which one does not know explicitly. This means that, by living in a certain social group, agents learn the main principles of justice, which have been developed over a period of time, and acquire the skills to obey them.¹³

In a second relevant aspect to agents' acting in compliance with implicit rules, the nervous system appears to act as a "movement pattern effector." But, for this to be possible, the organism needs to recognize actions conforming to such rules or patterns without being consciously aware of the elements of which they are composed. Hence, in order to understand how agents can follow unformulated rules, one must first know how human minds develop a "movement pattern detector" (Hayek 1962, 45). This topic is closely related to the theory of mind developed in *The Sensory Order* (1952), where Hayek argued that action is the final step in the perception process. Here, the point stressed by Hayek is that general and implicit rules of this kind do not govern people's behavior alone. They govern perceptions, particularly perceptions of other people's actions. The process by which agents can perceive other people's behavior as complying with some general rule is of particular importance when discussing how the lawmaker (judge or legislator) must evaluate any new rule to be enacted.¹⁴ Understanding which implicit rules are shared among people, and how they are recognized in social groups, could enhance recognition of what kind of formal rules may actually shape individuals' behavior in modern society (Ambrosino 2006).

According to Hayek, the capacity to perceive regularities (rules) in the actions of others is what enables different persons to perceive that a particular situation is one of a certain kind (Hayek 1962, 46). He argued that one of the main instances in which agents are able to recognize others' behavior is imitation. Nevertheless, before people can imitate, identification is necessary. Agents must establish a correspondence

¹³ These skills in some sense can be consistent with Veblen's definition of instincts as "generally inherited proclivities which favor specific reason or behavior" (Redmond 2006).

¹⁴ This kind of implicit rule shared by agents seems to be consistent with Veblen's instincts. In fact, instincts are efficient because they allow a reliable and speedy response to recurrent problems. They also supply a possible explanation for cross-cultural and trans-historical commonalities of behavior (Redmond 2006).

between movement patterns that are perceived through different sensory modalities (Hayek 1962, 48). This presupposes the existence of a mechanism transferring the capacity to discern abstract orders from one field to another. Hayek maintained that this kind of transfer is of the same kind as that by which one can easily transfer learned skills from one hand to the other (Hayek 1962, 49). The point is that, if two different sensory elements are to be recognized as converging into the same pattern, they must have some features in common. The most important of these features is the space-time framework.

As Hayek argued in *The Sensory Order* (1952), perception is the process by which human minds classify external stimuli, giving rise to patterns of classifications that enable agents to act. In "Rules, Perception and Intelligibility" Hayek emphasized that such patterns of classifications contribute to coordinating human behavior, and thus to achieving social order. Once acquired, these patterns of rules can be recognized in circumstances different from those that generated them. This is possible because – even if perception is strongly linked to space, time, and past idiosyncratic experience – each pattern of classified rules is activated in a mind whenever a certain circumstance shares attributes with those stimuli which originally gave rise to the classification. In Hayek's view, this is because these patterns of rules, which govern actions, are not related to specific actions. Rather, they constitute a general schemata that is then adapted to each particular circumstance (Hayek 1952, 56). These patterns of regularities, or rules, enable agents to recognize shared purposes, moods, and attitudes in the behavior of others, and thus to coordinate their behavior. By so doing, agents generate social order.

Hayek's paper "Rules, Perception and Intelligibility" is essential for understanding the link between his legal theory and his theory of mind, formulated in *The Sensory Order* (1952). In fact, it clarifies the role of individual perception in developing general schemata like moral rules by which agents can evaluate other people's behavior as corresponding or not to their own schemata (Hayek 1952, 56). The perception of others' behavior is the first step in the diffusion of common behavior through an imitation process. This diffusion of effectively shared behaviors is necessary to obtain Hayek's social order.

Moreover, to return to Hayek's idea of the judge's role in law-creating, comprehension of individuals' perception processes, as well as how perceived behaviors can be imitated and shared among people, seems necessary for understanding how (and with what kind of legal norms) social order can be improved or maintained. Hayek's stress on the importance of individuals' cognitive processes in developing morals has major methodological implications for a modern approach to law and economics. The next section of the paper addresses this point.

Hayek's Legal Theory and His Theory of Mind: A Different Interpretation of Posner's Criticisms

In this section, I focus on the main criticisms Posner (2003) levels against Hayek's conception of the judge's role in economic systems and to his/her contribution to the

law evolution. However, I will not analyze the legal philosophy under Hayek and Posner's legal theory in any detail. Instead, I will simply assume that the latter (Posner) endorses a constructivist approach, while the former (Hayek) rejects it (Dimond 1980). Based on this assumption, the concern here will mainly be with the difference between the approaches of these two authors in developing their economic analyses of law.

First, Posner considers Hayek's role of the judge to be a passive one (Zywicki and Sanders 2008). The judge's work is aimed at maintaining social order instead of consciously pursuing wealth maximization. Second, Posner argues that there is no room for the evolution of law in a theory in which the judge is averse to being creative, and merely works to enforce existing customs. These criticisms connect with another point Posner makes. In his opinion, Hayek makes confusing use of the term "rule of law."

According to Posner, Hayek rejected the idea of a central planner, because this requires too much information, preferring instead the alternative method of creating norms through customs. Customs give rise to a spontaneous order that is neither planned nor designed (Fleetwood 1996). In Posner's view, under such a process of norms creation, the role of the judge in deciding concrete cases is not to make new rules or standards of conduct, but simply to enforce established customs. Consequently, the judge has a passive role. This point shows that the two authors have very different views on the nature of knowledge, and on what the normative purpose of law in society ought to be (Zywicki and Sanders 2008). Posner believes that the judge should consciously create law in order to achieve designed social goals – that is, wealth maximization. In doing his/her work, the judge must consider the future effects of the rule that he/she states. When evaluating a case, the judge must decide which one among possible solutions best contributes to increasing efficiency (Posner 2006, 2008). The judge is thus a lawmaker who seeks the most efficient rule. In doing so, he/she applies the mechanisms necessary to ascertain that facts exist for the correct application of law (Posner 1973). Posner's judge, therefore, has the knowledge necessary to predict which rule will make society better off. There is the possibility that good sources of information will not be available to the judge, but this happens only in situations of social change. These are the cases, too, in which the judge should be strongly constrained by precedent (Posner 2003).

By contrast, Hayek believed that laws should be created to maintain the spontaneous order in society. In his view, it is impossible for the judge to predict how and whether any decision that he/she makes can improve social welfare. The main reason for this impossibility is strictly connected with Hayek's theory of mind. This theory explains why the idea of a mind, designing the institutions which make life in society possible, is contrary to everything researchers know about the evolution of man (Hayek 1973, 17). As argued in the first section, mind is the result of a process of adaptation to the social and natural environment in which man lives. It develops through a continuous process of interaction with the existing social institutions (formal or otherwise). Thus, human mind is the result of man's having developed in society (Hayek, 1952). The cultural heritage with which man is born consists of having

acquired those rules of conduct that increase the chances of continuous existence for the group in which one lives. Yet, these rules of conduct were not adopted intentionally in the knowledge that they would lead to particular effects (Hayek 1973, 17). Each individual in a group shares this cultural heritage. Each man living in society contributes to the gradual process of modification of social and economic institutions, but he/she does so only in pursuing his/her own interest, without necessarily considering the social effect of his/her choices (Ambrosino 2006, 2012). In the same way, the judge can only contribute to the creation of new laws by deciding cases solely on the basis of the concrete circumstances that he/she has, and without considering the possible effect of his/her decision in maximizing social welfare. The complexity and peculiarity of the cognitive processes characterizing human mind are key factors to be considered. These aspects are crucial when analyzing Hayek's argument that it is impossible for the judge to predict how to increase social welfare because information is dispersed and the judge has only subjective knowledge of the cases.¹⁵

Moreover, for Hayek, law plays the same role in society as other economic and social institutions (like prices). It provides decision-makers with the tools necessary to construct adequate expectations to plan their actions. Law, as a Hayekian institution, constitutes the framework that facilitates social coordination.¹⁶ When deciding concrete cases, the judge must not evaluate how his/her decision might contribute to social efficiency, but only whether the norm that he/she states conforms to the rule of law. The rule of law is strictly related to that general schema that agents develop through the perception and classification of external stimuli in social interactions and that determines the range of possibilities within which agents can make their choices (Hayek 1952, 1962). By finding the norm conforming to the rule of law, therefore, the judge can contribute to that social order which results from individual actions, not from human design. In Hayek's legal theory, the judge "is called in to correct disturbance of an order that has not been made by anyone and does not rest on the individuals having been told what they must do" (Hayek 1973, 95). In Posner's view, Hayek's judge is passive because he/she merely enforces customs. However, the judge's role seems to be somewhat more complex. He/she must intervene whenever there is a gap between actual behavior and the prescription of social order, and he/she has the responsibility of making any new rule in coherence with the existing system of rules. This is what maintains social order. Moreover, this social order is an ongoing process in which agents can pursue their plans because they can form correct expectations about others. In this sense, the judge is himself/herself an active institution of spontaneous order (Hayek 1973, 95). Spontaneous order is an ongoing process, where any rule stated by the judge is within the nature of an intellectual evolution (Hayek 1973, 101). The task of the judge is to preserve the general

¹⁵ This is different from what Commons argued about the role and purpose of the judge's decisions (Leathers 1989).

¹⁶ In that sense, Hayek's institutions are consistent with Commons's (1934, 69) idea of institutions as a "collective action in control of individual action." Such control liberates and expands individual will.

framework of rules by assisting change as part of the process of adaptation to changing conditions (Hayek 1973, 101, in Leathers 1989).

The second argument that Posner raises against Hayek's theory derives from his view of the Hayekian judge as a lawmaker with the limited power of enforcing existing customs. According to Posner, Hayek considered customs as the only source of law and he was insufficiently critical of the limitations of custom as a normative order (Posner 2003, 151). The evolution of customs, he argues, need teleology to move toward efficient results. In particular, Posner points out that Hayek ignored two main shortcomings of customs as a source of social norms. First, Hayek suggested that there are circumstances where the freedom of action of economic agents gives rise to cooperative activities which cause damage to society as a whole. In these circumstances, Hayek believed, the judge should reject such customs in order to promote economic efficiency. This means that the judge somehow provides the teleology needed to redirect economic behavior. Second, Posner maintains that Hayek ignored the fact that customs change very slowly since there is no lawmaker giving them to society when needed. Hence, because the judge's work is restricted to enforcing customs without regard to the consequences, it does not require any economic or social scientific analysis, nor does it contribute to the evolution of law.

Returning to Hayek's legal theory, it seems possible to add something to Posner's interpretation. The use of the term "customs" to refer to Hayek's concept of rule is misleading (Hayek 1962, 56), because it generally refers to the development of very specific actions. Instead, what Hayek had in mind are general and abstract rules of conduct possessing two main attributes. On one hand, men comply with existing rules without knowing them explicitly, and, on the other, they observe such rules because they give greater strength to the social group in which they are applied, but not because this effect is known by the group. In discussing the main attributes of spontaneous rules governing human conduct, Hayek explicitly stated that "in advanced society only some rules will be of this kind; what we want to emphasize is merely that even such advanced societies will in part owe their order to some such rules" (1973, 19). This point acquires particular meaning when one considers what Hayek argued in regard to the lawmaker's role in political evolution. Social order is the unplanned outcome of an ongoing self-generating process of cultural evolution, and it is characterized by a level of complexity that human mind cannot master as a whole. In a social context of this kind, the main instrument advocated to change society is legislation. Nevertheless, because each single lawmaking act will take place within the ongoing process of spontaneous order, the legislator is never completely free to redesign the legal system. Lawmaking is necessarily a continuous process whereby every decision produces unforeseen consequences for those, whose decision can or must be taken next. All parts of the legal system are adapted to one another, not according to an overall plan, but by the successive application of general principles to particular problems (Hayek 1973, 65). There is an endless process of law-changing, "every single step in this process is determined by problems that arise when the principles laid down by (or implicit in) earlier decisions are applied to circumstances which were not foreseen" (Hayek 1973, 65). The judge thus produces

new norms in response to unpredictable circumstances. In so doing, the judge remains within the boundaries established by the legal framework in which he/she operates, without questioning them or planning the direction of legal evolution.

Discussing the role of customs or general rules in the creation of new norms by the judge brings out an interesting difference between Posner and Hayek's theories. This difference can help understand the criticisms made by Posner against Hayek. Posner (1973, 2006) believes that customs become particularly important in the judge's decision-making only in the cases of social change. These cases do not seem to be the ordinary circumstances in which the judge must do his/her work. Rather, they are in some way "extraordinary" cases. By contrast, because Hayek considered the social order to be an endless evolutionary process, he also believed that every lawmaking act will take place in a situation of social change. Social change becomes the ordinary case in Hayek's theory.¹⁷ Nevertheless, Posner and Hayek's conceptions of the role of customs in social change are not entirely different.

Hayek's argument regarding the boundaries imposed on the judge's decision-making does not necessarily imply that every act of lawmaking will be merely conservative. Hayek's judge makes norms that conform to the existing legal system, but he/she does so without planning any social outcome. Of course, every lawmaker, when interpreting rules, not exactly extant in laws and precedents, will decide "to give the preference to what is still the predominant part of the law and to fit an alien element into it by so transforming it as to make it harmonize with the whole" (Hayek 1979, 66). But a very different situation arises when the judge, in his/her function as lawmaker, understands that a new general philosophy of law has recently arisen which is contrary to large part of the existing law. In these situations, the judge will use the same habits and techniques that he/she uses in preserving the law to transform it. Thus, "the same forces that in the first condition make for lack of movement, will in the second tend to accelerate change until it has transformed the whole body of law" (Hayek 1973, 66). However, the end of this transformation process is not foreseeable. It will depend on the nature of the new philosophy, and it may either lead to a new equilibrium or to disintegration of the whole body of law as existing in society (Hayek 1973, 66). This is because, in Hayek's theory, the process of cultural evolution leading to social order is not teleological, and hence not directed at any known goal (Hayek 1960). In this sense, the judge becomes a revolutionary force contributing to change toward a new, unforeseen spontaneous order.

Finally, behind Posner's criticisms of Hayek's legal theory lies his conviction that the latter gave a misleading interpretation to the "rule of law." Posner is not the only author to have criticized Hayek's idea of the "rule of law" (Raz 1979; Sunstein 1996; Zywicki 1996). Nevertheless, the proper interpretation of Hayek's conception requires one to consider the evolution of his concept of the "rule of law" in the development of his legal theory (Hayek, 1944, 1960, 1973, 1976, 1979). As I argue here, Hayek's

¹⁷ Also, the OIE tradition of Veblen and Commons points out that human action takes place in an ever-changing environment, and it influences changes in human behavior. Human behavior, for its part, influences the institutional environment (Hodgson 1993).

concept of the rule of law is not related to an idea of a rule of good law, as Posner suggests. Posner maintains that, by interpreting “rule of law” to mean “true law,” Hayek set this concept in opposition to that of “bad law.” Hayek indeed used the expression “true law” with reference to “rule of law,” but his concept is multi-faceted (Zywicki and Sanders 2008). The meaning that he gave to this concept evolved, and it is not necessarily opposed to the modern characterization of it dating from A.V. Dicey’s work onward (Zywicki 2003). “Rule of law,” in Hayekian terms, means (i) the existence of boundaries to government action (Hayek 1944), and (ii) the legislating and enforcing of rules that are general, universally applicable, as well as known and certain (Hayek 1960, 205). Moreover, the most important feature of the rule of law is that it increases the predictability of people’s behavior (Hayek 1973).

In Hayek, the best definition of rule of law comes from comparing this concept with its opposite, the rule of men. In a state under the rule of law, there is minimum arbitrary coercion of man by others, or by the state (Zywicki and Sanders 2008). As argued by T.J. Zywicki and A.B. Sanders (2008), one can understand why, in *Law, Legislation and Liberty*, Hayek argued that the common law system best embodies the rule of law, and that common law best enables spontaneous order. The rule of law is strictly linked with what Hayek posited in “Rules Perception and Intelligibility” concerning the relation between the rules of perception and of human action, and the role of these two levels in enabling agents to form correct expectations about their own and others’ behavior. It is under this definition of the “rule of law” that the judge contributes to the evolution of a set of rules which satisfy the requirements of generality, universality, and certainty, thereby becoming institutions of social order.

Hayek’s Legacy: Toward a Cognitive Law and Economics Approach

The analysis thus far supports Bruce Caldwell’s (2002) conclusion that one of Hayek’s most important legacies is the idea that economics of institutions must go against the disciplinary specialization, dominating social science in the last century. I suggest in this paper that Hayek’s legal theory can furnish important insights for the current economic analysis of law from both methodological and theoretical points of view.

The need for a different approach to law is not new in legal theory. Indeed, since the 1990s, authors like Christine Jolls, Cass R. Sunstein, and Richard Thaler (1998), among others, have questioned the relevance of studying human behavior to develop legal policies. The debate has led to the emergence of what is now known as a “behavioral approach” to law and economics. This approach draws on the tools and theoretical results of behavioral and experimental economics to reinterpret the standard models of law and economics by conducting a more complete analysis of the micro-foundations of human behavior. Scholars of behavioral law and economics believe that this approach can contribute to developing legal theory on a descriptive, normative, and prescriptive level. The original institutional economics stresses the existence of reciprocal causation processes between agents’ behavior and institutions, so that the former gradually changes in reaction to institutional transformation, while

the latter are strongly influenced by shifts in routines or habits (Ambrosino 2006; Hodgson 1993, 1994). Also, this research approach underlines that the inquiry into legal norms and social institutions must be based on a more acceptable theory of human behavior (Hamilton 1932, 85), and it must deal with a more interdisciplinary approach (Brown 2013). In fact, G.M. Hodgson (2009, 159) argues that “to place the explanation of the emergence of law in an evolutionary framework would require that one would address evolutionary theories in psychology that explain the origin and the transmission of particular motivation and deliberation.” A proper theory of law requires an explanation of how a system of complex legal rules may be enforced, and why people often obey laws in the absence of obvious (dis)incentives (Hodgson 2009).

The importance of Hayek's work has been widely recognized in experimental economics (Boettke, Coyne and Leeson 2008; Smith 2005), which is one of the main reference points for development of behavioral law and economics. However, Hayek's contribution is still neglected in the discourse about a new approach to developing modern legal theory. Moreover, his legal theory continues to be highly criticized within the discipline. Original institutional economics, on the other hand, does not consider Hayek's work to be in the tradition of Veblen and Commons, specifically pointing out the differences between Hayek and Commons's views of government intervention and the evolution of institutions (Leathers 1989). Nevertheless, I submit here that Hayek's methodological insights should be of interest both in developing a modern cognitive legal theory and in enriching OIE research.

By contrast, many contemporary economics disciplines recognize the importance of Hayek's ideas. In particular, both cognitive theory of economic institutions (Ambrosino 2006) and cognitive economics (Egidi and Rizzello 2004; Rizzello 1997) stress the importance of Hayek's pioneering contribution to the development of both research fields. The cognitive approach to economic institutions, going back to the contributions of old institutional economics, assumes that actors have imperfect information and that knowledge is dispersed. This echoes Hayek's idea that the emergence of institutions is a bottom-up process (Hodgson 2000, 2003a, 2003b). Moreover, Hayek's view of the role of human cognitive processes in the emergence of behavioral norms has directed some of the research on institutions toward a cognitive multidisciplinary inquiry (Ambrosino 2006).

The cognitive approach to economics focuses on the micro-foundations of human behavior (Camerer, Loewenstein and Prelec 2005). It also stresses the importance of Hayek's preliminary attempt to investigate the complexity of the mind and the role of human cognition in decision-making processes (Egidi and Rizzello 2004). The cognitive approach shares Hayek's contention that a multidisciplinary methodology is needed to investigate complex phenomena (Hayek 1952). Moreover, unlike pure behavioral economics, part of the cognitive approach suggests that multidisciplinary research cannot be reduced to the simple introduction of psychological or neurobiological insights into standard economics. Rather, it must comprise a comprehensive investigative approach aimed at understanding phenomena in their complex entirety, without conflating them into a standard model (Egidi and Rizzello 2004; Spada and Rizzello 2012). It seems possible to point out some relevant

connections between the goals of cognitive economics and original institutional economics. OIE defines economics as the science of human behavior and suggests that it is in need of proper psychological concepts to explain it (Clark 1918). Moreover, the reciprocal influence of institutions and human behavior could be explained by applying the tools of social psychology and other cognitive science (Hodgson 2004; Rutherford 2000).

My findings in this paper make it possible to argue that better understanding of Hayek's legal theory is feasible only if it is considered jointly with his theory of mind and his economic and legal theory. The importance of considering Hayek's work in its totality, as a unified research program, has already been emphasized in various research fields. For example, S.A. Beaulier, P.J. Boettke, and C.J. Coyne (2005) and P.J. Boettke (1999) have argued that Hayek's research program in economics overlapped with his (Hayek's) research in politics and law.¹⁸ Other authors, such as Salvatore Rizzello (1997), Bruce Caldwell (2000), and Steven Horwitz (2000), have discussed the connection between Hayek's economic theory and his contribution to cognitive psychology.

As a preliminary step to inquiry into his legal theory, Hayek's theory of mind – not just his economic theory (Beaulier, Boettke, and Coyne 2005) – highlights the importance of three key interconnected ideas. They play a fundamental role in his economic theory and explain the process through which social norms emerge and agents perceive other people's behavior as conforming to shared rules. These ideas are: (i) the role of idiosyncratic knowledge and the complexity of decision-making; (ii) the rise of social and economic institutions as the outcome of a "bottom-up" process; and (iii) the need for implicit as well as legal institutions in modern society. Beaulier Boettke, and Coyne (2005) emphasize the relevance of similar ideas in Hayek's economic and legal theory. They focus on the role played by the individual's cognitive processes in both economic and legal issues, and argue that Hayek's theory of mind is needed to understand these three ideas properly.

The first idea concerns the role of idiosyncratic and dispersed knowledge in decision-making, and hence the complexity of decision-making processes themselves. This theme (as well as coordination) formed the core of Hayek's works on economics in the 1930s and 1940s (Hayek 1937, 1945). But the problem of knowledge is also crucial when analyzing his theory of mind (Hayek 1952). Every classification is the outcome of a process in which the information that an agent gathers is processed by

¹⁸ The idea of different stages in Hayek's thought has been suggested by many scholars, and has given rise to a broad debate that different and opposed positions co-exist. That debate originates in Hayek's outstanding versatility. His research extends from economics and social philosophy to political science, to legal theory. Thus, many authors find it difficult to consider Hayek's work in its totality. For example, Terence W. Hutchison (1981) distinguishes between two sides of Hayek: the first being influenced by Ludwig von Mises and the second by Karl Popper. Ulrich Witt (1997) underlines that, in Hayek's work, there are two distinct research programs based on different assumptions, perfect knowledge and idiosyncratic knowledge. Steve Fleetwood (1996) finds three different stages in Hayek's work. Boettke (2000, xii), on the contrary, suggests that Hayek's research should be considered in its integrity, in which case it "would radically redirect the enterprise of political economy."

that agent's innate cognitive structure based on the knowledge that he/she has derived from past experiences. Thus, knowledge is one of the main elements involved in the cognitive process of classification and plays an important role in it. It is this knowledge that allows different agents to classify the same stimuli differently, but it is also what enables different agents to recognize others' behavior as corresponding to some implicitly shared norms (Hayek 1952). Moreover, the problems of knowledge in coordination and the complexity of decision-making are also the key issues to address when analyzing the rise of spontaneous social order, norms, and institutions (Hayek 1937, 1960, 1973, 1976, 1979).

As Hayek argued in a 1962 paper, agents analyze dispersed knowledge by means of a meta-conscious cognitive process. This process gives rise to implicit rules of behavior. These behavioral rules are, on one hand, the main tools with which agents interpret and classify other people's behavior as corresponding to shared rules, and, on the other, they can be learned from others through a process of imitation. The imitation of implicit norms of behavior plays a fundamental role in the development of social order, allowing these norms to become stable in a certain social group (Hayek 1967). The relevance of institutions as a tool of spreading dispersed knowledge is also a relevant topic in Veblen (1919). Veblen considers that habits both (i) enable agents to retain dispersed knowledge and (ii) promote the spread of such knowledge among individuals (see also Giddens 1984; Polanyi 1967).

The second idea is that social and economic institutions must be explained as resulting from a "bottom-up" process. Hayek used the term "norm" to denote every type of rule of behavior that spontaneously emerges in the interaction between agents, pursuing their own interests, and the society in which they live. Such norms of behavior arise from an individual's cognitive process of classifying external stimuli. These behavioral norms then became stable routines (rules) if they receive a positive feedback from outside (Hayek 1952). Moreover, norms of this kind can be shared by the social group in which they have emerged through a process of learning-by-imitation (Hayek 1960). Once the rules have become shared values, they constitute the boundaries of individual choices and become the key elements in society's coordination. Furthermore, they can be translated into legal rules, and may also be changed by the legislator whenever he/she considers them no longer coherent with the existing social order.¹⁹ The term "institutions," as with "norms," Hayek refers primarily to any spontaneously emerged and shared rule, shaping the framework in which agents can make their choices. Thus, formal institutions established by the state are obviously institutions in Hayekian terms, though not the only ones.

¹⁹ In Hayek, the legislator should change law only when he/she faces a break in the existing social order. He also considered the evolution of law as a bottom-up process. In OIE, and in Commons in particular, law is much more than the epiphenomenal expression of customs (Commons 1924; Hodgson 2009). While law depends on the spontaneous evolution of customs, it also requires the power and institutions of the state. Moreover, while imitation, in Hayek, is the essential vehicle to learn social rules, in OIE, there is the idea that, once a legal system emerges with a minimal degree of complexity, neither imitation, nor habit or instinct can fully explain the enforcement of intricate and extensive systems of law (Hodgson 2009, 149).

The relationship between cognition, shaping individual behavior, and the rise of norms, according to Hayek, shows that the process by which norms and institutions emerge starts from individual behavior. Both formal and informal institutions are created by a “bottom-up” process. This process is not simply one where the interaction of individuals gradually generates rules or institutions to help coordinate agents’ behavior, thereby producing social order. Rather, this process is a continuous one,²⁰ where agents contribute to shaping norms and institutions, while the latter influence individual behavior (Ambrosino 2006; Hodgson 2000, 2002).

The third idea is that human interactions need institutions and norms. This applies to any kind of interaction – economic, social, or some other type. In some cases, simple cultural structures or implicit and informal rules are sufficient, but legal norms and institutions are often necessary as well (Hayek 1973, 1976, and 1979, for a discussion of the difference between Hayek and OIE and Commons, see Leathers 1989 and Hodgson 2009). The need for institutional or behavioral rules is a consequence of the complexity of human interaction and of the fact that agents possess only idiosyncratic knowledge. Institutions and norms give agents a framework in which they can make their choices (Ambrosino 2006; Hayek 1973, 1976, 1979; Hodgson 2006).

These three ideas suggest that there is a need for a joint analysis of the role and nature of legal norms, on one hand, and of the cognitive micro-foundations of human behavior, on the other. Nevertheless, what Hayek suggested is a kind of inquiry that does not imply the need for a reductionist approach to jointly model the complexity of human cognition and its relationship with social order. Hayek was concerned with the analysis of human action, where a person can be said to choose between various opportunities open to him/her. In most cases, the objects of human action are not “objective facts” of the kind used by natural sciences to build their models (Hayek 1952). Hence, the analysis of social phenomena can be improved only “by the systematic and patient following up of the implications of many people holding certain views” (Hayek 1952, 34). This will yield understanding of “the unintended and often uncomprehended results of the separate and yet interrelated actions of men in society” (Hayek 1952, 34).²¹

An approach, suggesting interaction of different research fields, has already been included in the cognitive approach to economic institutions which examine agents and institutions as part of the same framework (North 2005; Rizzello and Turvani 2000, 2002). In this paper, in particular, I recommend an analysis of this kind to help develop the current approach to law and economics. Posner (2003) suggests that Hayek’s legal theory does not include any insights that may contribute to the development of current research. On the contrary, I claim that Hayek’s theory of mind – considered as the key to interpreting his legal theory – suggests that he still

²⁰ The reciprocal causation process, linking individual behavior and institutions, has been widely investigated in institutional economics (see, for example, Hodgson 2000, 2003a, 2003b).

²¹ See Brown (2013). The author merely points out why OIE also stresses the relevance of new models and tools to investigate economic institutions in the tradition of Veblen and Commons.

has much to teach scholars of modern law and economics. Hayek's work can be considered a pioneering attempt to develop a new approach to law and economics, with the preliminary step being a neurobiological inquiry into the cognitive processes generating human behavior (Ambrosino 2006; Caldwell 2002, 2004). In fact, only when a detailed understanding of such processes is obtained will it be possible to develop normative and predictive models.

Interesting contributions to the development of this kind of cognitive approach to legal theory can be made by cognitive economics. Particularly important insights can be furnished by the sector of that research field now called "neuroeconomics" (Innocenti 2009). This is a new and flourishing approach that seeks to integrate economic theory on decision-making with psychological insights into people's behavior and cognitive neuroscience, which studies the neural functioning of the human brain. Neuroeconomics, therefore, seeks to explain choice-behavior in terms of the human brain by applying synergies of these different research fields (Glimcher et al. 2009). To date, this approach has developed a reductionist methodology by trying to model human behavior on the basis of new neurobiological insights into the functioning of the human brain and the roles played in decision-making by different brain areas (Glimcher 2003). In this sense, neuroeconomics cannot be considered Hayekian in nature. Nevertheless, the relevance of some of its main research programs (for example, trust and reciprocity, reward and uncertainty, and the effects of addiction) to legal theory has been emphasized (Chorvat, McCabe and Smith 2004). This suggests that the neuroeconomics method, although reductionist, could be useful in developing a research approach to law and economics of a Hayekian type in the sense that its first research interest will be a better understanding of the cognitive mechanism defining agents' choices.²²

In recent years, the disciplines of law and economics have shown a growing interest in cognitive neuroscience. Indeed, some interesting and important attempts to apply a neuroeconomic approach to economic analysis of law have been made (Freeman and Goodenough 2009). But applications of this approach refer mainly to judicial decisions and procedural law (Freigenson 2008; Mobbs et al. 2007). A proper cognitive approach to law and economics is still a "work in progress," while the results of such an inquiry remain to be determined.

In this paper, I suggested that developing a proper cognitive approach to law and economics, following a Hayekian "bottom-up" process in the rise of social norms, requires the development of a complete inquiry into better comprehending an individual's mind. The purpose of such an inquiry will be to aid one's understanding of the nature of law, its limits in binding behavior, and how behavior can be effectively changed. On a Hayekian note, only better cognitive knowledge of behavior and reactions to legal provisions can lead to improvements in the drafting and enforcement of law. Such methodological approach to law and institutions seems to be coherent with the OIE tradition. Both disciplines share the aim of investigating

²² The relevance of neuroeconomics and neuroscience to the analysis of economic institutions has been pointed out by OIE (see Brown 2013; Herrmann-Pillath 2009).

human behavior to understand institutions and social norms. The approach I advocated here can also contribute to a research development in the field that is more in line with recent literature (Brown 2013; Herrmann-Pillath 2009).

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