COMPLEX THOUGHT AND SYSTEMS THINKING CONNECTING GROUP PROCESS AND TEAM MANAGEMENT: NEW LENSES FOR SOCIAL TRANSFORMATION AT WORK ENVIRONMENT

Magda C Kaspary
7711 NE 199th St Kenmore WA USA 98028
magdakaspary@outlook.com

ABSTRACT

This paper proposes some discussions about group process and team management in a different paradigm than the classical theories. We recognize an important trajectory made by both strategies, groups and teams, acknowledged here as living systems in our postmodern society, and we were willing to understand why, at some point, teams were elected as "a group with better performance or development". Teams thrive in our zeitgeist in different ways since it is a strategy that affects almost the entire active working population. We can say there is a desire for having work made through teams nowadays, even for those who work from home or in virtual teams. On the other hand, groups have been used for social change in many ways. When well-known authors write "from groups to teams" it is possible to see a position taken within one perspective, mostly from Management. In different disciplines of Humanities, a group – thought as a social strategy – is not called a team – understood as an enterprise strategy – to build the results they are looking to achieve. To integrate often isolated areas of human, economic, social and sustainability knowledge, we propose to think different possibilities on how to understand what happen in group process, what a collective can produce for itself and for the environment. We based this paper in three bodies of knowledge. For didactic purposes we present them in a sequence, but they are like a web, composing each other as an integral systems approach. One body is Complex Thought of Edgar Morin as our method of research, especially as we explore three principles of complexity (dialogic, organizational recursion, and holographic) and the concepts of comprehension and explanation. Second, we discuss systems thinking properties applied to living systems (interaction, interdependence, autonomy and dependency, organization and self production). Third, we connect some thoughts based on the work of Deleuze and Guattari around rhizomic structures in organization development as a mode of knowledge, nonhierarchical or centered, and a possible understanding of a current model in our highly interconnected society – alliances in movement. We propose an exercise to think group process through these three lenses presented. We understand group processes as immaterial human capital with effects on the intra and interpersonal construction (SEMINOTTI, 2007), and seek more comprehension so that their effects converge towards the human development, integrating different dimensions of nature-life-work that cannot be isolated. To incorporate dialogic into dichotomy, organizational recursion into linearity, holographic into unity is a path that allows the expansion for the homo sapiens-demens-faber in other roles in life. We defend we are in an epoch when we can surpass this linear thought of "group then team". There is a political and economic implication to

connect groups and teams, since team members are exposed to group process and sometimes they do not know how to deal with it. Also, if teams at work have access to group process we can prospect another level of right livelihood, self reflection and self production for its members, ergo, to our society. No matters which living system we are talking about, groups or teams, we are facing – hologramatically – concepts for the sake of a sustainable society with an ultimate desire of contributing to social transformation.

Keywords: group process, groups, teams, complex thought, systems thinking

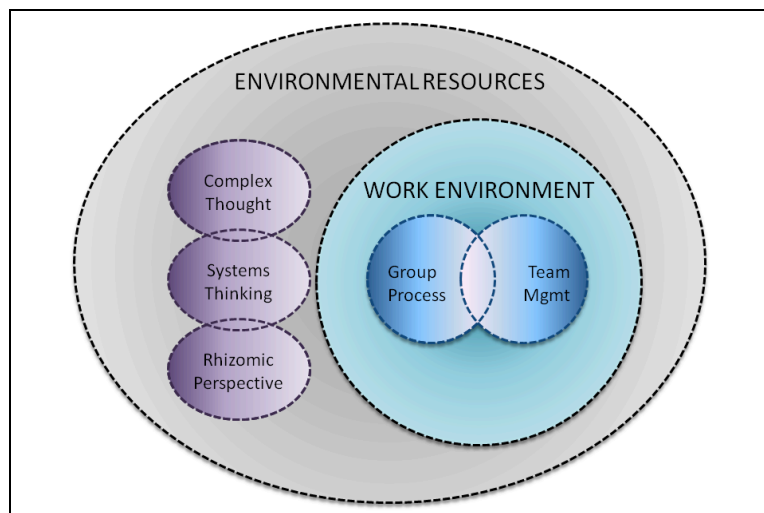**AN IMAGE FOR "NEW LENSES TO UNDERSTAND GROUP PROCESS AND TEAM MANAGEMENT"**

Figure 1: An Image for "New Lenses to Understand Group Process and Team Management"

We understand groups, teams, group process, team management, complex thought, systems thinking, work environment and environmental resources as living systems (MORIN 2005b) since each one can be seen as a set of interdependent components forming a whole with human beings. Body of knowledge and social actors are two examples of interdependent systems of these living systems. Dashed lines represent the establishment of boundaries of these systems and at the same time the possibility of dialogue between them. Living systems run cycles of openness to absorb inputs from the environment and closeness to operate its functions (MORIN, 2005a). What we claim in this paper is the possibility of interaction among all these systems to enrich each one. We look for conditions of possibility (FOUCAULT, 1994) in which these systems can operate and contribute to each other, especially the possible improvement by teams when they access group process knowledge. The whole image can be understood as a suprasystem (LASZLO, 2006), part of our system society. This suprasystem is seen as postmodern, which means a historic and cultural life mode in our society that question the

presence of a unique truth, foundations and rigid structures, definitive explanations and forms (BAUMAN, 2001; EAGLETON, 1996).

Overlapping the objects inside the figure 1 represents points of convergence, it makes visible that these systems can build knowledge together to enrich each other. We believe new lenses for social transformation at work environment are possible using a transdisciplinary approach (NICOLESCU, 1996). Moreover, convergence is the sign to understand we do not determine the course of things, instead we learn how to intervene in this flow of living systems. The work environment is immersed in this bigger system, our society, which can provide different inputs and possibilities of knowledge. It is useful for the work environment to understand itself as part of world knowledge so it can look for resources outside of its boundaries. When we refer to work environment we are including all social actors (LATOUR, 2005) that make it possible, as professionals, universities, communities, professional associations; and act antes (i.e. technologies) that have influence in the way work is done today.

We were a thinking being (active, looking forward) in Descartes and then a thought being (object of thinking, looking at itself) in Freud. As human systems part of a suprasystem, and also as organizational systems (all types of institutions) we have in our time, more resources to understand and explain our current processes (social, economic, production of subjectivity, production of a sustainable planet). The condition for it is the acceptance to revisit these processes and revisit itself as part of them, as a web of life.

COMPLEX THOUGHT AND SYSTEMS THINKING LENSES

We are going to hold a tension of what is complex and systemic, and not complicated or systematic, which means, what brings together several and different inputs for the studies on group process, groups and team management. With respect for all authors and studies made before this moment, we hope this research will provoke other emergencies in the web of this field.

Finding theories to support our discussion involving teams, groups and group process, by itself, is already a positioning on how we are going to research. Each has been studied by different authors, thus influenced by different paradigms, periods and places in our history. In Table 1 we present some authors whose classical works related to groups or teams in some way contribute to the present discussion.

Table 1: Classical Authors and Contributions Influencing the Present Discussion about Group Process and Team Management

Authors	Main contribution	Place	Since
Freud, Bion, Kaes, Yalom	Group psychotherapy principles	Europe	1900
Moreno	Psychodrama principles	United States	1932
Pichon-Riviere	Operative groups	South America	1940
Fritz Perls	Gestalt therapy principles	Europe	1940
Kurt Lewin	Field theory, T-groups	United States	1947
Rogers	Person Centered Therapy, Self-development principles	United States	1950
Sartre	Group concept	Europe	1960
Freire	Pedagogy of the oppressed principles	South America	1968
Katzenbach	Team development principles	United States	1990
Peter Senge	Learning Organization	United States	1990

Complex Thought Contribution

Our contemporary time requests different tools, lenses, posture and wisdom to face our challenges. In this section we are going to discuss how complex thought principles (MORIN, 2008) can help to understand group process and team management in our present and future challenges. Dialogic, holographic and organizational recursion are principles we can find everywhere in nature and living systems, and for this reason they are helpful operators within the management environment.
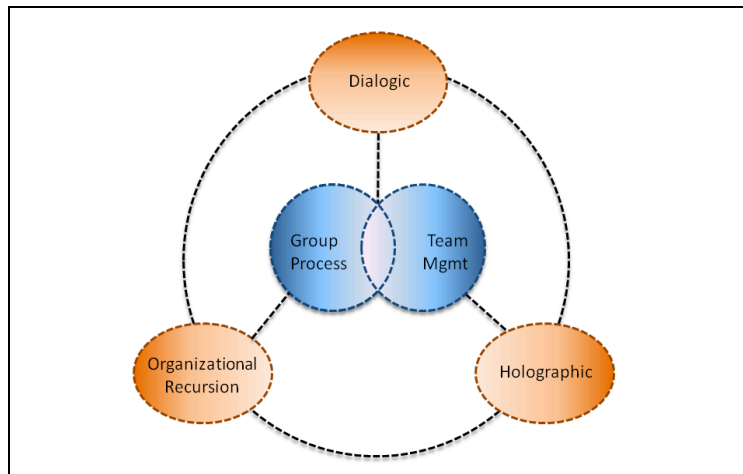

Figure 2: Complex Thought Lenses for Group Process and Team Management

The dialogic principle can be defined as "a complex association (complementary, concurrent, antagonistic) of necessary instances in conjunction for the existence, operation and development of an organized phenomenon" (MORIN, 2008: 110). The dialogic principle recognizes different logics in operation in order to maintain unity. This principle allows us to understand group process and team management as different logics communing, sharing and complementing each other, but also competing among one another. To develop activities of an assigned work in a team, its members must

understand they are facing at least two logics. First, what is explicit in a team (task, objective, resources, results to be achieved) and at the same time, what is implicit – the group process running underneath (the subjective, relationship, 'how to do together what needs to be done'). We can incorporate other logics within this example, if we examine the cross-cultural, gender, generational, and economic logics influencing group process and explicit task.

The dialogic principle shows us different logics can dialogue since it was a modern illusion trying to exclude them, especially in the way the work was done in the past (MEAD, 1955). First, there was the artisan or farmer working in his or her home with family around. Later, he worked long hours far from family. In the last thirty years, we have created workaholics – men and women – that are almost unable to connect two logics: work and life. One capital benefit of understanding and producing space where different logics can dialogue is exactly to produce reflections about group process within which a group or a team is immersed, so each member will become aware of the collective situation instead of building solutions or hypotheses based on self assumptions. Later in this paper we propose an exercise on how to intervene in groups or teams using this principle.

The holographic principle, in which "each point of the object is remembered by the whole hologram and each point has the presence of all, or most, of the object" (MORIN, 2008: 113) makes us understand that teams bring within themselves the organizational environment and the society as part of their system. It is not possible to think that all types of challenges we are facing as a society are not present in the work environment. Maybe teams are not aware of, or do not have time to talk about their context, but they carry on. Parts of an object, or system, explain the whole that explains the parts, making possible a greater result (emergencies, new qualities) or lower (constraints) that the sum of these, or they produce an outcome in which the whole is more than the whole (organizational dynamics) (MORIN, 2005a: 261). Considering the holographic principle, a team member and also a team as a whole can better understand that all types of challenges they are part of are part of something else. It helps to demystify fears that produce sick work environments. Each team member is sight, after understanding the holographic principle, as a spokesperson of a situation, and as a whole system team members can achieve a much better understanding of work situations.

The principle of organizational recursion complements and enriches the complex thought process. It goes beyond the feedback effect in which the result affects the product. Morin (2008) explains the organizational recursion principle using the example of a whirlpool, where a process is a producer and a product of itself. Teams can be seen as a recursive process of work environment. Also, it can see its recursive process if it understands the coexistence of objectivity and subjectivity, visible and invisible, explicit and implicit spheres producing results of assigned tasks and being produced as a member and as a team by these assigned tasks. This process will inform and generate other meanings and cognitive states in individual and collective spheres, while also producing objective and subjective understandings in a person's professional and life spheres, which implicates in a team's life.

Dialogic, holographic, and organizational recursion bring together another intelligibility to team management, since teams are able to understand their group process through the discussion of their practices using these principles. Handling these three principles, a group or team can operate as a *dispositive* or apparatus. We depart from the concept that "the apparatus itself is the system of relations that can be established between (...) elements" (FOUCAULT, 1980: 194) to think a group or a team, owning its discussions to map its situation, facilitated by these three principles.

As the human being is one and it is multiple (MORIN, 2005b) we can state that in the individual level there are different logics in operation, the dialogic of career, personal life, dreams and goals, reflecting and being reflected of the society (holographic) in a self-production process of life (organizational recursion) that will constantly change the life course of this person.

In the interplay between parts and whole, we now think about teams at work. Beyond the individual level, we are talking about the collective level as a system. A team system holds different, complementary and antagonistic logics: market place, competitors, stakeholders expectations, and its own mission, just to name a few. The team system can be viewed as a hologram of the whole institution it is part of, also as the society. All processes that a team system is part of influences its state, as in a feedback process, but also generates different beliefs for itself (organizational recursion). Members of a team complement each other; they learn from each other, so, produce each other, constitute and generate organization among themselves and for themselves. Like in a whirl of water or wind, as in life reproduction, and social relations, the subjects are part of a system, are produced and produce collective effects immersed in different logics.

Systems Thinking Contribution

From the Systems thinking knowledge, we are going to present five systems properties and discuss how they can help us to better understand group process in team management. These five properties are 1) interaction or relationship, 2) interdependency, 3) autonomy and dependency, 4) organization, and 5) self-production.

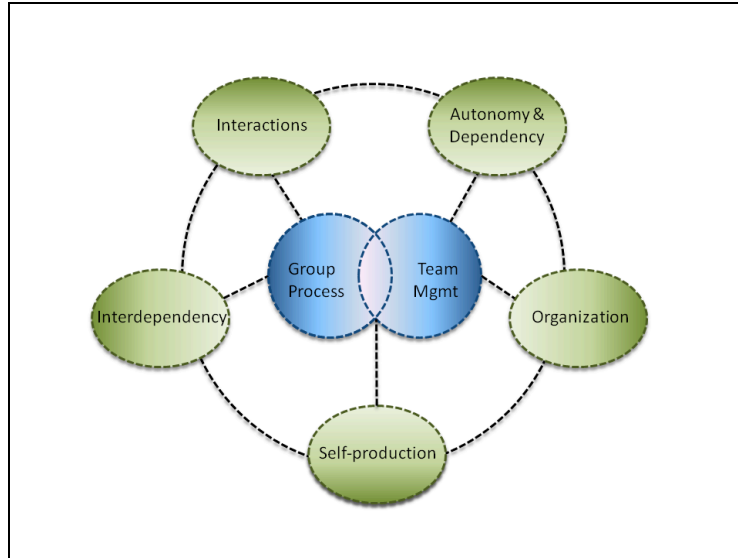**Group Process and Team Management with New Lenses**

Figure 3: Systems Thinking Lenses for Group Process and Team Management

Interaction or relationship is the first property of a social system (VASCONCELLOS, 2002; MEADOWS, 2008), since it distinguishes a system of a cluster of parts, and it demonstrates each connection established. In terms of human systems, Sartre (2004) defined reciprocity as the main differentiation of groups and series. From the interactions that a system (individual, group, team, community) performs, cohesion is produced, which gives the fundamental characteristic of wholeness. The notion of a whole constituted by parts interrelated, is also understood in Lewin's (1965) work as the notion of totality in group dynamics, and Pichon-Riviere's (2005) work about operative groups. Also, in Morin's (2005a) work, the notion of wholeness is understood by the holographic principle. A group process is only possible to be understood if we observe the interaction or relationship of members of a group or team. This process is affected by the physical and emotional presence and absence of its members. When a group or team has the possibility to discuss its interactions or relationships, it is accessing the dimension of being a system, a whole composed by its parts, it means, this group or team is recognizing that there are more meanings than only parts together.

Interdependency is the recognition that a system will not be a system itself without the presence and interaction of its parts. Interactions inside a system are not only unilateral or bidirectional (VASCONCELLOS, 2002), but circular, feeding back with information, interfering on the effects and causes, thus producing organizational recursion. A group or team results are made by the interactions among its members, enabling the production of results they are looking for and also producing changes in each member through this process. Without the presence and interaction of its members a group or a team cannot carry this designation, would be a cluster, combo or a work department.

Interdependency brings us the possibility to understand the property of autonomy and dependency. Living systems, such as groups or teams, are dependent on other systems

and the environment (also understood as a system), where they seek for information and energy to operate their organization, and paradoxically, they need their autonomy to decide how to operate, otherwise they will be only part of a system. "All human life is a standalone web of dependencies" (Morin, 2005a: 282) since they depend on multiple instances of the environment to build their autonomy and operate.

Interaction, interdependency, autonomy and dependency properties compose the property of organization. In the past, social systems in general looked for stability, so organization was an active action, a concept related to have things or situations under control, no chaos or disorder, being able to predict stages and results. As opposed to these modern ideas of organization as progress and methodology, we understand the organization property in systems thinking nowadays happens by movements of disorder-order-organization: emergencies arise, unexpected qualities come from the system that is able to produce through the interactions between parts and the whole, opening and closing to the environment and so producing itself: self-organization. In contrast, today organization is seen as a dynamic process that conveys cycles of disorder and order as necessary processes to maintain a system in operation. A group or a team operates its organization under more or less order, especially when creative and innovative skills are highly required.

The self-production property inspires poetry; it is the beauty of life creation, which it is *autopoiesis* (MATURANA & VARELA, 1992; CAPRA, 1997), and it is also self-eco-organization (MORIN, 2005b) because it takes into account the environment. It is genesic (ensures the birth), also generic (ensures specificity) and generative (ensures the existence) (MORIN, 2005b). To think group process is to look at the possibility to create meaning through its members, beyond subjects, experiences, and results.
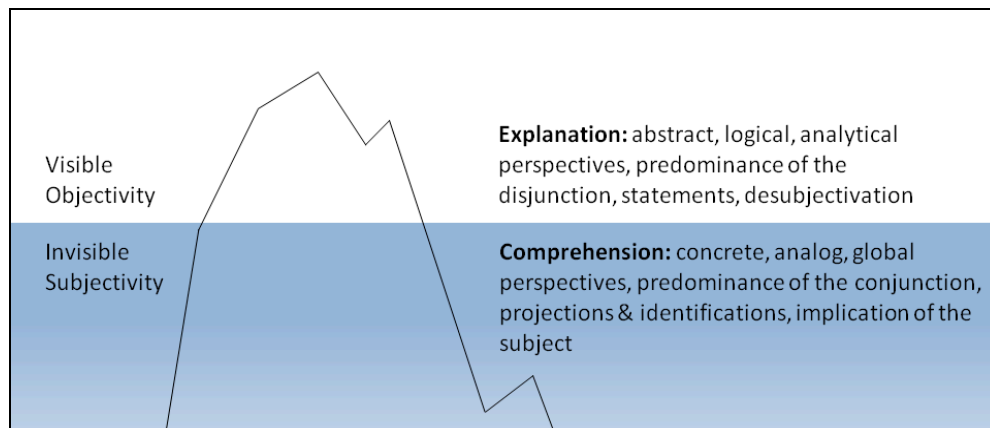
Comprehension and Explanation as Concepts

Figure 4: Comprehension and Explanation – Adapted from Morin (2008)

Group Process and Team Management with New Lenses

In this continuing path to elucidate group process and team management in our zeitgeist, we bring two basic types of knowledge (Dilthey, 1951; MORIN, 2008) namely comprehension and explanation. It is as important as to know something as it is to be conscious of the way we apprehend knowledge. The comprehension of knowledge includes empathetic and sympathetic processes related to other's attitudes, feelings, and intentions. From Morin (2008), we understand that the comprehension process comes with subjectivity, while the explanation type of knowledge is more rational, where objectivity prevails. In a group or team situation, when we comprehend, we recognize or feel what the other person is feeling, while when we explain, we are analytical. Morin (2008) suggests the ample interplay of both, comprehension and explanation for objective situations and for subjective situations.

Comprehension accompanies explanation in uni-duality or complementarity. To comprehend and explain group process in team management in a work environment we need to be open to an objective and subjective exercise. Like the iceberg image, people have constant interaction with visible and invisible processes, such as planning, budgeting, resistance, fear, production of subjectivities, competition, collaboration, belonging, connection and so much more. We know the iceberg is bigger than the part we see, as we know there are more contents than just the objective ones in a team. We can build an analogy that what we are able to explain is in the visible part of the iceberg, above the waterline, while what we do not see, below the waterline, is possible to be understood using a comprehension approach. All logical and analytical perspectives can be better processed if we look at them including our comprehension knowledge. Moreover, we can try better understanding all invisible processes in a team when we congregate comprehension and explanation, never diminishing the subjectivity.
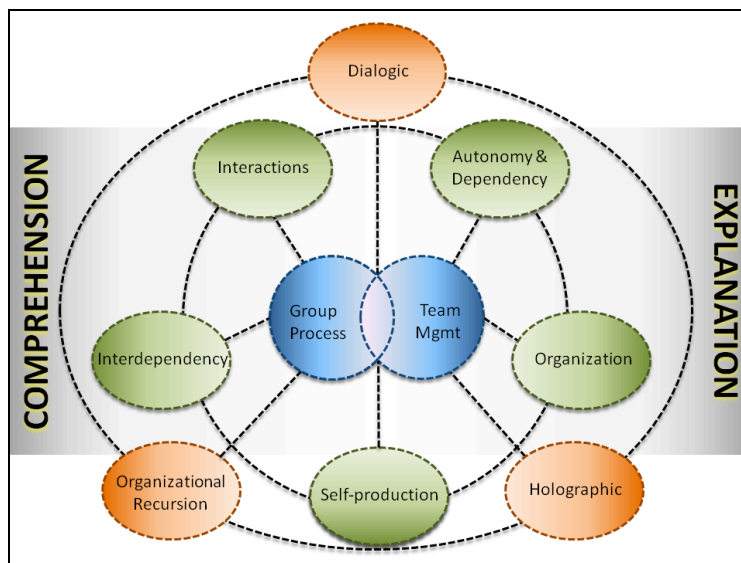
"While" as a Concept

Figure 5: While as an Operator Concept

Some studies emphasize the individual development in a team or group process (YALOM, 2005). Others emphasize the development of a group as a whole (ROGERS, 2002). We use the word "*while*" as an operator concept to hold comprehension and explanation in group process as a continuum that is always happening. From now on, we are italicizing the word *while* to intentionally denote the presence of concomitant processes (dialogic, holographic and recursive processes). There is an irreplaceable role of the individual in a group or team: each person brings its own history, culture, psyche, status, which compound this unique collective. Also, through the lenses of systems thinking properties we comprehend and explain the role of the collective as a container or enabler for the development of the individual. Ana Maria Fernández (2006) brings us the concept of a singular-collective tension, which means group process is not only about the person or the collective, but it is about what goes between, beyond and throughout a group or a team together.

While a team is discussing tasks of a project, other logics (dialogic principle) are operating among them. *While* a member of a group or team is talking she/he is being a spokesperson of this collective (holographic principle). To have a better understanding of group process, all actors involved – the facilitator of a group, the manager of a team, and also group or team members – need to pay attention to what is happening *while* this collective is together, what type of meanings, feelings, effects and results they are producing to others and to themselves (organizational recursion).

The process of observing the *while* dimension can be designed starting from the individual exercise of observing itself, relating its own feelings, perceptions, thoughts and what is happening in the collective environment. Also, from observations about what is happening among the other members and in the group or team as a whole. It is healthful for this process that these observations come to the attention of the whole collective as a condition to better understand objectivities and subjectivities that are influencing their process.

RHIZOMIC PERSPECTIVE AS A LENS

In a study following complex thought and systems thinking, we advocate different possibilities to think about our theme. From Deleuze and Guatarri's (1987) work, we connect how a rhizomic structure from nature can be a postmodern analogy to understand group process in groups or teams. Reflecting on the images of a tree and a potato plant, we understand the first one has a main root, one principal unity available, develops in a binary logic *while* the second one brings the rhizomic principle of multiplicities, diverse forms, ramifications that go in different directions. Both ideas – the tree and the potato plant – are living systems, we can observe and apprehend these meanings for other areas of life and knowledge.

The main characteristics of rhizomes according to Deleuze and Guatarri (1987) are helpful to seek for different understandings or possibilities for group process. Connection and heterogeneity refers to the ability that any point of a rhizome can be connected to any other. The principle of multiplicity explains there are no defined positions or structure in

a rhizome. The asignifying rupture helps to understand that even when a rhizome is broken, it can restart in another line or a new line. Finally, the idea of cartography and decalcomania, instead of following pre-traced lines, rhizomes produce new maps *while* they are producing themselves, opened and connectable, they have multiple entryways.

It is not difficult to observe similarities among these characteristics and those principles from complex thought and systems thinking we already discussed.

The studies of groups, group process, and teams have historically presented a mental model of stages, definitions of phases and assessments that practitioners and managers use to identify for better development, evolution or management of these collectives. Bringing a complex thought posture, we think this field of study can keep the classical logic of group and team development and complement it with a rhizomic perspective, therefore sustaining a dialogic process.

With this posture, we look at Figure 6 and think about it as group or team and their group process, through rhizomic lenses. Moreover, we can include the three principles of complex thought (dialogic, organizational recursion and holographic) and the five properties of systems thinking (interaction or relationship, interdependence, autonomy and dependency, organization and self-production). Throughout different conversations – represented by different dashed lines – members bring explanations and comprehensions about what their group or team is involved in an objective and subjective dimension. Each member – represented by letter P – has possibilities to participate, create, and name their situation. It is not a predictable or structured process; rather it refers to the flow and possible interconnections of meanings and feelings among members. As a rhizome, each time, members can propose different ways to produce meanings, insights and results they are looking for, beyond predefined stages. The operator *while* is present all the time and can surface in different ways: by an observer position assumed anytime by any member, or in a defined moment, when members discuss what happened *while* they were working together.
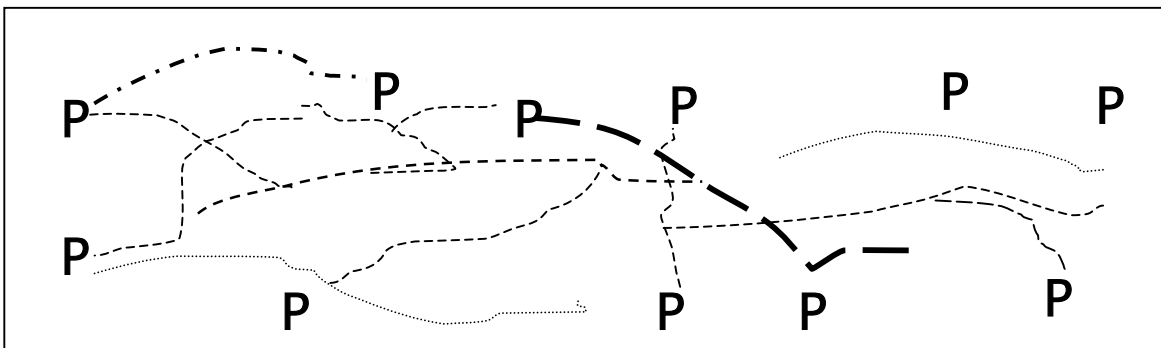

Figure 6: Group or Team and Group Process through a Rhizomic Lens

Group Process and Team Management with New Lenses

"Entireness" as a Concept

We live in a time that is able to reflect about its own history *while* we are living it. Different from our predecessors, in our postmodern time we are our own object of study, naming our own time. We have different techniques and technologies promoting development in different areas of knowledge, so we turn experts in one area and often, we feel ignorant in areas that we have not been studying. As a hologram, another dimension of this compartmentalized effect is the contemporary lifestyle, when people have much more access to all types of opportunities and innovations, and at the same time, are unable to connect and balance work and life. This effect is proved by the number of contemporary initiatives to transform this scenario, for example when people leave behind their corporate jobs seeking better life conditions or new concepts of work (KAROLY & CONSTANTIJN, 2004).

All topics discussed in this paper were oriented by a wide concept called "entireness". We recognize the benefits of knowledge already produced around wholeness (PALMER, 2000; BROWN, 2012). The concept of entireness comes to aggregate to it, so both can complement each other. *While* wholeness brings the idea of all parts together (MORIN, 2005b), entireness brings the state of full presence, gracefully, with acceptance. It is the condition of insideness, fullness, thoroughness, utterly present in a whole. When a system (person, group or team member, family, enterprise, community, society) is able to feel "entire" in a process, it is accessing a different and complex flow of life. In some languages, as Portuguese for example, entireness – *inteireza* – almost inspires poetry, it talks about how deep and tenuous something can be. In some way, we observe that rhizomes bring entireness in itself, reason why even broken, each part is able to start another whole.

Somehow the work environment, as a suprasystem, has been operating in a recursive process of non-entireness place to live, through all changes with a social impact, i.e. number of vulnerable employment[i] (from 11% in Europe to 79% in South Asia) or unemployment index[ii] (5.9% worldwide, 10.1% in Europe and 3.5% in South Asia). Analogously, this can be the greatest system to bring entireness to its reality, if it considers rethinking its practices, including the incorporation of safety opportunities to discuss group process in its teams. It is a task for the work environment to explain and comprehend how much entireness each member of its teams can feel *while* working.

Entireness comes from inside each person, but it is held in a collective environment. By the presence of the other we can find ourselves (BUBER, 2001; FROMM, 1997, LEVINAS, 1987, SPINOZA, 1950). We can also lose ourselves, especially among effects that our system society is reifying *while* promoting demands for constant innovation by instantaneous obsolescence (BAUMAN, 2001) life as a spectacle (DEBORD, 2000), and consumerism (BAUDRILLARD, 2006). It was not always like this as we learn from Mead (1955: 245):

> In many parts of the world we find that one works as necessity calls, this may be the need for day's food, or for preparation for a ceremonial, or it may be the need of the land or the growing plant which must be

> attended to on that particular day. (...) And it is an aspect of the different conception of time as a process rather than as pragmatic.

We are not suggesting going back to a situation where humans just worked to get enough food, even though one in seven people, or 925 million people, are still undernourishment[iii] today. Our exercise is to look for conditions of possibility to create a space to think "us" – as human beings in relation with work and a sustainable life, as we see movements that warn for sustainable business practices (CAPRA, 2002).

THE PRESENCE OF GROUP PROCESS

Looking for conditions of possibility to develop a sustainable society, we need to revisit some beliefs, turning nourishment for life possible in the work environment. For this reason we notice some limitations on theories about team management. The passageway "from groups to teams" is talking about groups as a generalized term and, more worrisome, it is hiding group process. Contemporaneous team models (KATZEMBACH, 1994; WHEELAN, 2013) serve to engage team members in their best to deliver a work result, but do not talk about *autopoieses*, time for production of self, entireness, how to promote a whole system condition. As Morin mentioned, "the natural machine produces itself, the artifact machine produces something" (2005b: 260). On Table 2, we propose some comparisons to better understand possibilities for enhance human condition at work. We compare groups – a social strategy – and teams – an enterprise strategy with the intention to elucidating of group process.

Table 2: A comparison between Groupsiv and Teams through Complex Thought, Systems Thinking and Rhizomic Lenses

	Group compared to a team at work	Team at work compared to a group
The possibility of a concept	**A group is a social strategy that brings together an aggregation of people in a number that allows everyone to see and hear one another[v], in a constancy of time and space, to achieve results of self-development or social results that for instance bring some subjective returns for its participants** (for example personal satisfaction, being part of, identity). **It is an apparatus that supports individual tasks** (self-development that paradoxically is just possible to be achieved through the group experience) **and collective tasks, with interaction and interdependence among people for the group to be a method/apparatus of social production.**	**A team is an enterprise strategy that brings together an aggregation of people in a defined number by the objective to be achieved** (which means increase/decrease of number of people deriving of the objective), **in a constancy of time but not necessarily of space, to achieve defined results of a bigger system (a sponsor or enterprise) that for instance bring some objective results for its participants** (as a financial result) **and subjective** (for example personal satisfaction, being part of, identity). **It is responsible for collective tasks that are developed in some level of synchrony, with interaction and interdependence among people for the final result to be achieved.**
Some features	It is spontaneous, it is flow[vi], it is happening, and it is movement. It is an object of itself *while* it is a method[vii].	It is a contemporaneous work strategy. It is not a denomination of aggregation of employees whose work in the same

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	Group compared to a team at work	Team at work compared to a group
		department in an isolated way.
Focus on	Itself. Focus on the implicit and explicit: the production of self. "How we are *while* we do it"[viii]. Focus on HOW and on WHAT.	To achieve goals and objectives that belong to a sponsor system, in which the team is one system. It has a focus on WHAT the team needs to do: the product or results that are expected to be achieved, then on HOW to work together.
Reason of being	To produce something and process itself, to understand itself and to develop itself. Also, to produce something in the social environment considering the social and historical context in which this group belongs[ix].	To attain goals and results they are subjected/designated.
Common features	**Bo group and team, have group processes, visible or not, because they are first and foremost, people in a life relationship: subjects-individuals** bio-logics[x], historicized, social, cultural, and economics. **They differ from clusters. Groups and teams produce themselves, consciously or not.**	
Systems properties	A group has **interaction or relationship** among participants and environment. Without it, it is not a group.	Same as a group. Sometimes a team doesn't have time to develop relationships as participants would like.
	The **autonomy and dependency** characterize a group as a social apparatus[xi], which recognizes its dependency on the environment and it has autonomy to think about it.	The **autonomy** is a limited property, since it belongs to the sponsor system. The **dependency** characterizes a team as an organizational structure, which depends on the environment and on the sponsor system.
	The **interdependency** happens because a group just occurs in the participation of each participant and all of them, sustaining the singular-collective tension[xii].	The **interdependency** happens because in a team results are always dependent of all participants having their tasks done on time and in the pre-defined quality standards.
	The **organization** is produced inside the group, which produce itself on it, in flows of order-disorder-organization[xiii], considering its context.	The **organization** is produced inside the team, which produce itself on it, considering the sponsor system needs. Flows of order-disorder-organization are less tolerated due the objective results paradigm.
	The **production of self** is organizational recursion and feedback loop in which the group is continuously producing itself.	The **production of self** is more frequently an objective task: bring information to the team about what was good or not for the next project. Also, can have recursion, if the team has the possibility of raising questions about all logics it is part of.
Complex principles	Both group and team coalive with dialogic, holographic and organizational recursion, consciously or not.	
Comprehension and Explanation	Use of comprehension as a tool for discussions about its process. Also, is part of the learning objectives for group development.	Use primarily explanation as a tool for process. Seeks for comprehension as a tool in team development.
Time experience	Seek for a balance between the objective task and the relationship. The tasks of meaning and feeling have the needed time to be accomplished.	Schedule, deliverables and outcomes sometimes surpass the time needed for comprehension of meanings and feelings of being part of a team.

Group Process and Team Management with New Lenses

	Group compared to a team at work	Team at work compared to a group
Participants absence	It means a hiatus in the subjective content; the absence is as experienced as the presence. Usually replacements don't happen.	It means an objective deficit and produces a subjective imprint. Some replacements can occur.
While as an operator	*While* is an operator for group learns about itself.	No often *while* is a valid operator, since the objective goal has supremacy over other demands.
Entireness as a concept	It is the desirable. Usually is the group's goal as a development for individuals and the group per se.	There are some intentions to include *wholeness* as part of team's discussions.
Illustrative image: Iceberg	A group gives attention to the visible (objective, explicit tasks) and invisible part (subjective, implicit, their own functioning) of iceberg: there is a genuine interest for "what we need to do" and also "how we are doing". There are apparent and latent meanings.	Priority, a team needs to take care of the visible part of the iceberg; even we know that if a team doesn't know how to manage the invisible part of the iceberg, it may have challenges to have the visible part done.
Rhizomic perspective	Since the structure in a group is less formal, rhizomes roles are formed along the process of work. It is through rhizomes formations that meanings emerge and the group process appears.	Less rhizomic perspective in a formal way. Teams are designated by the structure of the sponsor/enterprise. Some rhizomes roles can be formed along social activities.
Fields that study this theme	Psychology, Social Psychology, Psychoanalysis, Sociology, Social Work, Anthropology, Pedagogy, Religions.	Psychology, Management, Sports.

An Attempt to Understand Group Process

Group process can be understood whereby group as a process. It is bending over itself, to learn about itself as a member of the group and also, to look at itself as a group. With the perspective of visualizing group process as an eternal becoming (CARLOS, 2003) we believe that the following exercise can help in this understanding: "think what happens *while*, during the collective experience of a group or team." We propose that this exercise does not have each member talking as an individual, but each voice will be a collective production, as each person is a spokesperson that translates what is happening or what can be happening.

Table 3 converts in words what was previously presented at Figure 1. It brings some questions that can be offered to groups and teams to think about their process, or it can be a protocol for those who work with groups and teams to better observe and intervene on them, through these lenses. As a rhizome, these questions don't follow a rigid structure, and they don't need to be used in this presented order or all at the same time. Users are encouraged to follow the flow, respecting the moment and experience that a group or team is living and then some questions will be more appropriate than others (or others will be created).

Table 3: Possible Interventions in Group Process for Groups and Teams with Lenses of Complex Thought, Systems Thinking and Rhizomic Perspective

Lenses	Principle	Possible interventions in group process for groups and teams
Complex Thought Systems Thinking	Dialogic	• Which are the operating logics in this collective (only one prevails, multiple logics coexist, even if opposites)? • How much is diversity acknowledgeable?
	Holographic, Interaction, Autonomy & Dependence	• How members related to each other? • How members access the individual knowledge for collective benefit? • How members access the collective knowledge for individual benefit? • How members access the collective knowledge for collective benefit? • How members access knowledge from other systems for collective benefit? • Can members observe and name what is happening *while* they are together?
	Organization, Organizational Recursion, Interdependence, Self Production	• What types of results are achieved objectives and subjectives? • Are results oriented for the external and internal environment? • How much benefit does this collective generates for itself? And for other systems? • How much time is spent on "how and what": process, task, relationship, avoidance of task? • How is the process to have tasks done (attention to form and flow)? • How the achievement of goals that unite this collective is perceived? • What kinds of feelings are present? • How much aware this collective is about other systems around (family, work, community, society, global)? • How much does this collective influence or is influenced by other systems? • Is this a safe place for each member to feel *entireness*?
Rhizomic Perspective	Types of Knowledge	• Is there interplay between comprehension and explanation for objective and subjective topics? • Do members demonstrate empathy and sympathy to objective and subjective topics? • Are metaphors and analogies considered to facilitate understandings?
	Connection and Heterogeneity, Multiplicity, Asignifying rupture, Cartography and Decalcomania	• What kind of attitudes, gestures, flow, and movements can be perceived and experienced by being together? And what do they mean? • Are members able to say "Yes, and" for different ideas? • How emergence, divergence, and rupture are experienced? • How much this collective relies on the structure of sponsor systems to work together? • How much this collective learn and change itself by the experience of being together? • How much silence is experienced? And what type of silence is it (contemplative, uncomfortable, anxious)? • How much members and sponsors accept to design their cartography? • Is the communication opened, members have appreciation for other's ideas? • How much members build on other's ideas? • How flexible members and this collective are about known models and structures?

THOUGHTS AND HOPES

With this paper we have introduced some thoughts we hope can produce some rhizomic and recursive effects, as team management and its interdependent systems (members, managers, facilitators, sponsors, etc) can bring the group process dimension attention into its practices. Also, we hope the possibility to think the *while* and the *entireness* dimensions in living systems can be part of our quotidian at work environment.

This paper started its trajectory around ten years ago, so it has encountered many voices along its path, and it also talks about collectives – groups and teams – so for these reasons it was written using the pronoun we. We recognize our composition among our studies, fellows, professors, books, work environment and life experiences. To honor our history and the history we are building, we offer this thought of Michel Serres[xiv] that, in our opinion, summarizes what this paper is about: the becoming process, the vulnerability of being a traveller, recognizing spaces and other dimensions as the journey to meet our best being possible:

Networks and resonance
Better than describe or define it, I want to become,
the traveller that explores and recognizes
between two spaces away, this third place.

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[i] Data from IOT – International Labour Organization, Key Indicators of the Labour Market 2011 database, "Vulnerable Employment" refers to unpaid family workers and own-account workers as a percentage of total employment. Source: http://data.worldbank.org/indicator/SL.EMP.VULN.ZS

[ii] Data from IOT – International Labour Organization, Key Indicators of the Labour Market 2011 database, "Unemployment" refers to the share of the labor force that is without work but available for and seeking employment. Source: http://data.worldbank.org/indicator/SL.UEM.TOTL.ZS

[iii] Data from United Nations FAO – Food and Agriculture Organization, 2010 Report. Source: http://www.worldhunger.org/articles/Learn/world%20hunger%20facts%202002.htm#Number_of_hungry_people_in_the_world

[iv] A first version of this exercise was presented at RAM, Revista Mackenzie de Administracao, in 2012, vol 2. This actual version has been modified and expanded.

[v] According to Alves and Seminotti (2006) more important than the number of people is the way they are organized to see and hear each other.

[vi] According to Laszlo (2003) in the context of ESD – Evolutionary Systems Design, flow is not related to 'letting go', instead it refers to intentional and active participantion in the journey.

[vii] We understand method according to Morin (2005a: 338) as a way to articulate concepts without think them as concluded. It is not a methodology, it is a reflexive and multidimensional process of intelectual recreation. It is the full employment of the subject's qualities.

[viii] Shein (2008) clarifies the concept of process. He emphasizes the importance of the intrinsic quality – how things are done – and not only what needs to be done.

[ix] According to Lane (2003) there are two important premises to understand a group: 1) the meaning of existence of a group can only be found within a historical perspective that considers the integration of this group into society, and its economic, institutional and ideological limitations, also 2) the group itself can only be known as a historical process, and in this sense it might be more accurate to talk about group process, rather than a group.

[x] According to Morin (2006) we are, at the same time, an individual and a subject, with autonomy and self-organization, a plurality of personas and a biological organization, one and multiple. For the cientific world, a subject doesn't exist; for the philosophical world, the subject transcends visible limits.

[xi] Following Deleuze, we understand a group as a social apparatus in the sense of a space or place to understand its objectivity and subjectivity. A group has the potential to create understandings about meanings that cross itself.

[xii] According to Fernández (2006) the singular-collective tension doesn't explores what is about individuals or collectives, but what is singular, unique, meaningful and particular of this tension. If we try to eliminate the tension, then we only have the individual or collective dimension.

[xiii] According to Morin (2005b), instead of looking for order as stability and simplification, we need to contemplate the cycle of order and disorder as the possibility of a transformational process. Instead of something to avoid, order-disorder brings potential and new possibilities.

[xiv] http://traces-ombres.blogspirit.com/archive/2005/01/20/citation_michel_serres.html