

Organization of the Organization

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ABSTRACT

The Information Era has brought about significant changes in the various markets, thus forcing companies to be in constant evolution in order to become more competitive in this new setting characterized by the importance of “knowledge”.

Management Theory has evolved along with the needs of the companies to explain the increasing importance of human factors and the new problems of the organization. This discipline that began with a Mathematical Scientific Management approach now incorporates sociological and psychological principles in search of a discipline that is able to explain the “complexities” of the human organization.

The search for these “hybrid” theories is always done within the boundaries of the scientific tradition of reductionism as the tool for analysis, due mainly to the supremacy of the scientific method in western culture.

The proposal of this paper consists of a restructure of the Organizational theory based on a second order paradigm (in order to include the cultural context of the observer), which enables the study of the company based on the signification interchange (not just communication) that constitutes the organization.

INTRODUCTION

Self-Organization and complexity have become recurring concepts in studies associated with the activities and communicational processes of the organization. For decades these topics only interested academics and specialists in fields such as cybernetics, cognitive sciences, and philosophy. During this time some very interesting theories have been developed in these fields but without much attention on the part of management experts. Now, these ideas have somehow become explicative principles, in the Bateson sense where the corporate narrative is based on these principles, for the diverse phenomena with which we associate structure and process.

The systemic perspectives in the organization have been present even from the beginning of cybernetics in the Macy conferences of the 1940's. There has been a mutual influence between engineering, managerial operations and social epistemological approximations that have fomented the idea of the "organization as a system", as something more than the sum of its parts".

When referring to an organization in this context we are talking about cultural relational systems, in any scale, with a decisional history. The management process in this system is constituted by the group of actions that determine the structure and process.

The decisional process of organizations, seen as a coherent ensemble of actions which is collaterally specified by communication, directs the analysis of the structure and function of the system on the basis of an active and flexible strategy, where configuration and

behavior are developed throughout the course of operation, and not as a prescriptive set of rules.

COMPLEXITY

Practitioners and Academics have come to the conclusion that the most important problems facing contemporary organizations are human related. People and their knowledge have become the differentiating factors that determine a successful enterprise in the Information Age. The problems the modern organization faces today seem to be related to creativity, team-work, communication, know-how, etc. The ambiguous nature of these issues can pose a major challenge to organizational leaders who seek cut and dry solutions to these unstructured problems.

The inability to analyze the problems in a structured manner, leads managers to classify the current context of the organizations as complex. These objectives cannot be defined as a function of a set of variables, with a predictable response to the actions taken.

The markets are characterized by fast changing conditions and aggressive competitors. The social and political backgrounds provide ambiguous scenarios, which can be read in different ways depending on the specific context. Moreover, there is a consensus regarding the fact that there isn't a recipe for the actions that should be taken when confronted with a specific situation.

SELF-ORGANIZATION

Self-Organization comes into play due to the structure associated to human networks, materialized through communication. As the sophistication of the organizational members has evolved into what Peter Drucker called the “Knowledge Worker”, the structure of the organization has also evolved. At every organizational level we can see that there are critical decisions being made with respect to new business, process improvement, technological advances, etc. These decisions all change in varying degrees the structure and course of the future actions within the organization. They are management activities distributed throughout the organization, independent of the hierarchical level, academic preparation or practical experience of the worker involved. Currently, it becomes painfully obvious that the management processes cannot be separated from the rest of the organizational activities; they cannot be applied as if the organization were an independent object, isolated from its administrative process.

The paths of evolution of the organization are greatly determined by the company’s self-reference, like the development of ad-hoc strategies based on the organizational history. This is made evident when the members of the organization plan and implement changes in their structure and decisional strategy. The current tendencies in the self-determination of the organization can be seen in initiatives which include from the analysis and redesign of the business process, to the design of chains of commitment.

The analysis of complex systems as units requires careful attention to the factors that provide signification in its delineation, its dynamics and the way in which the investigator

describes. The orthodox tendency in the use of the self-organization concept, however, is potentially a change in words that does not include a change in the description and interpretation operations. We believe self-organization is a concept that must be applied with analytical rigor in order for it to be truly effective. The self-organization theories were originally thought out as an answer to the complexities and paradoxes evident in biological phenomena. Its haphazard use as a management tool can make organizations seem even more complex y paradoxical than the ones co-constructed on the basis of the positivistic discourse. The notion of a system that determines itself requires a recursive conception.

AUTOPOIESIS AS SELF-ORGANIZATIONAL THEORY

The theory of Autopoiesis (production of one's self) provides a specific basis to explain and treat "context", due to the fact that it incorporates an observer in the definition of the system. Its central concept defines live systems as self-producing units that consequently maintain their essential form disjunct from the world.

Incorporating the context in the management practice has been an intent to overcome the limitations of "objective" approaches, focusing on the people and the relations they generate.

Autopoiesis, one of the most rigorous approximations to a theory of self-organization establishes the structural coupling of the self-organizing unit with its surroundings, thus determining its form and process on the basis of information obtained from the outside. This approach is revolutionary in that it states that the information received from the

surroundings is filtered in such a manner that only the information that is viable for the survival of the unit is perceived.

Autopoiesis, however, does not surpass the disjunct vision of the world, which is the determining factor in the inadequacy of our current paradigms for the effective analysis and design of the organization. Even if the observer is co_determined with his surroundings, his descriptions originate on the basis of distinction operations emergent from identity (belonging) or opposition (differences) with that with which it is coupling.

However, from our perspective an organization and its organization process are not only complex and self-organized. This idea emerges from the fact that for relational systems like enterprises, the Autos (one's self) is not enough to provide the foundations that enable the description and analysis of the "self-determination". From the relational perspective there is no possibility of understanding an "Auto" system disjunct from its surroundings. In the case of the organization, it's only possible to think of a process of simultaneous specification of surroundings for each actor involved in the decisional process. Where it can be said that this specification is what generates meaning for the network of observers as an emerging coordination that incorporates each of them.

ENTORNO

Lamarck, in his studies about living organisms stated that the circumstances acted on the habits and customs of organizations and they in turn modified the organization of the living thing. "As for the circumstances [nature] required and still uses every day to vary its productions, one can say that they are in certain sense inexhaustible. The main

[circumstances] derive from the effects of climates, from temperature variations in the atmosphere and in all surrounding environments [milieux], from the diversity of places, from that of habits and actions, reproduction, etc. Etc" (Lamarck 1873). This idea of circumstance bears certain resemblance to the concept of **entorno** in Spanish as it relates to Ecology in its more current form. Ecology emerges as the study of the relationship between the organism in its surroundings in the context of that organism's behavior.

The word **entorno** comes from the Greek words "en", between and "tornos", circular movement, from which derives the meaning of "in the surroundings of". There is a sense of permanence in this definition with respect to the point of reference: the subject. **Entorno** exists if it exists for someone and his activities. This is not necessarily true with words like surroundings, environment, or milieu. These words refer to the group of objects which encircle the autopoietic unit at any given moment. The environment is out there before the observer arrives and will probably be there once he is gone. This coincides with the representative vision of the world as independent from the cognitive activities of the observer, who operates with internal representations that mirror reality.

Most, if not all, of the current management theories are based on the Reductionist Paradigm, whose principles dominate scientific and philosophical thought in western culture. This paradigm comes from a long realist tradition which includes Eleatic Philosophy, Cartesian Method, Positivism and Newtonian Physics. The paradigm of the modern scientific method is based on reduction *a priori* and analysis *a priori* of the object being studied. Reduction *a priori* consists in isolating the phenomenon to be studied, assuming that it is independent from the *entorno* and context of the observer. Analysis *a*

priori consists in the separation of the parts that make up the object in order to study their characteristics individually. Since both these operations can be seen as a form of reductionism this methodology has come to be known as Reductionism.

The characteristics of western orthodox conceptual framework has deep consequences that go beyond pragmatic methodological aspects, like the assumption of an external environment, consisting of groups of objects with inherent characteristics equally available to all observers. The rigorist nature of this method is based on a persuasive process based on the mathematization of objects, in order to arrive, through operations of deduction and induction, at conclusions of unquestionable truth.

Giving due credit to the astonishing accomplishments that western culture has achieved in the Economic and Technological fields, we hold that the Reductionist Paradigm has certain characteristics which can be seen as limitations, especially when used to explain human activities.

First, causal operations and deductions as generators of the explicative discourse for the Reductionist Paradigm pattern the cosmovision in a way that results in a blind spot that impedes the distinction of phenomena for which we don't know the cause. It's very difficult to solve problems we can't even see, as we dismiss inexplicable situations as being the exception to the rule.

A system is based on circular logic, where causes become effects and vice versa, depending on the time frame, structure of the system, or the specific context. The relationships

between the components of the system are constituted by buckles of positive or negative feedback, which establish the stable states of the system. A change in one component can be seen as the cause for the change in the activity of the neighboring components. However, due to the highly interrelated nature of the systemic structure, the effects of the initial action do not end there. The change in the neighboring nodes affects the relationship with the node that originated the change, so the effects of the original action become causes for subsequent activities.

Second, objectivity as the illusion of independence between mind and reality that maintains a separation between the characteristics of the observer and his descriptions of reality. It is indisputable that objectivity and rationality are the most valued virtues in western culture, where “objective” opinions of the representatives of the scientific community suffice to justify and explain any social problem.

This perspective undermines common sense, the decisional history and experience of the observer, as the source of the distinctions that determine context. This is the source of an impersonal dialogue that separates people’s perceptions and thoughts from the problems, even when these thoughts and perceptions are the problem. There is a disjunction between the what the organization is doing and what the members of the organization think it should be doing. As if it were somehow possible to talk about the “company” as an entity that’s independent from the people who compose it, an organism capable of making impersonal decisions that make the people pull in different directions. It’s no wonder that the environment is seen as hostile of competitive.

RELATIONAL THEORY

Lavandero's cognitive relational theory states the irrelevance of the existence (ontogenics) of a given world as a pre condition for the cognitive activity of the observer. Evolving from ontology, where objects have an independent existence, to an epistemological view, where distinctions are made on the basis of the culture of the observer. It's not necessary to speak of a world of independent objects as a condition for knowledge, since everything is a distinction referred to a cultural context. Culturally determined difference configurations explain the knowledge process. The network of observers that comprise the organization pattern the configurations (operations of distinction) through the common culture, defined as a structure of meta-configurations based on the conservation and production of patterns of appropriation (what one makes its own) and belonging (what becomes a part of). The observer does not exist as an isolated individual but as a member of a cultural network that determines its configuration process.

RELATIONAL MANAGEMENT

The organization is defined as an *eco__semio_auto_poietic* unit. This means that the individual ceases to exist outside of cultural networks, which determine the distinctions of the observers in such a way that the future of the cultural network is assured. The network produces its **entorno** (relations), its signification (semio)and itself (auto).

David Hilbert defined Eigen (Canonic) Values as an operation, conduct, etc. that emerges on the basis of the interactions of the members of the system without intervention of external factors. These Eigen concepts are at the base of self reference associated to the *eco__semio_auto_poietic* unit, as these concepts are applied to each other and result in concepts that are again part of the original organization. Under closure, all ends must

coincide with the beginning of something. There is really no end to the results or effects of the activities. There is, in fact, a constant evolution of the levels in which the semiotic circuits evolve.

In a self-organizing system each member is also a manager of the system. The resulting structure is that of a heterarchy, which comes from the Greek words “heteros” and “archein”: “the other” “governs”. In each moment there can be a change in the member of the organization who makes the decisions that “govern” the organization.

This concept differs from the hierarchy, where “hieros”, or the “saints”, concentrate the power to guide the organization.

This structure coincides with the concept of autology, which refers to concepts that can be applied to themselves. Management perceptions and actions must be applied to their own perceptions and actions.

RELATIONAL METHODOLOGY

The methodology used is oriented to modeling the process of reformulation of the experience (situation of phenomenon) that generates distinctions that configure signification for an observer and that convert this reformulation into an experience. The process of reformulation is developed in three stages: Cognitive, Decisional and Communicational.

COGNITIVE STAGE

All human activities are ecosemiotic (based on relationship and signification) operations, which means that the base of distinctions, as operations, will be analyzed on the basis of the structure that generates the reformulation discourse. When referring to the discourse structure we are orienting ourselves to the type and number of relations that an observer produces in the concepts that he uses as an explicative process. For the structural characterization of the discourse we used a Saussurian approximation of the axis of syntagmatic and paradigmatic relations. The syntagmatic relations have to do with presence of the terms or words in any series while the paradigmatic join terms or words without specifying a particular form. The paradigmatic axis of a discourse translates essential, stable universally accepted, implicit relations.

Within the perspective of cultural relativism, it's possible to clearly define a field according to which a number of paradigmatic associations, that for us "don't need to be mentioned", is in other places and in other times subject of explicit development. This is not only inherent to each culture but it also corresponds to all aspects of knowledge, including scientific.

On the basis of this we establish an analogy between the axes of the discourse, the distinctions and the relationality used, in the following manner: the discourse syntagma (the distinctions on the basis of a base question), the thought paradigm (the network of associations between the distinctions, and the type of associations use or terminological relations: associative or causal)

Some rules or guidelines that enable the connection of the syntagma are as follows:

Consecutive: Concepts in which the presence of one affects the other, the connection is temporal. The simplest form is causality.

Association: Concepts that superpose part of their signification in their relation.

The process of configurational reformulation, from its distinction base, is modeled as a group of consecutive and associative concepts. However, in abduction the units (syntagma) that compose the specific descriptions don't matter. What matters is the formality of the relations that enable the emergence of a determined form. For this reason, the basis of the reformulation process is if the relational configuration of the syntagmas enable the transit of the reformulation to the explanation.

The specific methodology for this type of modeling is based on the concepts of cognitive maps. This is a computer system that graphs the argumentative line of the observer as concepts and connections. The analysis on the basis of the graphic structure enables different types of analysis, for example: discourse attractors, terminal elements, initial elements, centrality of concepts. On the basis of these types of characteristics, it's possible to find that some concepts of the argumentative plane centralize and pattern the connectivity of the ideas and concepts, so that these are the objectives of the solution.

The cognitive map explains the framework or paradigm from where the observer builds his observation. This technique enables the structure, analysis and generation of signification for different types of problems. The types can be verbal, for example, discourses extracted from an interview or read directly from documents. The cognitive map can be developed

directly from an interview and enable the observer to construct and argument while the problem emerges.

The reformulations of the Territorial Configurations were graphed, as cognitive maps, from concepts and connections. The discourses are compared in order to find significant differences between the structure of the discourse of each observer. The criteria to evaluate if there are differences between discourses is focused on the conservation of the attractors of the generated structures. Attractors are defined as the concepts that orient and centralize the construction of the tracks of explanation or argumentation. These are obtained through a Hierarchical Analysis by domain or cluster.

The comparison of the discursive structures for each context is focused on the observation of the presence or absence of circuits, specifically the presence of discursive circuits.

These analysis enable the explication of explicative tracks (sequences of concepts that generate signification) from which the generative mechanism of the phenomenon to be explained can be seen. The type of analysis used and their objectives are detailed as follows:

Hierarchical Analysis of the Domain: This analysis prioritizes the density of the connections around the syntagmas and their connectivity domain. The goal is to identify the presence of centrality elements that guide the lines of reformulation.

Hierarchical Cluster Groupings: Generates groups on the basis of the syntagma generated from the central analysis concept. Evaluates all routes from each concept associated to a terminal syntagma. The groupings obtained from the main concept, will diminish in

hierarchy (connectivity) obtaining groupings or hierarchical clusters (subordinate concepts).

Circuit Analysis: Analysis that extracts circuits generated by the concepts in the syntagmatic model. If they are recursive it can be said that the reapplication of an operation occurs as a consequence of its previous application, which establishes the complexity of the explanation structure and the way it is associated to other processes. A complex chain of argumentation is developed when the circle of links is made.

DECISIONAL STAGE

In its cognitive stage, the reformulation process generates tension points or attractors which must be resolved before they can be used as explicative principles or elements of communicational closure. The result of this process is a prioritization of the alternative courses of action, as well as the criteria to solve the attractor. We will define this as the explicative-decisional configuration.

The explicative-decisional configuration can be established on the basis of the analysis of a three level hierarchy where the objective or the objective of the decision is at the top, followed by a second level of criteria and a third level of alternatives. The factors are organized affecting the decision in the gradual steps from the general (highest level) to the more specific (in the lower levels). The structure must reflect the importance of the elements in a given level with respect to some or all of the elements in the immediately above it. Once the structure is complete, the process to establish the priorities is quite simple. The specific methodology for this type of modeling is based on the concept of Analytic Hierarchy Process (Saaty, 1994).

COMMUNICATIONAL STAGE

It's a reformulation of the discourse that depends not only on the specific code, but also on the relationship of the participants. Communication in this model is related with the organization, the structure and the context of the communicational system and not with the operation of the parts. It responds to a conception of autoecopoiesis, meaning the reproduction of the relational organization, and the coupling with other types of structures with which it relates as surroundings or *entorno* distinctions. The idea of an emission that expresses an idea or thought, can implicitly transmit other ideas and thoughts, not identical to the ones it intends to transmit. The methodology of this stage has to do with the explicative routes that emerge from the Analytic Hierarchy Process, that act as guidelines for the reformulation communication. These guidelines are landmarks that must be present if reference is made to the process of cartography of the reformulation. At this stage it doesn't matter how they connect as long as the connection elements or guidelines are maintained.

CONCLUSIONS

Relational Management is based on the type of relationship that organizes or defines the network's identity. Management models based on the interactions between objects are not able to explain the dynamics of the organization, mainly due to the blind-spots associated with the reductionist paradigm. The major contribution of Relational Management is a model based on the ecosemiotic relationships that constitute the organizational network.

All networks organize themselves on the basis of triadic units, where groups of three people establish a stabilizing structure for the organizational processes. A triadic unit at the top

levels could be the General Manager, the Marketing Manager and the Finance Manager, whereas at a lower level there might be triadic units made up of Unit Manager, Sales Representative and Trade Marketing Manager.

Management is established as the process that reinforces the signification configurations that orient a recursive decisional process, determined by the general eco_semiosis of the organization. The recursive interchange of signification between the members of the organization conform semiotic circuits which evolve with each new exchange, in order to generate new possibilities of configuration. It's a morphogenetic process where new configurations are being established due to the semiotic spiral, where the same interaction generates a different level of signification each time.

A corporation seen as a cultural organization is, thus, an eco__semio_auto_poietic network. Each node in this network is closed with respect to each other, but at the same time contributing to the ensemble of the network on the basis of the construction of signification. The members of the organization constitute a closed network, where the signification patterns the distinction configurations that establish the decisional process. This means that the decisions, actions and conducts of the network are "applied" to these same decisions, actions and conducts. As a product of these successive recursive operations, the relational structure of the organization only permits the existence in the organization of more of the same decisions, actions and conducts, establishing a condition of closure for the organization.

Due to the eco__semio_auto_poietic nature of the organization it seems obvious that the design of solutions must be developed on the basis of the organization's own signification, for the solution to be assimilated by the culture.

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