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THE TRANSFORMATION OF CULTURE AND THE CULTURE OF TRANSFORMATION

Horaţiu Şoim
Western University Vasile Goldiş, Faculty of Economic Science, Arad, Romania

Andrei Anghelina
Western University Vasile Goldiş, Faculty of Economic Science, Arad, Romania

Imbrescu Ion
Western University, Faculty of Economic Science, Timişoara, Romania

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Abstract

An undervalued ingredient of the economic theory in the past, culture, became in the last time a very important element for understanding economic phenomena. Culture establish the thinking and behavioural patterns of the individual, leaving its imprint on the way the society is functioning. In this paper we analyze the main causes and mechanism of cultural transformation. Our approach of cultural transformation is given by evolutionism. The analogy with genetic transmition of traits – by introducing the concept of - "meme" – *allow the study of the way the culture is transmitted and changed by a process of natural and/or artificial selection. The proposed evolution is rather Lamarckian (the inheritance of aquired traits) than Darwinian. Anticipated by Alvin Toffler's* "Future shock", *change became the only permanent thing, the agents' efficiency and survival depending on its capability for change. A* "*culture of transformation*" *apears to be requisite. It has the special quality of being a result of the cultural transformation and to facilitate it. At the organizational level the* "*culture of transformation*" *is reflected by elements that foster or reduce the resistance to change and increse the adaptability to the environment facilitating the change management.*

1. Introduction

An undervalued ingredient of the economic theory in the past, culture became in the last time a very important element for understanding economic phenomena. Defined by its main elements – values, norms, language – culture comes along an influences the evolution of man from the moment he became a thinking being. Culture establish the acting and being frame of the individual, his thinking and behavioural patterns.
The culture-society relationship is doublesided. The economic and social evolution has its reflection and often the source in cultural evolution. By its ubiquity in the economic and social, culture leaves its imprint on the the way the society is functioning.

In this paper we analyze the main causes and mechanism of cultural transformation both at the individual level – changing "*mental models*" and at the colective level – changing "*institutions*".

An approach of cultural transformation is given by evolutionism. Terms as evolutionary psychology, sociobiology, and even evolutionary psychology are common places of contemporary science. Used for the first time in biology, evolutionism prove to be a useful tool for economics. The analogy with genetic transmition of traits – by introducing the concept of - "meme" - allow the study of the way the culture is transmitted and changed by a process of natural or artificial selection, both at the individual an organizational level, and its evolution in a community. The proposed evolution is rather Lamarckian (the inheritance of aquired traits) than Darwinian. It is ephasized the

phylogenetic characteristic of cultural evolution, proposed by the New Institutional Economics.

One of the most pregnant characteristic of modern society is the change. Anticipated by Alvin Toffler's "Future shock", change became the only permanent thing. The efficiency and survival in a more and more competitive world seems to depend on the capability for change. A "culture of transformation" apears to be requisite. It can emanate from an internal pressure for change from the environment, various "formulas" for change can become step by step part of the culture, or from the contact with other cultures. This "culture of transformation" has the special quality of being a result of the cultural transformation and to facilitate this transformation.

The "culture of transformation" find out its practical utility at the organizational level. Organizational culture mai include elements that foster change, reduce the resistance to change and increse the adaptability to environment. The change management can increase its efficacy and efficiency by facilitating and using a "culture of transformation"

In the second part are defined the concepts we use in the paper – culture, evolutionism, mental models, institutions, meme, etc.

In the third part are presented the main mechanism through which culture changes.

In the fouth part we use the evolutionary approach to the cultural transformation process and place the concept of „culture of transformation" in this context.

Conclusion are presented in the fifth part.

2. Theoretical backrounds

2.1 Culture. National and organizational culture

Defining culture isn't an easy task. Culture can be defined as the combination of underlying assumptions, beliefs, values and behaviors commonly believed to determine success/viability in a given social context. According to *The American Heritage Dictionary (2000) c*ulture represents "the totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought [...] the predominating attitudes and behavior that characterize the functioning of a group or organization". In other words this concept covers knowledge, beliefs, values and rules that exist in a society. It doesn't matter if these knowledge or beliefs are really true. They shape the perception of the reality and thus determine the human behavior. Social anthropology defines culture as the set of patterns of thinking, feeling and acting shared by the members of a community. The term culture encompass not only the reality and shared values but also the shared expectation regarding the behavior of the members of society. If these expectations are infriged the society responds with punishments.

One of the main element of culture is represented by values. Values are "collective conceptions of what is considered good, desireable and proper – or bad, undesireable, and improper – in a culture." [Schaefer, 1986: p. 67] They establish the shared standards for what is considered fair and desireable. The value system of a culture explain in part the main rapports in society, the psychological traits of individuals and of the nation as a whole, and even the functioning of the economy in as much as it shape the goals and the means of the people. In every society or culture there is a core of values and a mentality, system of cultural norms, built on this core, that mould human behavior.

From the point of view of economics, culture is a complex of factors that are specific to the economic environment in a country and are the result mainly from a evolution in time – formal and informal norms, values and beliefs, artifacts. These can be seriousness in work, contract enforcement, value of free time, the role of money in interpersonal

relationships, risk taking, etc.. The aquire of the values specific to a culture is made by socialization, socio-cultural integration. Thrain Eggertsson defines culture "as a cluster of analytic models which the members of a community share". [Eggertsson, 1998: p.2] People use these models, analyitic as Eggertsson names them, or mental as are named by North, to perceive reality and to "build" their behaviour. It can be seen that people who share mental models have common traits regarding values and behaviors. It is about the characteristics „in the form of rules guiding the mutual relation among individuals which are not innate but learnt" [Hayek, F.A., 1988: p.25].

A model of culture was proposed by Trompenaars and Hempden-Turner. Culture consists from a set of three concentric layers:
1. the innermost layer - basic assumptions, represents the core assumptions of what life is, assumptions about how to handle everyday problems that have become self-evident. 2. the second inner layer - norms and values. Norms are "the mutual sense what is right and wrong" while values represent the "definition of what is good and bad"
3. the outer layer - artifacts and products, is the most explicit of all layers: including language and food, architecture and style etc. [Trompenaars Fons and Hempden Turner, 1997:22].

Culture can be analyzed both at the macro level – national culture and at the micro level – organizational culture. Organizational culture is difficult to define but very important for the succes of an organization. It [...] includes values, written and unwritten rules, formale and informal norms, desireable and forbbiden actions at the organizational level. All these elements shape the human behaviours, influence the way they interact and hence the effectiveness and efficiency of the organization. [Şoim &Anghel, 2003: p. 140]. An important feature of organizational culture is it's stability, the widespread resistance to change. The reasons are that cultural traits are integrated – they are ingrained in the habits of people, and intercorrelated – it is hard to change one trait without making pressures for other changes. Organizational culture dimensions reffers to regularities in perceptions, attitudes, and behaviors of peoples.

2.2 Mental models and institutions

Mental models are cognitive aspects of the social norms. They are "internal representations that individual cognitive systems create to interpret the environment". [North & Denzau, 1994: p. 2] Recreation inside the human mind of reality is done through mental models. These mental models express the beliefs the members of of a cultural area shares. They can be found in habits, norms, rules that help the individual to perceive the reality and to decide. "Mental models, institutions and ideologies are all a part of the process by which human beings interpret and order the enviroment". [North & Denzau, 1994: p. 11] At the comunity level these behavioural regularities appear as institutions. Mental models and institutions represent two approaches, from individual level and collective level, on the same problem – the human behavior. From the individual point of view we see mental models – habits of thought; from the collective point of view we see institutions - behavior regularities at the comunity level.

An important problem is to find out how these mental models are changing and diffused in an cultural area, in other words how institutions evolve. The process by which institutions are born, change and dissapear because of individuals' actions moulding in turn their behaviour is in fact the economic evolution. This is a continuous, cumulative, and coherent process as Thorstein Veblen emphasized: "Like all human culture this material civilisation is a scheme of institutions – institutional fabric and institutional growth. But institutions are an outgrowth of habit. The growth of culture is a cumulative sequence of

habituation, and the ways and means of it are the habitual response of human nature to exigencies that vary continuously, cumulatively, but with something of a consistent sequence in the cumulative variations that so go forward, - continuously, because each new move creates a new situation wich induces a further new variation in the habitual manner of response; cumulatively, because each new situation is a variation of what has gone before it and embodies as causal factors all that has been effected by what went before; consistently, because the underlying traits of human nature (propensities, aptitudes, and what not) by force of which the response takes place, and on the ground of which the habituation takes effect, remain substantially unchanged". [Veblen Thorstein, 1993: p. 165].

In analysing of institutions as endogeneous variables, institutional constraints are seen as the result of peoples efforts to optimize. Institutional evolution of an economy can be explain as the result of individual choices. Once the institutional environment is established it becomes a set of constraints for short-term individual choices, and reaching a long-term optimum equilibrium. Thus the evolution of mental models and institutions has a phylogenetic character their transformation being more than a adaptation to some static constraints: the evolution of constraints themselves.

2.3 Elements of evolutionism

2.3.1 Brief history

The idea that beings actually evolve, despite its large acknowledgement today, is not old. The fixism, the idea that all being were created and they are not transforming at all during the history was dominant till the eighteen century. In fact that century was crucial in this respect by imposing, transformism, the idea that beings evolve as species. The following century was no less important; transformism became widely accepted and the main features of the transformation mechanism was discovered. The main names linked with this developments are Lamarck and Darwin. The former put the basis of the idea of transformation and the mechanism by which the traits of a species are transmitted. His ideas were expresed in his „laws".

The first Lamark's law is known as „the function creates the organ" – „In any animal, who are not beyond the limit of his development, a more frequent and continuous use of any organ gradually strengthens, develops and enlarges that organ, and gives it a power proportional to the lengh of time it has been so used; while the permanent disuse of any organ imperceptibly weakens and deteriorates it, and progressively diminishes its functional capacity, until it finally disappers." [Buican Denis, 1999: p. 16].

The second Lamark's law - „heredity of aquired traits" - „all the acquisitions or losses wrought by nature on individuals, through the influence of the enviroment in which their race has long been placed, and hence through the influence of the predominant use or permanent disuse of any organ; all these are preserved by reproduction to the new individuals wich arise, provided that the acquired modifications are common to both sexes, or at least to the individuals which produce the young." [Buican Denis, 1999: p. 16]

Despite their lack of precision and of a strong empirical material, the Lamarck's ideas were a huge step for evolutionism and set the stage for Darwin. Under the influence of these ideas, of Herbert Spencer's „survival of the fittest", and of Thomas Malthus's contradiction between the „geometrical progresion" of the beings spreading and the „arithmetical progression" of food base, Darwin proposed one of the most ambitious scientific theory – evolutionism based on natural selection. The esence of this theory is the genetic variability of the individuals from a species and the selection of favourable

variations in a given environment. We have to emphasize that the transmission of the characters are genetic, and thus is rejected the „eredity of aquired characteristics". This observation is important because we can distinguish between phylogenetic and ontogenetic evolution, of particular importance in other sciences that use the evolutionary approach.[1]

2.3.2 Evolutionary mechanism in economics

The evolutionary economics, the theory that applies the mechanism of evolution to economic phenomena, is not an old movement, even if there were many attempts to use the Darwin's theory in economics. One of the firsts economists that make the remark that the economic process has an evolutionary flavour is Thorstein Veblen „The economic life history of the individual is a cummulative process that goes on, both the agent and his environment being at any point the outcome of the past processes." [Veblen, 1998: p. 411]

Another step on the way toward an evolutionary economics was taken by Armen Alchian. [Alchian, 1950] He had to face the increasing criticism regarding the rationality of the human actor. In response Alchian proposed the idea that competition on the market can be viewed as the biological competition, in which the firms have to pass a survival test – tha capability of the firm to make profit. This mechanism of natural selection eliminate firms that do not maximize the profit replacing thus the necesity for rationality and maximizing behavior. This argument is refined by Harold Demsetz. "[…] there is a process at work - natural selection – that determines which business decision lead to viable outcomes and which do not. […] the filter that is used by the evolutionary process is […] whether decisions result in positive profit." Moreover "decisions that survive this filter are disseminated through the economy by the imitative effort of other firms." [Demsetz, 1996: p. 485]

The evolutionary approach reaches a new strenght with the works of Richard Nelson and Sydney Winter. They have defined the concepts of ability and routine in order to describe the way an individual decides and an organization is functioning. The ‚skill' is „a capability for a smooth sequence of coordinated behavior that is ordinarily effective relative to its objectives, given the context in whitch is normally occurs." [Nelson & Winter,1982: p. 73]. The importance of these skills is emphasized by the the opinion of many philosophers and psychologists who characterized "habits" as being "a second nature". The concept of routine is that of a repetitive sequence of activities that can be accomplished without dificulties in an organization. It can be seen as organizational memory. Making an analogy we can say that „Routines are the skills of an organization." [Nelson & Winter ,1982: p. 124].

3. Method and results

3.1 Cultural evolution

The cultural evolution takes into account the transformation of the elements that define culture. If we consider a cultural inventory at time t_0 that includes all the values, languages, beliefs, practices, edifices, methods, tools, myths, music, art, and so forth, that

[1] Hodgson define phylogeny as „the complete and ongoing evolution of a population, including changes in its composition and that of its gene pool" and ontogeny as „the development of a particular organism from a set of given and unchanging genes". In Hodgson opinion „genes represent a given set of [...] developmental possibilities". [Hodgson Geoffrey, 1993: p. 40]

compose a culture, we can see that over time this inventory changes: some of our items disappear, some multiply, some merge, some change, and some are completely new.

But how does culture evolve? What are the mechanisms that can account for its stability and evolution. For this we need to explain how culture is transmitted. The individual learn its culture from its environment - first from its family, later from its social relationships, and the social environment, in particular the media, politics and its professional life. Cultural transfer can be personal (family, friends) or impersonal (media). Undoubtedly, television and cinema, the Internet, changes in political structure and international business expose us everyday to new cultures, values and attitudes, whether or not actively perceived by us. New forms of communication have brought the vision of a "global village" and "globalization", not only of business and finance, but also of culture.

We can make an analogy between cultural transmission and genetic transmission. Richard Dawkins one of the main theorist in this matter suggests that as in the case of language „Fassions in dress and diet, ceremonies and customs, art and architecture, engineering and technology, all evolve in historical time in a way that looks like highly speeded up generic evolution, but has really nothing to do with genetic evolution. As in genetic evolution though, the change may be progressive." [Dawkins Richard, 1989**:** p. 190]. It means that cultural change proceeds through a process that involves variation and selection even it is not similar with biological natural selection. This opinion is shared by Richard Nelson who accepts a form of evolution of culture but "doubts that the processes Darwin put forth as driving biological evolution also provide a plausible theoretical framework for analysis of the evolution of human culture." [Nelson, 2005: p. 1]. Nonetheless the cultural transformation has certain evolutionary features, even only some of these fit the Darwinian theory.[2] One example is the passing on of acquired characteristics that was denied by Darwin but sustained by Lamarck. On the other hand cultural evolution is not only „blind" variation and selection. There are also elements of reason and purposeful action in the change of cultural traits. Thus the natural selection and reason works toghether toward changing culture. As Friedrich Hayek puts it "cultural evolution is not the result of human reason consciously building institutions, but a process in which culture and reason developed concurrently … . It is probably no more justified to claim that thinking man has created his culture than that culture created his reason" [Hayek, F.A., 1979**:** p. 155].

3.2 Memes and the cultural evolution

Cultural evolution needs, in order to apply the Darwinian theory, an equivalent of genes. These are the memes, the units of cultural evolution, a culturaly-shared idea, concept introduced by Richard Dawkins.[3] Dawkins also proposed treating of elements of the society involved in the cultural evolutionary process as "vehicles" for those memes, in the same sense that phenotypes are vehicles for genes. According to the definition given in the Journal of Memetics the meme is an information pattern, held in an individual's memory, which is capable of being copied to another individual's memory. In this respect memetics is the theoretical and empirical science that studies the replication, spread and

[2] In anthropology, a number of writers have proposed that the culture and social structure of the societies they have been studying need to be understood as the result of a process of variation, selective retention based on the contribution of different traits to individual and group survival [Nelson, 2005: p. 5]

[3] Richard Dawkins „The new soup is the soup of human culture. We need a name for the new replicator, a noun that conveys the idea of a unit of cultural transmission, or a unit of imitation. „Mimeme" comes from a suitable Greek root, but i want a monosyllable that sounds a bit like „gene". I hope my classicist friends will forgive me if I abbreviate mimeme to meme." [Dawkins,1989: p. 192]

evolution of memes. [Journal of Memetics, 2005: p. 2] Memes are a replicators, similar to genes, units of information with the ability to reproduce themselves, memetics being seen as a general theory of cultural replicators. The propagation of memes in the meme pool through the process of imitation – a brain to brain propagation, looks very simmilar to the propagation of genes in the gene pool - a body to body propagation. [Dawkins Richard, 1989**:** p. 192].

„Imitation, in the broad sense, is how memes can replicate. But just as not all genes that can replicate do so successfully, so some memes are more successful in the meme-pool than others. This is the analogue of natural selection. [...] particular examples of qualities that make for high survival value among memes are: longevity, fecundity, and copying-fidelity. [Dawkins Richard, 1989: p. 194]. Longevity is important because the longer any instance of the meme survives, the more copies can be made of it. Fecundity is important because the faster the rate of copying, the more the meme will spread. Copying-fidelity is important because the more faithful the copy, the more will remain of the initial meme after several rounds of copying.

The memetic life-cycle consists of 4 stages that together determine the meme's fitness:

1) assimilation by an individual, who thereby becomes a host of the meme;

2) retention in that individual's memory;

3) expression by the individual in language, behavior or another form that can be perceived by others;

4) transmission of the thus created message or meme vehicle to one or more other individuals. This last stage is followed again by stage 1, thus closing the replication circle. At each stage there is selection, meaning that some memes will be eliminated/transformed. [Journal of Memetics, 2005: p. 7]

Memes are useful for analysing cultural evolution because cultural traits can be turned into 'memes' to which the concepts 'variation', 'replication' and 'fitness' apply equally well as in genetic theory. We have to distinguish here between Darwinian and Lamarckian concepts of evolutionary mechanism. The main difference between them is that while both of them accept the variability and the presure for the survival of the fittest, the Lamarckian type evolution accepts the inheritance of aquired traits while the Darwinian type doesn't. The evolution of culture seems to fit to Lamarckian evolutionary mechanism. Steven Pinker supports this idea „Of course cultural evolution is not an exact replica of the Darwinian version. In cultural evolution, the mutations are directed and the acquired characteristics are inherited. Lamarck, while being wrong about biological evolution, turned out to be right about cultural evolution."[Pinker, 1997: p. 209]

To complicate even more the issue some theorists proposed an analize of a gene-meme co-evolution, that is to analyze the variation of both genes and memes and jointly selection of those who give the greatest advantage in terms of capability for survival in both genetic and memetic pool.[4] An argument is that one of the results of evolution is a big human brain with extended areas specialized for transmission of memes (i.e. spoken language).

[4] The development of this branch of population genetics can become a basis for a formal theory of memetics because on the one hand we can "build a mathematical theory of human behavior that captures the important role of culture" and on the other hand we can connect "the rich models of behavior based on individual action developed in economics, psychology, and evolutionary biology with the data and insights of the cultural sciences, anthropology, archaeology, and sociology." [Robert Boyd, Peter J. Richerson "Memes: universal acid, or a better mouse trap?", in Aunger Robert, 2001]

3.3 Culture of transformation

One of the most pregnant characteristic of modern society is the change. Anticipated by Alvin Toffler's *Future shock* change became the only permanent thing. The efficiency and survival in a more and more competitive world seems to depend on the capability for change. A "culture of transformation" apears to be requisite. According to Richard Love, from Hewlett Packard, observes that :"Changing rate is so high, that capability for change became a competitive advantage" [Kotler, 2003: p. 14]

But capability for change depends on the culture of transformation from that organization. This is why it is common in management textbooks the concept of „learning organization". It can emanate from an internal pressure for change from the environment, various "formulas" for change can become step by step part of the culture, or from the contact with other cultures. This "culture of transformation" has the special quality of being a result of the cultural transformation and to facilitate this transformation.

The culture of transformation can be understood as the mix of elements – attitudes, values, that foster change, reduce the resistance to change and increase the adaptability to environment. And because when it is about culture „The change is always in the last resort a change in habits of thoughts" [Veblen, 1998: p. 411] a culture of transformation is oriented toward eficiently changing the people's habits of thought.

The "culture of transformation" find out its practical utility at the organizational level. The change management can increase its efficacy and efficiency by facilitating and using a "culture of transformation"

4. Discusions

This paper intends to address few issues. A first discussion theme is if the evolutionary approach to social sciences is appropriate. This analyze has to start with the individuals' behavior. An interesting perspective is offered by Thorstein Veblen who suggests that the man is „a creature of habits and propensities given through the antecedents, hereditary and cultural, of which he is an outcome." [Veblen, 1998: p. 414] A useful theory has to explain the dynamics of the economic processes. It should explain both the continuity due to human bias toward habits and routines, and the change due to purposeful actions. These both situations lead to cumulative learning that determines changes in habits, ideas or desires. This is because „what changes over time is the human agent [...] the agent's knowledge, skill, and habits of thought" [Rutherford, 1998: p. 464]. The evolutionary approach seems to respond to these requirements because it deals with the replication, variation and selection of a certain item. In biology this item is the gene. This theory proposed first by Darwin was refined then but has kept the basic principles. „Darwin's great theoretical accomplishment was to put forth a particular mechanism, variation and selective retention, through which evolution worked […]." [Nelson, 2005: p. 3].

But is this approach useful outside its initial field? The response is affirmative if we look at the numerous sciences that apply evolutionary mechanism: evolutionary psychology, sociobiology, and evolutionary economics. This is not surprising if we recall that "Darwin himself proposed that his theory of evolution had application beyond biology, and might well fit changes over time in language, moral ideas, and the structure of human groups." [Nelson, 2005: p. 5]. The same author recognize the existence of an extensive

body of evolutionary theorizing regarding scientific knowledge, technological advance and the evolution of business organization and practice.

Another question important for our paper is if culture fits in this evolutionary framework. To answer to this question we have to take into account the fact that the study of cultural evolution requires identification of the entity that is the subject of evolution, the way the entity replicates and the criteria, and mechanisms working for that entity to be selected for or against. From the economics point of view we can make useful analogies between business practice and genes and business firms and phenotypes [Nelson and Winter, 1982]. Moreover the basic mechanisms of evolutionary theory can be recognized in economic life. There are key elements of culture or elements of organizational culture fostering and/or facilitating economic change. The replication and transmission of the cultural traits – namely the business practice – is done by imitation of those which lead to better results. The selection mechanism at work regarding cultural traits linked to economic activities is profitability. "I think it fair to say that the best worked out models of cultural evolution is based on this analogy, with profitability for firms being the basic proximate selection criterion for the goods and services and practices involved in economic activity, and the determinant of whether or not new technologies and practices take hold." [Nelson, 2005: p. 11]

The proponents say that cultural trait can be modeled by using an equivalent of the biological gene – the meme. Thus, memes can be viewed as informational structures that have their own dynamism constrained by the same evolutionary laws as genes are.

There are two lines of criticism of this theory. First comes from evolutionary psychology and sociobiology. Their argument has its roots in the basic dispute regarding the influence of genetic or cultural inheritance – „nature versus nurture". The main idea of evolutionary psychology is that of the innateness of psychological traits, that the human rationality is gene-based and it was created during the history to be the best response to the problem posed to human beings. Sociobiology explains how these rationing devices evolved in the gene pool. The conclusion is that "[...] natural selection's invisible hand created the structure of the human mind" [Cosmides and Tooby, 1994, p. 328], but thus the concept of cultural transmision is rejected. They criticize the ideas that the mind functions as a „general purpose machine" and all significant aspects of adult mental organization are culturally aquired, that "all of the specific content of the human mind originally derives from the outside - from the environment and the social world - and the evolved architecture of the mind consists solely or predominantly of a small number of general purpose mechanisms that are content-independent, and which sail under names such as 'learning', 'induction', 'intelligence', 'imitation', 'rationality', 'the capacity of culture' or simply 'culture'" [Cosmides & Tooby, 1997, p. 3].

Unfortunately this debate does not came to an end. It appears that the truth is somewhere between. For every sociobiological explanation of ones, the others can find a cultural explanation as well. The proponents of memetics have their own arguments „'Gene' as a concept for information, does its work, irrespective of how it is materialized." [Voestermans & Baerveldt, 2000: p. 2]. After all, the essence of a gene is its capability of storing and replicating the information. Thus the meme is a legitimate unit for culture evolution. As in the case of gene selection, in a certain physical, social and cultural environment, some cultural traits leads to better ways of doing things than others, being positive selected and increasing the chances to be "passed on" by learning. And, because learning is more flexible than genetic evolution, one can expect memetics to tend to increase its role relative to genetics in the area of evolutionary mechanisms. I conclude with the opinion of Richard Nelson relative to evolutionary psychology and evolutionary psychologists who emphasized "I believe some proponents of these fields have claimed

far too much of the character of human behavior and cognition as explainable as a result of the biological evolutionary selection forces that have molded the nature of homo sapiens" [Nelson, 2005: p. 2].

The second criticism is more concrete and because of this its more targeted. It refers to the differences in substance between gene and meme and between memetic and genetic mechanisms.

An argument is offered by Richard Nelson. He stresses the fact that culture and culturally based learning is humankind specific and relates this „with the unique human capability both for analytic thinking and for language". [Nelson Richard, 2005: p. 8] It is strange to have genetic evolution at all species and cultural evolution just at one.

But this is not the only difference between biological and cultural evolution. An important feature of the latest is that human behavior is goal oriented and inteligent, things that have an impact both on variation and selection processes. Contrary to variation in Darwinian biological evolutionary theory […] in cultural evolution a good portion of the relevant variation is in human minds, and explored through calculation, discussion, and argument, rather than in actual practice. [Nelson, 2005: p. 8] Another feature is that culturat traits have seldom a direct impact on human survival or reproduction, so the selection criteria cannot work as in the case of biological evolution.

Another argument is related with the precedent, but stresses the way a meme is „replicated". If DNA permits obtaining an almost perfecly replica in the case of the genetic evolution the same is not true for the memetic evolution. Even if we ignore that it is hard to identify the unit of cultural information, meme, the dificulties a lot of dificulties remain. The unit of cultural information is hardly replicated into an identical meme. The influence of personal traits and specific environment contribute to transforming the meme during transmission and storage.[5]

Another criticism that is true in part is that cultural evolution resembles more to Darwin's model of artificial selection (as a special case of natural selection) than to Lamarck's model as Steven Pinker said. In order to broaden the perspective and to avoid punctual criticism we can approach memetics, differently than genetic evolution. Memetic evolution can be considered as an particular case of a more general process - a selection process in which the interactions with environmental constraints lead to differences in spreading the "replicators".

5. Conclusions

A clear and ultimate conclusion is impossible to be made. The "nature versus nurture" debate is essential for this but is still ongoing. The evolutionary approach, the Universal Darwinism, proved to be useful to many other disciplines.

Meme, an analogue of gene, "defined as an entity that is capable of being transmitted from one brain to another" [Dawkins, 1989: p. 196], had to be postulated in order for cultural evolution to fit in this framework and making memetics one possible evolutionary approach to the study of culture. There is a lot of literature about memetics,

[5] It is whether the replica, perfect or imperfect, is in fact produced by a copying process. When a non-negligible part of the information realised in the replica originates from sources other than the replicator itself, so that its properties, even if identical with the alleged replicator, are not derived from it, then one is not dealing with a true replicator -- in the cultural case, not with a true meme. Few cultural items are true memes, or even are "memish" enough for the meme model to apply. In such cases of partial inheritance (which is compatible with identity of properties, I insist), an important part of the explanatory weight has to be carried by mechanisms other than replication, variation, and selection. These mechanisms may well be biological adaptations, so that the overall account may well remain squarely within the Darwinian framework. [Dan Sperber "Why memes won't do" in Aunger Robert, 2001]

but there is a lot of criticism, too. To mention just the main arguments they are (1) the innateness of psychological and cultural traits, the idea that human cultural traits could be explained in terms of genetic programmes, (2) the influence of human reason on the variation and selection processes, (3) the concept that meme is a purely theoretical one because memes are not distinguishable units, and thus memetics is not capable to be operational on empirical data, and (4) the process of cultural selection resembles not with Darwinian natural selection but with Lamarkian evolution with elements of Darwinian artificial selection. To conclude, and this final contradiction has a meaning itself, we attach two opposite opinions about meme, memetics and cultural evolution.

Adam Kuper: "Dawkins […] insisted that the "evolution" of "culture" should be treated as an independent phenomenon. But if culture was not driven by genes, the units of culture, memes, propagate ideas in ways that are analogous to the processes of genetic transmission." [Kuper Adam, "If memes are the answer, what is the question?" in Aunger Robert, 2001]

Richard Nelson: "I am concerned that the presumption that elements of culture are gene-like, and the use of the term "replicator" to connote implicitly the central mechanism for continuity, may take attention away from aspects of culture that clearly are not gene-like" [Nelson Richard, 2005: p. 16]

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