

GLOBAL JOURNAL OF ADVANCED ENGINEERING TECHNOLOGIES AND SCIENCES

THE PROCESS OF THE PARADOXICAL DISSONANCE AND DESIGN IN THE ENTREPRENEURSHIP ACTION: A CONTRIBUTION TO THE STUDIES OF THE PARADIGM OF COMPLEXITY

Ruben Molina-Sánchez*, Christophe SCHMITT

* Researcher and lecturer holder "A" University of Guanajuato Mexico,
Holder of the Chair to undertake University of Lorraine, France

ABSTRACT

In this work, the objective is to shed light on little-studied concepts in the research of entrepreneurship: the concepts of design and paradoxical dissonance. Therefore, we propose to the scientific community of entrepreneurship the paradigm of paradoxical dissonance in the thought processes of the entrepreneur, where to resolve intra-psychic conflict we use what we call the design process. Therefore, in the design process, the entrepreneur participates in the work of mental representations, adding to the projective thought and definition of the business project. The present document deals with, through the mental process of design, a reaffirmation of the entrepreneur and giving importance to the entrepreneur as a cognitive and social individual who operates in complexity. We approach complexity and entrepreneurial thought based on the perspective of Edgar Morin (1988). We reflect on the social and mental construction of the entrepreneur, and what makes the existence of paradoxical dissonance possible. We analyze processes of design in the entrepreneur as a useful element to direct the thought of the entrepreneur and help him to represent, define, and problematize his or her entrepreneurial project. Therefore, the article achieves the integration of the two cognitive mechanisms of the entrepreneur, paradoxical dissonance and design, and we propose a model of the two cognitive mechanisms at play.

KEYWORDS: Design, paradoxical dissonance, entrepreneurship, paradigm of complexity.

INTRODUCTION

The thought is a process of creation of representations that involves both biological processes as the human mind (Morin, 1986), this process is influenced by multiple factors of both the history of the individual, its context, its objectives or its activities (Le Moigne, 2007).

Smith & Lewis (2011) establish that in a dynamic environment with multiple actors and where the individual must take decisions, is created in them a cognitive dissonance¹, where one or several thoughts come into conflict. Thus, the individual is surrounded by a multiplicity of phenomena that create paradoxes, which we can define as "the existence of different elements, interdependent and contradictory that exist simultaneously and persist during the time" (Smith & Lewis, 2011, p. 382).

In this article we propose to the scientific community studios of the entrepreneurship, the paradigm of the "paradoxical dissonance" in the entrepreneurship within their thought processes, for which we evoke an empirical evidence of research with entrepreneurs of 343 family-based companies in Mexico (Molina 2012) where you studied the intrapsychic process and cognitive perception in the entrepreneur, to resolve the difficulties and challenges that involve the address of your company and that has to do with the psicosocioculturales factors that influence the mechanism of thinking business complex, which we call "paradoxical dissonance".

Likewise, to resolve the conflict intrapsíquico when entering a "paradoxical dissonance", the entrepreneur uses what we call the design process (Sarasvathy, 2003) coined also in the context of the Sciences of the Artificial (Simon, 1991; Avenier and Schmitt, 2010; Venkataraman et al 2012).

Thus, in the design process, the entrepreneur participates in the work of mental representations, coupled with the projective thought and to the definition of the business project. That is why the design process is the basis of our ability to project sequences of actions directed toward a goal.

Through the constructs of "paradoxical dissonance" and the design process, we do not seek to propose that the latter eliminates the dissonance in the thought of the entrepreneurs, but to develop a new representation of entrepreneurship and human intelligence, returning its importance to the dynamic interactions between the

¹ The concept of dissonance that we use in this article is taken from the theory of the dissonance of Festinger (1957), which is based on the premise that the individual is striving to establish a state of harmony or consistency with himself. If a person has knowledge of himself and his environment that are not consistent with each other, it is a state of cognitive dissonance that is one of the main causes of behavior. The people do not tolerate the inconsistency and when it occurs the individual is motivated to reduce the conflict, mainly in the entrepreneurs.

entrepreneur and its environment and the social construction that the entrepreneurs makes the world (Moreau, 2004; Fillion, 2008). It is through this mental process of design, reaffirm and return to give great importance to the enterprising as individual cognitive and social development that operates in a complexity.

BACKGROUND

Without being contradictory in the order and complexity, only to assist and guide the reader, the work is organized in four parts, noting that they are not individual or are separated into reality, the first part we will address to the complexity and entrepreneurial thinking based on the perspective of Edgar Morín (1988). In the second part we reflect from the social construction and mental of the entrepreneur and that makes possible the existence of the dissonance paradoxical. The third part discusses the processes of design in the entrepreneur as a useful element for directing the thought of the entrepreneur and help you represent, define and contesting their business project. In a final and fourth part are trying to integrate the two concepts of cognitive mechanisms of the "paradoxical dissonance" and design, giving relevance the latter because of its low and arid study in investigations of the undertaking.

PARADIGM OF COMPLEXITY AND THOUGHT OF THE ENTREPRENEUR

The paradigm of complexity of Morín (1988), allowed in the approach to the investigation of the entrepreneurship, have the possibility of a deeper explanation, since the complejizar the phenomenon of entrepreneurship, we can have the magnifying glass well-tuned to observe the spectrum of the uncertainty and not to stay as scholars of complex issues with linear explanations of problems.

The paradigm of complexity² takes into account all relevant levels and simultaneous reality, if you want to reach a broader understanding of the study of the entrepreneurship, but we must also try to integrate, as far as possible, all the knowledge available, in this case the processes of dissonance paradoxical and design. A complex vision is presented with the disturbing traits of the tangled, as inextricable from disorder and the ambiguity and uncertainty. It is with Ashby (1960), the founder of cybernetics, that the complexity comes truly in scene in the science. It is with Von Neumann in Morín (1988) which, for the first time, the fundamental nature of the concept of complexity bound appears with the phenomena of self-organization.

From the perspective of the complexity there is the possibility of entering into the processes of the entrepreneur, to intrapsychic consider the complex phenomenon of the organizational and the logic of the undertaking. In this case, the difficulty is not only in the renewal of the design of the object, but it is reversed the epistemological perspectives of the subject. For this reason we take the entrepreneur as a subject that maintains its own traits of human beings and not only as an object-machine, rather with autonomy, individuality, complexity, uncertainty and ambiguity, fused with the object and inseparable from the ratio of its natural eco-system, social. So we studied an entrepreneur as a reflexive subject that is not another which I myself that treatment of thinking on the subject-object relationship and inversely, if I start from this reflexive subject to find its basis, or at least its origin, meeting my society, the history of that society in the evolution of humanity, the man self-eco-organizer. In that process, the subject and the object are constitutive of one another and remain open on themselves and on their environment. (Morín 1988).

Understood what above, traditionally in the economic and administrative sciences, the study of entrepreneurship has had its focus on econometric studies giving account only of data on aspect of the context and reductionist statements and causality simplistic studied object, falling in generalizations that little paid to understanding of the complex phenomenon of entrepreneurship. To understand the study of entrepreneurship from a complex perspective there is to know, before anything else, that there is a paradigm of simplicity that puts order in the universe, and pursues the disorder. For Morín (1988) we must unite two notions that, logically, would seem to be excluded: order and disorder, concluding that the complexity of the relationship order/disorder/organization emerges, then, when it has been found empirically that disorderly phenomena are needed in certain conditions, in certain cases, for the production of phenomena organized, which contribute to the increase of the order. So, order and disorder are incremented with each other in the midst of an organization that has been complejizado.

Then for the study of the undertaking in a traditional way in the administrative economic sciences in general its approach is deterministic, there is no subject, there is no awareness, there is no autonomy. To understand more deeply the undertaking is necessary to devise a universe in which what is created, it creates not only in the random and in the disorder, but through self-organising processes, i.e. where each system creates its own determinants

² Taken from chapter of the paradigm of complexity of Edgar Morín in *Culture, signes, criticize*, Presses of IUniversité of Quebec, 1988 (Cahiers Recherches et théories, Collection "Symbolique et idéologie", nro. S16), pp. 65-87. Texts published under the direction of Josiane Boulad-Ayoub.

and their own aims, we can understand then, as a minimum, the autonomy, and we can then begin to understand what it means to the subject.

It is therefore the study of the entrepreneurship *conceived* of as a notion of human autonomy complex that depends on cultural and social conditions within which are education, language, culture, a society, and in this case of the study of the thought of the entrepreneur depends on a brain, with all its process like perception and intrapsychic what we now occupies, the process of "paradoxical dissonance" and the design of the creation enterprising. These processes are complex and therefore linked to logical contradictions.

Thus, the entrepreneur to belong to a complex environment where their status of creation is demanded and retrieves, on the one hand, the empirical world, uncertainty, the inability to achieve certainty, to formulate a law to devise a absolute order. And retrieves, on the other hand, something related to the logic, i.e. with the inability to avoid contradictions.

The foregoing is part of human nature and the enterprising action of man. The processes that we put in the light of the debate to explain the enterprising action with the "paradoxical dissonance" and the design of the creation entrepreneurial, comply with the principles proposed by Morín (1988), in which the principle dialogical allows us to maintain the duality within the unit. Associates two terms at the same time complementary and antagonists. The principle of organizational recursion. Since the products and the effects are, at the same time, causes and producers of those who produce it, is a cycle in itself self-establishing, auto-organizer, and auto-producer. The last principle is the principle hologramático, not only the part is in the whole, but the whole is in the part. The dissonance paradoxical and the design process of the enterprising creation are Hologramáticos, recursive and dialógicos interrelated.

THE PARADOXICAL DISSONANCE IN THE CREATION-ENTREPRENEURIAL ACTION

In this part of the article, we will establish the premises that led us to consider and elaborate on the concepts of cognitive complex processes of entrepreneurial thinking. To do this we evoke the studies of Festinger (1957) who explains *the theory of dissonance*, which is based on the premise that the individual is striving to establish a state of harmony or consistency with himself and his environment. In this case the entrepreneur has knowledge of himself and his environment that are not consistent with each other, resulting in a state of cognitive dissonance, which is one of the major causes of behavior that the employer has to exhibit to resolve the different, challenges and in a lot of cases the achievement of success of their actions. Thus the entrepreneur in the process intrapsíquico its dissonance cannot tolerate the inconsistency and when it occurs the employer is motivated to reduce the conflict and take the action that is complemented with the design of entrepreneurial actions aimed at modifying the environment and the creation of your company.

In addition to the cognitive dissonance in the mental representation of the entrepreneur is an *event occurs* and inter intrapsíquico called paradox basing the explanation of the process in models that provide the cybernetics and in the study of the communication, Watzlawick *et al* (1985) , set the science of the *ways in which* each person influences the other through the *character of message* of their own behavior (or the ways in which each confirms or disqualifies to another in his relationship with him). That is why we now have the adequate tools for the analysis of communication, which are: the concept of context as an array of the meanings; the coexistence in the man, of two languages, the analog and the digital; the concept of sequence in the interaction; the concept of necessity of definition of the relationship and the various verbal and non-verbal levels on which can be such a definition; the concept of symmetrical position or complementary in the link; the fundamental concepts of paradox. In this way we assume that the organizations are systems autocorrectivos, self-governed by rules that are in time through trial and error, as evidenced Selvini, M., *et al* (1991) in which the central idea of this hypothesis is that each group-natural-with-history, in which the organization is fundamental, also a team of work, a spontaneous community or a group entrepreneur, is formed in a certain period of time through a series of tests, exchanges and corrective feedbacks, thus experiencing on what is and is not allowed in the relationship to become a systemic unit original that is supported by means of *rules* that you are peculiar. These rules relate to the exchanges that occur in the natural group, and which have the character of communications of both a verbal and non-verbal. In fact, the first axiom of pragmatics of human communication affirms that all conduct is a communication, which in turn cannot but provoke a response, a response that is in another conduct-communication.

So that when the entrepreneur assumes in its cognitive perception a contradiction between the rules that is a paradox and this in turn led to discover and change a fundamental rule, you can quickly get the disappearance of the conflict paradoxical.

THE DESIGN IN THE CREATION-ENTREPRENEURIAL ACTION

The concept of "paradoxical dissonance" is partially addressed and separately in research on the topic of the undertaking, but the design concept is not present in the investigation of the entrepreneurship, although it is an integral part of the cognitive process, used by entrepreneurs in their practices. In this article we try to understand this absence. Our investigations have put in evidence different reasons to understand it. In a first moment, we will take a historical point of view- cultural on this concept to understand their absence at the level of the research in general. We believe that this absence has a strong effect on the way in which investigations have been developed, which we will discuss in the second point. We are going to demonstrate that the investigation of the entrepreneurship has focused mainly on the distinctive competences neglecting the design.

Historical-cultural approach of the absence of the concept of design in the research

To understand the weak presence of the concept of design in the field of endeavor, it is necessary to expand our definition. The design concept refers to two different aspects but that have given rise to a marginalization of the concept in terms of research in the field of the organization in general and of the undertaking in particular. The first definition of design refers to the work of H. Joash (1992) on the creativity. For this author, is difficult to work on this concept, as well as for those who are close to him, because they are divine nature. In fact, the design is a faculty that a Christian could not recognize more than in God. This definition of the design is far from being neutral in the way of approaching the entrepreneurship in Europe and in America. In the Christian perspective, prevails "a creation of the world from the nothing by the action of the one and only God the Creator" (H. Joash, 1992). We will talk of *creatio ex nihilo*. Obviously, this acceptance of the creation of the world refers to the cosmogony of Greek Antiquity, which nourishes many mythological tales, essentially demonstrative of the omnipotence of the gods in the face of the impotence of man.

Through the works of Terssac (1996), it is possible to highlight the second representation of the design from two elements:

- The role of design compared with the achievements obtained. The design does not refer to the same image of the work, the fruit of achievement, i.e. returning to the idea of fatigue and suffering. In addition, the design does not lie, unlike the achievements, in the category of a "productive activity" allowing generate value³.
- Design and achievement have long been considered so dissociated or choice. This separation between the two is part of a Taylorist approach of the Organization.

These two approaches the design allow us to imagine the reasons why this concept was discarded in the search of the entrepreneurship, despite the fact that it is one of the engines of the research in innovation. Therefore the fundamentals of the economy are not neutral opposed to no mobilization of the concept of design in the current research of the undertaking.

Perceive the undertaking differently: the distinctive skills to the ordinary skills.

By concentrating on the question who is the entrepreneur? (Approximation by the traits), we see that the search in the entrepreneurship is concentrated mainly in the identification of the Distinctive skills in the entrepreneur. This type of research has been structured mainly in two stages.

The first step is to identify the persons in a population that are more likely than others to start a business.

The second step, is a direct result of the first, should help to highlight the features of the creators of success compared with those who fail.

These two stages correspond to behavioral approaches that lead to a normative understanding of entrepreneurship, and in particular of the entrepreneur. The aim is to develop a standard profile and working on the differences between the standard profile and the profile of the person concerned. In this perspective, a lot of work of the standard profile was developed which leads to the questionnaires used in particular for the support structures.

In this sense, an analysis of the literature shows that the traditional design has no place in the fruits of the skills developed. It is important to emphasize some notable exceptions. The work of Filion (1997), through the concept of vision, helped highlight it. Filion speaks of skills relating to the design / the systemic thought. The work of Laviolette and Loue (2006) it also includes in its approach to skills.

In the search for the distinctive skills, the researcher of the entrepreneurship, making reference to a parable known, don't behaves as the drunk you are looking for your keys under the lamp when the lost further? In effect, it under

³ in other words, the commonly accepted idea, is that the design is not involved in the mechanisms for determining the value.

the lamppost is the only place lit! How to search in another part? And, however, some authors propose a very different design to the distinctive competences: undertake would be a regular talent ⁴.

After reading the article of Lavoie (1988), we have another way to understand because the design is not part of the search for entrepreneurship. In fact after reading entitled " Créativité, innovation, invention, entrepreneurship-intrapreneurship- Où est la différence? ", the design does not appear as a distinctive competence to the extent that participates in other situations than those of employers in general. For the author, the mechanisms involved in these situations are the same, although the situations are fundamentally different. Maintaining this logic, the design is not a sign of originality, in contrast is a mental act ordinary. In the words of Simon (1991) is a designer "those who imagine any chance to change an existing situation to a desired location" the design appears as a skill that is put into practice in our daily lives, regardless of creativity, innovation, the invention, entrepreneurship, etc. The design exceeds the only activities mentioned by Lavoie (1988). At the enterprise level, as stressed Martinet (2000), the situations facing business agents "seem more and more to those that characterize the design and development of new products." Teulier-Bourgine (1997) asserts that "the management, as well as many of the tasks of the organization are increasingly from the cognitive point of view, the tasks of the design." This proposal is supported by a number of researchers in the cognition and who are interested in imagine the mind (Roth, 2007; Runco, 2007 or also Cottraux, 2010). The design capacity is in fact one of the fundamental characteristics of the human cognition. It is understood as the capacity to produce mental images and associate them to form "possible worlds". The introduction of the concept of abduction takes here its meaning to the extent that the abductions the process by which people form a hypothesis (Pierse, 1932-1958, cited by Joash, 1992).

At present, the layout does not have an important place in the investigation of the undertaking. This is mainly due to the way they perceive the concept of design. Another important aspect, the weakness of the cognitive approaches in the investigation of the entrepreneurship (Gregoire *et al.*, 2011). If the design is a routine activity in the field of entrepreneurship, it should be noted that research in the field of entrepreneurship, shows a significant delay. In the next section, we will present the benefit that you can have the design for the investigation of the entrepreneurial spirit.

When you know how to take, is able to design.

Undertake is not limited solely to the creation (Verstraete, 1999). It is a complex process in which the design plays an important role, and in particular the establishment of a new value provided (Bruyat, 1993; Jouison-Laffite, 2008). In fact, it is sufficiently high to imagine what the potential value of a business project and be able to communicate with the stakeholders in the project (Lorino, 1999; Caron-Fasan *et Chanal*, 2009). Let us begin with the definition given by Simon (1991) on the concept of design. The design is "the description of an artificial object by its organization and functioning its interface between the internal and external environments". In this definition we can see several elements that deserve to be understood: the artificial object refers to the idea of projection of a future. As well as noted Venkataraman *et al.* (2012), the undertaking normally falls within what might be called the science of the artificial. The description of its organization and operation correspond to a logic of problematization, while the interface between the internal and external environments are what may be called the entrepreneurial project. These elements are involved in cognitive mechanisms in the game within the entrepreneurial process.

Designing an artificial object, is projected in the future

When we speak of projection, obviously, we should recall the concept of vision in the scope of the undertaking referred to in the pioneering work of Filion. We understand by vision "*the image projected in the future, the place that we want to see to occupy our products in the market, as well as the image of the type of organization needed to accomplish this. In summary, vision means the company image projected in the future*" (Filion, 1991).

The vision is undoubtedly of a strategic nature (Avenir, 1997) and proactive (Zampetakis, 2008). For its part, the vision of an entrepreneur must not be reduced to their dreams. This refers to *the utopia mentioned by Filion (1991). Dreams are not conducive to action. To concretize, it is necessary to be backed by a specific vision.*

While interesting, the concept of vision does not seem to be sufficient. It is convenient to consider cognitive mechanisms involved in the development of a vision. In fact the concept of vision is similar to the concept of design, in particular as a result of the same. These cognitive mechanisms are related to the way to build the future. At least two ways can be mobilized for this purpose. The first, usually the most known, is an extrapolation in the future of a situation known, past or present. The second is mobilised by a large part of entrepreneurs (Sarasvathy,

⁴ is not trying to cultivate these talents, which would be tantamount to enroll in the debate between the nature (the distinctive skills) and acquired skill (cultivar grown), rather be interested in the cognitive activity of design.

2001) and corresponds to a temporary investment. More precisely, the entrepreneurs have an idea of what they would like to develop and so it is appropriate to make. They propose some possible scenarios. This set of possible scenarios form what we call scenario. The entrepreneur then tries to a possible world or a fragment of a possible world. In followed its activity will show the acceptability or rejection of what has been projected. However, the logic is not considered in a linear fashion, is not the present into the future, we must take into account the cognitive mechanisms and the present into the future of a recursively (Cazes, 1986), in order to "create a feasible reality" (Watzlawick, 2000), because "it is not the past but the future, who determines the present" " (Watzlawick 1988). The entrepreneur builds the present on the basis of the vision of the future that is using the cognitive tools, as well as the creation of new artifacts in facilitating this construction (Roth, 2007; Runco, 2007). Often, the first hypothesis proposed by the entrepreneur is your protection from a product or a service. Between the entrepreneurs more advance in your project, your projection will be longer and more accurate. This will be long because encompass a large number of points related to the business project. It will be needed because this can deepen on these points, due to the almost decomposition of the systems (Sarasvathy, 2003). The projection is not an external party, nor a blurred image. More than a set of images is a process of construction where the designs, objects, actors, interested parties, etc. are related.

If we accept this projective perspective, it seems possible to help entrepreneurs to build its future on the basis of possible scenarios. What would be the direct consequence of this projective perspective? It is not possible to judge the value of this set of assumptions in the light of the search for an objective reality. On the contrary, it is possible to discuss the foundations of the proposed scenarios, as well as the consistency of the scenario was constructed. The assistance to entrepreneurs ambition is to promote the construction of hypotheses allowing better organize the realities of the entrepreneur around a design of entrepreneurship.

Design the description of its organization and operation, is problematized.

The design is different from other approaches by the very nature of the situation to treat. In fact, the situations related to the design are often ill-defined (or, in other words, evil "represented") and the solutions do not necessarily exist *a-priori* (Fabre, 1999; Micaëlli et J. Forest, 2003). The entrepreneur built before hand a more or less accurate representation of the solution that you want to put in place. As mentioned previously, the starting point for the entrepreneur is a possible hypotheses on the product or service that is proposed. This initial representation will change depending on the progress of the project and of the meetings made by the entrepreneur **that** enable you to build a scenario on the various possible scenarios (Darses, 1994). There is in fact a link between the design plan that the entrepreneur has in mind and the design of what he wishes to develop.

It is then a question of a process to come and go between the statement of the problem and its resolution (Gautier, 2003). The representations constructed by the entrepreneur correspond to their representation. We will talk of the problematization (problem setting) to make the difference between the resolution problems ⁵ (problemsolving) (Fabre, 1999; Gérard, 2005). The problematization is directly linked to the vision of the business project and investor. We find ourselves in a situation dialogical according to the acceptance that gives you. Morín (1977). At the level of the entrepreneur, is to give meaning to the possible hypotheses together with the scenario was constructed. It goes without saying that the mechanisms of problematization are not definitive, they need, particularly in the phase of the top a reformulation of regular the situation. This work of problematization is largely dependent on the representations of the entrepreneur in any case its own representation of the world. Here we see the importance of the role played by the representations (Filion, 2008). The entrepreneur redefines consistently the situation treated and even situations proposals. This work is not performed in isolation. Is done according to the situation. It would be wrong to think of the entrepreneur as an independent. The work of Zafirovski (1999), Julien (2005) or Jones et Wadhvani (2006) insist on the social integration of the entrepreneur. This work is done implicitly or not with all interested parties in the business project. This appears as a tool of intermediation that favors the action (Jeantet et al. 1996), i.e. as an instrument of dialog and constriction with project stakeholders. To paraphrase Martinet (1993), we can say that the entrepreneur must demonstrate that this form of intelligence participates less in the resolution of a problem that the design of a world shareable. The design work is involved in this way in the structuring and the communication of the draft enterprise as artificial object.

Design a project of entrepreneurship in the interaction of the internal and external environments.

It is leaving the implicit assumption of separation between the internal approaches lists (approaches by the traits) and external approaches lists (approaches by the facts), within table in the search of the undertaking was developed in recent years. The objective is to visualize the undertaking in its entirety. It is time to consider the entrepreneur as a social construction (Julien, 2005), found (Filion, 2008) and theological (completed). If the search in entrepreneurship does not take into account the entrepreneur, as we have mentioned above, does not take explicit

⁵ The resolution of problems concerns the problems known as closed whose contours are known or dice.

account of the human person and social which is the entrepreneur, i.e. that "individuals are not only the processes of information concerned only by themselves; they also have tangible connections, affiliations in communities, are emotional beings and if they have a body" (Tsoukas, 2005). Do not take more into account other characteristics attributed to humans, such as the awareness and reflexivity (Numagami, 1998 ; Weick, 1999), the desire, the capacity of proposed evolutionary goals, communicate, interpret, to share and to answer the interpretations (Yanow, 2006).

However, these components play a crucial role in the phenomena being studied by the research in entrepreneurship. The design is not only linked to a product or a service, favors the design of an artificial object, the object of entrepreneurship, making it possible to make the connection between the internal and the external. However a product or a service should also be considered as being beneficial for the construction of the sense of the business project.

In this perspective, the design exceeds the hypothesis of separation between the interior and exterior, as indicated by the most prominent definition of this part (Lemasson *et al.*, 2006, Sarasvathy, 2003). It would thus be possible to summarize the business project around the following question: What can I do with what I know to do and my understanding of my environment?

The draft undertaking appears as a construction that is ending and completed, modeled by the man. Is the result of a relationship that the subject has with the world by their acts. Through this relationship, the subject is built, builds the artifacts, makes evolve, builds the meaning and participates in the construction of others in connection with the situation (Filion, 2008). Then we understand by design, the cognitive capacity of the entrepreneur to develop as had already been mentioned a purpose for doing a design. In particular, as underlined Boutinet (1993) "The purpose of the design must be translated into a design of achievement, which amended, by adjusting the original design, the latter leads to a new realization".

As we come to demonstrate, the design is concerned and cognitive mechanisms such as the projection, the problematization or also the project in entrepreneurship. To conclude this section on the design concept see well that we are far from the classical representation, even romantic, of design (Joash, 1992). We are far from the images commonly used to describe the entrepreneur: the myth of Eureka, Archimedes, of the Apple Newton, or the myth of the modern times with products from Apple Steve Jobs in which the entrepreneur is single and undertakes in a heroic manner. The entrepreneur as the designer does not part of nothing. These images related to the Endeavor traditionally are no more than the visible face of the iceberg, the conscious part of the undertaking. Thus, it becomes urgent and necessary to overcome these images studying patterns of thought leading to undertake, as we did with the concept of design. To conclude this presentation of the concept of design, it is appropriate to say that the design becomes a strategic issue allowing entrepreneurs to obtain a utility (income) from the design (David, 2002).

COGNITIVE MECHANISMS FROM THE DISSONANCE PARADOXICAL AND DESIGN IN THE CREATION-ENTREPRENEURIAL ACTION

After reviewing the various aspects related to the concepts of "paradoxical dissonance" and the design, we seek to relate to. At the beginning of this third part, we propose then a model of these concepts allowing to shed light on the cognitive mechanisms that are at stake.

Proposal for a model

Often, the management sciences have considered - and still consider them as a part of the discipline- that conflict and contradictions that generates the dissonance paradoxical and the design process is by nature ontological, i.e. targeted, and corresponding to a reality outside of the person who will naturally evolve to a desired location. Thus, understanding these processes, in an epistemological paradigm within the classic sciences, we need only to be able to see the result of this process intrapsíquico: a situation of entrepreneurship. In reference to an epistemological paradigm, this time the radical constructivism ⁶, in accordance with the meaning of Glasersfeld (1988), we see that these processes can be considered "intrapsychic as the set in order and the organization of a world created by our experiences". In a theological approach, a situation of entrepreneurship can be considered, in particular the human design taking into account the context, at some point, compared with a projected future. The order mentioned above is an important element to relate these processes. The endeavor then begins by the discomfort, uncertainty, contradictions, conflict, confusion we call among other events "paradoxical dissonance" and in particular the invention of a possible world or a fragment of possible world. "It is not enough to imagine

⁶ This is called radical epistemology Glaserfeld E. (1988) because "breaks with the Convention and develops a theory of knowledge in which knowledge does not reflect an ontological reality 'objective'.

the future, we must also build it" (Pralhad, 1997). The entrepreneur must make this dual task that affects exit from the dissonance paradoxical with the design of the future and the strategic plan to build it. This space includes the ideas, images, representations, the product, the project, the entrepreneur, the actors, etc. This space includes aspects real and imagined by the social construction of the entrepreneur.

Then from the recognition of the processes explained, for the entrepreneur has sense to build and-build, terminology used by Weick (1999), or also to build a situation, a problem according to the terminology of Dewey⁷ (1938/1993). The situation appears as a neguentrópico process which consists in finding, organizing things in relation to disorder or to perceived problems and to give them a meaning (Verstraete, 1999). This is the case of the entrepreneur that seeks to give sense of its situation of entrepreneurship. Finally the entrepreneur is found in the concept of Piaget (1979): The entrepreneur transforms the world in reality (assimilation= transform their activity (knowledge) to go better in better (accommodation). A fundamental question emerges from this observation: What are the links between the "paradoxical dissonance", the design, the situation of entrepreneurship, problematization and projection? The response that we wish to share in this work takes the form of a model of the activity of design.

The design of situations of entrepreneurship should be seen as an open problem⁸, i.e. does not have a default solution. The idea that there is not a default solution does not mean that the entrepreneur has no solutions in mind. On the contrary, as we have said previously the entrepreneur has at least one solution related to a product or a service that he wants to develop. This means that the solution retained by the entrepreneur has no more than the status of possible scenario. This solution is then ready to evolve. To put it another way, "we know a problem for your solution" (Watzlawick, 2000). In other words, the difficulties encountered by the entrepreneurs, coming from this stage, of his difficulty to consider as their hypotheses could evolve. We could say that the entrepreneur has the solution before knowing the problem. This situation is not easy to view because the logical are reversed compared to the usual cognitive mechanisms (problem \square solution). It is not easy to understand the solution of a problem that does not yet exist and also causes "dissonances paradoxical" in the entrepreneur.

Thus the design links the desired future context to the current context of their discomfort, discomfort, conflict or desire for change and only evolve, to form that which we call a situation of entrepreneurship. This design activity is not more than an assemblage of action rules that guide the search for solutions. This construction will prepare in large part the delimitation of the situation, but also the vision that is going to develop the entrepreneur and the investor. For example, the situation of entrepreneurship delimited by the activity of design will be different depending on what you consider the draft <<production of enriched eggs with omega 3 >> or << production and marketing of eggs enriched with omega 3 >>. The second project is necessary to display the marketing activity (marketing), which is not outsourced, as habitud to a distributor. The answers provided will depend heavily on the construction of meaning made by the entrepreneur in respect to the situation, then the delimitation of the situation of entrepreneurship⁹.

The situation of entrepreneurship can be seen as a missing link in the deep understanding and complex of the phenomenon of entrepreneurship. The processes of the "paradoxical dissonance" and the design is not take refuge in an imaginary world, fantasies, but giving the intellectual tools to analyze a situation. *"What we have to ask is: What is the participation of the future opportunities that we can wait with our current skills? And what new skills we need to develop to maximize the participation of these future opportunities?"* (Pralhad, 1997). The entrepreneur must identify the tools required for the construction of your project. However, what is more important is to recognize that you have to learn and unlearn in order to progress in your project.

⁷ The treatment of the reception problems in J. Dewey (1938/1993) the term "investigation" generic, is controlled research and led the transformation of an indeterminate status in a situation that is as determined by its distinctions and relationships that make the constituent elements of the original situation in a unified system.

⁸ There are also so-called closed issues, which are characterized by the statement that the problem was not only known in advance, but also the approach to the problem is independent of the person who brought to resolve it.

⁹ "any matter of resolution of problems, you should begin by the creation of a representation of a problem, in other words of a space of the problem in which the search for the solution may be exercised. Surely by the majority of the problems that we find in our daily lives, personal or professional, we keep in our memory representation that we have already used in a previous situation and stored (...) Therefore sometimes what happens is that we find ourselves in a situation that does not appear to be able to resemble the problems that we had faced earlier, even entendiéndolas and transforming them. Then we are faced with a task of discovering/Invent, which can be as significant as the search for a new natural law. If Newton could discover the law of gravity, it is because he had before found a new mode of representation, of differential calculus (...) most of the time, the problems of representation are of intermediate difficulty between the simple adaptation of a representation known and the intervention of a new mode of representation" (H.A. Simon 1991).

To further illustrate the reader on these processes intrapsychic that we propose, through the concept of situation of entrepreneurship, we find the concept of "space of problematization", developed by P. Jonnaert (2006), a "space issue" of H.A. Simon (1991) or still *Spielraum* of Heidegger (1964)¹⁰. The situation of entrepreneurship can be seen as a space around the restrictions that limit possible and imposition of rules of conduct in relation to a wide range of possibilities. The action of the entrepreneur cannot be seen only as a response to a situation, rather as a resolution to the "paradoxical dissonance", to a creation, to an innovation and a sense of attribution (Tourraine, 1999)¹¹.

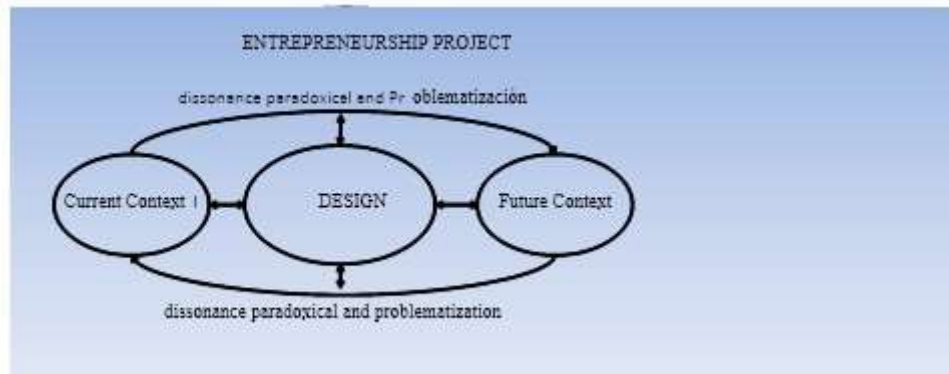


Figure 1 - The interaction between design, paradoxical dissonance, problematization and situation of entrepreneurship.

However, it is clear to see the little importance is given to the tools dedicated to the design of projects of entrepreneurship in the face of the abundance of those dedicated to the resolution of problems¹². Often this phrase is made in an empirical manner. But problematized cannot be improvised. The design requires a work of imagination organized and structured (Boutinet, 1993). This requires the method, the efforts (Filion, 1997). These different observations lead us to overcome many of the difficulties encountered by the entrepreneurs and also linked to the conception of situations that a resolution of problems, namely implement solutions.

Derive then tracks of interesting reflection for the search of the undertaking. These roads include not only the concepts of design, business situations, "dissonances paradoxical" or problematization, but also the relations between these different concepts. In particular, this is a new type of research to develop. In fact, it is not possible to abstract the entrepreneur of the situation and has no meaning if it is defined by someone outside the situation. This raises a fundamental question from the point of view of research around a third. This means that the observation cannot be separated from the observer. A change in the epistemological vision seems essential for the development of research taking into account cognitive mechanisms as the design. We maintain with Foerster (2000) that "if the basic principle of scientific discourse requires the separation between the observer and the observed, it is our duty to transgredirlo". As suggested by Lambin *et al.* (2009), "it is necessary to understand the market as an ecosystem in which all actors involved are functionally connected". The entrepreneur is a part of this ecosystem. This is why it is necessary to take into account the complexity of this ecosystem from the point of view of research and actions.

Support for an enterprise project: help entrepreneurs to develop outside the logic of resolution of problems.

Caille (1991) offered to us through the metaphor of the Alpha and Beta planets highlight two figures of the accompaniment in the field of entrepreneurship. These two figures could help us to better understand the positions that can counselors take in a process of creation of companies:

In Alpha, each organization has a "device" that automatically provides the answers to all the problems that may arise. When the machine This decomposed, the organization uses a "repairer" that will perform the necessary adjustments and to replace the faulty components;

¹⁰ German: space to maneuver. The *Spielraum* concerns the scope of application, the actual operational area of a person in, also called the field of possibilities.

¹¹ Often, these problems of adaptation is derived from the fact that they are the representations which make the difference in the difficulty of resolving problems. Part of the difficulty of employers could then be understood as a problem of the representation to new situations. To resolve the problem, we have to work in the problematization space.

¹² This point will be deepened in the following paragraph

In Beta, each organization constructs its instruments with the means available. These organizations may, in case of difficulty, find a "facilitator". "The facilitator" is not the solution, because there is no preconceived solution. It is used on all its position to help the system to give a same representation reflexive, not be closed in its opinion, to perceive what is or can be another way to become actor and creator its future.

Metaphorically speaking, the planet Alpha considers the intervention of an expert on the situation, while the planet Beta perceives that makes sense, an aid to design a world shareable. It is therefore necessary to distinguish between:

The technician, that brings ready-made solutions and considers that as real the situation facing (Alpha planet). We are here in the resolution of problems;

The facilitator that has its particular role is to help the actors of the system to give a representation reflective of themselves to find solutions, or in the project leaders to build opportunities (planet Beta). This is the area of design, problematization of the situation and the representations that are present at this level.

This distinction relates to the distinction made by Watzlawick (2000), the author of the reality of the First Order and the reality of second order¹³. The transition from a reality of first to a reality of second order, of the restorative position to that of facilitator, requires a change in the epistemological level. As much as the first order of reality refers to an epistemological posture traditional, as the reality of second order is in "this branch of the contemporary epistemology called radical constructivism" (Watzlawick, 2000). The second order of reality cannot be considered outside of any human experience; therefore, what is real is then considered experienced by human beings. The concept of "truth" (within a positivist epistemology) gives way to the likely, credible, feasible, and possible (within a constructivist position). This change of perspective is not neutral on the form of support to entrepreneurs. The entrepreneur is a world of projection to a world of possibilities. "The entrepreneur is the man who deliberates to act correctly" (Facchini, 2007), and, conversely, too, in our opinion.

Through the figure of the repairer is found mainly the bearings that are entered in a problem-solving approach. For them, the entrepreneurial spirit is as a role with musical notes: all you need is the tool that allows you to read music. Its application, the use of the business plan (Nlemvo and Witmeur 2010). The use that is being made is in some logical rules, with the search for conformity of the actions developed by the entrepreneur (Kirsch *et al.*, 2009). In a logic of resolution of problems, these supports are developing universal approaches that work in any project and in all situations. Its approach is very attractive for entrepreneurs, since that would be sufficient to follow the steps of the process to be successful. This approach aims to be reassuring. If the support is a repairer, means that he is looking for a solution on the basis of the given elements by the entrepreneur that appear as truths. If the support is a facilitator, the data provided by the contractor appear primarily plausible assumptions, as possible appropriate solutions to discuss. Does not predict what is going to happen, but it can happen. In fact, an example of its natural process of the "paradoxical dissonance", we find it in the event that expresses "the development of a young company is characterized by many uncertainties and unknowns that it is unrealistic to reduce it to a planning exercise describing essentially a foreseeable future" (Nlemvo and Witmeur 2010). The definition of the business project at this level of thought is an important topic rather than working in the business plan. In this case, the business project can serve as an intermediary of artificial object and structuring of the project in entrepreneurship.

It is not a pendulum effect where it is now to be more facilitator that expert. These are two positions that appear as complementary. If the paper repairer is much broader, it is important to ensure that there are also areas in which it would be possible to assist the employer to develop their business. Already there are situations of this type, but not necessarily in the beginning of a business logic, but in innovative companies: Accelerated Solutions Environment of Capgimini, Creaholic d'Elmar Mock (co-creator of the Swatch), or the manner of Living Lab. Since the transition from idea to opportunity is a part of the investigation of the entrepreneurship (Chabaud and Messeghem, 2010), cognitive mechanisms that support this transition are still working. Any entrepreneur is in itself a single entity and original. He has dreams, tools and knowledge. He constructs an individual process that produces its own learning experience. Therefore, the exchange of experiences among entrepreneurs each one offers different perspectives on how to tackle the projects and on the entire management of their "dissonances paradoxical" of its creation and enterprising action and of his own life.

¹³ To illustrate the distinction between the reality of the First Order and the reality of the second order, quote here the history of the bottle as half full and half empty commonly used, the difference between an optimist and a pessimist before the same bottle of wine is that the optimistic said the bottle of wine is half full and the pessimist half empty. The first order of reality is the same for both (a bottle that contains the wine); the realities of their second order are different, and it would be really useless determine who is right and who is wrong" (P. Watzlawick, 2000).

CONCLUSIONS

In this work, the aim is to disseminate concepts that are not very active in the investigation of entrepreneurship: the concept of design and the dissonance paradoxical. The last part of the work aims to understand the almost absence, of design in the investigation of entrepreneurship. This absence can be understood, in part, in the light of the historical-cultural approach building research of the undertaking on the basis of the economy. On the other hand, this lack can be understood by the fact that the design should not be considered as a regular skill but distinctive.

In order to address the concept of design in the endeavor, we have to change the point of view of research. In fact, since it is not a question of knowing what we already know in the level of research on entrepreneurship, but rather how we know the entrepreneur and their practices, to resume the thought of Foerster (2000).

There is a certain dissonance of a side between the searches of the entrepreneurship, where the design is relatively absent to the debate of the investigation, and on the other side the practices of entrepreneurship, where the design is part of the ordinary skills. Before this dissonance, the second part proposes to integrate the debate in the field of research entrepreneurship the concept of design (Simon, 1991; Avenir and Schmitt, 2010; Venkataraman et al, 2012). On the basis of the definition of the concept of Simon (1991), we have tried to show its variation in the level of entrepreneurship and to highlight cognitive mechanisms involved as the projection in a desired future, the mechanisms of problematization and the business project. The third and last part have had as objective to propose a modeling of the design concept for the articulation of cognitive mechanisms mentioned above and show the implications of the concept of design in a field of entrepreneurship: business support. This has shown new perspectives in this field.

The integration of the concept of design in the field of entrepreneurship is not neutral. In fact, the design is considered the experience that the entrepreneur can have as a person, as the cause of what in the world that has been built. In other words, our research is part of a constructivist epistemological framework (Avenir and Schmitt, 2010), to the extent that it does not seek to know the reality, "But better understand how the representations are constructed and how they can be used to achieve objectives pragmatic "(Yatchinovsky, 1999). So we understand the weakness of research in the field of business cognition. There is a need for a different view of the entrepreneurial process, it is essential to use research methodologies, qualitative and quantitative, appropriate to the cognitive aspects (Bornard, 2012). In this methodological reflection, we must not forget that it requires that the researcher to act as a person familiar with other people, have knowledge and not only in an economic rationality as it is often suggested in the investigation of the entrepreneurship (Tounes and Fayolle, 2006). This change opens the way to new representations of entrepreneurship.

For the future in the field of the constructs that we discuss in the considerations, qu eremos leave enunciated the bracket to the entrepreneur for handling of the discords paradoxical in the creation and entrepreneurial action:

- 1) In the social network of the entrepreneur value their diversity and differences, making aware the inevitable conflict, analyzing their frustrations, expressing opposing ideas and refining its relations to make them productive in a sharing in common.
- 2) The mutual benefits, search share interests and find a common field, a shared vision.
- 3) The Empowerment: feel security and possibility of making decisions and the opportunity and ability to resolve the conflict.
- 4) Reunions and reflections: have spaces and times for experience, giving feedback and continuously improve the differences.

In addition to the above, must be given priority in the dissonance paradoxical the handling of conflict in a positive way to understand the antagonisms and is a global context to work together as systemic organization. This will require designing organizations with open and positive attitude toward the conflict, where the groups are the fundamental elements, meetings are the forum to decide how to work together and solve problems, it is conducive to honest relations, direct and open, to express emotions, visions and frustrations. Here also the entrepreneurs, leaders and leaders are participatory, enabling the group to analyze problems and conflicts.

Finally, this part, intends to consider the investigation of the entrepreneurship through the concept of design, should not be understood as a rejection of other research in the field. It must be understood as the identification of an opportunity for the investigation of the undertaking to enrich, if allowed not limited only to the research on the traits or investigate the facts - which are in fact inextricably linked with the business are two sides of the same coin. This work also aims to be a defense for the development of research in the field of entrepreneurship taking into account the employer as a whole and their interactions and the context located.

Finally we can conclude that there are four important elements interrelated with the mechanism of thinking entrepreneur for control of problems and conflict, under the perspective of the paradoxical dissonance and design:

1. Valuing Diversity. When you recognize the various views, experiences and efforts.
2. Confrontation: openly express views on the problems with the respectful dialog clarify confusion, assumptions and disinformation.
3. Seek mutual benefits to achieve cooperative goals.
4. Empower employees to feel confidence and capacity, as well as rewarding success and learn from mistakes.

REFERENCE

- [1] Ashby, W. (1960). Introduction to the cybernetics. Ed. New Vision. Buenos Aires, Argentina.
- [2] Avenier M.-J. (1997), " Une conception of l'action stratégique en milieu complexe : The stratégie tâtonnante ", dans AVENIER M.-J. (coordination), the stratégie "chemin faisant" , economic, p. 7-35.
- [3] Avenier M.-J, Schmitt C. (2010), " Et if c'était l'expérience du Réel, plutôt you réel lui-même, qui était connaissable : quelles conséquences pour la Recherche en Entrepreneuriat ? ", Colloque CIFEPME , Octobre.
- [4] Bornard, F. (2012), " Les Liens between représentation mentale et processus de création d'entreprise, exemple d'a dispositif méthodologique ", Revue Internationale de Psychosociologie , 2012/44, année xviii, p. 179-198.
- [5] Boutinet, J.-C. (1993), Psychologie de the conduite à projet , PUF, Paris.
- [6] Bruyat, C. (1993), création d'entreprise : contributions épistémologiques et modélisation, Thèse pour le Doctorat of Management Sciences, Université Pierre Mendès France (Grenoble II).
- [7] Caille, P. (1991), A et a font trois , ESF.
- [8] Caron-Faisan, M.-L., Chanal, V. (2009), " Des scénarios pour explorer les modèles d'affaires ", Expansion Management Review , n°128, mars.
- [9] Cazes, B. (1986), Histoire des futurs , Segherts. Ed. L'Harmattan.
- [10] Chabaud, D., MESSEGHEM K. (2010), " Le paradigm of l'opportunité ", Revue Française de Gestion , p. 93-112.
- [11] Cottraux, J. (2010), A Chacun sa créativité , Odile Jacob.
- [12] Darses, F. (1994), " Gestion des contraintes dans la résolution of problèmes in conception " , Thèse of doctorat in psychologie cognitive, Paris, Université de Paris 8.
- [13] David, A. (2002), " Décision, conception et Recherche en sciences de gestion ", Revue Française de Gestion , no. 139, juin-juillet-août, p. 173-184.
- [14] Dewey, J. (1938/1993), Logique, Théorie of l'enquête , PUF.
- [15] Fabre, M. (1999), Situations-Problèmes et Savoir scolaire , P.U.F.
- [16] Facchini, F. (2007), " L'entrepreneur comme un homme prudent " , the Revue des sciences de Gestion , no. 226-227, octobre, p.29-38.
- [17] Fillion, L.-J. (1991), Visions et relations , éditions de l'entrepreneur.
- [18] Fillion, L.-J. (1997), " Le métier d'entrepreneur " , Revue Organization , vol. 6, No 2, Automne, p. 29-45.
- [19] Fillion, L.-J. (2008), " Les représentations entrepreneuriales : a Champ d'études en émergence " , Revue Internationale de Psychosociologie , Volume XIV, n°32, Printemps, p. 13-43.
- [20] Foerster, H. (2000), " Ethics et cybernétique of second ordre " , dans Watzlawick, P. (coordination), L'invention of the réalité. Contributions au constructivisme , Seuil, pp. 60-76.
- [21] Gautier, F. (2003), piloting économique des projets de conception et développement de produits nouveaux , Economica.
- [22] Gerard, C. (2005), Diriger dans l'incertain pour une pragmatique the problématisation, Paris , L'Harmattan.
- [23] Glasersfeld, E. (1988), " Introduction à a radical constructivisme " , dans Watzlawick, P. (coordination), L'invention of the réalité, contribution au constructivisme , Seuil, p. 19-44.
- [24] Gregoire, D.A., Corbett, A.C., McMullen, J.S. (2011), " The cognitive perspective in entrepreneurship: an agenda for futur research " , Journal of Management Studies , 48:6, september, p. 1443-1477.
- [25] Heidegger, M. (1964), L'Être et le temps , Gallimard.
- [26] Jeantet, A., Tiger, H., Vinck, D., Tichkiewitch, S. (1996), " The coordination par les Objets dans les équipes intégrées in conception of produit " , dans TERSSAC OF G., FRIEDBERG E., Coopération et conception , Octares Editions, p. 87-121.
- [27] Joash, H. (1992), the créativité of l'agir , Passages. Ed. Suhrkamp. Berlin, Germany.
- [28] Jones, G., Wadhvani, R.D. (2006), "Entrepreneurship and Business History: Renewing the Research Agenda", Cahier de recherche , Cambridge, Harvard Business School.

- [29] Jouison-Laffite, E. (2008), L'opérationnalité du Business Model in contexte de création d'entreprise : Recherche Action sur le terrain des Porteurs of projet de création d'entreprise , Thèse of doctorat of sciences de gestion, Bordeaux, juin
- [30] Julien P.-A. (2005), *Entrepreneuriat régional et économie of connaissance* , Presses Universitaire du Québec.
- [31] Kirsh, D., Goldfarb, B., Gera, A. (2009), " form or substance: the role of business plan in venture capital decision marketing ", *Strategic Management Journal* , vol. 30, n°5, may, p.487-515.
- [32] Lambin, J., Galucci, C., Sicurello, C. (2009), "Direction of Marketing: strategic and operational management of the market", Ed. McGraw-Hill.
- [33] Laviolette, E. M., Loue, C. (2006), " Les compétences entrepreneuriales : définition File et construction d'a, CIFEPME référentiel " , Fribourg, Octobre.
- [34] Lavoie, D. (1988), " Créativité, innovation, invention, entrepreneurship-intrapreneurship- Où est la différence ? " , *Revue Gestion* , septembre, p.64-71.
- [35] Lorino, P. (1999), " Le Sens giratoire et le camel " , dans *between systémique et complexité, chemin faisant . . .* , P.U.F., p. 147-156.
- [36] Martinet, A.-C. (1993), " Une nouvelle approche the stratégie, Introduction au dossier Gérer la complexité " , *Revue Française de Gestion* , No. 93, mars-avril-mai, p. 62-63.
- [37] Martinet, A.-C. (2000), " Epistémologie of connaissance praticable : exigences et vertus de l'indiscipline " , dans David A., HATCHUEL A. ET LAUFER R., *Les nouvelles fondations des sciences de gestion* , Vuibert/FNEGE, p. 111-139.
- [38] Micaëlli J.-P., Forest, J. (2003), *Artificialisme, introduction à une théorie of conception* , Presses polytechniques et universitaires romandes.
- [39] Molina, R. (2012). The problems emerging in the msms relatives: between the subsystem company and the family subsystem. Chapter VII, in López, A., Contreras, R., Molina, R. (2012). *The family company as an object of study*. Ed. PEARSON. Mexico.
- [40] Moreau r., (2004), " L'identité entrepreneuriale of soi " , *Revue Internationale PME* , vol 17, No. 2, p. 11-42.
- [41] Nlemvo, F., Witmeur, O. (2010), " Faut-il vraiment brûler les plans d'affaires ? " , *L'Expansion Entrepreneuriat* , juin, p. 46-50.
- [42] Numagami, T. (1998), " The infeasibility of invariant laws in management studies: a reflective dialog defense of case studies " , *Organization Science* , 9/1, p. 2-15.
- [43] Piaget, J. (1979), *Epistémologie génétique* , PUF, Que sais-je ?
- [44] Prahalad, C. K. (1997), " Strategies for Growth " dans R. Gibson, *Rethinking the future* (p. 76-91). Bogota: Standard.
- [45] Roth, I. (2007), *imaginative minds* , Oxford University Press.
- [46] Runco, M.A. (2007), *Creativity: theories and themes, Research, Development and Praticce* , Elsevier, Academic Press.
- [47] Sarasvathy, S. D. (2001), " Causation and effectuation: toward a shift from economic inevitability theoretical to entrepreneurial contingency " , *Academic of Management Review* , Vol. 26, No. 2, p. 243-263.
- [48] Sarasvathy, S. D. (2003), " Entrepreneurship as a science of the artificial " , *Journal of Economic Psychology* , Vol. 24, p. 203-220.
- [49] Selvini, M. Boscolo, L. Cecchin, G. & Prata, G. (1991). *Paradox and contraparadoja: a new model of family therapy with schizophrenic transaction*. Second edition, Ed. PAIDOS, Spain.
- [50] Simon, H. A. (1991), *the sciences of the artificial* , Dunod.
- [51] Smith, W. K. Lewis, M.W. (2011). " Toward a theory of paradox: a dynamic equilibrium model of organizing " , *Article in the academy of management review* •April 2011, vol. 36 no.2 381 -403.
- [52] Terssac of G. (1996), " Le travail de coopération : quoi Parle-t-on ? " , dans Terssac of G., Friedberg, E., *Coopération et conception* , Octares Editions, p. 1-22.
- [53] Teulier-Bourguine, R. (1997), " Les représentations : médiations of l'action stratégique " , dans Avenir, M.-J. (coordination), *the stratégie "chemin faisant"* , Economica, Paris, p. 95-135.
- [54] Tounes, A., Fayolle, A. (2006) " L'odyssée d'a concept et les multiple figures of l'entrepreneur " , *the Revue des sciences de Gestion* , 2006/4 No. 220-221, octobre, p.17-30.
- [55] Tourraine, A. (1999), *Sociologie de l'action* , Le Seuil.
- [56] Tsoukas, H. (2005), *Complex knowledge* , Oxford University Press.
- [57] Venkataraman, S., SARASVATHY S.D., DEW N., FORSTER W. (2012), " Reflections on the 2010 AMR decade award: Whither the promise? Moving forward with entrepreneurship as a science of the artificial " , *the Academy of Management Review* , Vol. 37, n°1, 21-33.
- [58] Verstraete, T. (1999), *Entrepreneuriat, connaître l'entrepreneur, comprendre ses actes* , L'Harmattan.

- [59] Watzlawick, P. (1988), " effet ou cause ? " Dans Watzlawick P. (coordination), L'invention of the réalité, contribution au constructivisme , Seuil, p. 73-78.
- [60] Watzlawick, P. (2000), " The construction des Réalités cliniques " , Dans : Watzlawick, P., Narbonne G. (dir), Stratégie the thérapie brève , Seuil, p. 19-33.
- [61] Watzlawick, P. Beavin, J. Jackson, D. (1985). Theory of human communication. Ed. Herder. Barcelona.
- [62] Weick, K. E. (1999), " Theory Construction as Disciplined Reflexivity: tradeoffs in the 90's ", the Academy of Management Review , 24/4, p. 797-806.
- [63] Yanow, D. (2006), " Thinking interpretively: philosophical presuppositions and the human sciences ", dans Yanow, Schwartz-Shea, interpretation and method. Empirical research methods and the interpretive turn , Sharpe, p. 5-26.
- [64] Yatchinovsky, A. (1999), L'approche systémique gérer, pour l'incertitude et la complexité , ESF Editeur, Paris.
- [65] Zampetakis, L.A. (2008), " The role of creativity and proactivity on perceived entrepreneurial desirability " , Thinking Skills and Creativity , Volume 3, Issue 2, p. 154-162.
- [66] Zafirovski, M. (1999), "probing into the Social Layers of Entrepreneurship: Outline of the Sociology of Enterprise", Entrepreneurship and Regional Development , Vol. 11, n or 4, p. 351-371.