New and Old Management thinking: Some reflections

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Abstract
In this paper, we take as starting point that thinking about organizations and management makes use of epistemology. We refer to an epistemology reconciled by the dialogical principle of Morin which offers the possibility to create unity, while maintaining both logics - the one that ‘emphasizes more the knowledge’ (Anglo-Saxon), and the other one, the ‘scientific thinking’ (French tradition). This does not mean that the issue of epistemology is completely resolved. Certain organizational sociologists notice that the central idea of epistemology is often the scientific purity, as can be found in the work of Bachelard, Popper or Kuhn. These epistemologists associate scientific production with a break not only with the common sense but also with previous science, whereas for the classic epistemologists and the supporters of logical empiricism, anything not analytically deductible or verifiable should be excluded from the science.

Another issue raised in the new sociology of organization is that the theorists of the organization do not sufficiently consider the company as a multi-dimensional space. They focus on a specific topic, such as power or culture, without taking into account the global coherence of the company. This reflection relates to the concept of transdisciplinarity which is underlying the complexity thought because the latter utilizes « intellectual procedures which privilege a plural thought ». This brings us to focus on the management thinking in the problematic of contemporary organizations. Can the usual way of analysis cope with the complexity of the current organizations? What place holds complexity thought in management? Or, in other words, wouldn’t it be advantageous to combine new and old management thinking to approach the complexity of the organizations?

This paper is a reflection on the problematic of management thinking raised by the sociology of organizations. We will try to answer above mentioned questions by means of the complexity approach, while knowing that complexity «is the challenge and not the answer » (Morin,2005).
The research in science of management – as in all other sciences - requires an epistemological and methodological framework integrating the reality of a company. The question then is which paradigm can fulfil this demand. The aim of this paper is to put forward thoughts about the paradigms of simplicity and of complexity and about how these ways of thinking are reflected in the management of contemporary organisations. We take as starting point that thinking about organizations and management makes use of epistemology. We refer to an epistemology based on the dialogical principle of Morin which offers the possibility to create unity, while maintaining both logics - the one that emphasizes more ‘the knowledge’ (Anglo-Saxon), and the other one, the ‘scientific thinking’ (French tradition).

1. This does not mean that the issue of epistemology is completely resolved
Some organization sociologists notice that the central idea of the epistemological reflection – whether it is from Bachelard, Popper, or Kuhn – is the scientific purity. These epistemologists associate « the scientific production with a process of break not only with the common sense but also with the past science » (Amblard & al., 1996, p.193). A break not only with the classic epistemology, but also with the logical empiricism which recommends that what is neither deductible analytically, nor verifiable, must be excluded from the science.

*Popper* (Baraquin & Laffitte, 1997, p.255, 256) proposes completely new principles for the contemporary epistemology: the "falsifiability", or the possibility for a scientific theory to be submitted to an austere critical method containing crucial experimental tests susceptible to refute it; and the "fallibility" which is the possibility to confront a hypothesis or a theory with the experience and to confirm or refute it by looking at precise facts. According to Popper, the latter principle would not be able to ensure the validity of a scientific theory, because apparently verified theories succeed one another and oppose each other without permitting to claim infallibility. These principles reveal the character of the scientific knowledge which, while being objective and having an ontological reach, proceeds by unlimited approximations.

*Kuhn* (http://fr.wikipedia.org), initiator of the concept of 'paradigm', rather emphasizes the discontinuity in the process of the scientific construction. There are periods when research follows the dominant theoretical paradigms and other periods of inexplicable major changes in which new paradigms appear. According to Kuhn, a paradigm has no rational basis, it allows resolving certain problems at a certain moment and then, a sudden change of paradigm may turn up, called 'epistemological’ break.

It is maybe the epistemological rigidity that discourages the researchers in sciences of management. However, the current tendency would be an integration of both constructivist and positivist approaches. A moderate form of constructivism, ‘which becomes apparent in particular by rejecting a too
radical relativism’ (David, 2000, p. 95), linked to a general logic not limited to a particular scientific domain.

2. New sociology of organization: concept of transdisciplinarity
Not only the epistemology, but also the status of the sciences of management itself raises numerous debates at the moment. According to certain authors, these sciences would take only from the other sciences or even, management would not be a science but only a practical art. The work of the researchers would be reduced to only the methodical observation of the activities of the managers. Others - as those of the new sociology of organizations - underline that the theoreticians of the organizations do not sufficiently approach the company as a multi-form space.

They look into a specific topic of the organization, such as for example, the issue of power or culture, while « the multiple study models split up the subject of study to a point not to see any more its global coherence » (Amblard and al., 1996, p. 192). At a practical level this has the consequence that managers have difficulty in making the synthesis, and leads to a split between theoretical knowledge and practice.

Nevertheless, we notice the emergence of the concept of ‘transdisciplinarity’ in the sciences of management. These sciences would not be seen any more as the coexistence of various disciplines, but as a metascience which penetrates into the domains which are not theirs (sociology, philosophy, cultural anthropology, linguistics, economy,) and which try to synchronize them within the framework of the company (Pèron, 2000).

It was noticed by Heilbrunn (2002, p.39) that this notion of transdisciplinarity raises a ‘fundamental epistemological issue’. It makes us thinking about how we should approach management; either we consider management as a field having its own structure or, on the contrary, as a field which strictly speaking does not exist, but where many disciplines pass and cross, or even as a field that appropriates the disciplines - if we refer to the book of Jarrosson ( 1991 ) entitled Introduction in the philosophy of management.

This issue of trans-disciplinarity or inter-disciplinarity (which implies the reciprocity) is picked up by J-M Le Moigne (2005) when reviewing the book of Legay and Schmid ( 2004 ), Philosophy of the interdisciplinarity: « An essay in which the philosopher concluded that he aspires to ‘change the relationships between philosophers and scientists’ (p. 255). ...It is what gives to this correspondence an experimental turn, where discussion points are looked for, without reducing the language of the one or the other into "completely scientific" or in "completely philosophic" (p. 261). The authors implicitly feel that behind the difficult questions of cohabitation between the scientists (all Serbian?) and the philosophers (all Bosnian), there are some issues of civilization and culture which we should not reduce to a matter of language problems. “The usual interpretation of the relationships between scientists and philosophers ... attributes at the same time absence of knowledge to the philosopher and lack of consciousness or of civilization to the scientist ”(p. 260). »
Prygogine (2000) sees in the laws in mathematics, physics and chemistry a possible source of inspiration for human sciences, especially for economists and sociologists who are confronted to complex problems: « It is curious that many economists keep the idea of a linear and determinist world, which is in contradiction with all that we observe. The society is inevitably non-linear because what I am doing influences what others do and vice versa. However, to produce non-linear models is certainly more difficult than to model by supposing a linear evolution. The emergence of the non-linear is particularly clear at periods of crises. ... The bigger the society, the more the not linear effects are important, and the more points of bifurcations are present. This leads us to the conclusion that deterministic laws are not adequate when we want to scrutinize the future. They should be replaced by laws implying probability. ... In physics and in chemistry, we are capable of formulating laws satisfying these conditions. Mathematicians would like to qualify these non-reducible probabilities in the sense that they cannot be reduced to a decomposition in individual behaviors because the interactions should play an essential role. » Prigogine, 2000, p.14-15

These interdisciplinary approaches worry however some who wonder in which measure we can import concepts into a context which is not that where they were conceived. This is the case for complexity thinking, which possesses techniques which are precise, but different according to the scientific disciplines where they are applied, e.g. in mathematics or in biological sciences. Having said that, the notion of complexity is not the privilege of the abovementioned sciences because its sense is polysemic. (Girin, 2000). When this notion includes human actors, it can generate new forms of complexity as in the case of the coordination of the activities of the actors in an organization who are engaged in a common task, but who pursue different, even contradictory objectives.

Whether or not the sciences of management borrow from the other sciences, their preferential object of study remains the company. A company in which organizational, economic and social phenomena become entangled. However, since the company is not any more what it was, we see appearing new forms of organizations and, at the same time, new ways of thinking. The current organizational model seems to be based especially on micromanagement (Delavallée & Morin, 2004). That will say, more autonomy is granted to the employees who become then actors partially creating their own working situation. How do the changes in the contemporary organizations affect the management thinking?

3. Management thinking in the problematic of contemporary organizations
Péron (2002) underlines that the approach of management thinking, particularly in the Anglo-Saxon world, is rather pragmatic, while the focus is put on action and not on analysis, thus on the culture of how and not of why. Action is the keyword. It is not theorization that counts but direct application of the principles. Principles which generally originated from a positivist
approach of the management of organizations. If it is true that, as we noticed above, more and more researchers in science of management adopt the constructivist paradigm - which includes several different trends – we observe at least that the positivist thought is still dominant in management.

3.1 Positivist thinking
Le Moigne (1990) defines this way of thinking by five principles:
- The ontological principle: any knowable matter has an essence; the science has a truth criterion and its objective is to discover this truth by describing the reality which holds itself for evident.
- The principle of the cabled universe (metaphor which opposes to 'constructed' universe): the reality is determined; the purpose of science is to discover the laws of nature which explain the natural phenomena; the law of nature is the principle of causality postulating that the observed effect results from the cause and explains it.
- The principle of objectivity: this principle has fundamental dualism, the absolute independence of the natural object with respect to the subject describing it; the reality should exist independently of the subject which declares to perceive it or to observe it.
- The principle of the naturality of logic: there is a uniform way of reasoning - 'one' method, a 'natural' logic – which proceeds by deduction and disjunction. Morin and Le Moigne (1999, p. 116) underline that this logic « is strictly additive and cannot conceive the qualitative transformations or emergences which arise from the organizational interactions. It consolidates linear thinking, which goes from cause to effect, and hinders understanding the feedback of the effect to the cause. ».
- Finally, the principle of minimal action or unique optimum: according to Le Moigne this fifth principle does not originate specifically from positivism, but ‘its heuristic virtue is manifestly so fertile that it gladly serves as implicit criterion of scientific value of a statement. It implies a unique solution (the optimum) and in the choice between two theories, chooses the simplest (argument of simplicity).

Le Moigne (1990, p.91-96)

With Morin and Le Moigne (1999, p. 112) we can conclude that the foundations of the classic science are based on the principle of order, separation, reduction and that the absolute character of deductive reasoning has as cause and effect to solve complexity by simplicity.

3.2 The problems of contemporary organizations
Certain authors underline the changes in the world of organizations which have arisen in recent years. Not only is the need for information growing, but the tasks of the actors become more and more complex due to globalization. (Larrasquet, 1999) Let us take the example of the innovation because innovation is itself an extremely complex process which requires complex actions. Genelot (1998) distinguishes three levels of innovation which are all interactive. – 1) science and culture 2) organisation and production 3) consumption of products and services. So, innovation not only refers to the creation of products or services. Innovation in the areas of
methods of management and production can also be facilitated and conditioned through scientific developments and evolutionary thinking.

How do companies approach innovation? The R&D departments of companies are in principle set up to produce innovations. However, it appears that innovations are often blocked rather than taken forward. This attitude is usually due to management’s lack of flexibility: they are too focused on a single goal and prefer to abandon an innovative project for fear of failure rather than adapt their strategy in line with the possible results of innovation.

Furthermore, notices Getz, (2002 p.149) in the global community, where the entrepreneurs and the researchers are connected easily and in an immediate way thanks to the technologies, the companies which are likely to benefit most from the innovation could indeed be those which make least efforts and use least resources to undertake the complex task to generate inventions by themselves. These companies utilize resources and efforts differently, more targeted; they are primarily equipped with a capacity to build creative links between inventions (it doesn't matter much where they are generated) and factors of successful interaction with their customers.

If we refer to the innovation issue which we have just raised, we can conclude that the classical management thinking is questionable and does not seem to answer any more to the problems of current organizations. In addition, Larrasquet (1999, p.21) proposes a complex reviewing of the organization which questions « the ontological and rational character of the usual approaches of the problems of control, regulation and power ». What alternative to propose? A complex 'holistic' and 'dialogical' approach of the organization which appeals to new methods and ways of thinking. A way of thinking which uses « intellectual procedures that privilege a plural thinking, principles of antagonisms and the logics of contradiction and paradox. » (Wunenburger, 1990)

4. Complexity approach of the organization

Leaving the classical management thinking for a complexity approach of the organization, brings us to consider the works of E. Morin (2005, p. 113-124) on the complexity thinking and the firms. For him, the function of the company is to produce objects or services for a certain market. To achieve this, the company produces for itself, « it produces all the elements necessary for its own survival and for its own organization. », it produces itself. This raises the question of causality. On the one hand, by applying a process of transformation, the company produces an object of consumption. « Such a cause produces such effects ». On the other hand, it is dependent on the effect, in this case on the sale of its products and this « can retroact to stimulate or to inhibit » the productivity in the company. Finally, « the effects and the products are necessary for the process that generates them », what means that « the product produces that by what it is produced ».

The originality of the approach of Morin is due to the fact that he recognizes these three causalities – linear, circular retroactive, recursive - as being
present at all levels of a complex organization. Not only does he reconcile the epistemological approaches (positivist concerning the linear causality), but he also considers the problems of a company to include both specific problems (production) and problems originating from human relations. Therefore, these problems are not only inseparable but also interdependent.

4.1 The notion of order

Another interesting issue concerning the company, is the point of view of E. Morin concerning the notions of order and disorder which he defines as follows:

«Order? It is all repetition, constancy, invariance, all which can be put under the aegis of a highly likely relation, entirely regulated by a law.
Disorder? It is all irregularity, deviations from a given structure, hazard, unpredictability.
In an universe of pure order there would be no innovation, creation, evolution. There would be no living and human existence. Existence would also be impossible in the pure disorder, because there would be no element of stability to found an organization. » (Morin, 2005, p. 118)

While postulating that organizations need both order and disorder, Morin (2005, p. 119) notices that any system experiences an increasing disorder and that their organization inevitably ends in degradation and disintegration. Without wanting that everything continues, the capacity of the organization to reorganize and to regenerate in a permanent way represents the only means to fight against degeneracy. But how to integrate liberty and disorder into the company while knowing that they can mean its end? Nevertheless, these notions can also bring adaptability and inventiveness, conditions necessary for the development of innovation in the current organizations.

4.2 Innovation in the context of complexity thinking

Innovation displays two ways which are to be combined: improvement of existing projects and new creations. Morin (2005) distinguishes three main principles which can help us understand complexity and which we can subsequently apply to organisational problems such as organisational innovation:

- The dialogic principle plays an important role in the process of innovation. It implies a crossing of logics and a process in which numerous actors intervene. This principle permits the association of contradictory notions to conceive the same complex phenomenon, such as the attitude towards innovation which should allow “a large openness to creativity and rigour in leading projects” (Genelot, 1998, p.316).

- The principle of Morin’s recursivity is a concept of self-production and self-organization. Thus, innovation is an interactive process running between a system and the environment which includes itself.

- Referring to the ‘hologrammic’ principle of Morin “which brings to evidence the apparent paradox in complex systems, where not only the parts are present in the totality, but also the totality in the parts”. We can see that
innovation represents in an organisation a totality in which the individuals’ projects can be found within the collective process.

**Conclusion**

This paper is a reflection of management thinking in the problematic of organizations raised by the sociology of organizations. An organizational issue such as innovation should be approached via complexity thinking, because it does not deny the interference and the interaction between human thinking and its organizational environment. Particulariy, the ‘dialogic’ principle which offers the opportunity to keep duality within unity (for example between order and disorder). These two complementary and antagonistic logics remain essential in the elaboration of organisational strategies in cases where these strategies have the ambition to combine old doing with new thinking.

Traditional thinking either separates what is linked together (disjunction) or unifies what is different (reduction), whereas complexity thinking “takes into account the links between different disciplines”. This approach is particularly suitable for the management disciplines which brings together different fields, while knowing that complexity «is the challenge and not the answer» (Morin, 2005).

**References**


