THE DYNAMICS OF THE MATRICS STRUCTURE

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Abstract:
The relationships organization-suppliers-customers have recently known major changes in the structure of services and have made the organization develop its managerial and professional competencies in order to do projects. The qualified organization is the most trust-worthy in the process of doing a project. The participation of an organization in doing projects depends on a multitude of factors. Out of these factors, the structural organization comes forth, as it represents the variable with the most important impact on a project's quality, costs and lead time. From the organizational point of view, the matrix structure is frequently chosen for projects. The matrix structure generally coexists with the line structure. The two structures are contrastive. The line structure is based on the unity of command principle and is not open to cooperation and dialogue. The matrix structure encourages cooperation and communication, favours conflict, which is considered here a healthy and essential process. The matrix structure and the line structure claim their right to initiative. Conflict and the multidimensional integration of multiple hierarchies can be negotiated through the concept charisma – mediation, sustained by the matrix structure.

Keywords: qualified organization; matrix structure; mono-affiliation – multi-affiliation; projects – professions; charisma – mediation

Introduction

The development of organizations by use of a diversification of activities, products or services, market and customers makes them apply to a more and more complex environment. The acceleration of the scientific and technological process, the going international of changes, the cultural diversity, the growing of uncertainty and instability are all factors with a strong impact on the dimensions of the structural organization: specialization, coordination and formalization.

As problems which need solving grow more and more every day, the complexity of the environment appears both strategically and operationally. Strategically, the opportunities of an organization's development multiply and diversify the perception evaluation and especially the exploit of opportunities make the organization have abilities to detect signals given by the environment. Operationally, the complexity of the environment makes the organization consider any problem as a particular case which has to be treated with specific instruments, techniques and modalities.

The relationships organizations-suppliers-customers have recently known major changes in the structure of services. The requirement to do projects makes the organization develop its managerial and professional competences. The ongoing of a project implies a high level of staff qualification and their capacity to use sophisticated working techniques. Projects are represented by unique activities, with a high degree of novelty and a complex working task. The participation in projects needs an interdisciplinary collaboration within a special management structure (organizing

structure and informational system) and a management process (decisional process, management style, management methods and techniques and interpersonal communication). Consequently, the possibilities of answer of an organization to the environment evolution are limited by its internal capacities which, in their turn, depend on the scientifically and cultural accumulations of the subdivision that make it. *The qualified organization* is the most trust-worthy in the process of doing a project.

The Characteristics of the Qualified Organization

The present ideas – which focus on organizing, especially labour organizing – are orientated towards the identification of flexible and evolving forms, able to prepare the developing of the organization under the conditions of a powerful competitive environment. Flexibility and evolution suppose the enlargement of managers' decisional horizon and the subordinates' autonomy growth. The decisional horizon and the autonomy depend both on the process of getting competencies and on their vertical and horizontal transmission to any organization. The process of getting and transmitting competencies is based on an organization's human resource access to the accumulation of knowledge through the formation of a culture capable of assuring the multidimensional integration of multiple hierarchies. In such a culture, managers and subordinates get to understand and solve the inter-conditioning between two kinds of structure: the organizational structure through projects and the line structure. Organizational structures' richest field is represented by the qualified organization.

In his paper, Philippe Zarifian, one of the main researchers of the qualified organization, says that the content of the labour process has been considerably modified lately. The share

of intellectual work processes is continuously growing. This leads to the idea that routine activities, inherent to the Taylorian organization, are more and more losing status in favour of high qualified activities which use sophisticated technical equipment. Organizations cope with the environment factors through the high qualified activities. The content of the working process, which is mostly intellectual, functions through the organizations' orientation towards the generalization of the quality management and the assurance of the structural flexibility. These orientations are imposed by the necessity that the organization resists the force with which the environment factors act towards major provocations: they innovate better (quality), they innovate faster (time) and they innovate more efficiently (costs). The successful approaching of these three provocations is possible only in those organizations where most work acts become an opportunity to individual and collective self learning of the organization. The purpose of learning is to pass from the working process' static logics to competencies' dynamic logics, where human resource intelligence, creativity and autonomy are the forces' determinants.

In competencies dynamic logic, communication and cooperation become essential because they allow, on the one side, the development and consolidation of individual and collective competencies and, on the other side, the permanent transformations in the process of knowledge. Human resource interactions and organizational subdivisions involved in the process of innovation depend on the quality of communication and cooperation. In this context, through his ideas concerning the qualified organization, P. Zarifian[1]

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[1] Zarifian, Philippe. – *Travail et communication. Essaisociologique dans la grand enterprise industrielle*, Presses Universitaires de France, pp. 213, 1996: "The qualified organization

transmits collateral subtle messages, to which we add our perception that this creates the knowledge developing environment through a "concerted plurality" and not in "isolation". The qualified organization will be met in all those places which authorize and favours the initiating of inter human relationships, which to allow to every person (manager and doer) to elevate his competency.

The qualified organization is based on four principles[2]: the principle of facilitation for a team project; the principle of the dynamic logics of a project; the principle of cooperation and friendly functioning and the principle of anticipative thinking.

The principle of facilitation for a team project allows human resource to establish and make objectives through the group organization of activities.

The principle of competencies' dynamic logics is based on the evolving conception able to capitalize human resource creative capacities. The organization continually develops the abilities to adapt to the changes of the environment.

The principle of cooperation and friendly functioning demands that all activities be organized and reorganized based on communication. Communication has a determinant role in the process of learning and in the transfer of knowledge. The circulation of information and the interaction among the subdivisions which participate at a project are favoured for the developing of cooperation and colleagues' good functioning. Group interpersonal communication and organizational communication are based on learning of a common language and on the clarification of the group's global purposes, organizational subdivisions and the entire organization.

The principle of anticipative thinking allows every person to project things into the future. Through the projection, the person makes a transfer of information about the attained objectives, favours the bringing up to date again the competencies and investigates the better use of abilities in the solving of daily problems.

P. Zarifian states that a truly qualified organization "develops the model of separated organization, which facilitates innovation and makes staff responsible without checking and controlling processes...[3]".

Cécile Dejoux says that, when we go deep into the analysis of the qualified organization, we notice that "... the heart of the system is based on the notions of learning and competence. The qualified organizations have as essential characteristics the capacity to generate competencies. They offer human resource liberty of action and they allow them to use, develop and continuously transfer their competencies. The human capital is valued and used as a permanent resource. In addition, the essence of this kind of organization is:

• to develop everybody's competencies;

• to identify and adopt the organization's potentially useful competencies;

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represents a set of wishes, opinions, interests, which are built in a special way... wishes which, from now on, must be developed not only in their isolation, specialization and self centring but also in their report and communication. The organization becomes qualified in such a way that it authorizes and favours this connection; it allows every participant to raise his competency in the social contact with other professions and/or other social categories. "

[2] Torrés-Blay, Olivier – *Économie d'entreprise. Organisation, Stratégie et Territoire à l'aube de la nouvelle économie*, 2ᵉ edition, Economica, Paris, 2004, pp. 244.

[3] Torrés-Blay, Olivier – *Idem*, p. 244, continues to sustain that "The qualified organization is based on the principles which derive from the traditional discourse about responsibility, autonomy and the reduction of hierarchical levels. This model proposes a separated organization".

• to transmit the strategically obtained competencies (the key competencies) from person to group"[4].

According to Olivier Torrès-Blay, the model of qualified organization is assimilated „...to the ideal kind of organization suggested by Max Weber, a type of target organization which allows the structuring of the position taking into consideration the new competencies, acquisitions and admitted assimilations by all the organization's human resource as being given by the changing of the context. In essence, a qualified organization is based on three principles[5]: fitter of precious stones, the privileged character of working and management situations and the research of the work cooperation.

The principle of fitting precious stones asks the organization to structure through the implementation of competencies to all those who don't work in the way (attitude) resulted from adjusting the human resource as an effect of the decisions made. According to this principle, the organization is less defined through its organizational structure and more through collective competencies contribution to the achievement of objectives.

The principle of the privileged character of working and management situations motivates human resource for a certain perception. In this sense, most incidents and risks which appear in the process of working are considered privileged moments of learning. Other incidents and risks, derived in the evolution of industrial systems, are assimilated to the routine situations and more and more incorporated in technical devices

The principle of the research of the work cooperation lies at the basis of the norms according to which activities of communication and transfer information must be done between the interested parts. As far as cooperation is concerned, it can be considered that it facilitates the making of common effective references among persons and leads to the unitary defining of production objectives, of problems to be solved and of ways to mobilize.

Our considerations referring to the qualified organization sustain the idea that its dominant advantages are: the big share of intellectual work processes, the communication and cooperation among staff, a good dynamic of competences, anticipative thinking and separated organization. All these characteristics recommend the organization to plan and coordinate its activities adopting the method of project management.

The structural organizing of project management

Project management is a general method of management. This means that it develops principles and techniques that influence the two major components of the management system: the management structure and the process of management. The feature that we highlight – general method of management is the argument that the literature promotes an improper characteristic "the method of project management exhibits many alternatives".

Regarding these alternatives (project management with individual responsibility, project management with staff responsibility, etc.) we appreciate that is more fair to asses the impact of these method regarding the organizational structure of the project management. As a general method of management the project management influences also other components of the management system. For example, making a project involves teamwork that is a major role is assigned to interpersonal communication within the group. In the same manner we will

[4] Dejoux, C., *Organisation apralifiante et maturité en gestion des competences,* AINS, Lille, 1996.
[5] Torrés-Blay, Olivier – *Idem*, p. 245.

consider that the project management influences other components such as: the information system, the management style of the managers, etc. If our assumption is true we will ask ourselves: why there aren't alternatives for these components of the management system? Because such answers cannot be found we will agree with the following concepts "alternatives of the component of the management system" and we will reject the concepts "alternatives of the project management method".

Refering to organizational structure the method of project management require a certain structure, according to the necessity of the project. In this sense, in the paper "*Project Management*" it is specified that "according to the competences assigned, there three types of organizational structures that can be found in project unfolding: project coordination, project matrix and project organization"[6]. In this case the idea of alternatives of organizational structure of project management is correct. Still we will consider other concepts of structural organization of project management.

Applying management through projects method needs the existence of a procedure with the implication of three "actors": The Administration Council, Project Manager and Project and Team Manager. The content of this procedure refers to achieving some activities, events and tasks which define the competences of the three "actors": competences of Administration Council; competences of Project Manager; competences for Project and Team Manager.

Depending on the nature of competences distributed to project manager, there are four kinds of organizational structure:

- organizational structure with facility[7];
- organizational structure with individual responsibility;
- organizational structure with major – state responsibility;
- organizational structure with mix responsibility.

Organizational structure with facility is the simplest organizational formula of management through projects. In this case, the labor department chief is the project manager. Obviously, the project manager can also be another person with major implication in the project. The first solution presents the advantage that the project manager doesn't need to have authority upon team members of the compartment he coordinates. This problem is approached only by team members who come from other compartments. Together with these, the project manager realizes an indirect communication, through their compartment chief.

Organizational structure with individual responsibility presents, as a main feature, the fact that the exclusive responsibility of project achievement, goes to the project manager. He has tasks, competences and specific responsibilities oriented to project objectives accomplishment. By naming the project manager by the Administration Council, his hierarchic authority is the same with the authority of the other managers that subordinate directly the general manager. In other words, the project manager is placed, hierarchically speaking, at a hierarchic level next to the general manager.

After building the project team, the relationships between the project manager and the organizational subdivisions managers, it is created *the*

[6] Mocanu M., Schuster, C., - *Managementul proiectelor*, Ediţia a II-a, Editura All Beck, Bucureşti, 2004, pg. 44.

[7] This kind of organizational structure is proposed by Verboncu, Ion – *Manageri şi Management*, Editura Economică, Bucuresti, 2000, pg 181. The design of the structure and other few considerations are ours.

secondary structure of the organization. Human resources are temporary integrated (during the life cycle of the project) into an autonomous organizational structure. In this structure, the holders of some labor posts from the primary organizational structure continue to remain the holders of those labor posts and receive some tasks, competences and responsibilities specific to the project.

Organizational structure with major – state responsibility is more complex as it operates with two "managerial characters": project manager and coordinators of project share, meaning major state. The decisional competences and the responsibility for the project are split between the two "managerial characters". The members of the team continue, like in the other case, to be overloaded with two categories of tasks, competences and responsibilities.

The organizational structure, with the two components: primary and secondary structure, becomes more complex. Multiplying the management functions generates new problems, such as: authority delegation and the complication of hierarchic and functional authority relations.

Organizational structure with mixt responsibility presents a higher degree of complexity only in what concerns the decision competences and responsibilities the project manager has. Between the project manager, project coordinators and the managers of the compartments named to take part in the accomplishment of the project it is built an "*organizational and informational web*" which breaks through at least the next principles: the principle of command unit at every hierarchic level, the principle of adaptation level of decisions and the principle of correspondence between authority and responsibility.

The four organizational structures are specific to organizations that do projects in n alternative way (one by

one). There is also the case of doing the projects at the same time (more projects at once). For these projects' accomplishment are good only organizational structures with individual, major-state and mix responsibility. For example, in Fig. 1, is presented an organizational structure with individual responsibility in case of doing at the same time two projects. This time, the secondary structure, in its whole, is more complex. Tasks, competences and responsibilities remain at the level of complexity specific to every project.

The Relationship Design-Culture-Structure

The design renders, in a synthetic shape and through different instruments, the characteristics of some models of structural organization. "There develops a certain relationship between the design and a model of structural organization. In order to understand the relationship, we must start from the principle that any design reflects an implicit culture, which is the philosophy of interpersonal relationships derived in a system of values, presumptions and behavioural norms."[8] The correct perception of the system of values, presumptions and behavioural norms allows us to generate by use of design both the physical components of an organizing structure and its functioning mechanisms.

A design is most often chosen to explain the resulted implications from the pursuing of the system of values, presumptions and behavioural norm. For example, in the graphical representation seen in Figure 1, the design of the primary structure synthesizes the mono affiliation relationship: "any person has a single boss". The culture of this design is *the*

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[8] Denis, Hélène – Strategies d'entreprise et incertitudes environnementales – Design organisationnel, cultures et technologie, Collection Gestion, Paris, 1990, p. 194.

culture of personal authority. Contrary, the design of the secondary structure reflects *the relationship of multi* *affiliation*: "a person has two or more bosses". The culture of the new design is *the culture of impersonal authority.*
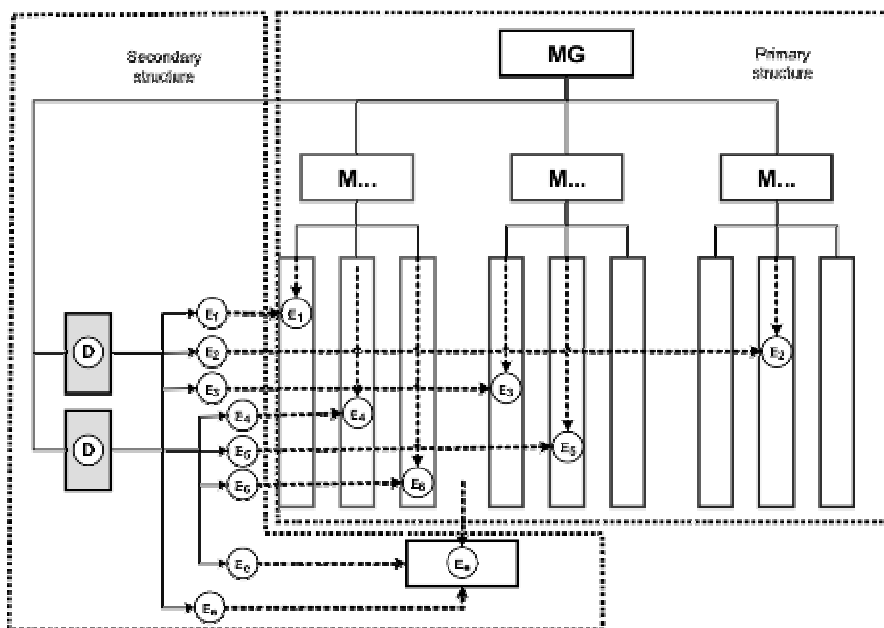
Figure 1. Multiproject organizational structure with individual responsability

The implementation of the project management method implies that the organization should accept a new culture. The new culture (that of the impersonal authority) does not exclude the old culture (that of the personal authority) even if the cultures are not equal. In the system of values, presumptions and behavioural norms of the new culture, *the coexistence principle* is dominant. Nevertheless, we notice that in literature, but mostly in practice, the perception of the coexistence principle is insufficient, which undoubtedly explains the fragility of the relationships between cultures. But, the appearance of a new culture imposes a new design; each culture has its own design.

The research of the primary structure design suggests the existence of a one-dimensional structure type, with a single axis where the authority is distributed vertically. It is the *unity*

command principle which "rules" in the organizations with such an organizational structure. This is a structure specific to those organizations which use human resource subjected to the authority and with a weak individual impact upon their development. The domination of the command unit is even more evident in organizations with many employees and with a low qualification level or in those organizations which use techniques and technologies with a very low degree of mechanization and automation. In these organizations, routine activities are of a high importance. The design emphasizes a pyramidal organization because the human resource belong to a culture whose essence will be a system of values, presumptions and behavioural norms where individual work and the unity command principle rule.

When organizations make projects they need to distribute staff in order to

perform unique, original and complex activities based on innovation. This time, staff must be highly qualified and they should use modern working techniques. Human resources grasp their existence through a system of values, presumptions and behavioural norms specific to team work. The group culture imposes a greater behavioural autonomy. The design of the structural organization implies the multiplication of vertical axes and the association of horizontal axes. The horizontal axes determine the distribution of authority both vertically and horizontally. To this purpose *a secondary structure* is to be developed. Most people consider the new structure an autonomous structure, which is not true. Coming back to the design, we can notice that the secondary structure goes together with the primary structure. There are differences of principles between the two structures; the primary structure is based on the unity command principle and the secondary structure on the multiple subordination principle. At the same time, we can clearly see in the design what the global structure model is able to coordinate two activity groups: current activities (routine ones) and project activities (unique, original and complex). The global organizational structure, with its own design and culture, imply the domination of the coexistence principle. In order to coordinate the two activity groups, we need to "adjust" the characteristics of a constant organizational structure: the primary structure (a line structure) and the secondary structure (a matrix structure).

"The process of adjustment" imposes modifications on the hierarchical authority, specific to the primary structure. The hierarchy shouldn't have the entire power in order to determine the execution of the activities involved in the project. For this purpose, once objectives and hierarchical authorities have been identified, the "the negotiations zones"

are established. Together with the distribution of the hierarchical authority, the managers' and subordinates' responsibilities are modified. This leads to the idea that the global organizational structure is transformed from a separate elements assembly, vertically distributed, into an assembly of elements connected through interfaces, horizontally settled by use of a process of adjustment. The possible clash of interests is taken to light, they become visible and they go through a procedure of equilibrium concerning the power reports. The interfaces become positive tension zones in order to respond to the requirements of an environment characterized by diversity and complexity

The Dynamics of the Matrix Structure

The line structure, which is encountered in many organizations, is part of the bureaucratic culture. "A bureaucratic culture appreciates some functioning ways, such as: the respect of the hierarchical and survey authority and of the norms. On this basis, the vertical and horizontal fluxes among different experts must have a hierarchal position[9]".

Doing a project in the line structure outlines a process which goes successively from "idea" to "construction". Interactions between the two units are hierarchically coordinated and the organizational formula of project management goes to organizational structure with facility. Nevertheless, if for doing the project a third unity is necessary, suppose "the quality of the environment", and then the complexity of the project will know an obvious growth. In this case, one might ask: Is the line structure more corresponding? A positive answer is not possible because reality shows that the line structure facilitates conventional

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[9] Denis, H – *Idem*, p. 196.

projects, medium sized ones, which imply few variables.

For full-sized projects, a project might be mistaken for the organization which takes the responsibility for its carrying out. Nevertheless, in most cases, projects are done by qualified organizations able to develop very complex and irreproducible activities. These organizations have the necessary competences to successfully finish any project, they combine, in variable proportions, the capacities of planning and coordinating activities and promote organizational structures which succeed in reconciling contradictory dynamics.

The approaching of full-sized projects makes the organization add to the primary structure a secondary one. The design of the two structures will be, as previously mentioned, different. The greatest change brought to the design of the secondary structure appears from the necessity to share the hierarchical authority with the project's manager. At the culture's level, this division implies a new legitimacy, that of the distribution of authority among different experts and of direct cooperation and negotiation. Thus, the system of values, presumptions and behavioural norms is modified. The new culture, based on the division of power, defines the design of the entire secondary structure and reflects the multi affiliation. This means that mixed organizational structures with individual responsibility and are "matrix structures"[10].

In order to explain the major dynamics brought by the matrix structure, we shall use the concept "dialectic articulation for projects – professions"[11]. This articulation can be imagined in three sequences. The

description of the sequences is synthesized in Figure 2, which shows the design of the projects – professions matrix structure.

A first sequence of the relationship projects – professions lies in making a multi disciplinary team around the Project Manager. This team must have all the necessary competencies in order to do a project. The role of the Project Manager is to generate a global conception of the project, which to be the assimilated by the project's team.

A second sequence of the relationship projects – professions shows the modifications in the internal organization of professions with the purpose of establishing the necessary competences in order for them to be integrated in the global doing of the project. For a correct integration, each profession according to the required contributions, is placed directly under the manager's control or under one of his subordinates'.

A third sequence of the relationship projects – professions aims at the developing of communication abilities. Through communication, the "adjusting" of the organizational system is attained, and, in this way, it is also reflected the criteria of reflection for the job contributions to the project. The communication among those who are responsible for the project and professions generally has an important part of tacit elements addressed to the conception of an internal plan, a community of wishes. The communication's purpose is to develop the capacities to be abstract in such a way as to allow the intervention of the team in all the project's stages. Through communication, the relationship projects – professions will become the decisional process in initiating, planning, control and ending of the project.

[10] Charron, Jean-Luc, Sépari, Sabine – *Organisation et gestion de l'entreprise*, 3e edition, Dunod, Paris, 2004, p. 94: "The matrix structure is often chosen for projects. Nowadays, matrix structures are the most supple and flexible"

[11] Crémodez, Michael – *Idem*, pp. 186-188.
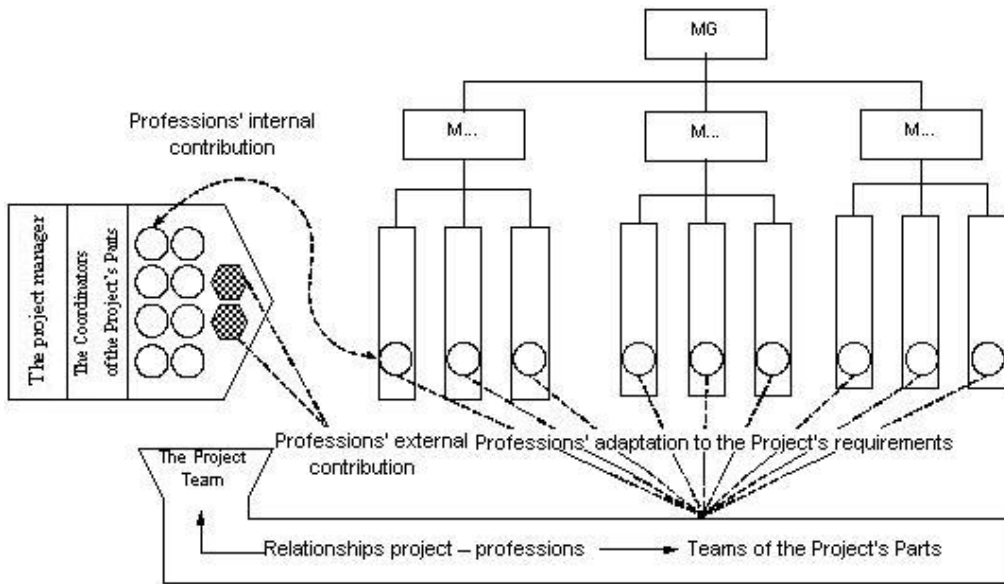
Figure 2. The articulation projects – professions
Source: Adapted from Crémodez, Michael – Idem, p 187

The major modification brought by the matrix structure, as compared to the line structure, lies in the fact that the authority of the hierarchical boss turns into a "more personal" authority for the new horizontal axis, that one of the Project manager. Consequently, the matrix structure "makes way to charisma, based on the managerial qualities of a person, and mediation authority, based on the capacities of the person with abilities to stimulate the cooperation between managers and subordinates". The two types of authority (charisma and mediation) are asked simultaneously, especially by the one who is responsible for the horizontal axis (the project axis). The concept charisma-mediation is asked by the on responsible for the horizontal axis because he has few resources than the one who is responsible for the function axis.

The choice for "charisma-mediation" is also sustained by the other modification determined by the matrix structure: the capitalization of

direct cooperation and negotiation. The system of values, presumptions and behavioural norms initiated by the direct cooperation and negotiation becomes indispensable for the horizontal integration of a complex task. In this context, the one who is responsible for the vertical axis must adapt his expert exigencies to the needs of other specialists and to give a part of their authority to the one who is responsible for the horizontal axis[12].

For a complex project, the matrix structure, through an interdisciplinary collaboration, generates another dynamics. The source of modifications is to work in teams. In matrix structures, working in teams is more developed than in line structures because liberty and autonomy are highly praised. Nevertheless, we shall outline that working in teams is not excluded in the organization specific to line structures. Such a situation is confirmed by the existence of the board of directors

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[12] Denis, H – *Idem*, p. 199.

which has a collegial type of organization. In the matrix structure, work in teams enlarges the specialization field and turns the expert into a generalist. And, also by comparison, another consequence of working in teams is the more open nature of conflicts in the case of the matrix structure. Work in teams is imposed by at least three requirements: quality, novelty and the urgency of the information[13].

Solving a task in teams means to use more experiences and aptitudes than one person has. The team will also make more planning alternatives and will propose various modalities to a practical approach of a task. All these are allowed in favour of a better quality execution of activities than in the case of individual work.

When new ideas and original solutions are required, teams are considered superior to individuals. The project team, when confronted with the need to provide new ides, appears as a more profitable source. A good example is a team's behaviour in a reunion for staff's creativity stimulation using brainstorming, Phillips'66 technique and so on.

Teams include persons who are different according to their acquired experiences and the level of information. That is why, when there is a lack of information or an urgent need for research, teams will bring more information in a shorter period of time. At the same time, teams implication facilitates the access to the most complete and suited information.

The matrix structure appears in a managerial context, where we begin to deeply sense the growth of complexity. The matrix structure offers a good answer to contradictory needs: "From the economics point of view, the matrix structure is capable to accumulate both simplicity and effectiveness advantages specific to the divisionary structure, and expertise and efficiency advantages generated by the line structure. Ideologically, the matrix structure is capable to better answer individuals' democratic aspirations without giving up hierarchical simplicity and hardiness"[14].

In the practice of the production enterprises, the implementing of the matrix structures is a difficult process due to the exclusivity of the hierarchical authority: "any person has only one boss". The double subordination is unacceptable. In these enterprises the principle of unity of command "rules" which disputes the double subordination. The production enterprises use human resources subjected to authority and having a weak individual impact on their development. The domination of unity of command is even more obvious in the enterprises with numerous effectives and with a low level of qualification or in the enterprises which use techniques and technologies of low level mechanization and automation.

The matrix structures are easier to implement in the investigation activities, of intellectual performances in the organizations that use highly qualified human resources and which claim a bigger behavioural autonomy. Therefore, the conclusion is that the project domain is a suitable place for the matrix organizational structure. The project-based activity has been, at least lately, desired by the majority of the organizations. The organizations' desire is contradictory to the reaction of the human resources accustomed to act in a universe where conflicts are not considered as effects of disobeying the unity of command. Here, conflicts are seen as a result of the dysfunctions caused by the inappropriate regulation of some contradictory realities. Thus, in

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[13] Devillard, Olivier – *Dynamiques d'equipes*, 3ᵉ edition, Editions d'Organisation, Paris, 2005, p. He considers that "novelty, quality and urgency of information depend on the context and the environment".

[14] Crémodez, Michael – *Ibem*, p 163-164.

order to implement matrix structures the human resources must take an important cultural step: to be open to cooperation and dialogue and not take refuge in the "redoubt" of the hierarchical authority.

The matrix structure requires a density of relationships between the human resources (managers in a subordinate regime, managers – subordinates and subordinates – managers) incomparably more important than a one-dimensional hierarchical structure.

The matrix structure favours conflict, it considers it healthy and indispensable. In the matrix structure, conflict expresses a natural tension within dimensions of contradictory action and requires its negotiation, to a certain extent "out in the open" in order to find a solution which would allow a punctual solving of contradictions. As such, the matrix structure forces the line structure to accept to give up certain initiatives. Regarding the decisional level, instead of functioning from top to bottom it requires functioning from bottom to top. The sustenance of this way of functioning is argued by accepting the principle promoted by delegating authority through exceptions. This means that the line structure is required to function through exception in order to solve the "saturated" problems. From the above -mentioned we can observe that the two structures dispute the right of initiative.

In a line structure, the initiative belongs to the boss. Only he can delegate part of his authority but assumes the risk because he is still responsible for the results. The boss is the only one who puts into action the instruments of control which allow reaching the objectives. In a line structure, the right of initiative is ceded by the superior to the subordinate. This right can be withdrawn from him if he doesn't prove worthy of the trust he was shown.

On the contrary, in a matrix structure, the right of initiative actually belongs to the subordinate, regardless of his superior's attitude. The right of initiative is rendered by the organisational dynamics which places him in contact with the events and allows him to transmit appropriate information or to deal with the problem directly without reporting and without letting his superior know that he overlooked something.

For example, the person in charge of the production workshop, where there is tension between the requirements of the different people responsible for the products, is the one who perceives the consequences of the tension and the one who has the ability to eliminate the tension.

How? Depending on what he knows about the future production programmes and on the anticipation his experience allows him to appreciate the veracity of some people's exigencies. The one in charge of the production workshop is also the one who disposes the necessary elements to explain the lack of technical or logistics performance. In the case taken into consideration, the presence of the section manager is not necessary in order to put an end to the tension.

The key for the dynamics of a matrix structure is in the structure centre and not at its outskirts, because the "alchemy" operates at the crossroad of dimensions. The performance of a matrix structure can be appreciated depending on the number of problems which can be solved through direct contact between the interested parties. The bigger the number, the more effective the structure. The conflict generated by the structure dynamics must be solved in the depth of each person by approaching the relationship between their culture and their aspirations. The process of solving the conflict is not an easy one, because going from subordination to cooperation is not simple neither for the subordinate,

nor for the superior. For the subordinate situated at the crossroad of two or several dimensions of the matrix, applying the principle of unity of command entails the dependence on two or several hierarchies, on two or several authorities aiming at different objectives and disputing the limited resources. Disobeying the principle of unity of command exposes the subordinate to one alternative:

• To interiorize the difficulty and to find himself caught in a network of constraints thus locking himself in a schizophrenic attitude, damaging for his equilibrium (Figure 3);

• To free himself of constraints and to take advantage in enlarging his margin of personal liberty, thus gaining autonomy (Figure 4).

In any of the situations, the subordinate's attitude is the source of some serious dysfunctions. First of all,

the management gets blocked and the least problem of allocating resources requires the highest level of arbitrage. Secondly, the management presents a dislocated functioning because applying the strategy depends on allocating some resources, chosen at random and achieved in an irresponsible way.

To avoid getting stuck with an alternative, the subordinate still has as a solution the breach of another principle, just as important, that of short-circuit interdiction. To "short-circuit" your superior means to address directly to a hierarchical superior echelon or moreover to communicate directly with the subordinate of a boss similar in rank to the one you depend on. "The matrix structure institutionalizes the connection to the extent in which its effectiveness depends on the ability to solve conflicts of resource allocation at the level where it is manifested.
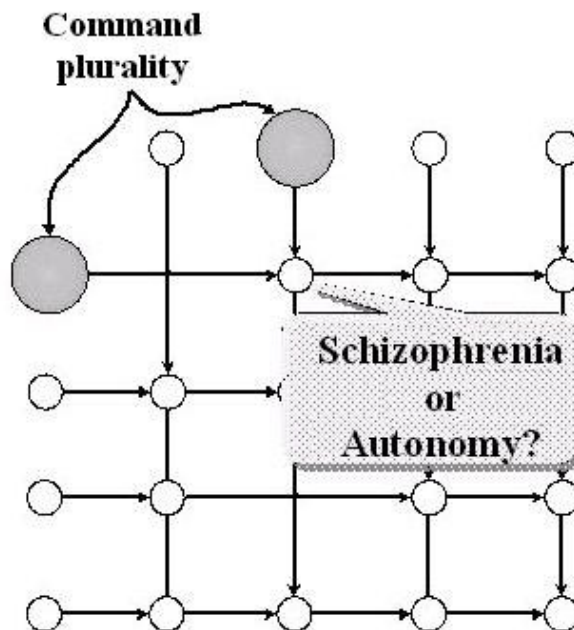

Figure 3. The effects of multiple hierarchies
Source: Perfected according to Michael -Idem, p. 168

Actually, the subordinate exposed to this kind of conflict can solve it if he has a liberty margin to modify his activity programme without letting this correction have an impact on the individual objectives".

The subordinate cannot appeal to the liberty margin in the event his intervention does not cause a chain reaction for the other actors who contribute to the achievement of the objectives of one or another of the dimensions associated with. Obviously the reactivity of each one of them is directly tied to the others' and to the liberty of action of each and every one to solve one's own difficulties.

In such a dynamics, solidarity and not authority is important. The individual "disappears" compared to the group and each actor must fully and simultaneously feel as part of all the dimensions he contributes to. Within this context, the superior is "mono – affiliated", while the subordinate is "multi-affiliated". The subordinate is liable when disobeying orders, in order to interpret the objectives correctly and to try to find means compatible with the others'. In his turn, the superior does not attract legitimacy from the instructions but from the ability to clarify and assign the objectives, from his ability to make compromises with his colleagues compatible with the globally available resources and the decision to facilitate the necessary adjustments in a crisis.
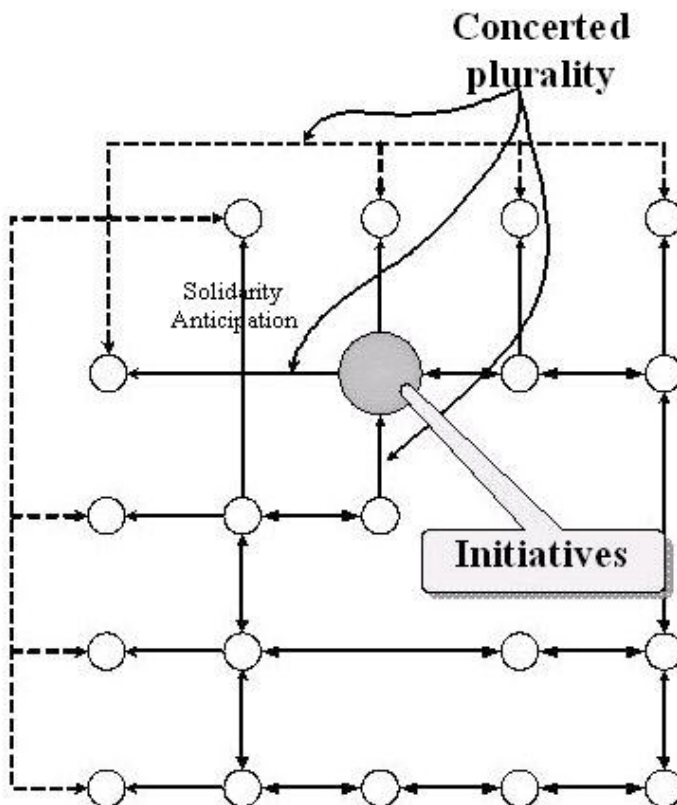
Figure 4. The Effects of multidimensional integration
Source: Perfected according to Crémodez, Michael – *Idem*, p. 168

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Conclusions

For organizations, the exogenous and endogens factors become variables that oblige them to restructurate the management structures at short intervals, to abandon the simple structures and to adopt complex structures. The need for permanent restructuration exposes the organization to the risk of implementing a complicating structure.

The implementation of project management, as a part of modern managerial concept, leads to the generation of a global structure in which the hierarchy specific to the primary structure is confronted with the autonomy and the liberty promoted by the secondary structure. As a consequence, the structural organization and the development of communication at all levels of project implementing are two themes that complicate the managerial decisions. The effects of organization and communication can modify the profile of requests of the two actors: the project manager and the project team.

In an organization, the projects beneficiate from the expertise of the competences. The relationship projects-profession is bivalent, because the professions can be influenced by the by the specific conditions that the projects offer. The intersection between the expertise of the experts that offer technical assistance, and the projects managers that facilitate the intervention of experts, takes place with the purpose of creating common methodology. The careful analysis and the improvement of the common methodology, project after project, will lead to the ability of the organization to bring together the contribution of competences and to capitalize the accumulated experience. Combining the conciliation capacity and the capitalization of experience, the organization must develop one of its distinctive competences: implementation of projects in an efficient conditions. In this way the projects and the professions contribute to the construction of a global organizational structure in order for its actors to establish the collective liberty margin capable of facing the environment constraints.

Promoting a matrix structure projects-competences may help conciliate the unique characteristics of clients requirements or their desire to beneficiate from stable resources, as functional expertise. The orientation toward the matrix structure can help the organization to integrate the functional competences in order to realize complex projects by a multidimensional mobilization, keeping an eye on costs, time and quality.

To conclude, we notice that the matrix structure project-professions can be adopted more easily by the qualified organizations that have a project culture and are oriented toward the multidimensional integration of multiple hierarchies. The implementation of the matrix structure is much more difficult for the organizations that have an organizational culture focused on competences and the orientation toward projects determines a reflex to protect the territory of the hierarchic authority. It is much more easily to install a dynamic matrix in the case of projects that reflect an external reality, than in the case in which the dialectic articulation between the projects and professions corresponds to an abstract case.

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