IN-HOUSE INNOVATION – REVISITING OL AND KM FROM A SEMIOTIC LEARNING PERSPECTIVE

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Abstract

The present paper presents a road map of different theoretical perspectives which disclose a breakthrough approach to organisational innovation and development. It starts from an overview of key questions related to the concept of double-loop learning, then it relates innovation to the concepts of entrepreneurship and leadership, it highlights the key role of the fields of Organisational Learning and Knowledge Management, and then it presents three key conceptual approaches: social semiotics, critical realism and action theory. Finally, it presents the Semiotic Learning framework for organisational learning and design as an action-based and action-driven tool for organisational innovation and development.

Keywords: innovation, complexity, action, meaning, social semiotics, critical realism, organisational learning, knowledge management, and semiotic learning.

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1   Introduction

Innovation, in-house innovation, as the title refers, is the subjacent focus of the present paper. In order to foster and to promote innovation it is critical that innovation itself, as a concept and as a knowledge field, is understood, and that this understanding process is validated at an ontological and epistemic level. This understanding process is inherently complex as it must mirror the complexity of organisational settings and reality. Heidegger (1962; Palmer, 1969; Ricoeur, 1998) related hermeneutics – the philosophical field of interpretation – to both ontology – how reality manifests itself – and to epistemology. Under this perspective, the act of interpretation is not a passive reading and processing process but rather a highly creative and critical activity where we are able to improve our understanding and our connection to the reality which surrounds us.

In management fields, many areas aim at developing this tactic, from strategic management, to entrepreneurship, and to innovation management. The pro-active concept of management is also an illustration of this process.

Going back to Heidegger's considerations, we have just referred that it is through hermeneutics, through the process of interpreting the reality in which we are immersed, and are part of, that we are able to improve our understanding and thus our capacity to act and to interfere in that reality, our agency capacity. This is the ontological part of Heidegger's perspective on hermeneutics, the way reality manifest itself, the study of being. And, his considerations imply, that this is directly linked to the ways through which we organise our thoughts and map our knowledge in a dynamic developmental process. And this is the epistemology part, the theory of knowledge.

Though there are several examples of management theory counterparts to the process of understanding and acting upon reality, there are no obvious examples of the continuous developing process at an hermeneutic, ontological and epistemic level, i.e. of management sub-disciplines which may take seriously the issue of the study of philosophical categories such as action, language, meaning and knowledge within organisational contexts.

The view of the current paper is that this role may be taken by the disciplines of Organisational Learning and of Knowledge Management under the argument that their reasons for existing, their foundations, are inherently linked to the emergence of the knowledge economy, thus the need to constantly reformulate and revise the basic assumptions and boundaries of what this emergent reality signifies.

In-house innovation is a metaphor to this inner process of reinventing innovation: repositioning it and reformulating it under the perspective and the impact of the knowledge economy. In order to help organisations to be better learners and better knowledge managers it is crucial to clarify what it means to be a knowledge-base organisation.

The objective of the current paper is to present a road-map of three theoretical perspectives able to unlock key insights of organisational processes: social semiotics, critical realism, and action theory. These enable the study of categories such as language, meaning, knowledge, self and agency, and collaborative work and learning.

The conceptual framework of Semiotic Learning is presented as an application, within the fields of Organisational Learning and Knowledge Management, of the insights developed through the study of the above mentioned theories. Semiotic Learning is also an illustration of how to move forward in terms of ontologically and epistemologically defining knowledge within organisational settings.

Two critical aims are highlighted. Firstly, there is the conscious effort to avoid positions which separate the individual from the social sphere of action. Instead of taking the perspective that organisational learning processes may be understood by focusing first on individual learning, then on group learning and finally on organisational learning, within the current study, both individual and social arenas are taken, from the start, as a single whole and as a single reality. Bakhtin's Circle work on multiple-voices, heteroglossia, dialogue, participation, social subjectivity and intertextuality (Lemke, 1995), are an illustration of how it is possible to deal, simultaneously, with the unique characteristics of individual life within social and collective settings.

Secondly, this study represents a commitment to practice-based and to practice-lead approaches, under the belief that theories are the product of reflective practice or at least of some experiential nature phenomena which is then distilled into the draft of a future theory. Each of the perspectives that are used as well as the approach which is developed are grounded on practice and on a close relation to reality.

The creative tension between theory and practice is captured by the focus on the complexity of organisational life which calls for a constant renewal of the conceptual lenses with which we read its reality. The success of the development of theoretical tools and frameworks is validated by their capacity to broaden the horizons and to open new venues to organisational transformation and growth. And this radically depends on their capacity to affect, to inform and to empower organisational practices.

2   Double-loop learning - the what, why and how questions

One of the most interesting, challenging and fascinating concepts in the field of Organisational Learning is the idea of "double-loop learning" (Argyris & Schon, 1978, Argyris, 1992). That we need not only to question the way we have accomplished something, but the very assumptions that were implicit, the hidden reasons and rationale that led us to act in such and such way, is a critical step that cannot be overlooked.

But what does this mean, this questioning of our own assumptions? What kind of assumptions are necessary in order to make this questioning possible?

This is the first order of reasons, or of issues to be raised. The second level is to question:
- Why is it necessary to undergo such troublesome process? What for? What possible gains can there be?

And the third and last issues to be raised are: - How can this happen? Where can we find guidelines and orientation to undertake this task?

The first group of questions leads us to very broad discussions, indeed we can say that it points out to the whole breath of schools of thought of philosophy and epistemology. Again, as these influences are most of the time hidden and implicit it is not a simple process to bring them up to discussion.

The second group of questions directs us to the particular circumstances that we are going through as a society and to how these may affect organisational environments.

And the third set of issues to be raised directs us to the practicality and the pragmatics of such a choice. Once we assume that "we know what we are talking about", we know what kind of issues are at stake, and we realise the importance of taking those steps, now we must consider the choice of the approach, the theoretical paths and conceptual frameworks that might lead us in the desired direction.

We can refer to these groups of questions as the "What?", the "Why?" and the "How?".

The "What?" questions can be interpreted as pointing to different approaches to the issue of "reflection", and to what this reflection means. We can have an interpretation that points to a passive and distanced observation, where "thinking" is paralleled with a pure mentalistic activity, similar to the scientific method applied to natural sciences, where the critical relationship is the subject-object instance. Alternatively, we can have an approach that is based not in the distinction between the passive observer, independent and autonomous, and a static object, but on a relationship that Heidegger characterised as a being-in-the-world instance (1962). Under this approach there is a complex whole where the rationale and the reasoning process is to take into account that complexity of constant and dynamic relationships, where it becomes meaningless to differentiate subjects and objects because they all are part of a unique interrelation, and of a continuous interactive process. This is a simplistic description which points to two alternative options though this should not be taken as a dualistic choice but rather as two broad fields of philosophical approaches to reality and to the study of human sciences.

The "Why?" question points to the challenges of the information age and of the knowledge economy (Kearmally, 1999) and stresses that though reflection processes have always been cherished they now represent a critical and survival issue within the current context and the complexity of organisational environments. When the changes are drastic it is necessary to revise common conceptions and to develop new approaches to new

problems. Both at internal and at external level there are new and demanding challenges, with threats and opportunities that need a closer attention and greater depth and breath of the conceptual approaches being used and applied.

The "How?" question responds to the urgency of keeping up with the pace of change. Faced with an increase in complexity, it is necessary to answer with adequate levels of analysis and of sufficiently powerful theoretical approaches, able to bring new insights and to inform new practices.

Going through yet another round of interpretation of these questions and narrowing it down to the focus of the present paper, we can state that they open new ground for organisational learning research.

The first set of questions, the "What?" issues, points directly to the importance of the social and cultural aspects embedded in each organisation which enable or else inhibit spontaneous reflection. When profiting from the insights of the being-in-the-world instance, it is obvious the role of relationships and interactions in determining the way people act, think, decide, and make judgements. This implies that we are not focusing on individuals conceptualised as independent, autonomous, rational, static and hermetic, but rather we are concentrating our attention in a specific context in which individuals interact and collectively determine their social practices and structures. This implies that people are determining as well as are determined by their social environments. They are the result of their social settings and also the medium of those settings as they have an agency capacity to influence it back.

The second set of questions, the "Why?" issues, refers to the way that management science and organisational theory has developed. On one hand, there has been an effort to systematise issues in a way that is closely related to the pure mentalistic approach of Cartesian thought. The functionalistic and mechanistic approaches to management fall under this category. The effort is to analyse the parts of a whole in an independent way, i.e. ignoring the complexity of the whole. On the other hand, the more human oriented approaches, which try to deal with the complexity of organisational environments, and take a holistic stand, need further development and stronger theoretical grounding otherwise they risk remaining side and marginal issues in relation to the more visible and immediate areas of functionalistic management. The focus on the reflection process and on the potential of the double-loop learning concept, through an adequate theoretical framework, represent a real breakthrough and a radical opportunity for effective change at organisational level.

The third level, the "How?" questions, points to possible theoretical paths which may open new windows of opportunity for organisational development. The issue is one of taking an adequate account of the complexity of the social and cultural aspects of organisational settings. Three sets of theories are referred in the present paper: social semiotics, action theory and critical realism. The reference to these threes theories do not aim at an extensive description of their conceptual validity within organisational settings but rather at an illustration of the potential gains that may be achieved by the use of less common frameworks. The concept of Semiotic Learning is presented as a specific organisational learning framework which incorporates the insights of the above mentioned theories.

3   Innovation, entrepreneurship and leadership

The need to innovate is traditionally linked to competitiveness issues: in order to survive and to grow it is necessary to innovate. Innovation may be related to a product or service, to the production process itself or else to the organisational structure that supports that process. In the present paper we focus on organisational innovation under the assumption that in order to (i) promote other kinds of innovation as well as in order to (ii) be able to profit from those innovations at product and process level, it is necessary that organisations themselves innovate, change and develop.

The title of this paper refers to "in-house" innovation. This means that the focus of analysis is on organisational settings and on how these settings may be designed so that effective innovation takes place. By "in-house" we refer not only to the internal environment of an organisation but to its overall identity, so that its internal design is unavoidable linked and projected in the way it relates to its external environment.

Innovation, taken in this sense, includes not only formal processes and procedures but also the hidden and informal aspects of organisational dynamics. Issues such as entrepreneurship are closely related to this innovation concept. In order to maximise its innovation capacity, an organisation must constantly revise its common practices and search for new ways of achieving its objectives. Entrepreneurship is not a set of initiatives needed to create a new organisation but rather an essential component of management during all stages of an organisation's life cycle.

Both innovation and entrepreneurial efforts may fall under the functions of the organisation's management team. However, if taken as exclusive areas of management influence, their true potential is left untouched as the critical issue is that the organisation as a whole understands and seizes the opportunities that constantly surround it.

Leadership is then a critical element in this process as it is through the effective creation of the conditions that enable innovation to occur that managers may promote change and organisational development. The point to focus on is that we may achieve the full potential of organisational innovation when we devise the necessary structures and processes which enable it to emerge. The traditional command and control approach to management practice has severe limitations under the current circumstances of high market volatility, turbulent global movements and constant change. Facing complexity, an organisation cannot rely solely on the specialised skills its management team acting in isolation. What it needs from this team is its ability to create an environment where each single individual realises and acknowledges its role within the overall developmental process.

From an image of an organisation which functions like a machine, like a clock, with the precision and the eternal repetition of the same mechanisms, we use instead the metaphor of a living organism, in constant interaction with its environment, being able to influence and also being influenced by its surroundings.

It is critical to clarify that when we advocate certain approaches and contrast them with traditional and conventional management positions, we are not calling for a total substitution of previous standings. That is not the issue. The critical issue is to realise that though management science has been extremely effective in devising ways to improve its specific functions and departmentalised areas, in creating norms, procedures and bureaucratic systems that guarantee that its core areas run smoothly, in creating command and control operations which define roles and responsibilities, nevertheless it still has a long way to go in terms to coping and dealing with more subtle human issues which relate to power, to signification and meaning creation processes, and to the social tissue of which every organisation is made of. Innovation, entrepreneurship and leadership are intimately and constitutively related to these soft, invisible and underlying torrent which consists of the social and cultural aspects of organisational life.

To rephrase the fundamental rationale of this paper, the critical idea is to call attention to the drastic need of complementary efforts to the current management core issues. This means that management science needs the integration of non-orthodox and non-conventional approaches able to support, inform and orient new and innovative theories and practices.

«Management here cannot be associated solely with the traditional process mentioned previously – the mechanicistic approach - but rather with a broader and less precise form of action which constructs itself as it advances, through the constant redefinition of the

driving issues and of the key concepts which fit current situations. There is a 'reality pull' instead of a 'model push' – we try to understand reality in its full complexity instead of trying to fit the reality into the models we already have and disregarding everything else which does not fit into these models.» (Nobre, 2001, p.19).

John van Maurik (2001) refers to the works of several key authors on leadership and innovation issues. Referring to the work of Warren Bennis he cites: «The manager administrates; the leader innovates.» (cited in Maurik, 2001, p.101). Bennis refers that it is necessary for the leader to master the context to which he or she belongs and that this context is moribund. Consequently, everybody persists in grasping neat, simple answers when in fact they should question everything. Driven by pressures that occur when people reach high office, they become bosses, not leaders. The first step in becoming a leader is to recognise the context as a trap and to declare independence from it. So that «conventionalists and rationalists wear a metaphorical square hard hat; leaders must be different and wear sombreros.» (ibid., p. 101).

Referring to the works of James Kouzes and Barry Posner, Maurik (2001) cites their definition of leadership as starting where management ends, where systems of control, reward, incentive and overseeing give way to innovation. Agreeing with Bennis these authors state that leadership is not a place or a position within an organisation, it is a process. Maurik revises his own work on leadership claiming that there has been a not sufficient focus on the leader's need to foster creativity and innovation (ibid., p. 223).

The following citations are in line with what has been said:

«The only way to be able to predict the future is to create it.» - *Chief Executive Officer, Sony* (cited in Maurik, 2001, p.75).

«Change is down to unreasonable people, reasonable people accept life as it is.» - *George Bernard Shaw* (cited in Maurik, 2001, p.75).

Although there is a call for new and innovative approaches to innovation itself, there is not a clear grasp of how this process can be analysed, i.e. what kind of analytical framework we can use to understand it better, so that it can be fostered and developed effectively.

4 Organisational Learning and Knowledge Management as windows of opportunity

The fields of Organisational Learning and of Knowledge Management are the most visible faces of the efforts to help organisations to keep up with the challenges of the new

economy – the knowledge economy of the information age (Kearmally, 1999). From an initial focus on technological issues, there was a gradual shift to a human centred perspective, and lately a further move to the social aspects of organisational change and development.

Though each move has brought new insights, as well as the production of new conceptual tools and practices, there is still the need to further develop a theoretical framework able to grasp the complexity of today's organisational environments.

The importance of these areas is directly linked to need for a new approach the management thinking, so that they represent this creative and innovative process of management development.

It is interesting to observe the different ways in which organisational learning has been described across time by leading authors of the field. Rani and Docherty (2003, p. 3) collected the following citations as descriptions of organisational learning or of learning organisations:

- «... is a process in which members of an organisation detect error or anomaly and correct it by restructuring the organisational theory of action, embedding the results of their inquiry in organisational maps and images.» (Argyris and Schön, 1978)

- «...includes both the processes by which organisations adjust themselves defensively to reality and the processes by which knowledge is used offensively to improve the fits between organisations and environments.» (Hedberg, 1981)

- «... organisations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspirations are set free, and where people are continually learning how to learn together.» (Senge, 1990)

- «...the intentional use of learning processes at the individual, group and system level to continuously transform the organisation in a direction that is increasingly satisfying to its stakeholders.» (Dixon, 1999)

- «... is an organisation that is skilled at creating, acquiring, interpreting, transferring, and retaining knowledge.» (Garvin, 2000)

- «... is a process of inquiry (often in response to errors or anomalies) through which members of an organisation develop shared values and knowledge based on past experiences of themselves and others.» (Friedman, Lipshitz, and Overmeer, 2001)

Facing an increase in complexity, not only new disciplines and approaches are developed but also there is an entirely new attitude on behalf of both practitioners and researchers, in terms of testing their capacity to innovate and to think anew, with a fresh mind, breaking the grounds of previous and less dynamic theories, patterns and approaches. However, this cannot be said to be a general movement, but rather a dispersed minority which proves the presence of a new and rising trend.

A broad range of new concepts are introduced by diverse organisational theory sub-disciplines. Communities of Practice introduces the critical importance of the situated character – situatedness – of all learning initiatives (Lave & Wenger, 1991, Wenger, 1999, Wenger, McDermott & Snyder 2002). Argyris introduces the concept of double-loop learning and Senge (1990) states that organisations change only when people change and that people change only when they change from within. Alvesson (2002) focus on the role of critical management. Dixon stresses the importance of reflexive practice. Marsick (Marsick & Watkins, 1990) develops the concept of informal learning. Brown and Duguid (2000) call attention to the social life of information. Allee (2002) refers to the future of knowledge and focus on value networks.

All these initiatives have in common the need not to ignore the complexity of current organisational contexts thus promoting an integrative and holistic, reflexive and critical approach.

Within the context of the present paper, the argument is that it is precisely because both Organisational Learning and Knowledge Management developed as new approaches to the reality of organisational settings that it should be within these sub-disciplines that new theoretical frameworks should be integrated and explored. To put in other words, it is within these disciplines that both researchers and practitioners have a better chance for an effective development of new theories and practices as these represent the innovative front of management science.

5   Social Semiotics

Social semiotics is a knowledge area which has had little development within the management and organisational field. However, its insights may prove to be valuable to the analysis of organisational life.

According to Paul Cobley (1997) semiotics is an ancient concept, already analysed by Plato, who ponders the origin of language, and Aristotle, who considers nouns in his work. Semiotics, as a discipline, is simply the analysis of signs and the study of the functioning

of sign systems. The idea that sign systems is of great consequence is easy enough to grasp. Yet the recognition of the need to study signs is very much a modern phenomenon. It was through the works of Ferdinand Saussure, in Europe, and of Charles Peirce, in North America, that semiotics developed in early twentieth century (Chandler, 2002).

Social semiotics derived from the work of Michael Halliday, a British linguist, since the 1970's, and was developed mainly in Britain and Australia. As the name indicates, social semiotics focus on the social aspects of signs systems. The idea is that the acquisition of language and of social norms and values occurs simultaneously, and that throughout life language use is permeated and embedded in a social tissue which, in turn, languages helps to constitute.

When the term "semiotics" is used it often is interpreted as merely a reference to sign systems without taking into account the intrinsic social nature of signification and meaning creation processes. It is never enough to stress this point and within the rationale of the current paper social semiotics represents a critical contribution to organisational development and innovation precisely because social semiotics has as object of study the social context where shared meaning may occur.

«Meaning potential is realised relationally.» states Allan Luke (in Lemke, 1995; editorial introduction). Jay Lemke is a physicist and a social semiotitian. Lemke refers that there has been a dominant mentalistic perspective on learning which contrasts to the much more powerful views of learning's social and cultural foundations. In his collaboration with Halliday he developed a new synthesis of ideas about social meaning and human development as aspects of the self-organisation of complex social systems.

Lemke (ibid.) refers that social semiotics is critical because it is within communities that meanings are made, so that an analysis of meaning cannot be separated from the social, historical, cultural and political dimensions of these communities. Lemke clarifies that meaning is not an individual and isolated process but rather a socially determined one.

«Many people have been taught a social habit, a discourse, for speaking about meaning, which considers only the role of the individual organism, or the individual mind, in the process of making meanings... Mentalistic discourses, by creating a separate realm and locating meanings there, are not useful for understanding the material and social aspects of meaning-making. Mentalistic discourses depend on a common sense view of the separation of mind from body, and individual from society, which has ideological functions in our society. Particular aspects of these discourses deflect attention away from the social, cultural, historical and political dimensions of the meanings we make.» (ibid., p.9).

Lemke declares that he prefers to talk about meaning-making as something that «is a *social practice* in a community» (emphasis in the original) instead as something that is done by minds. A social practice is constitutive of a community as such, it is through its practices that a community creates its own identity. According to Lemke, we must refer to a community not as a system of interacting individuals but as a system of interdependent social practices.

Referring to his influence by the work of the sociologist Pierre Bourdieu, Lemke states: «We need a social theory that sees all social phenomena, including itself, as being partly the product of how people in a community deploy semiotic resources: how we mean, and what we mean, by every meaningful act.» (ibid., p.15).

Inspired by historical psychologists like Vygotsky and Leontiev, and referring to the contributions of Gee nor Wertsch, Lemke declares that: «... minds are formed by our social interactions in a community and a culture.» (p. 16). Lemke refers to Bakhtin's 1930's work on the social theory of discourse as a tool for understanding the meaning creation social mediated process. According to Lemke (1995, p.101) the theory of cultural discourses as social semiotic formations has arisen from the study of the semantics of texts inspired by Bakhtin's social linguistics and Halliday's functional semantics. Social semiotics thus gives priority to signifying acts and to signifying practices as regular, repeatable, recognisable types of meaning-making activity. This implies that social semiotics contrasts with the exclusive emphasis on sign systems in formalist semiotics, as is the example of Eco's work.

Explaining this further, Lemke (ibid., p.102) stresses that social semiotics offers the view that socially meaningful doings constitute cultures, which are social semiotic systems, that cultures are systems of interdependent, socially meaningful practices by which we make sense to and of others, not merely in explicit communication, but through all forms of socially meaningful action. Sign systems are abstractions from such practices and they change as practices change.

The possible contribution of social semiotics to organisational theory is vast and promising. The greatest difficulty refers to the need to mediate the discourse of social theory and translate it and adapt it to management settings.

The issue is to open management theories and practices to the inputs of far fetched areas which may illuminate new perspectives and show breakthrough insights. Social semiotics is not alone in this process. Other social theories present relevant contributions to the understanding of organisational settings. Though, in practice, and in pragmatic terms, it is

necessary to focus in only one theoretical framework, it is critical a minimum contact with close alternatives in order the give a wider breath to our choice. Better still, different frameworks often refer to different levels of analysis so that the mere contact with such approaches raises an attentiveness and an awareness that represents a precious resource in terms of organisational analysis.

6 Critical realism

Ted Benton and Ian Craib (2001) refer to critical realism as a way thinking «about the social sciences made possible by an account of the natural science which is anti-positivist, but still "realist"» (p.119). This approach was developed during the 1970's by some British scholars. Rom Harré's work on realist philosophy, and Mary Hesse's work on models and metaphors in scientific thinking were influential to the field. Roy Bhaskar's work has provided its most systematic development, though many other authors contributed to the area.

«Whereas positivism is primarily concerned with epistemology, the theory of knowledge, realism is primarily concerned with ontology, the theory of what exists in the world.» (ibid., p. 10).

Benton and Craib refer to the origins of critical thinking which has influenced the way that the natural world and the social world relationship has been conceptualised:

«Critical rationality is a form of dialectical thinking exploited to the full by Hegel, who saw both the history of ideas and the history of the world as a dialectical process. The two were directly related: the history of the world was the product of the history of ideas.» (p. 107).

Benton and Craib refer to four characteristics of critical realism: (i) it holds that we can make sense of cognitive practices such as sciences only on the assumption that they are about something which exists independently; (ii) it shares with most contemporary philosophy a reflexivity about the conditions of possibility of thought, or language, to represent something outside itself, so that it theorises knowledge as a social process which involves variable means of representation; (iii) it regards the surface appearance of things as potentially misleading as to their true character and this is why knowledge has to be an achievement and a process, as work has to be done to get beyond or behind misleading appearances, and so it is often referred to as depth realism; (iv) finally and most importantly, in face of (i) and (iii) implies that current beliefs will always be open to correction, thus critical realism is a fallibilist approach, contrasting with idealist and

relativist theories of knowledge «which insulate themselves from the possibility of being proved wrong by doing away with the idea of a knowable independent reality.» (Benton, Craib, 2001, p. 121).

Critical realism questions the needed conditions for science to be possible, and these concern what the human scientific investigators, their modes of communication and society must be like in order for science to exist. According to Benton and Craib (ibid.) Bhaskar's position is close to that of Kuhn, Feyerabend and the sociologists of science in recognising, contrarily to the empiricist tradition, the social and historical character of science.

«Science as a social practice presupposes the institutions of scientific communication and criticism, and the role of metaphor in scientific reasoning implies the existence of a culture which can be drawn on for the conceptual "raw materials" for the production of scientific knowledge. But there is in critical realism also an emphasis on experimental practice. This presupposes humans as embodied agents capable of deliberately intervening in the world, monitoring the consequences of their interventions, as well as entering into critical dialogue about how to interpret those consequences.» (ibid., p.131).

These authors summarise the distinctive features of critical realism as a theory of science as: (i) it recognises science as a social practice, and scientific knowledge as a scientific product; (ii) it recognises the independent existence of the objects of scientific knowledge; (iii) it has an account of scientific experiment and discovery as simultaneously material and social practices in virtue of which both (i) and (ii) are sustained.

Benton and Craib compare this position with that of Kuhn, Feyerabend and constructionist accounts of science that recognise the social character of science but «have great difficulty in maintaining a coherent account of the independent reality of the objects of scientific knowledge.» (ibid., p. 131). Empiricists, on the other hand, «have little or no room for the social dimension of scientific practice, though neither can they fully sustain the independent reality of the objects of scientific knowledge.» (ibid., p. 131).

Bhaskar develops a 'transformational model of social agents' which states that it is only through the through the activities of social agents that social structures are kept in being (reproduced), but individual or collective agency may also modify or transform social structures. It is central to this account «that social structures and human agents are ontologically distinct from each other.» (ibid., p.132).

Benton and Craib (2001) argue that «we cannot absorb everything into discourse and culture. Our contemporary culture has its own view of the natural world but that natural world has an existence that is independent of our view of it... We argued that this sort of issue is at the moment best understood in the development of critical realism...» (p. 175).

These authors offer a final advise: «it is always important to avoid seeing issues in black and white... knowledge, whether it is produced by the social or the natural sciences, is always provisional, always there to be questioned and investigated further.» (ibid., p. 175).

Archer and Bhaskar (et al, 1998) develop extensively the notion of social structures, posing the question as to how they should be conceptualised. They argue that individuals and persons surely exist, though social structures do not exist in the sense of either of these. Structures are both medium and product, enabling and constraining. Since social structures do not exist independently of activities, they are not simply reproduced but are, as Bhaskar notes, reproduced and transformed. Because society is incarnate in the practices of its members, it is easy to lapse into methodological individualism, in which society disappears and only individuals exist. Of course, "society has not disappeared, since these individuals are persons and their acts are situated, not simply in a 'natural' world but in a world constituted by past and ongoing human activity, a humanised natural and social world." (ibid., 1998)(italics in the original).

The argument follows that because social structures are incarnate in the practices of persons, this means that they do not exist independently of the conceptions of the persons whose activities constitute (reproduce, transform) them. It is because persons have beliefs, interests, goals, and practical knowledge acquired in their epigenesis as members of a society that they do what they do and thus sustain (and transform) the structures.

Critical realism presents valuable insights into the organisational world, namely through the relationship between social structures and human agency, the capacity of individuals to influence those structures.

7 Action theory

Action is a broad area of research, with parallel tracks in activity theories. Action, as a philosophical category, is closely connected to other key categories such as language, meaning, and knowledge. The study of these categories as well as of action and activity theories is a promising ground for the development of organisational and management theories and practices. There has been a long standing relationship between some of

these lines of research and management yet it still remains a minority and, unfortunately, it seldom gains enough weight to be disseminated and implemented at a larger scale.

In the present paper, we'll present the contribution of Joaquim Gonçalves (1995) and will focus on action philosophy. According to this author, there may be two opposing interpretations of philosophy: one more theoretical, contemplative and interior to the human process of thinking; another one, which interprets philosophy as a doing, as a practice, and as an action. As philosophy is highly complex both interpretations are possible. Philosophy of action stresses the meaning creation process inherent to all human action.

There are also two distinct possible perspectives of analysis: «the subject-object instance refers to the closed relationship, unidirectional, between the researcher, the subject, and his object of research; the being-in-the-world instance, a concept of contemporary philosophy, precedes and includes the former one, and is ontologically rooted thus bringing forth the concept of the world and the unity of action» (ibid., 1995)(italics in the original text). Ontology is the manifestation of being of all reality.

According to this author, the action involved in the development of human beings and the action involved in the development of the world, is inherently the same. It is not possible for human beings to manifest themselves unless in a constitutive relationship with the world. The world is, then, "no longer the mere object of the consciousness of the subject" (1995)(italics in the original text).

The doing of philosophy is integrated in a "all-encompassing action". It is intrinsically associated with action yet bringing in the world dimension. It is understood as one of the most significant activities in the manifestation of the instance of being-in-the-world. This being-in-the–world activity is how reality manifests itself. The world is an expression of meaning of the «meaning of the being».

Gonçalves comments on the concept of knowledge referring that «human life, as well as the philosophical exercise, are not a suffered climbing towards the unattainable mountain of truth» (1995). Human beings frequently face the question of truth as a victory over totality, the knowledge of everything, absolute knowledge. As if this total knowledge would be anterior and external to humans.

The knowledge of being is one of the most radical constituent drives of humans, and it happens within the compromise of action, and never in the summing up, whether total or partial, of discreet units. At the origin of all knowledge there is the drive to organise reality

in order to optimise it. It is this drive which promotes the creation of all knowledge and which also unifies it. All knowledge departs from cultural worlds; all knowledge is made possible through the action of human beings; and all knowledge is directed towards the widest horizon possible. The engine behind the global movement of knowledge is the ontological demand felt, in particular, by the areas that use natural language. This perspective of philosophy of action by Gonçalves summarises many of the aspects that have already been referred in other sections of this paper. This author clarifies:

«Action has a signifying function and is characterised by an expansive mechanism which creates its own content and follows a result; this result – the world - belongs to the intentionallity of the doing process, thus avoiding being closed into itself. This process, which occurs through action, is the de-centring process. Action is an organised whole, and it brings forth organised contents, always as a function of the ontological drive. Action, means doing, in order to give more meaning, more signification. It is a process which generates a meaningful reality. All human collaboration is inherently this process of meaningful creation of reality.» (Gonçalves, 1995)

The whole process of emergence of the world, as well as its horizon, are brought through the ontological drive; the world is used as a mediator of the being, and it is this construction of the world which indicates the practical nature of philosophy. Gonçalves stresses a particular point:

«Philosophy must be critical but through the demand of ontological development, through hierarchysation and selection. If we use the notion of philosophy focused on human's inner transformation or in a critical attitude, then there is the risk that this approach will overlook the central role of action in the world and its essential de-centring process.» (ibid.)

All discourse points to a double referent: the word of meaning already constituted, the starting point; and the world of ideallity, which is the world of excess of meaning, of over signification, which dynamises the referent of all action. It is this ideallity which continues to justify a certain degree of contemplation in philosophy. This contemplation is not rendered unimportant by action but rather lives from action.

According to Gonçalves (1995) modern hermeneutics reinforces the idea of philosophy as a practice: to practice philosophy is to interpret, which is to bring through the possibilities of being-in-the-world. Hermeneutics is not a methodology and it rejects the possibility that philosophical knowledge can be confined to a reductive strategy. Through an hermeneutic

approach, the "ontological soil becomes visible". All action is inevitably driven by its ontological roots.

Humanism should not be reduced to the world of human beings but considered as the humanism of the world, as the value of humans within the world process.

According to Gonçalves, independently from where philosophy is practised, it is an activity which is learnt. Philosophy mobilises the whole being of humans and it represents one of the most significant manifestation of their mode of being. Thus philosophy is a rational activity, reflexive, not simply spontaneous, but from where arises the possibility to create something new: to learn to create, and to learn the content of that creation process. Philosophy produces meaning starting from other meaning, and this is something objective and which can be universalised. Though it cannot be transmissible by sympathy or as a model of reality, ready to be applied. Philosophy is learnt while it is being practised: it is a learning-by-doing process. Philosophy is practised and learnt, through vertical and horizontal contextualisation, through reading and commenting, and through being open to the texts of the future.

This author stresses that pseudo-education or a reductive approach to learning is the effort to transform human beings as if they were an isolated psychological entity, with no constitutive relation with the world. It is thus necessary to develop the world in order to educate and to transform human beings, as this is the only way that humans can change. However, instead of de-centring, as much as possible, human beings in the world, humans are often reduced to a diminutive and artificial psychological world, especially the one indicated by consciousness. Philosophy cannot be a psychology, a pedagogy or an ethics. Ethics can only be identified with philosophy when accepting to be an expression of an ontology.

8   Semiotic Learning

Semiotic Learning is a framework and a tool for implementing an Organisational Learning initiative and an Organisational Learning design. It may complement other organisational initiatives though it represents an overarching instrument able to bring more depth and breath to current actions. It consists of a set of theoretical inputs which aim at enabling organisations to grasp their reality beyond a functionalist approach. It is a highly innovative learning process oriented and informed by unorthodox and uncommon perspectives and insights.

This approach focus on the collective character of human action, knowledge creation, and meaning-making processes, processes which are themselves embedded in a social, historical and cultural reality. The argument is that it is possible to promote, stimulate, create and facilitate an organisational environment able to explore the organisation's full potential, i.e. organisations are special social settings, with unique structures and practices, and the Semiotic Learning framework works on these structures and practices by clarifying and informing each organisation's potential for action. It is an insightful, thought provoking and action directed approach. It is the sort of process that leads to the declaration: «Suddenly, it's there.», the solution, innovation, breakthrough or way to go. Picasso said: «I do not search. I find.». It is the ability to grasp the opportunities that emerge from reality as well as the capacity to do the most out of every single situation that represents an organisation potential, and it is this potential that the Semiotic Learning framework works on.

This approach represents an action tool within the fields of Organisational Learning and Knowledge Management that incorporates the insights of social semiotics, critical realism and action philosophy. Following Heidegger's interpretation of hermeneutics, explained above, it simultaneously presents an ontological and epistemological approach. It mediates and informs, and thus it helps to develop and nurture the interpreting process of organisational reality. Thus it is an action-oriented and an action-based tool and approach.

The key concepts of double-loop learning, reflective practice, collaborative work and learning, and of knowledge creating and sharing are critical to the areas of Knowledge Management and Organisational Learning as was initially stated. This framework deals with the how and why questions through which these concepts operate, their mechanisms and inner dynamism.

This framework does not substitute current organisational initiatives such as training, strategic thinking activities, leadership and communication style approaches, or community building efforts. It works on these issues and brings forward their full potential.

It is an organisational design approach that focus on interpretation as a transformational and developmental process. The critical issue is the design of on-going organisational learning mechanisms which enable the development of the organisation's full potential. The result is that of organisations which are more effective and productive as well as more gratifying and meaningful.

9 Final words

From the early development of Organisational Learning, there was a call for self-critical reflection, namely through Argyris concept of double-loop learning and Schon's analysis of the reflective practitioner (Argyris & Schon, 1978, Argyris, 1992). From this stand point the present paper reflects on the reflection process itself. To guide and orient this reflection it uses the theoretical concepts of social semiotics, critical realism and action theory. From these in-puts, it presents an Organisational Learning and Knowledge Management tool and framework, the Semiotic Learning approach. This approach is an action-based and action-driven instrument for organisational design and development.

In-house innovation is the subjacent focus of this study: organisation's capacity to survive and develop is directly dependent upon its innovative potential. However, this potential hides a complex reality which can only be partially grasped by traditional management theories. Organisational Learning and Knowledge Management represent the windows of opportunity from which new perspectives and insights may emerge and develop. The Semiotic Learning framework is presented under the argument that it is necessary to use solid and powerful theories able to grasp the complexity of human interaction and of organisational environments.

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