

## The Role of Agents' Propensity toward Conformity and Independence in the Process of Institutional Change

Angela Ambrosino

Università di Torino, [angela.ambrosino@unito.it](mailto:angela.ambrosino@unito.it)

This paper analyses institutional change and Veblen's work (1907, 1914, 1919) under the perspective of cognitive economics. Particularly it focuses on two interesting issues of Veblen's theory of economic change: 1. in Veblen's view habits are both mental habits and behavioral habits and they play a twofold role in economic change because they are particularly relevant both as elements of propensity, and as forces resisting to change. 2 Veblen gives an exhaustive definition of instincts and habits but he does not completely explain the cognitive processes that bring changes and evolution in social habits. He develops an economic theory at the base of which there is an evolutionary view of reality and a deep awareness of the role of the human mind within the decision-making processes of choice. This paper is aimed at analyzing both issues using the interpretive tools offered by psychology and discussing the role of agents psychological propensity toward conformity and independence in explaining institutional change. The central idea is that if we better encompass the theory of conformity and independence developed in psychology (starting from Asch, 1952) in the analysis of economic institutions, we can better explain institutional change. Conformity is the effect of the pressure of social group on agents' behavior. That concept contributes to explain resistance to change. On the other hand, psychology shows that agents are also subject to mechanisms of independence. These are key elements in explaining behavioral change. The analysis of Veblen's instinct-habit concept under conformity-independence perspective shows interesting connections between Veblen and Hayek's ideas of economic change. Hayek's concept of evolution based on psychological and neurobiological aspect, in fact, is a contribution of great significance both in explaining the dual role of habits in institutional change and in understanding individual mechanisms that bring changes in social habits.

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## Introduction

At the end of the nineteenth century, the concept of habit, widely-spread in philosophy, psychology and sociology has also been introduced in economics. It is mainly due to the contribution of Old Institutional School and to Veblen's work in particular.

It seems, therefore, interesting to analyze the role of this concept inside Old Institutional Economics (OIE) thinking, and to shed light on the function of habits in Veblen's theory of institutional and economic change. The analysis proposed here shares the aims and methodology of the cognitive approach to economic institutions, which is aimed at explaining the micro-foundations of economic theory by investigating the functioning of mind and of human brain. Particularly this research approach focuses on the relationship between mental models and economic and social institutions.

To this end, it applies an interdisciplinary approach to the study of topics of the nature and evolution of organizations, institutions, and social norms in a context characterized by structural uncertainty, scarcity and incentives (Innocenti 2009; Ambrosino 2012, 2014, 2016). In this research approach is particularly relevant the contribution made by disciplines such as psychology, philosophy, neurobiology, biology, and artificial intelligence. A proper cognitive inquiry into social norms and institutions, requires a big effort to develop a positive analysis of processes evolution of agents' behavior in real context (Mitchell, 2002a, 2002b, 2003a, 2003b, 2009) in order to point out the reciprocal downward causation processes linking individual behavior and the evolution of institutions (Ambrosino 2006, Hodgson, 2004)<sup>1</sup>.

OIE and Veblen, in particular, are then reconsidered in the light of the contributions made by both part of the New Institutional Economics (NIE) (Rutherford 1994) and cognitive economics. This paper shares what argued by that part of the literature that considers Veblen one of the forerunners of the cognitive approach to economics, due to his awareness of the links between mental mechanisms and the evolution of rules and social norms (Rizzello 2003 Egidi and Rizzello 2004). Such literature also highlights how OIE, in its basic features, has helped to shed light on some aspects reclaimed later by the cognitive economics of institutions. In fact according to OIE

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<sup>1</sup> Cognitive economics of institutions does not coincide with behavioral economic nor with the strand of the New Institutional Economics. Such research approaches share relevant theoretical and methodological tools and partially contribute to the development of the cognitive approach to institutions. Nevertheless cognitive economics has a deeper explanatory scope, it focuses his analysis on a positive level and is aimed at developing an ontology of institutions, leading to definitions and classifications of institutional types, in order to build a theory of institutional change allowing an enhanced understanding of the relationship between agents and institutions (Ambrosino, 2012, 2014, 2016 Ambrosino e Biancone 2013; Mitchell, 2002a, 2002b, 2003a, 2003b, 2009).

economics, as a science that studies human behavior, involves the use of psychological concepts (Clark 1918). The importance that institutions have in framing human behavior stresses the centrality of social psychology in explaining the links between institutions and individual and collective behavior (Rutherford 2000a, Hodgson 2004a). This position seems to anticipate what today assumed by part of the scholars in the discipline: human cognition and evolution are key elements to be explained in economic theory (Egidi and Rizzello 2004). Economic theory focusing on the analysis of agents' behavior, can not help but consider the lessons from psychology and neurobiology.

The analysis of the role of habits in Veblen's theory of economic change suggests two interesting issues. In the first place, according to this author, the presence of habits, as mental habits and habit of behavior, seems to play a dual role in economic change. In fact, they seem to be particularly relevant both as elements of propensity, and as forces of resistance to change (Hodgson 2004a).

Secondly, Veblen provides a complete definition of the concept instinct-habit that is the basis of his theory of economic change, but he focuses on the macro-level analysis and he does not give an equally exhaustive explanation of the mechanisms that take place at individual level and that generate changes and the evolution of social habits.

This work aims at analyzing both issues using some interpretive tools developed in other scientific disciplines. Particularly it will refer to the conformity-independence dichotomy widely investigated by social psychology (Asch, 1952). This type of analysis seems to allow identify a new link between the thought of Veblen and Hayek in explaining the dynamics of economic change. Conformity is a type of social learning that has received considerable attention among social psychologists and human evolutionary ecologists (Efferson et al. 2008). Behavioral and experimental economics increasingly refers to conformity theory. Different nuances of this theory are applied to investigate whether market experience increases the convergence of individual behavior to the neoclassical prediction (Beraldo et al, 2013, Looms et al. 2003), to deal with behavioral research on conformity-seeking behavior and anchoring effects (Meub and Proeger, 2014), to understand processes of endogenous preferences formation (Di Giovinazzo and Naimzada, 2012). Conformity theory is also used to explain why economic agents conform to existing institutions (Dequech, 2013). This literature mainly focuses on the relevance of agents' tendency to standardize their behavior toward a process of social conformity. So conformity theory mainly contributes to explain the existence of self-sustaining social roles and of relevant social resistance to institutional change.

Nevertheless, although conformity theory (Asch, 1952, 1955, 1956) is often interpreted as demonstrating that conformity is fundamental inside group processes, in its first formulation in social psychology (Asch, 1952, 1955, 1956) there was as much concerned with those factors that enabled individuals to resist group pressure. In fact, Asch's theory points out the importance for a

society to foster values of independence in its citizens because that promotes and improves social change.

This paper argues that independence, as the propensity of some agents to be self-assertive, can provide an interesting explanation of the coexistence of opposing forces in the processes of institutional change.

The conformity-independence dichotomy, hence, identifies a possible explanation of the problems suggested by Veblen's theory of institutional change. Such dichotomy seems to provide an interesting explanation for the coexistence of opposing forces in the processes of change. Moreover, conformity and independence allow identifying a possible explanation of the problems suggested by Veblen's theory, in Hayek's theory of institutions, particularly in his idea of evolution, selection, and change. In fact, his concept of evolution based on psychological and neurobiological aspects of human nature is a contribution of great importance both in the explanation of the dual role of habits in the economic change and in understanding the mechanisms that are the basis of the process of evolution of social habits. Finally, this explanation suggests the presence of a close link between Veblen's and Hayek's economic theory, due to their common awareness of the centrality of human behavior in the processes of institutional change. This is the consequence of behavior being the outcome of the interaction between past experience and instincts.

The article is divided into three sections. Section 1 takes into account Veblen's theory of institutional change, highlighting the importance that habits assume in it, both as obstacles preventing change and as elements promoting change. In section 2, these elements are analyzed in the light of the dichotomy between conformity and independence as analytical tools able to explain the ambivalence of Veblen's concept of habit in his theory of economic change and to highlight new elements of continuity and complementarity between Veblen's thought and that of Hayek. The analysis proposed here allows considering conformity and independence as two complementary aspects in the light of Hayek's ideas of evolution, cultural selection, and change. Hayek's contribution seems to take a step further to overcome the Veblen's difficulty of explaining in depth the not conscious processes of behavioral change.

Finally, section 3 presents some conclusive considerations that suggest the possibility of identifying elements of continuity between the OIE, in the Veblenian tradition, and Hayek's economic theory. These elements suggest that a proper cognitive approach to the analysis of economic institutions (Ambrosino, 2006, 2012, 2014, 2016) could give new emphasis to the development of the research in the tradition of the OIE.

## 1. The role of habits in Veblen's theory of economic change

Just in the years in which the debate on the concept of habit prospers, in the United States, Thorstein Veblen builds up his economic theory<sup>2</sup>. He never enters directly in the dispute about the definition of habit, but he is strongly influenced by it. In particular, Veblen went into contact and read authors such as William McDougall, C. Lloyd Morgan, and William James, who today are commonly regarded as forerunners of behaviorist psychology (Reisman 1960, Tilman 1996). The relationship instinct-habit is the theoretical aspect of the work of these scientists that most influences Veblen. But the fact that they do not define precisely these concepts, leads Veblen to feel free to use instinct and habit in an idiosyncratic way to pursue its goals<sup>3</sup>. He puts these ideas into the center of his economic theory (Tilman 1996)<sup>4</sup>. The originality with which Veblen uses these concepts leads him to develop an economic theory in that the explanations of human behavior offered by what will be soon defined as behaviorist psychology are not enough. In the perspective of behavioral psychology, in investigating the process that leads to action as a result of an external stimulus, the focus is not on the mechanisms taking place inside individual's mind. Veblen focuses his analysis on the social level, but he emphasizes the centrality of the role of individuals and their instincts in economic processes. Veblen is not a behaviorist, rather his use of the concepts of instinct and habit

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<sup>2</sup> Part of the authors in OIE (primarily Veblen (1898 , 1909 , 1914), but also Patten (1889 , 1893) , Downey (1910), Fetter (1916)) explain economic phenomena starting from the psychological theory of instinct- habit. However, the psychology of instinct began to fall into decline very soon and other authors (such as Hoxie 1916 Ayers 1918) criticize this theoretical approach and suggest that economics should find its psychological foundation in behavioral psychology which, by analyzing the behavior in an objective way, could finally overcome the introspective analysis and obtain the empirical rigor of the natural sciences (Asso and Fiorito 2004; Rutherford 2000b, Lewin 1996).

<sup>3</sup> Despite that the concept of habit changed over time, it can be said that the scholars of the eighteenth and early nineteenth century generally refers to habit as a relatively broad idea. It was a shared way of thinking that was the basis of intellectual life, morality and actions (Helvetius, 1758; Hegel, 1830; Woodcock, 1980). Since the Nineteenth century, the idea of habit is gradually identified and associated with relatively elementary actions. This identification process is mainly due to the development of European intellectual thought in two directions. On the one hand there are the biological sciences, with particular reference to evolutionary theories and experimental psychology, in which the concept of habit is used to describe behaviors of elementary lower species. In particular, Darwin's work (1859) contribute strengthening the link between habit and elementary behavior, and it promotes the study of this class of phenomena outside of the social sciences, enclosing it within the interests of biological and physical sciences (Thomsom 1968). Secondly, the definition of the concept of habit is widely influenced by the progressive emergence of psychology as a science. Before the nineteenth century, psychology was considered the search field of philosophers employed in investigations without a proper scientific aim. From the last quarter of the nineteenth century, the research on mind processes has gradually achieved more autonomy (Ross 1967); psychology (or the new psychology, as it is often defined) arises and it manifests strong influences arising from the biological sciences.

<sup>4</sup> This choice to originally defining the concepts of instinct and habit, was often the subject of criticism, particularly with respect to the definition the author gives to the first concept. He has often been accused of making an inconsistent and inadequate use of the terms and to apply a "vocabulary in transition", and an archaic use of the terms. In this regard see, among others, Tilman (1996).

is closer to that of the pragmatic philosophers and instinct psychology (Hodgson 2007). Because of his originality with respect to the use of these concepts, Veblen's instinct theory has been criticized by many scholars and considered a normative theory of instincts (Walker, 1977), rather than as a proper theory of instinctive behavior. Veblen's theory is, hence, interpreted as a sort of system of concepts that can be used to assess behavior (Mayberry 1967).

The richness of this author's thought derives by many and varied influences the author has been exposed to. As a student in philosophy, he studied the work of Kant and Hegel, and the American philosophy, which in those years (thanks to the work of William James) was looking for a true psychology to deal with the study of human progress "in the here and now" (Teggart 1932 Daugert 1950). His work, was also influenced by the pragmatism of John Dewey (who he met at the University of Chicago) of who he incorporates some aspects of the description of human nature and conduct, while he does not share the whole theoretical approach (Reisman 1953 , Tilman 1996, Hodgson 1998, 2007). Moreover, Veblen is influenced by the biological principles of Darwin analyzed in line with the work of some cultural anthropologists such as Franz Boas and Edward Tylor, and by other anthropological theories that suggest the plasticity and malleability of the human species. From the latter studies he derived his idea of economics as a theory of cumulative economic growth and of a sequence of institutions (Teggart, 1932, Tilman 1996;). To fully understand the role that the concepts of instinct and habit play in Veblen's thought, it should be noted that he considers (as well as other OIE economists) human behavior being the object of economic science. However, he emphasizes the social nature of his analysis (Chandler 1959; Tilman 1996). Veblen contrary to mainstream neoclassical economics, develops an economic theory at the base of which there is an evolutionary view of reality and a deep awareness of the role of the human mind in decision-making processes (Egidi and Rizzello 2004). Human action is driven by desires that are part of an existing mental structure, which is the result of the interaction between inherited traits, past experience, costumes, and factual circumstances (Leathers, 1990). Veblen believes that neoclassical economics is conventional taxonomic<sup>5</sup>, static and teleological; he suggests that economics can become an evolutionary science if it loses these traits and becomes process-oriented and able to explain the causal relationships as well as change over time. To this end, he recalls (influenced by James (James 1880)) some aspects of Darwinian theory such as the existence of a causal mechanism of evolution that involves variations, inheritance and selection and that can be applied to all types of open evolutionary systems consisting of a variable number of units (Russett 1976, Hodgson 2004, 2007). According to Veblen, economics must be based on a correct idea of human nature. For this reason, economists must necessarily take account of modern psychology and apply tools and methods of

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<sup>5</sup> See Veblen 1919.

evolutionary science (Anderson 1933). Veblen has in mind a less strict psychology than Watson's behaviorism, he is looking for a psychological inquiry able to open new doors to economics, trying to analyze the mechanisms that lead to the evolution and change in individuals, and providing valuable tools for a deeper understanding of economic change at the social level. Veblen's idea of evolution does not imply both the concept of development and that of improvement toward a predetermined state or equilibrium. Indeed, he argues that the evolutionary science allows investigating economic change according to a "scheme of blindly cumulative causation, in which there is no trend, no final term, no consummation" (Veblen, 1907, p. 304). Human being, considered essentially as a set of instincts, is at the center of Thorstein Veblen's economic theory (Veblen 1914). Instincts have a double nature: on the one hand, they are something that defines individual's goals, on the other, they are aspirations that demand to be met (Anderson 1933). Human action appears to be driven by two factors: instincts and context conditions. Instincts place goals for individual activity while the latter, being subject to an ongoing process of change, implies cognitive skills and experience (Veblen 1914, Hodgson 2004a). So instincts can be considered as the psychological matrix of social habits.

In Veblen's theory habits are rules of action, repeated behavioral rules that in the long run may adapt to the changing environment (Hodgson 2004a). Instincts are the main driver of human action, however, their influence is highly unpredictable. Their effect, in fact, depends greatly on specific circumstances and preexisting habits (Hodgson 2004a). Understanding which of individuals' instincts are included in the composition of a habit, is an issue closely connected with the process of selective adaptation to environmental and context change in that instincts are involved (Harris 1953). Instincts as individual proclivities show a capacity to adapt to changing circumstances. It is not the same for habits. The latter, as mental habits and habitual behaviors, are considered in their social dimension. They are in close relationship with the cultural context, and although able to slow changes over time, they put up a strong resistance to change. This resistance is stronger the more entrenched over time are habits<sup>6</sup> (Waller 1988). Habits manifest a dual institutional nature: they are institutions because they are rooted and stable customs and conventions to be "insensitive to the demands of the instincts" (Anderson 1933, p. 604), moreover they are also suitable for being transposed into written rules and established social institutions. Habits and institutions are, hence, closely and mutually connected. The firsts, in fact, lead to the emergence of the seconds and they are embedded in them. On the other hand, institutions in their evolution bring to a slow change of habits. Both habits and institutions manifest two main features: they present a relative stability and a marked resistance to change: "institutions are products of the past process, are adapted to past circumstances, and are therefore never in full accord with the requirements of the present... At the

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<sup>6</sup> Note that the concept of habit used by Veblen is perfectly consistent with the definition given by Durkheim (1913), Weber and also Pierce. See in this regard W.T. Waller Jr. (1988).

same time, men's present habits of thought tend to persist indefinitely, except as circumstances enforce change. These institutions which have so been handed down, these habits of thought, points of view, mental attitudes and aptitudes, .... are therefore themselves a conservative factor. This is the factor of social inertia, psychological inertia, conservatism" (Veblen 1899, p. 191). In Veblen's thought both habits and institutions are subjects and objects of change and selection, but he fails to explain the sources and processes of that evolution (Hodgson 2004b): "The progress which has been and is being made in human institutions and in human character may be set down, broadly, to a natural selection of the fittest habits of thought and to a process of enforced adaptation of individuals to an environment which has progressively changed with the growth of community and with the changing institutions under which men have lived. Institutions are not only themselves the result of selective and adaptive process which shape the prevailing or dominant types of spiritual attitude and aptitudes; they are at the same time special methods of life and human relations, and therefore in their turn factors of selection. So that the changing institutions in their turn make for a further selection of individuals endowed with the fittest temperament, and a further adaptation of individual temperament and habits to the changing environment through the formation of new institutions" (Veblen 1899, p. 188). Veblen explains that the close link between habits and institutions and the presence of aspects of stability and resistance to change are the cause of slow process of change in human behavior (Anderson 1933, Tilman 1992). The explanation of the economic life must be sought not so much in the aspirations and needs of individuals as in the nature of the institutions. From the above, it seems possible to highlight certain fundamental features of Veblen's thought: he considers economics to be the study of a dynamic system characterized by cumulative causation, which focuses on continuous processes of change in which human behavior is driven by the institutions, rather than just on static equilibrium (Dennett 1995). Institutions are the formal transposition of habits (understood as habits of thought and repetitive behaviors) (Veblen 1899). Economic change is intrinsically linked to institutional change, it is characterized by the coexistence of two forces that move in the opposite direction: resistance to change that is part of the nature of habits and institutions, and push for change, given by the evolving nature of the economic system.

As already pointed out, Veblen fails to give an explanation of the origins of institutional change and the evolution of habits (Hodgson 2004b). In fact, he clarifies the relationship between instinct and habit (that shows elements of reciprocal influence (Hodgson 2004a)) and their role in the processes of economic change. However, he fails to explain how instincts may change over time. This lack of explanation seems to stem from the difficulties he encounters in completely accounting the existence in both instincts both habits of resistance forces and elements that allow change.

The evolutionary nature of Veblen's economic theory indicates that change is part of the dynamic



structure of economic and social systems. Change is therefore a process of endogenous type. However, Veblen does not seem to provide elements that lead to understand the presence and action of the elements of resistance and push for change (Ambrosino 2006).

## **2. Conformity and independence in institutional change: elements of contact between the thought of Veblen and Hayek**

This section investigates some theoretical contributions -coming from psychology to analyze the evolution of economic system- that contribute improving the path of inquiry indicated by Veblen. It seems that a step forward in the economic analysis can be accomplished by introducing two concepts derived from social psychology: conformity and independence. The use of these two analytical tools could help to explain the polarity between resistance and willingness to change, including the tendency towards' adaptation to the environment and to safeguard the internal integrity of Veblen's habits and institutions.

Conformity is a type of social learning that receives considerable attention among social psychologists and evolutionary ecologists (Efferson et al. 2008). Behavioral and experimental economics increasingly refers to conformity theory. Different nuances of this theory are applied to investigate whether market experience increases the convergence of individual behavior to the neoclassical prediction (Beraldo et al, 2013, Looms et al. 2003), to deal with behavioral research on conformity-seeking behavior and anchoring effects (Meub and Proeger, 2014), to understand endogenous preferences formation (Di Giovinazzo and Naimzada, 2012). Conformity theory is also used to explain why economic agents conform to existing institutions (Dequech, 2013). This literature mainly focuses on the relevance of agents' tendency to standardize their behavior toward a process of social conformity. So conformity theory, mainly, contributes to explain the existence of self-sustaining social roles and of relevant social resistance to institutional change.

Conformity refers to the act of changing one's behavior to match the responses of others (Cialdini and Goldstein, 2004). The behavior and judgment of other people provide information on the normal and expected behavior in any particular circumstance and what is typically approved or disapproved in a specific social context. Learning processes strengthen conformity among agents, i.e. social norms selectively reinforce certain behaviors. Successful behavioral patterns are reinforced while errors call for adjustments of behavior (Klucharev et al. 2009). Most of social psychology investigations on conformity focus of agents proclivity towards conformity without investigating the role of independence in social interactions. Whereas psychological studies emphasize the rewarding value of social approval or affiliation with others (Cialdini and Goldstein, 2004), behavioral

economics focuses more on the effects of punishment for violation of the norm (Fehr and Fischbacher, 2004)<sup>7</sup>. But in any case, the idea of a diffuse proclivity toward conformity is not questioned. Although conformity theory (Asch, 1952, 1955, 1956) is often interpreted as demonstrating that conformity is fundamental inside group processes, in its first formulation in social psychology (Asch, 1952, 1955, 1956) there was as much concerned with those factors that enabled individuals to resist group pressure. In fact, Asch's theory points out the importance for a society to foster values of independence in its citizens because they promote social change. This is not to say that Asch minimizes the forces of conformity or loss of independence. Simply he doubted that it predominates social life. He argues that agents do not accept assertion about socially significant matters uncritically. The meaning of an assertion changes for individuals depending on its relationship to the source. It was the changed meaning of the stimulus that was responsible for the changed interpretation. Asch suggested that concentration on conformity in social psychology result in the neglect of the importance of stimulus conditions (Friend et al. 1990).

Hence, the debate opened in social psychology about the dichotomy between conformity and independence points out that shared rules of behavior arise mainly through social learning processes in which the feedback obtained by actions reinforces the settled rule of behavior. But this does not imply that things cannot change. Agents show independence. Changes in external stimuli can bring to different interpretations and to new rules of behavior that can be in conflict with the previously settled ones. Agents can break with a habit of behavior and start a slow process of institutional changes.

The usefulness of these concepts (conformity and independence) in understanding the evolution of social habits and institutions and the fundamental role played by the brain and individual cognitive mechanisms in evolutionary processes seems all the more evident if we analyze the contribution of Friedrich August von Hayek, one of the scholars who most contribute developing cognitive economics. He manages to condense in his economic theory, many different aspects of analysis of economic change. Hayek brings economics at a turning point anchoring processes of change to individual choices and to cognitive mechanisms that underpin human action.

The paper analyses the social dichotomy conformity-independence proposed by social psychology in the light of Hayek's idea of evolution, selection, and change. Hayek's concept of evolution, in fact, is based on a psychological and neurobiological analysis. That makes Hayek's theory of institutional change interesting and logically consistent with the socio-psychological literature cited above. This

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<sup>7</sup> Economic theory and behavioral economics apply conformity theory to investigate agents' economic behavior. These research approaches basically focus on the main results obtained by social psychology and, hence, they underestimate the relevance of independence tendency.

type of analysis highlights important elements of continuity between the work of Veblen and Hayek's.

Hayek refers to a concept of evolution whose goal is essentially in understanding how learned rules, rules of conduct, habits, routines, and institutions emerge from social interaction and evolve (Caldwell 2000, Witt 2000). He, as well as Veblen, emphasizes that evolution is not a process of teleological type and that it does not involve necessarily an improvement nor it necessarily moves towards a predetermined setting (Caldwell, 2000). Even if the evolution involves a greater amount of knowledge does not necessarily mean that "the new state [of affairs] will give us more satisfaction than the old" (Hayek 1960, p. 41)<sup>8</sup>.

According to Hayek, rules, habits, routines, and institutions emerge to overcome the cognitive limitations that individuals encounter in dealing with the complexity of the world. This implies that in his idea of evolution of human mind plays a crucial role. Hayek's model of mind, described in *The Sensory Order* (Hayek 1952a), is essential to understand how human mind contributes to cultural evolution

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 the past experience agents derive from acting in the external world. The classification process is contextual and complex. The order attributed to each particular input depends also on all the other inputs coming in at the same time so that there is not a 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 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. Agents are heterogeneous Also past experiences are unique to individuals, and they play an important role in the perception and classification process.

The classification process is adaptive in fact it is subject to changes due to processes of evolution in forming individual's set of neural connections and to changes in life experiences. "Map" is the term Hayek used to define the system of neural connections that mind creates over an individual's lifespan. 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, individual's mind is able

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<sup>8</sup> Many authors including Leathers (1990) are of a different opinion. According to this author, contrary to what happens in Veblen's concept of evolution, the outcome of Hayek's evolutionary process would be deterministic and brings to emergence of efficient rules.

to maintain and continuously update the mental model of the environment as he has experienced. This mechanism allows Hayek to explain how the brain can ensure complementarity between its propensity towards adaptation to the environment and tendency to preserve its internal integrity. What argued so far, seems consistent with the psychological dichotomy between conformity and independence.

Conformity manifests its power in the evolution of new neural circuits in the brain it. The latter, in fact, are nothing more than the result of feedback processes between sensory responses and pre-existing mental schemes that tend to interpret external stimuli according to path-dependent dynamic. Habits are the result of such processes. Every time agents face situations similar to other yet experienced they repeat the same interpretative process and perform the same behavioral rule. That repeated behavior reinforces itself as far as agents obtain a positive feedback from the external world. In Hayek's theory, once a routine (or habit of behavior) is formed, it can be defined an institution in the sense that it becomes a shared rule of behavior setting individual action. Social interaction is the mechanism that allows the spread of such rules of behavior that become social rules by a process of social learning (Bandura, 1967) in that conformity can take place (Friend et al. 1999). As far as agents obtain a positive feedback from their action, a particular rule of behavior (habit) reinforces itself and agents resist to change their habit also when facing new circumstances (Ambrosino 2012, 2014).

Independence emerges because, in Hayek's model of mind, neuronal structures built in the past to interpret certain circumstances show the ability to move toward to new configurations in reaction to changes in the environment or in the context (Rizzello 2004). Moreover, a negative feedback is required to start a slow process of changes in behavioral rules. Because agents are heterogeneous, in any new circumstance there could be some subjects that do not follow the established and shared behavioral rule. External stimuli can be detected as different and, hence, they will be interpreted differently. Their innovative behavior can be the starting point of a slow process of change.

Hayek's theory of mind in this context has an another important meaning: this author, in fact, provides an additional contribution that allows finding an explanation for the difficulties Veblen encountered in giving a deep explanation of changes in habits. Hayek does not make direct reference to the concept of habit, as defined by OIE. But he explains that while it is not possible to completely understand our habitual behavior and its changes, we can get how our brain operates (Caldwell 2000). In Hayek's words the reason is that: "any apparatus of classification would always have possessed a degree of complexity greater than any one of the different things it classifies; and if it is correct it would follow that it is impossible that our brain should ever be able to produce a complete explanation (as distinguished from a mere explanation of the principle) of the particular ways in

which it itself classifies external stimuli” (Hayek 1979, [1952]: 86).

For this same reason, if we consider the sensory order as the map of the relationships between classes of events in the environment and their mental representation, we can understand how it works, but we will never be able to dig deep until we can get a detailed explanation so to describe what specific sequence of neuronal connections or which given mental event takes place when a specific external stimulus is classified (Hayek 1942, Hayek 1952a).

### **Concluding remarks**

This paper was aimed at highlighting the modernity and the relevance of Veblen’s contribution to the current analysis of economic institutions. Numerous research areas acknowledge the emphasis Veblen gives to the need of an economic theory grounded on a robust psychological theory. What argued here suggests that Veblen’s advocacy for an evolutionary theory of institutional change could obtain new strength with the contribution of the research tools and methods of the cognitive economics of institutions.

Veblen’s discussion of the role of habits in economic change and of their interaction with social institutions, suggests exciting points of contact with the research on economic institutions recently developed by cognitive economics (Ambrosino 2006, 2012, 2014). The cognitive approach to institutions, in facts, investigating the micro-foundations of agent’s behavior that determine the rise of shared social norms, applies a multidisciplinary approach that has interesting point of contact with the OIE, in the tradition of Veblen (Stainfield, 1999, Groenewegen et al., 1995, Hodgson, 2009, Ambrosino 2016).

The paper, hence, analyses Veblen's theory of economic change under the perspective of contributions coming from other disciplines, and particularly from social- psychology. The paper offers a possible explanation of Veblen’s theory of economic change by introducing Asch’s psychological theory of conformity (1951, 1952, 1955, 1956). The dichotomy between conformity and independence in agent’s behavior can contribute to explain the coexistence of forces of resistance and forces pushing change in Veblen’s theory. Moreover, the proposed analysis points some relevant points of contact between Veblen’s theory of economic change and Hayek’s research on evolutionary processes.

The concept of habit used by OIE scholars, and particularly by Veblen in the turn of the nineteenth and the twentieth century, is rooted in the psychology of the time.

Veblen gives habits a prominent role in his economic theory and emphasizes their dual role as

elements of both resistance and pressure in economic change. Habits arise and change over time because agents and their instincts also change. They are rules of behavior that develop over agents' conscience. Here, the dichotomy between conformity and independence in psychology is proposed as a useful tool for understanding role, nature, and evolution of habits. These same concepts apply to Hayek's theory of mind. They allow explaining how human cognition is able to overcome its tendency to resist change - due to the presence of preexisting neural structures- pushing toward change. That push comes from the mental ability to interpret new external stimuli and adapt behavior to environmental changes.

Hayek' theory, focusing on the individual and on the mechanisms through which agents acquire knowledge, adds important elements to Veblen's contribution. Particularly Hayek succeeds in explaining why cognitive processes that occur at deeper levels of the mind cannot be explained by the mind itself.

If we consider the complementarity between the idea of the OIE (in Veblen's tradition) that economics must be grounded on a robust psychological theory and Hayek's study of individuals' cognitive processes, then it is possible to identify a theoretical path of inquiry in which the focus shifts from the analysis of the social dimension to the individual one. Such new path of economic inquiry could improve the tools available to current research on institutions in the direction advocated by the OIE by increasing the explicative power of heterodox models of institutional change under a perspective of cognitive economics. This kind of analysis implies, as suggested by Hodgson (2007), the development of a new formulation of the micro-macro relationship involving interactions between heterogeneous agents and focusing on the emergent properties of this interaction at the macro level.

The centrality of the role of agents and of the cognitive dimension in OIE research, along with the rejection of the hypothesis of perfect rationality are the aspects that create a relationship of continuity and complementarity among the OIE, in its Veblenian setting, Hayek's economic theory and that part of cognitive economics that develops the analysis of institutions according to a cognitive-institutional approach (Ambrosino 2006, 2012, 2014).

What argued in this paper, finally, emphasizes the importance of the economic theory of institutions of a research method grounded in an understanding of the literature of OIE and cognitive economics, that uses other interdisciplinary tools to build a consistent alternative to the existing theory.

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