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Management of Non-Rationality through Decisional Knots in the Project's Society I

Gestión de la No Racionalidad mediante Nudos Decisionales en la Sociedad de Proyectos I

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ABSTRACT

The Project Methodology has been impacted by the intense digital transformation of the last decade, made possible not only by the evolution of microcomputers, intranets, networks and decentralized computing, but also by the maturity of digital corporate spaces based on robust digital platforms. In this article the previous phenomena are related; product of performative mechanisms with linguistic, social and political characteristics that are impacted by constant transformations and redefinitions adjusted to a Connective Non-Rationality that modifies ends and modifies means according to external pressures; with project structures that reflect a social imaginary or that respond to socially accepted demands or the imposition derived from administrative fashions that give rise to organizations and quality assurance systems that help to generate management modes that are more related to Non-Rationality that adjusts the media to the permanent changes of the environment and solves this through decisional knots that invoke standardized mechanisms that package Lego-type decisional routines.

RESUMEN

La Metodología de Proyectos ha estado impactada con la intensa transformación digital de la última década, posibilitada no solo por la evolución de los microcomputadores, las intraredes, las redes y la computación descentralizada, sino por la madurez de espacios corporativos digitales basados en robustas plataformas digitales. En el presente artículo se relacionan los anteriores fenómenos; producto de mecanismos performativos con características lingüísticas, sociales y políticas que son impactados por constantes transformaciones y redefiniciones ajustadas a una No Racionalidad Conectiva que modifica fines y modifica medios de acuerdo a las presiones externas; con las estructuras de proyectos que reflejan un imaginario social o que responden a las exigencias aceptadas socialmente o a la imposición derivada de modas administrativas que hacen emerger organizaciones y sistemas de garantía de calidad que ayudan a generar modos de gestión que se relacionan más con la No Racionalidad que ajusta los medios a los cambios permanentes del entorno y resuelve esto a través de nudos decisionales que invocan mecanismos estandarizados que empaquetan rutinas decisionales tipo Lego.

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1. Introduction

We are in a society of Projects understood as a strategy of centralized and concentrated coordination, in time and space of non-repetitive efforts that generate searchings associated with a specific standardization of the layman's block type; in the style of the Middle Ages when the first methodologies were refined for the construction projects of cathedrals in France -the first Christian kingdom after the Empire of Constantinople-.

Such extensive use of Project Methodology occurred at the end of the last century prioritized in the 21st century, particularly linked to the large digital transformation projects largely enabled by the evolution of microcomputers, intra-networks, networks and decentralized computing (Intel, Apple, Microsoft, Sun, Oracle); and the generation of digital corporate spaces generated by the Global Digital Platforms (Amazon, Google, Facebook, Twitter).

These processes accelerated and promoted industrial offshoring, displacing manufacturing to the periphery in China and other nations without strong labor regimes that promotes the concentration of creation, conception and design in the countries of the center, such as the United States, Germany and France.

However, the problems derived from purchasing capacities eroded by the decline of wage societies and substitution by precariousness and labor flexibility, generated two phenomena the first one is related with the need for consumer articulation beyond national borders that build permanent multidimensional profiles of consumer preferences in the second one,- goods and services are associated with survival- and the generation of expectations of experiences that compensate the deficits of sociability through a platform sociality that modifies desires and needs. The above has been incorporated in the selections of modes of conducting social and political processes, reflected in public policies and managers considering a marketing issue.

To frame this phenomenon, it is necessary to contextualize the Schumpeterian source and the Non-Rationality in the Decisional Knots. In the previous perspective, the pre-industrial development models and the knowledge were used to organize the mobilization of labor capacities and means of production; while in the industrial model, knowledge is used to provide new sources of energy to reorganize production, so in the informationism, knowledge is used to promote the generation of new knowledge as a source of productivity.

Under the given premise, Schumpeterism is a mode of organize the social relations and dematerialized economic activities, built from the impacts of new technologies that have reduced the need to work physically by expanding free time, as well as the production of informational goods that have corroded the market's ability to set prices by generating strong monopolies. Consequently, relationships and activities have been transformed into pre-modern forms of collaborative production of communities originating in Asia, Europe and America, [1], liquidating the wage society, because it modified the main characteristic of work from being the standardized and main social function in the community bond.

The new Development Model is based on the Informational Mode that Castells describes as a form of work organization in which the large-scale use of microprocessors in automated, robotized and computerized processes, by producing modifications in the living beings that improve productivity and dematerialize economic relations, [2]. The mode of regulation in Schumpeterism is informationalism: a form of sociotechnological-economic organization that makes extensive use of digital information and microelectronic communication technology focused primarily on the technological capacity of communities and individuals as a condition for the generation of wealth, the exercise of power and the creation of cultural codes.

The core of the informational economy is the processing of symbols, which is expressed as a global network of financial markets based on Information and Communication Technologies -ICT-; where productive organizations maximize their value chains by increasing informational intensity, [3]. This Informational Mode is characterized by two aspects: 1) Concentration on Information processing; and 2) Effects centered on the transformation of Processes. Applied to the Increase of material wealth by generation of surplus in the productive processes.

On the other hand, Informational Development for Castells is the equivalent of industrial development because value is generated by the transformation of information into knowledge and its application to all productive activities. It uses on a large-scale Digital Information, the ICT; then it presents a synergic link between the informational and the human because it generates an organizational transformation by allowing both the Network-Organization and the networks of organizations as well as the global network society.

As a consequence, Digital Platforms have generated a New Digital Space different from the public and private ones. This New Corporate Space, based on a virtual architecture, conditions both human interactions and the generation of contacts, affinities or communities from a mercantile perspective through mediations that replace intermediations, transforming the traditional informal social activities -proper of the private sphere where tastes and consumption experiences were shared- by a Mercantile Corporate Space generated by algorithmically oriented interactions: Sociality, Creativity and Knowledge are produced there, but above all, consumption and preference profiles. However, also the connectivity of the network society and the emergence of the New Digital Corporate Space generated have increased a new happiness for the new digital sociality of social networks and for the empowerment associated with the Internet of Things (IoT), [4].

According to Shoshana Zuboff, the experiences of people in these Digital Corporate Spaces become, according to Shoshana Zuboff, proprietary data streams and are used to improve products and services, as well as to build Predictive Signals - analyzed using Artificial Intelligence (AI) Computing Solutions - generating profiles that can anticipate present and future decisions, which are traded in Behavioral Futures Markets where Surveillance Capitalists sell certainties and seek Behavioral Capital Gains thanks to Action Economies that can predict, modify or generate behaviors. Overcoming the Economies of Scale that were produced in Taylorism and that are applied with Big Data, the Economies of Variety derived from Toyotism and associated with the capture of data in different digital corporate spaces are also overcome, [5].

On the other hand, at present, trans individualization as a process that generates a sphere neither private nor public derived from technique - which is not interindividual, like the General Intellect - has transformed work into a Force-Invention associated with thought, language and imagination that unfolds as a double transindividual-technical dimension and a transindividual-collective one. In that sense, a process of reification is generated thanks to linguistic, emotional and technical events that promote and demand the generation of a new third digital space, [6].

ACAFor example: Silicon Valley has created a fiction and has become the world reference. However, just as it has generated tension from the Ecosystem of the new corporate space developed by digital surveillance platforms, it has also generated a technological dream from the images of technological programs in a market controlled by an algorithmic rationality that presides over economic activity, as well as financing and austerity, through a mixture of computer and AI services that manage to commodify information and the desires or preferences of individuals through the extraction and expropriation of data coming -many of them- from the sensory experience of individuals. This, because value is generated from the physical accumulation of data traces captured through facial recognition, smart sensors, virtual reality, or IoT, [7].

In this sense, abstraction is fundamental because the work becomes indirect, focusing on monitoring the behavior of automated processes and on the complexity due to the increasing interaction with microelectronic mechanisms. Therefore, it does not stimulate people's participation and development. Integrated information systems, on the other hand, have software that records the rate of interaction and errors of workers operating a computer terminal, allowing real-time monitoring of individual performance. However, it should be noted that, in general, these possibilities are by-products of the basic functions of information systems.

From this perspective, labor flexibility has taken a number of forms: 1) flexibility related to the quantity and distribution of hours worked (part-time, job sharing, flextime, flextime, annual computation of hours worked, flexible daily workday, quarterly work, shift work); 2) contractual flexibility (temporary, casual, fixed-term) and outsourcing; 3) work-life flexibility expressed in programs that provide for career suspension; and 4) flexibility related to work space (telecommuting and homework).

And, in line with flexibility, we can speak of an Online Civility associated with the digital conversion process. Such Civility is integrated by a set of practices and expectations that condition how the individual presence is manifested and the position that corresponds to it in an established hierarchical order. This is why the civilizing process generates a set of social norms and gestate affections and rules that guarantee self-control; which, according to Norbert Elias, allows us to speak of the Digital Environment as a Habitus, [8].

For all that has been described so far, a Digital Culture has been created for promoting oscillations and political and sociological transitions; therefore, the Conversion from Analog to Digital presents characteristics of a

Technical and Religious Conversion, which forces to carry out processes of reinterpretation and reinsertion of the old frames within the new frames; as well as the generation of explanations to the new acts and new facts.

In other words, Digital Culture is expressed as a new religion that brings its own language, which has remodeled the spoken and written languages; according to Jacques Ellul the Digital Technique is dehumanizing and anti-religious, which is linked to the "Automation of Decisional Processes" whose solutions are not conditioned by the need of the users but by the technical restrictions.

Therefore, Digital Identity is polyphonic by allowing a multiplicity and diversity capable of implementing different "Cultural Specificities" that allow interactions between the digital and the political. At the heart of the Informatic or Scientific Component of the Digital is the explanatory religious narrative function of the origin of the past and the future. This generates emerging forms of "Active Digital Citizenship"; with challenges and challenges to "Credibility and Legitimacy": because the so-called Digital Corporate Space generated by Social Networks privileges Presence over Analysis, Location over Substance, and Visibility over Relevance.

Finally, Digital Culture is composed of Modes of Communication and Information and Data Exchange that affect knowledge by the irruption of New Formats that operate in the so-called "Digital Environment", composed of associated tools, modes of access and navigation and exchange where each object is characterized by its position within it. Contemporaneously, Video Games have contributed to establish the Mental Models that shape moral reasoning, political awareness and the understanding of actions associated with Active Citizenship, taking a place alongside literature, cinema or television.

The present article, consequently, is the first part of a reflection on the management of Non-Rationality through Decisional Knots in the Project Society; introducing the notion and phases of a project, but without delving into any methodology for structuring it. It results, then, a research essay derived from the experience developed in the engineering area seen from the perspective of Education and Communication. Therefore, it intends to enrich the context of the outlined digital Culture by adding two elements: the performative acts, or those of constant transformations and redefinitions that constitute a language translated into effective communications; and the non-Rationality related to the multitude of interests that must be satisfied contextually and that configure different rationalities or that express the foundations of a "Subversion of Rationality".

Henceforth, the fundamental idea is to systematically overcome this confusion through decisional processes or premises to project them when there is no decision or there is conflict in the decisional process within an organization considered as a non-trivial machine; and, in this sense, to constitute an organizational culture that maintains a reference in the past and a link with the future but that assimilates innovation as a deviation of such culture but appears invisible in front of the decisional knots.

2. Performative Language and Effective Conversations

The functioning of society is linked to the development and use of words, in this sense communication coordinates behaviors that otherwise would not generate recurrent collective acts; contents are not transferred but behaviors are coordinated. The social is constituted in language, it is always a linguistic phenomenon. However, as long as there was no alphabet, communities lived in a situation in which, thanks to orality, language and action were closely linked; speaking sometimes had the capacity to make things happen.

Social phenomena take place when recurrent interactions are evidenced that follow operative courses of mutual acceptance, based on emotions that allow the coordination of their actions. These are formalized through networks of recurrent and changing conversations, as well as through networks of coordination of actions or behaviors.

The alphabet separates speaker, language and action; besides it changes from a language for action to a language for ideas. Words are modes of consensual behavioral coordination and language in turn coordinates words; that is, it coordinates behavioral coordination. Culture is a phenomenon that is made possible by a particular instance of communicative behavior; people are recognized as linguistic; people create themselves in language; and language is generative.

Language is one of the three primary human domains, along with embodiment and emotionality.

Language, being generative, not only allows describing the environment and expressing interiority, but it is also active and precedes reality because it is capable of generating being or reality; which generates a linguistic bubble that oscillates between reality and the fiction that represents what is to be achieved, [9].

Signs, objects, events and actions are constituted in language, they are linguistic relations that are established with the environment thanks to the consensual domain where sign systems are shared and where social space is constructed. Language is what an observer sees when he sees a consensual coordination of coordination of actions is a recursive coordination of behavior.

From the systemic approach, human behavior is conditioned by the structure of the system in which the human being is framed, so language is action and can alter the course of things and events: it can make things happen, create new realities and by speaking we model our own future and that of others. We shape identity and the immediate environment.

The construction of a "meaningful reality" [10] is based on observation, which is not only to perceive with the senses, but with thoughts, communication sinteriza and conceptualizes from observation by means of thought through consciousness; which results from the accumulation of focus that observes or cuts out a portion of reality.

When looking for reality, the world and the observations are observed, communication cuts out something, that is why the second order observation is the focalization of the distinctions, to analyze the observations used by the observer; and to characterize the observer's blind spot.

So, the construction of reality is made through distinctions that are contingent. Every observer is the one who gives meaning through distinctions, [11].

For Luhmann, for example, the observer is a system of meaning that produces itself while producing distinctions, the results of these observations are meanings that are organized at the level of perception, consciousness and communication. The relationship System/Environment is established as distinct but correlated constructed realities, one does not exist without the other; what differentiates is the degree of organization of the elements.

For Habermas, meanwhile, there is a generative knowledge that enables to speak correctly and is intuitively dominated that opens a dimension of background that represents the world of life in which interactions are concatenated and stabilized, which are also practices that allow the coordination of actions by enabling agreements rationally motivated by common convictions and the establishment of dialogic practices, developed by communicative action based on understanding, [12].

One can characterize instrumental actions or strategic actions, the first type is governed by technical rules of action and evaluates the degree of effectiveness, while the strategic type is governed by the observance of rules of rational choice. Butler assumes from Derrida the idea of Performativity or the ability to create the situation that is named, the speech act is reiterated and installs ontological effects.

Austin, on the other hand, establishes some expressions that when uttered are the only condition to consider that an act has been carried out, these words go beyond saying something, he calls them realizative or performative expressions; which seek an informative transfer and have implicitly or explicitly verbs in the first person singular, present indicative, active voice. These need two conditions: 1) to take as a basic assumption that the communicative fact exceeds the symbols or words; and 2) to recognize a certain intentionality of the communicating agent, [13]. He indicates that there are expressions called utterances that can be false or true and that say something in the face of realizations; it can be said that they are unfortunate, because they can go wrong and go wrong.

On the other hand, the theory of speech acts is based on the idea that every time an utterance is uttered, actions or "things" are performed at the same time by means of the words used. The locutionary act is the act of saying exactly and only something in the fullest sense of "saying". The illocutionary act is that which is performed "by saying something"; it consists of "the making of an assertion, offer, promise, etc., by uttering a sentence, by virtue of the conventional force associated with it".

Austin states that Locutionary Acts exist when we express complete units of speech. The perlocutionary act is the one that takes place as a result of saying something produces effects and consequences in the feelings, thoughts or actions of oneself and others. Acts, gestures, enactments, generally constructed, are performative in the sense that the essence or identity intended to be

expressed are fabrications constituted and sustained through bodily signs and other discursive means, emotions do not exist prior to their performances, [14].

These acts or "fabrications" are considered natural through repeated execution in time, in a set of multiple daily social interactions; affected by conventional frameworks, so it can be expected that contexts interact with the power of their realization; being decisive the iterability or repetition projected into the future, linking the constituent past with a future to be constituted; surely associated with decisional chains, which are supported by the weight of the past.

For Echeverria, in relation to these Acts or Fabrications; there are the Locutionary Actions which are linked to what is said. There are also the Ilocutionary Actions which are linked to what is executed when saying what is said; that is, affirming, declaring, asking, offering and promising. And on the other hand, the Perlocutionary Actions which are related to the effects verified in others, "by saying what was said". Rafael. 1998.

The acts, or "fabrications" generate new norms that can be considered as natural. Performative acts are impacted by constant transformations and redefinitions. In Judith Butler's interpretation, performativity is a linguistic, social and political mechanism that is capable of producing what it names; it is understood as that which promotes and sustains performance thanks to a process of iterability or repetition subject to certain norms.

Social norm's function based on repetition and exclusion which generates the sensation of stability, naturalness and coherence; recognizing that people are vulnerable and interdependent. The category performative is related to effecting, performing, or also to representing or interpreting; in terms of a speech act, it indicates when what is enunciated is realized. It refers to doing or also to failing in some cases; it is oriented to produce transformations of what is given or also to create a reality by means of a performative locution; its efficiency is related to the power of successfully producing the new reality it names.

Performance expresses in English a set of reflections on the inscription of ritualized repetitions of the law, which various authors, from Foucault with the concept of discipline, to Bourdieu with the concept of habitus, take to explain the processes of socialization and internalization of norms. Performativity is understood as that which promotes and sustains the realization using expressions that are constituted in types of action; constituting a kind of chain of resignifications whose origin and end are not predetermined, nor totally predictable, they generate frameworks that can be modified.

In this perspective, concepts such as language games become important, where the effects of discourses under specific pre-established rules are analyzed, considering, among other aspects, the following: Rules do not have legitimacy in themselves, but are part of a contract between players. In the absence of rules there are no games. Every argumentative statement is a move made within the game.

The collective considered as social allows acquiring an average capacity, that is, a practical ability for what is important, for which "daily life mediates towards the non-daily and is the school for it". This generates a process of development of community forms of relationship that allow to achieve levels of basic performativity or sociability, [15].

3. Rationality and Non-Rationality

Rationality means mainly calculability and calculability; the historical concept of rationality expresses the specific action of a society whose organization rests on universal principles of calculation and makes it possible to calculate the ends that are calculable; in such a condition rationality, calculability and controllability are synonymous, [16].

Traditionally, rationality was accepted as a relationship of means to ends that sought optimization.

There are three forms of Rationality, the Absolute of economists and engineers; the Limited of psychologists centered on cognitive capacity; and the Social that conditions individual behavior. However, it is expressed that freedom of will little operates in the decisions of business managers facing the pressure of the environments, [17].

Complexity is conceptualized as a relationship between decisions, which make decisions work with each other, reciprocally qualify each other and are used as decisional premises, or as the power to decide; therefore, rationality is replaced by complexity.

The current concept of irrationality is that of incalculability, which means freedom of the will; but others think that incalculability does not exist in

human behavior, emphasizing that everyday life is full of phenomena where chance is present and neither explanations nor causal relationships can be found. We also speak of irrationality when there is no interpretation of a behavior, that is, when there is no coherence associated with previous motives and it is expressed that many times the processes are not understood. When this occurs, people value or take a position in the face of what they do not know.

Non-Rationality within organizations is related to the multitude of interests that must be satisfied, so we can speak of a "contextual rationality" [18]; which allows, in different circumstances, to speak of different rationalities, or even of the "Subversion of Rationality. It is also like incorporating not only self-reference, but also heteroreference, which allows us to see an organizational rationality associated with adjustments to the environment, which does not respond to ends that affect the means.

The concept of autopoiesis groups together the set of strategies used for the differentiation of the environment, regulating its operation, as well as incorporating the experiences (experiences) and actions (skills). The overcoming of Traditional Rationality incorporates the dimension, the future as the uncertain and the past as the explanation of the present, around the decisional knots.

The decision process is above all a process of reflection that serves to prepare the action that will execute the decision taken. These have a double unit: 1) It relates different adjusted alternatives to be considered; 2) It chooses an alternative by substituting one for the other.

Decisions are no longer framed, then, in a Traditional Rationality approach, it is renounced to the achievement of effectiveness, of the Optimum, achieved by the joint use of effectiveness and efficiency, which allows them to reach correct results or of adjustment of related means. This Non-Rationality is then of Connection, it is a Connective Rationality; it modifies ends and modifies means according to external pressures; decisions function with each other as decision premises, [19].

The relations between decisions are selective; because there is no causal relation between effects and causes or means and ends. But the End is decisional and the Means too; a relational and not causal functionality is then achieved, derived from the existence of fictitious bridges that link decisions. Decisions establish temporality in the organization by defining the past, the present and the future; in the absence of perfect competition, the Rationality of Means to Ends cannot be guaranteed, i.e., it cannot be expected that decisions will be correct and optimal, [18].

The Logical Deficit of Rationality in organizations tries to be compensated by generating Decisional Knots or sets of linked decisions; routines are decision programs subject to communication and articulation; and they become the constituent elements of the organization through communication processes; the communication network privileges some options and conditions the evaluation of alternatives, as well as constructs time lines thanks to past and future temporal connections.

The usability of an option to be considered in a decision is influenced by organizational decisions, the pressure to decide generates the formation of stocks of decisions or elements for repetitive use. Decisions appear as the last element of organizational relationships; they are the combinatorial elements of complex social systems; it is a unit as an element and as a reference to other alternatives.

The decisional nodes are established in a selective relationship by individualizing the points of the processes of accountability; the other decisions are projected as assumptions; it is decided because it has already been decided; for this reason, they make the options appear as different according to the timeline of the decisions and of the different organizational forms.

In organizations, complexity is a relationship between decisions that reciprocally qualify each other, just as they establish situational states projected as decisional premises; but they are neither limits nor decisional orientations. An attempt is made with complexity to reach "routinizable decision processes"; three types of decision extension mechanisms are established. 1) Decision assumption; 2) Decision probabilities; and 3) Decision making itself.

Decisions are context-sensitive because they are different according to the moments, due to the thematization of contingency. There is a reflexivity of linkage, there is a non-rational social and temporal preparation, which does not respond to the means-ends relationship; a systemic rationality can be established, which sometimes incorporates the means-ends relationship into the relationship with the environment; complexity appears as a condition to transform selective

decisions into events and to be used as elements for the construction of the system.

Systems are operationally closed and synchronized with their environment; they generate their own operations as well as those that follow them. They act in accordance with the immediate past which generates a rationality of connection, by the relation between the decisions for this reason these must: 1. Aim at a unit of chaining. 2. Cotematize the selectivity of their relationship with other decisions, to promote articulation. 3. Link to points in time to reflect and take on a function that connects them to time. 4. Produce meaning in the logic of the chaining of knots. 5. Incorporate and include schemes of rationality.

Communication is a selection process by means of which access to the world of meaning is made possible through representations that as soon as they appear they vanish, [18]; that help to endow with difference; communication is the operation with which society as a social system produces and reproduces itself autopoietically.

When deciding, uncertainty is transformed into risk, deciding is to try an alternative according to the context; the organization generates internal events that are not articulated with the environment to maintain its coherence, but decisions must be related to the environment under conditions of resource and time restrictions.

Organizations define with high specificity the behaviors of the people who compose them; and appeal to general incentives to motivate them, they are defined and designed in terms of a Rationality of Adequacy of Means to Ends; for which it establishes a division of labor that seeks to optimize the means to achieve the ends. Power is stratified to coordinate and control activities. Communication is channeled in a subordinate way to guarantee the coordination of activities.

Structure is produced across operations for use in the same operations. All operations produce information; organizations, being social systems, are operationally constituted by communications, which are retrospectively and prospectively recursive; information has themes and functions. The themes form the organizational memory centered on what happens internally, that is to say, it remembers only itself. While functions support subsequent communications.

As expressed by March and Simon, the ability of an organization to design, implement and maintain a complex and independent activity model is limited by its capacity to generate and process in real time the necessary communication to make interdependent independent activities and processes that must concur in an organized manner, [20].

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4. Project

The project, [21], is an undertaking, initially promoted by the Enlightenment, which was generated by science and faith in the progress of the nineteenth century, was taken up again in the 1960s, and it was the 1970s that brought it to the general public. Its temporality and transience make it the instrument that best represents postmodernity. Project management is at the heart of strategic companies, subject to a rapid rotation of their operations and to the redistribution of the structure in search of agility, horizontal.

The project arises historically from the separation between the conception of cathedrals and their construction, i.e., the division of design and execution, results from modern society, symbolizes the threshold of the Renaissance by the representation through drawing and future construction, which allowed the projection and design. The project environment is "mobile" but must meet the objectives of the business; and shall not change the initial condition of temporality of the projects, [21].

The infrastructure works that remain as permanent testimonies of ancient civilizations show the early development and use of different project management techniques for the execution of infrastructure; the Pyramids of Egypt, those of Yucatan, the monumental works of China, Greece and Rome; as well as those of the Incas, the Aztecs and the Zeus.

At the beginning of the 20th century, Henry Gantt, a disciple of Taylor, developed the Bar Chart that bears his name, [22], where the tasks necessary to execute a project, their duration and the temporal sequential position of such tasks are related. In the 1950s, the Critical Path Method was developed, at the same time that the U.S. Navy advanced the Polar Missile Project and used the Pert Method. Since the end of the 20th century, there has been talk of consolidation promoted by changes in the organization of work and business activities in industry, towards a projection more in line with a Network Society.

A project is an organized collective creation, with a set of established parameters related to time, resources and technical characteristics; around a need, [23]; but it is also a set of interdependent activities oriented to a specific end with a predetermined duration. It has a high level of uncertainty associated with the combination of resources, specificity of action, communication and coordination.

And it is executed in parallel with the permanent and inherent processes of an organization. The project has two essential characteristics: Temporality, it has a start and end date; and Uniqueness, which differentiates it from organizational processes and routines and from other projects.

The work has a unique approach that differs from others, processes that are unique to its activities are required for the achievement of the objective, as are the repetition of processes that define the boundaries of the phase. And the closure of a phase ends with some form of transfer or delivery of the work produced as a deliverable of the phase; which must be approved before the phase can be considered closed.

Within the set of actions prior to the formulation of a Pre-Project it is required to understand if there is a Business Opportunity and a Business Model, probable in terms of technology and market analysis; as well as to establish the conceptual definition of the project, which involves the realization and validation of prototypes.

Deciding whether to carry out a project requires overcoming the evaluation of the probable financial profitability as materialization of the ideas; for which it is key to establish the needs of the clients, the analysis of the competition, the evaluation of the availability and reliability of the technologies as well as the characterization of the regulatory requirements; for this, the preparation is carried out to: Formulate the project; elaborate the Business Plan and the Business Model: Formulate the project; elaborate the Business Plan; and carry out the Detailed Plan of the project.

Figure 1 shows the relationship between Strategic Management, Deployment linking the Logical Framework Matrix and the Project Life Cycle in the PMI conceptualization.

Project Management seeks to achieve coherence and integrity and the scope comprises management actions ranging from Portfolio Construction to the actions comprised between the Preliminary Studies and the Putting into Production of the project; it can be characterized from Four Phases and Seven Stages:

A Reflection: 1) Preliminary Study, it tries to squeeze and characterize the needs in a synthetic way and to advance a tour through the horizons of possible solutions

Figure 1. Project Management based on Prospective Management.

Source: own.

and through the supply and demand market; 2) Detailed Study of Needs, to model the needs and to understand the core of the need.

B Conception: 3) Functional Study, to establish exhaustively the functionalities to be satisfied; 4) Technical Analysis, to contrast the different functionalities with the technical solutions.

C Manufacturing: 5) Realization, is to manufacture, purchase or parameterize the technical solution within the documents made; 6) Tests, which evaluate the needs, functionalities, technical solutions achieved, almost through a verbal process of conformity.

D Commissioning: 7) Production Commissioning, for which post-market monitoring and surveillance actions must be established.

The planning activities are essential for the elaboration of the Pre-Project, where resource needs are established, as well as the risks and assumptions that must be characterized; to understand the complexity of the conceptualization of the problem to be solved from the characterization of the planning, communication and learning activities; which demands the integration from the recognition of two domains: the Specific Knowledge associated to the management of the required technology and the Knowledge System associated to the sector; to be able to choose and understand the technical hypothesis and the industrial applications.

All this allows to advance an exploratory and a preparatory phase prior to activities such as: 1) The research around the techniques and procedures. 2) Market studies and Product Foresight. And 3) Strategic Reflection on the development of the Organization.

5. Conclusions

In project management, the ISO-type Globalized Quality Systems are of mandatory adoption, which generates more Lego Block-type Standardization processes that show the guidelines of the so-called Neoinstitutionalism, which recognizes two types of environments in which organizations can be immersed: technical and institutional, which coexist. In the former, production and exchange take place in sectors where the control of production systems is rewarded. In the latter, rather than exchanges, rules and requirements for support and legitimacy prevail; this is the case of hospitals. There is a dominant organizational structure in Courts, Universities and Hospitals, which is bureaucratic and non-centralized, called by Mintzbert professional, which depends for its functioning on the skills and knowledge of its clinical professionals. Such a structure is based on two fundamental pillars: division of knowledge and collective participation in management; or collegial management.

In order to achieve predictable behavior and guarantee the autonomy of the professionals who carry out the processes, skills are standardized through training and indoctrination, which then allows self-management. The training is classroom and university based and the indoctrination is provided by the professional associations on a regular basis. For example, at present, the documentation and elaboration of "Technical Standards", which are the result of consensus processes and the incorporation of scientific evidence, are mainly carried out by the guilds, the expert power being decisive. All of which seeks to preserve the autonomy of the professional-user relationship, managing differences in the environment by means of uniform organizational categories.

It is frequent that project structures reflect the social imaginary; that is, they respond to socially accepted demands, or to the imposition derived from administrative fashions. And sometimes these structures are also generated by institutionalized myths that press for the incorporation of professions, specific techniques or technologies promoted as symbols of organizational efficiency; in the eyes of public opinion, such resources or knowledge make the organization appear modern, rational and efficient.

Such types of organizational configurations and the adoption of quality assurance systems help to generate management modes that are more related to non-Rationality, in terms of adjusting the means to the permanent changes of the environment and solving this through decisional knots that invoke standardized mechanisms that package Lego-like decisional routines.

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