The Social Dimension in Organizational Models

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Abstract   The purpose of the present essay is to analyse the social dimension in organizational structures, as we believe that it represents a significant organizational component in with the power to affect organizations.

Organization theorists tend to distinguish and analyze two typologies of structures coexisting within organizations: physical and social structure. Thus, although recognizing the relevance of the physical dimension, the focus of the present study is placed on social aspects in organizations, made up of people, positions and organizational units.

In order to know the actual structure of any organization, we have to analyse management modes of differentiation and integration mechanisms, as well as to assess the *de facto* structure, operating within the actual context under examination. We have to focus on reality if we are to understand how an organization really functions in a daily dimension, in the implementation of strategies and in the performance of activities, where we have the opportunity to identify real and specific criteria of differentiation and integration. In such view, any bureaucracy is always subject to multiple interactions of a different nature – social, techno-

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logical, environmental – so that the initial stability prescribed by classical model changes into a continuous movement.

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1.   Organizational Social Structure

Organizational design, meant to draw the structural components and the inter-connections of a specific organizational apparatus, implies providing an answer to a double question: the "mission",[1] or the reason behind the organization on the one hand, and the internal and external environment with its logics and dynamics on the other. Organizational models represent an attempt to integrate and balance these two aspects.

Nonetheless, making the most appropriate organizational choice is not an easy task, since every organization, in handling the division of labour and expertise, cannot avoid taking into account the inevitable social nature which shapes and influences the organization itself.

Organization theorists agree on analyzing two types of structures existing together within any organization: physical and social structure.[2] Physical structure refers to the relations between the physical elements of an organization, that is, the places where the work is performed. Analysing the physical structure of a firm means describing first of all its organizational geography, elements such as layout and design which decisively influence the organizational effectiveness.[3] So-

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[1] For an in-depth analysis of the concept of organizational "mission", see Daft, (2002).
[2] On the concept of structure and structural typologies, see Simon, (1945), and also Ferrante, M. and S. Zan, (1994), pp. 251-281.
[3] The interest in the physical structure of organizations may be traced back in the studies conducted in the USA, between the 1920s and the 1930s, on the Western Electric plants, under the guide of Elton Mayo. For a detailed description of the physical structure of an organization, see Hatch, (2006), pp. 305-354.

cial structure implies instead the relationships between the social components, such as persons, positions and organizational units.

Although the physical characteristics of an organizational structure are somehow relevant in establishing the interrelations which will be created between its members, the present paper will mainly consider organizations as social structures.

At the start of the 20th century, the logics underlying organizational thinking conceived of organizations as closed systems, within which relationships were compared to static routines, tending to be resistant to swift changes. Classical approaches to social structure, as well as several modernist approaches, tended to adopt such a conception, believing in the possible existence of a stable long-lasting social structure.

Over time, such orientations have gradually yielded to more dynamic views of social structure, such as those brought about by symbolic-interpretive and postmodernist perspectives, which focus mostly on the multiple changes which organizations are likely to come across, due to changing times and circumstances.

Yet, what do we mean by organizational social structure? And which criteria do we use in our analysis? First of all we need to point out that the concept of social structure refers to "organizational aspects regulated by models or by reiterated relationships existing between members of an organization".[4]

According to Kingsley Davis, two components can be identified for each social structure: a normative and a behavioural structure, which seem to be closely intertwined.[5] Normative structure implies a set of values, norms and role expectations. Values represent the criteria employed in choosing behavioural goals; norms represent the rules governing behaviour and indicate the means to achieve the goals; finally, roles represent expectations and assessment criteria used in or-

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[4] Scott, (1970), p. 31.
[5] Davis, (1949), p. 52. For a detailed description of normative and behavioural social structures, see also Scott, R. W. (1970).

der to judge the behaviour of the individuals who hold specific social positions.[6] Every social organization is actually a normative structure, since the distribution of values, norms and roles is not incidental, rather, it follows criteria aimed at coordinating, in the most orderly way, the behaviour of organizational actors.

The second component of a social structure is represented by the behavioural dimension, which focuses on actual behaviours, on what actually takes place, rather than concentrating on what is prescribed by norms. Theorists define it 'behavioural structure', not just 'behaviour' since they are interested in observing and studying interactions, that is, the activities occurring almost regularly and constantly in the daily life of an organization.

The overall daily activity of any organization is characterized by a great number of individual activities, which do not result in confusion, rather, in a gradual coming closer to the idea of order. Hence the relevance of analysing organizational social structures: through an in-depth study we are able to assess whether, and to what extent, behaviours enacted by individual organizational agents are shaped by the structure itself, or, rather, they are the result of individual choices, potentially in conflict with the system.

We have to remember, however, that there exist a variety of models for studying organizational structures, each one concentrating on the analysis of one or two specific variables. In the present paper, we will take into consideration some of the best-known and widespread models. Yet, we need to point out that, in the very attempt to explain and to apply to reality what is just a theoretical model, drawn from and grounded on the basis of a single variable, or perspective, lies the very drawback of any theory.

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[6] *Ibi.*, p. 32.

1.1.   Classic Perspectives

According to Max Weber, the most important theorist in the field, organizations are bureaucratic structures, that is, forms of administrative organizations, able to achieve the highest level of effectiveness. In Weber's opinion, what distinguishes society spanning the past century is rationality, understood in its technical and functional meaning, since a series of behaviours are planned so as to achieve organizational goals.

The term bureaucracy as described above – a recurring term in the present study owing to its relevance – in Weber's view, does not refer to the meanings of inefficiency and excessive conformism, which, in daily life, are instead commonly assigned to bureaucracy and bureaucrats.

On the basis of Weber's theory, organization theorists maintain that the effectiveness of organizations depends on their being social structures regulated by three components: a) formalized rules and procedures; b) the hierarchy of authority; c) the division of labour.[7]

a) An organizational structure changes depending on whether it is more or less formalized; that is, when the rules regulating behaviour are expressed according to well defined criteria, independently from the characteristics and the needs of the persons who hold specific positions.

The most common mechanisms of coordination are: rules and procedures, which specify how work should be performed and decisions made; plans and schedules, setting the deadline by which activities should be conducted; and communication channels, which have the function to create linkage roles, as well as design and management teams.[8]

b) Although rules, procedures and plans may make business management easier, they alone are not enough to run a business. Weber, in fact, gives the

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[7] On these three aspects, see Hatch, (2006), pp. 101-108.
[8] On the mechanisms of procedural coordination, see Hatch, (2006), *cit.*, pp. 129-133.

hierarchy of authority the task to integrate the organization, especially when enterprises have dimensions and levels of high complexity. Hierarchy, according to Weber, would mirror the way in which authority is distributed among different organizational roles. The one who holds authority owns specific rights, which are the prerogative of that position, such as the right to issue commands, to give rewards and impose sanctions. Such rights are, therefore, may be defined as "positional", primarily because they are tied to the position, rather than to the person who holds it; as a consequence, when that person quits that post, owing to promotion or simply to length of service, he will be divested of the authority he possessed before.

In Weber's conception, what ensures the success of authority is its diffusion by means of vertical communication; that is, through communication channels appropriately created to convey information to managers.

Although influential, the hierarchical conception of authority has today been replaced with a dual relationship of subordination, as, in recent times, great importance has been given not only to vertical communication, but also to horizontal communication, which fosters integration and functions as a vehicle for information along the whole organizational structure.

c) Last but not least, the division of labour and the consequent need for coordination of the different phases in which it may be organized, "represent the crucial aspect of the organizational problem".[9]

Every firm possesses an organizational structure devised on the basis of the identification of criteria for distributing tasks to the different organizational units or departments. Whereas the hierarchy prescribes the sharing of authority, the distribution of work specifies the sharing of responsibilities, that is, the way in which the workload is distributed within the organization and is assigned to the individual organizational actors/agents.

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[9] Di Cagno, Adamo and Giaccari, (2002), p. 168 [Italian in the original].

There are two major schools of thought on the division of labour:

1) *Scientific management*;
2) *Job enrichment.*

1) *Scientific Management*, devised by Taylor at the turn of the last century, involves a few simple tasks given to a person, careful supervision, and little decision-making autonomy for the individual workers.

> "[. . .] under scientific management, arbitrary power, arbitrary dictation, ceases; and every single subject, large and small, becomes the question for scientific investigation, for reduction to law [. . .].
> The man at the head of the business under scientific management is governed by rules and laws which have been developed through hundreds of experiments just [. . .]".[10]

This approach, defined by Taylor scientific management, had the objective to scientifically analyse every single action performed by each worker, so as to identify the procedures which, by a minimum effort, would have yield the maximum output, by subjecting all activities to the standard of science.

2) *Job enrichment* refers to the creation of more complex tasks, involving a variety of skills and jobs. Workers are supposed to be more motivated since they enjoy higher autonomy and responsibility; employees themselves play the role of supervisors, rather than relying on external persons.

Job enrichment literally means enhancement of tasks, since it is the approach by which the characteristics of work are changed so that the workers may perform more complete and less subdivided (segmented) activities, with increased responsibility.[11] As to the criteria of division of labour, theorists usually identify a horizontal and a vertical dimension.

The horizontal division of labour refers to the subdivision of a firm's activities and tasks among the organizational actors; "It refers to the segmentation

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[11] For a more detailed description, see Tosi and Pilati, (2008), pp. 306-08.

of the whole production process into a series of elementary activities, identified in function of technical characteristics, or in function of the market outlets for the products".[12] The vertical division of work establishes the number of organizational levels and "involves the definition of management and coordination abilities, and their distribution along the different levels".[13] The vertical division of work, therefore, concerns the sharing of power among the different bodies, thus defining the degree of decentralization or centralization of the structure.[14]

1.2.   Dynamic Perspectives

The Weberean conception, in its attempt to list and establish the essential and permanent characteristics of bureaucracy, represents one of the classic approaches to organizational social structure, even if, in its evolution, it has uncovered the limits and the risks of the inelasticity of such an apparatus, which has proved to be a "golden cage".

Dynamic perspectives focus on organizational change, in the belief that organizational structure relies only on an apparent stability. According to this view, every bureaucracy is constantly subject to multiple interactions of a different nature – social, technological, environmental – and the initial stability envisioned by classical models is changed into an "incessant movement". This point of view is shared by different approaches, among which we will mention the most representative, namely, the evolutionary perspective and the open system model.

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[12] Di Cagno, Adamo and Giaccari, (2002), p. 168 [Italian in the original].

[13] *Ibi.*, p. 169.

[14] Talking about centralized organizations means saying that the final decisions are made exclusively at top levels, with a low participation on the part of the subordinates, who are required to show absolute compliance; in decentralized organizations, on the other hand, there is a higher participation of all the organization's members of the organization at any level, especially those involved in a specific situation which requires decision-making.

In the evolutionary perspective, a relevant role is played by the theory of life cycle as devised by Larry Greiner,[15] according to which an organization, just like a human being, has a life cycle and has to move through five specific phases of growth (creativity, direction, delegation, coordination and collaboration).

The open system model drawn by Katz and Kahn[16] supports a historical view of social structure, according to which it emerges from basic technical needs, from internal pressure towards integration, as well as from environmental needs; the formation of the first technical core is followed by structures of maintenance and adaptation.

A further important contribution to technical models is represented by the structuration theory devised by the English social theorist Anthony Giddens, who eschews both traditional conceptions, which see the dominance of social systems over the individual, and the opposite view, where the concept of structure fades away due to the dominance of the individual with his marked subjectivity. By rejecting either imperialism of the subject, or imperialism of societal totality, Giddens sees structure in its dual aspect, that is, as a plurality of regulating principles, which are, at the same time, condition and consequence of social agency.[17]

With his theory of structuration, Giddens, therefore, proposes an answer to the long-standing debate in sociology which opposes free will (agency) to determination (structure). In Giddens' view, the process of structuration occurs through the mutual influences of present actions (agency) and the residue of past actions (structure). Through the process he called duality of structure and agency, organizational agents are enabled and, at the same time, constrained by the structures of resources, routines and expectations. Agents are enabled when the structures of signification, domination and legitimization support their activities, whereas they are constrained when their activities are not supported.[18]

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[15] Greiner, (1972), pp. 37-46.
[16] Katz and Kahn, (1966).
[17] For a detailed analysis, see Giddens, (1976), as well as, Giddens, (1984).
[18] For a more detailed description, see Hatch, *cit.*, pp. 101-140.

With the theory of structuration, therefore, the focus of analysis shifts from objective properties to the interpretive elements concurring in shaping an organization.

2.   Bureaucracy between Environmental Certainty and Uncertainty

Organizations are not to be seen as closed systems as ends in themselves, rather, as "systems of inter-connected activities employing resources from the outside environment, which are transformed into products and services".[19]

Environment, market and technology represent three important variables capable of influencing an organization's structure and efficiency. For this reason, we need to take these three dimensions into consideration, when trying to understand the complex organizational phenomenon.

The process of adaptation of an organization to the environment depends on the level of organizational certainty, as organizations can operate in stable or in dynamic environments. Tom Burns and G. M. Stalker,[20] with the great number of studies conducted since 1961 in the fields of electronics and research, were among the first to identify a correlation between environmental condition and organizational structures. The two researchers discovered that, in the presence of stable and foreseeable technological and market environments, the most appropriate organizational model was a mechanistic one, whereas, in dynamic environments, an organic model was more suitable.

The two opposing types of management, mechanistic and organic, applied by Burns and Stalker to organizational environments, closely resembles the known distinction of social systems drawn by Durkheim[21] regarding the process of social modernization, between the two forms of solidarity established between social groups: mechanical solidarity and organic solidarity.

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[19] Tosi and Pilati (2008), *cit.*, p. 297.
[20] Burns and Stalker, (1971).
[21] Durkheim, (1893).

Whereas in mechanical solidarity – widespread in traditional societies – a collective consciousness tends to prevail, and shared bonds and rules are predominant, in organic solidarity, functional bonds existing between individuals are seen to be prevailing, and there is more space for the agents' diversity.

By applying the two attributes, mechanistic and organic, more specifically to an organizational environment, and by placing the environmental certainty/uncertainty variable along an ideal continuum, we can identify four different models of organizational structure:

1. simple mechanistic model;
2. complex mechanistic model;
3. simple organic model;
4. complex organic model.[22]

A useful correlation is the one existing between the above models and Mintzberg's theorization, according to which there are five potential mechanisms of coordination. In particular, Mintzberg, on the basis of the presence or coexistence of five basic elements – strategic apex, meddle line, techno-structure, support staff, operating core – identifies five possible organizational configurations:[23]

1. simple structure;
2. machine bureaucracy;
3. professional bureaucracy;
4. divisional structure;
5. *adhocracy*.[24]

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[22] On such differentiation, see also Vitalone, (2004), pp. 69-72.
[23] As Bonazzi states "configurations are forms firms tend to reach in a process of mutual adaptation between their structure and the situational factors they face". See Bonazzi, (2002), p. 135.
[24] Mintzberg, (1983).

2.1.   Simple Mechanistic Model

The mechanistic organizational form, in a pure state, operates in a highly stable environment and is characterized by complexities, formalization and centralization.

A rigid division of labour (complexity) and a highly routinized activity with easy tasks assigned to individual employees constitute the most evident aspects of a mechanistic form.

Since tasks are highly specialized and duties segmented by means of fixed procedures (formalization), the individual employee has no possibility to understand, or even to imagine, what takes place within the rest of the structure, and his knowledge remains limited to his specific area.

The mechanistic model is marked by a hierarchic structure of control, as well as by a purely vertical form of communication, characterizing the organization as extremely centralized. Decision-making processes take place only at top managerial levels, *a priori* excluding participation of members of inferior levels (centralization).

In its simplest form, the mechanistic model operates in stable conditions that do not require a well-organized structure and can, therefore, be compared to the "simple structure" as theorized by Henry Mintzberg. He claims that coordination in the simple structure is controlled largely by direct supervision. Especially power over all important decisions tends to be centralized in the hands of the chief executive officer, thus the strategic apex emerges as a key part of the structure. Indeed, the structure often consists of little more than a one-person strategic apex and an organic operating core. A middle-size commercial activity that makes only one product, or simple products and revolves around the figure of only one individual who has responsibility for the whole organization represents a typical example of a simple structure.

2.2.   Complex Mechanistic Model

A more complex form of mechanistic model operates always in a stable environment, but at the same time, in the presence of a context of reference organized in rather differentiated areas.

Like its pure form, it is a highly centralized structure, regulated by strict formal procedures, but unlike a simple mechanistic model, the presence of different areas requires roles of integration.

Among the organizational forms theorized by Mintzberg, the closest model is "machine bureaucracy", where the techno-structure plays a leading role since it is made up of analysts who, dealing with planning, analysis of production time and methods, establish the working procedures and have a strong influence on the whole organization. As the effectiveness of machine bureaucracies depends on environmental stability, they not only tend to avoid uncontrollable situations, they tend also to stabilize the chosen environments, trying to incorporate all possible supporting services, which simple structures prefer to purchase.[25] Machine bureaucracy is the most widespread model among large firms that provide traditional mass services, such as banks, insurance companies, or large car manufacturers.

These activities have in common highly specialized, routine operating tasks and standardization of work processes; a proliferation of rules, regulations and formalized communication in the whole organization; large-sized units at the operating level; reliance on the functional basis for grouping tasks; relatively centralized power for decision making; and an elaborate administration structure with sharp distinctions between line and staff.

In machine bureaucracy, formal authority runs along a clearly defined hierarchy: power is here based on position, rather than on actual competence. Due to its peculiarities, the simple mechanistic model is often associated to the fea-

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[25] For a detailed study, see Costa and Nacamulli, (1997), p. 612.

tures of the ideal bureaucratic of Weberean conception, legitimized by the fact that bureaucratic structures, with their rigid apparatuses, are often regarded as inflexible machineries.

Nonetheless, as Hatch underlines, such parallelism does not apply to the level of centralization, since, whereas mechanistic organizational models are characterized by a high level of centralization, bureaucratic models tend to be, instead, strongly decentralized.[26]

In line with Richard – who defines the organizational environment as "All elements existing outside the boundary of the organization and have a potential to affect all parts of the organization"[27] – we have highlighted how stability or, rather, the environmental instability represents a variable determining the modes by which organizations are structured and act. The organization of McDonalds, for example, is planned following the model of machine bureaucracy.

Among the other configurations operating in stable environments theorized by Mintzberg, we should quote professional bureaucracy, a radically different model when compared to machine bureaucracy, as it is founded on the standardization of skills rather than on the standardization of work processes.

Standardization is the result of training taking place outside the organization, with selection and career criteria fixed by bodies outside the organization. Once hired, the employees are more subject to the judgement of users than to the judgement of their colleagues. This is the case with universities, hospitals or big counselling firms.

This typology of organizations constitutes a reality operating in a stable yet very complex environment, with a decentralized power of decision making, and within which the supporting staff plays a primary role, having to provide for the functional needs of the operating core (for example, secretarial or library staff for universities, nurses for hospitals, etc.).

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[26] Hatch, (2006), *cit.*, p. 136.
[27] Daft, (2002) *cit.*, p. 122.

2.3. Simple Organic Model

Regarding the environment as the variable determining an organization's morphology, the organic form is the contrary of the mechanistic form, since it is suitable for situations of high environmental dynamism.

As with a mechanistic model, we have to distinguish between a simple and a complex form of organic model. A simple organic model, in fact, operates in an environment whose level of complexity, although existing, is not so high as in firms that adopt a complex organic model. This model tends to be simpler, more informal and decentralized than the mechanistic model. The organizational units constitute a limited number and the network of relations is of an informal type. When compared with a mechanistic model, moreover, boundary activities are highly relevant, because this kind of organizations generally need to possess an ability to cope with frequent change.

In an organic model, tasks tend to be varied and the employee does not live isolated in his area; rather, being the model grounded in teamwork, the employee possesses a wider organizational knowledge. Information runs along a horizontal communication channel and the rigidity, typical of traditional structures, is replaced with a constant need for flexibility. Power is no longer positional; rather, it is grounded on the employees' specific expertise.

By analogy with the configurations theorized by Mintzberg, a simple organic model can be compared with the first stage of formation of what will later become "adhocracy",[28] which, on its turn, will reach its most perfect accomplishment in the complex organic model.[29]

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[28] Drawing on the Latin phrase *ad hoc*, meaning "expressly for the purpose", the term refers to work groups born with specific objectives, made up of persons who know each other well and work within a climate of mutual confidence, who are open to innovation and creativity, which constitute the basic qualities so as to act in unexplored grounds.

[29] See Vitalone, (2004), *cit.*, p. 71.

2.4.   Complex Organic Model

The complex organic model is the only one capable of coping with work situations of increasing environmental unpredictability. In such instances, the organizational structure has to be flexible, and decision-making processes have to be oriented by a few guidelines, since sudden changes tend to hinder long-term plans. Here, we find a strong tendency to decentralize the activities, by moving them to different working units, and, as a consequence, setting a great number of integration roles.

According to Mintzberg, this is the configuration that least reflects the classic principles of organization, a mechanism which is far from the traditional hierarchical conception, where formal rules and procedures are replaced with an informal agreement and where the lines of authority are often updated. Therefore, in the organic form, there in not a single boss, and an employee may be under the authority of a number of power centres. For example, a group of scientists especially devised to study a phenomenon never experienced before.

As mentioned above, the corresponding model in Mintzberg's theory is *adhocracy,* described as a highly organic structure with little formalization of behaviour; job specialization based on formal training; a tendency to group specialists in functional units for specific purposes but to deploy them in small, market-based project teams; a reliance on liaison devices to encourage mutual adjustment, the key coordinating mechanisms, within and between these teams.[30]

2.5.   Divisional Model

The last of the five configurations theorized by Mintzberg, although it cannot be placed within the dichotomy stable/unstable environment, is represented by the divisional solution, clearly distinguished from the other four, since, rather than being an integrated organization, is a set of quasi-autonomous divisions, coupled

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[30] *Ibi*, p. 378.

together under a central administrative structure, which sets the organization goals, yet it leaves wide discretional power on how to achieve them. It is a kind of organization overlapping with other organizations with a bottom-up flow of power. In the divisional solution, the diversity of markets represents an important variable, therefore, the divisional form relies on a market basis for grouping units at the top of the middle line. Divisions are created according to markets served and they are given control over the operating functions required to serve these markets.

Differing from firms operating on a single market, the divisional structure constitutes a solution for those firms which, operating on different markets, derive advantages from the creation of distinct units for each market. An example of such organizations is provided by multi-campus universities.

The five above-mentioned configurations, in the author's view, are to be regarded as a typology of pure type where each type represents the description of a basic type of organization and its situation; a typology adequate to explain most tendencies which compel efficient, successful firms to be organized as they are.

Actually, even taking into account the value of the dichotomy mechanistic-organic, and although a great number of firms adopt a mechanistic model (such as large car manufacturers, or McDonald's, to name but a few), or firms relying on an organic model (such as the huge industries of fashion and advertising), we have to observe how today mixed forms of organization are very frequent and dominated either by technologies or by the market. Examples of technology-dominated mixed organizations, called by Tosi and Pilati MDT,[31] are companies selling computers, which possess an organic apparatus able to cope with drastic and swift technologic changes, and a mechanistic apparatus for selling and shipping the products. Examples of market-dominated mixed organizations (MDM)

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[31] The distinction between MDT (Italian acronym for *organizzazioni miste dominate dalla tecnologia*) and MDM (*organizzazioni miste dominate dal mercato*) is taken from Tosi and Pilati, (2008) *cit.*, pp. 303-304).

can be found in the field of fashion, where the determining variable is not tech-
nology – which, in this case tends to be quite stable; it is the fact that the
manufacturer is able to launch an innovative product that the market will accept
and buy.

3.   The Model by Ansoff and Brandenburg

Organization theorists, as well as managers, make often use of organizational
charts in order to have a global and prompt idea of an organizational social
structure. Yet, such instruments, although providing a quite clear representation
of the hierarchy of authority and of the division of labour, fail to provide us
with enough information on the actual coordination mechanisms, on informal
relations, or on the distribution of power beyond the formal hierarchy of authority.
Hence the need to integrate a merely descriptive plane with a more descriptive
plane, since in every organization, along with a formal dimension related to laws,
regulations, charts, there exist another, more specifically informal dimension,
enabling organizations to operate apart from specifically predicted and planned
norms and role structures.

By means of this very logic, typical of symbolic-interpretive perspectives, we
may also see the picture of possible typologies of organizational structures: there-
fore, not as rigid organizational charts existing *a priori*, with the task to define
and control social interactions, but as social structures in continuous movement,
to whose formation and power dynamics every single actor contributes.

Choosing the most adequate among the number of organizational models rep-
resents a complex challenge. Starting from the assumption that environmental
complexity makes it impossible to identify a universally viable and stable organi-
zational model, H. Ansoff and G. Brandenburg[32] devise a theory claiming that a

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[32] Ansoff and Brandenburg, (1971).

business, in a sort of evolutionary course, within an increasing complexity, goes through four pure models of organization:

1. functional model;
2. divisional model;
3. project model;
4. and, matrix model.

Giuseppe Bonazzi underlines, "Every model is constructed so as to maximize an organization's efficiency, yet, we have to take into account that the criteria of efficiency may vary in function of the context where the firm operates."[33]

The criteria are the following:

– stability, that is the fact that production levels and characteristics remain stable over time;
– operative flexibility, an essential requisite when decisions have to be made on swift and effective change in production standards;
– strategic flexibility, a quality needed when a firm has to respond to changes in the quality of the product;
– structural flexibility, meaning that the firm has to be able to adapt to the changes imposed by external conditions.

According to the most recent trends in organizational thought, of which we will analyse the most widespread forms, three categories of models are usually identified:

1. *vertical*, including functional and divisional structure;
2. *orthogonal*, including matrix and the process structure;
3. *horizontal*, including network structures.

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[33] Bonazzi, (2002), p. 124.

First of all, we need to point out that the best organizational structure does not exist; nonetheless, there is a structure which is more coherent and in agreement with environment, managerial choices and strategic power. Moreover, we must not regard the terms vertical, orthogonal and horizontal as mere geometrical metaphors; rather, as indications of three different actual dimensions involving management principles and techniques, cultural orientations on how to think about work and organizational dynamics.

A current trend in business moves back from the vertical dimension, towards a dimension marked by horizontality. Actually, as we will see below, each dimension offers some advantages, but shows some weak points at the same time. In a few words, where vertical links prevail, there is more control and a more strict hierarchy, rules and norms fixed in advance, and a centralized decision-making process. Vertical links are planned mostly for the purpose of organizational controls, meaning that lower-level employees have to perform activities which have to be coherent with the goals set by superior levels. Especially in case of recurrent problems, rules constitute a further linking mechanism, as they provide the employees with information needed in order to work in coordination without any necessity to communicate for every task they have to accomplish.

Horizontal links, on the contrary, are designed for coordination and collaboration. Sharing of duties and high levels of responsibility prevail in this instance. Communication between manager and employees is direct, and there is no real hierarchical power as in typical vertical links, and power is replaced with milder forms, poorly formalized rules, and decentralized decision-making processes.

The organizational structure can actually be made more visible by means of a chart, "Visual representation of a whole set of underlying activities and processes in an organization."[34] The use of an organizational chart for economic activities began with the Industrial Revolution. The increased complexity of work and the

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[34] Daft, (2002), *cit.*, p. 90.

involvement of a growing number of workers created the need to manage and control organizations, whose simple structure came to take on increasingly complex and diversified forms. The usefulness of an organizational chart remains grounded on the fact that, by highlighting the different parts of an organization and how they are connected, it "should" help us understanding how an organization functions. The use of a conditional mood, however, underscores, once more, the need to distinguish what is predicted on paper from what actually happens in the daily life of an organization.

In this view, which tends to revive the concept of such organizational structure, find their place the considerations of Massimo Ferrante and Stefano Zan, who, in order to conceive a more generalizable analytic frame, suggest to search those designing criteria and those behavioural regularities which may enable a better identification of the main types of organizational structures. In this sense, they come to define structure as, "The set of specific modes by which every organization manages and governs the processes of differentiation and integration."[35] The differentiation ensuing from a specialization of tasks, can also be defined, together with Daft, as "The differences in cognitive and emotional orientations among managers in different functional departments and in the differences in cognitive and emotional orientations among functional departments", while integration, representing the mechanism of rearrangement of unity of organizational efforts, involves the "quality of collaboration among departments".[36]

According to Ferrante and Zan, the number of fundamental criteria underlying the design and the construction of the main mechanisms of differentiation and integration can be brought down to three, one for each specific organizational structure. The first criterion is the function, related to the functional structure; the second is the result, on which basis the divisional mode takes shape; and the

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[35] Ferrante and Zan, (1994), *cit.*, p.48.
[36] Daft, (2002), *cit.*, pp. 152-53.

last criterion in planning an organizational structure is the one combining the first two criteria and originating a matrix or project structure.

3.1.   Functional Structure

Characterized by a criterion of division of labour on the basis of technical specializations, the functional structure represents the oldest and the best known, as well as the closest to Weber's bureaucratic model. The underlying criterion is to bring together all employees performing the same function, or possessing similar knowledge and abilities so that similar activities form units, or departments, within the organization; in this view, for example, all persons involved in accounting are grouped in an accounts department under the same supervisor, and so on.

The functional structure promotes the achievement of scale economies within the different functional divisions, meaning that, "Economy of scale results when all employees are located in the same place and can share facilities."[37]

By privileging the moment of differentiation, the functional structure guarantees the maximum level of specialization in different roles, and reduces the duplication of efforts, thus representing, as Ferrante and Zan point out, a sure advantage. The weak points, instead, have to be sought in the limited ability to cope with environmental changes, the poor aptitude for innovation, and in an inability to favour the integration of diversified knowledge and experiences, which remain confined to the different specialized units. A further difficulty is represented by the overload of the hierarchical scale to such an extent that, as Ferrante and Zan state, "The major mechanisms of integration lie in hierarchy, norms, standards and procedures. As a consequence, all the connections are adequately planned and everybody has to perform his task. Nevertheless, even if everything works perfectly, integration along hierarchical lines implies vertical-

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[37] Daft, (2002), *cit.*, p. 92.

ization and thus longer decision-making processes, with a remarkable waste of time."[38]

Figure 1: Functional structure (adapted from M. J. Hatch, cit. p. 334).

3.2. Divisional Structure

The divisional structure represents a sort of evolution of the functional structure typical of centralized systems, emerging either from the need to cope with the overload of responsibility of the decision makers, or to better adapt to increasingly dynamic and unpredictable environments. This is what Ferrante e Zan define the "resulting criterion".

In a divisional structure, the focus shifts from a division of duties on a function basis, to a division which privileges the results achieved, thus showing a tendency to group together all the persons needed to achieve the desired result.

The system of technical specialization therefore, is here replaced with a system tending to gather together persons, units and position based either on the similarity of their functions within production processes, or on the customer's typology, or even on the geographical area where the activities are conducted.

The divisional structure is essentially a set of distinct functional structures, each one responsible for the management of its own internal activities. Yet, just because any management of division acts as a firm in itself, with full responsibility

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[38] Ferrante and Zan, (1994), cit., p. 81.

for its strategic and economic choices, some problems in the balance between the different divisions are likely to arise. Therefore, the general management takes on a relevant role so that, together with diversification strategies, will perform the functions of mediator and linkage between the different divisions.[39]

The advantages of a divisional structure derive mostly from its flexibility. The possibility for every unit to adapt to urgent environmental needs, as well as to different products, geographical areas and customers represents the most evident points of force of this structure. Moreover, by decentralizing the decision-making process, such model turns out to be very useful when organizations cannot be controlled by a rigid hierarchy.

On the other hand, a disadvantage emerges when organizations lose their economies of scale within the functions. The distribution of homogenous resources by competence or by employment among analogous functions actually hinders the formation of that critical mass able to bring about important innovations.[40]

A further weak point lies in the difficult coordination between the different units, as a result, the employees are often unaware of what happens in the other divisions and, in their activity, they often forget the organization's final goals.

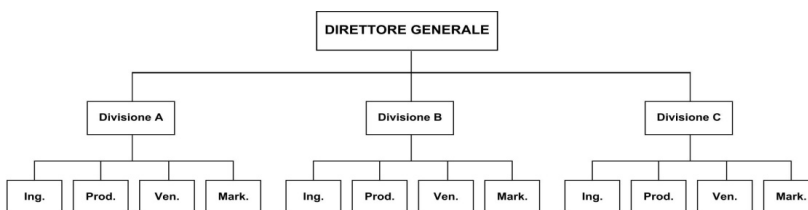As with the functional structure, in the background there is always a vertical model also in a divisional structure.

Figure 2: Divisional structure (adapted from M. J. Hatch, cit. p. 338).

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[39] Vitalone, (2004), *cit*., p. 81.
[40] Daft, (2002), *cit*., p. 108.

3.3.   Project Structure

Functional groupings and the divisional groupings are the most commonly used approaches to structural design. Both approaches adopt a vertical organizational model. Orthogonal structure models represent a middle way between vertical and horizontal dimension, where "The processes of differentiation are based on a cross-combination of differentiation by function and by result."[41]

According to Bonazzi, the project structure arises when, "The combination of technological development and growing market needs makes it imperative for businesses to launch products with a shorter commercial life than in the past, but with higher technical contents."[42] The flexibility of time-bound projects takes the place of the inefficiency of traditional structures. The term project here means a single, non-repetitive activity aimed at the achievement of a specific goal by a fixed deadline. As a consequence, organizations working on projects are temporary, flexible, polymorphic, and destined to break up as soon as the goal has been achieved.

Among other advantages, this structure offers the possibility to solve complex and innovative problems, the same problems traditional structures are unable to solve being hindered by their bureaucratic routine.

Among the most apparent disadvantages, there is the possible difficulty in achieving collaboration between persons coming belonging to different units and possessing different abilities and modes to tackle problems; as well as having to overcome bureaucratic resistance in the unavoidable relationships organizations will have to establish with traditional structures.

Increasingly far from the old conception of formal authority, in a project structure teamwork is of paramount importance, possibly within a cooperative and peaceful working climate.

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[41] Ferrante and Zan, (1994), *cit.*, p. 64.
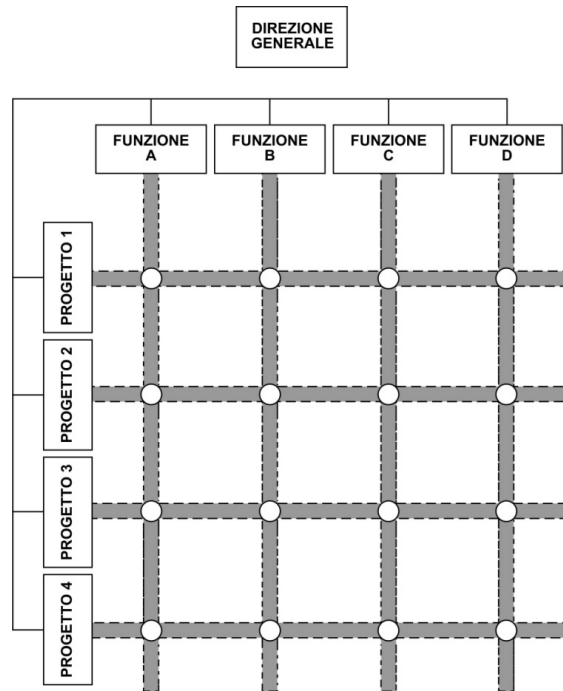[42] Bonazzi, (2002), *cit.*, p. 129, [Italian in the original].

Figure 3: Project structure (adapted from G. Vitalone, cit., p.85)

3.4.   Matrix Structure

A matrix structure is the result of the overlapping of functional and divisional structures, thus combining the efficiency of the first with the flexibility of the latter. It can be compared with the evolution of a project structure, but whereas a project structure involves persons in a single project for a limited period of time, in matrix models collaboration lasts longer and an office with promotion and coordination tasks is set for each project.

Flexibility represents another strong advantage of this structure: unlike what happens with functional and divisional structures, a matrix structure has only to find a manager in charge of the new project, who will manage it, and to arrange a team able to implement and to accomplish the project. Yet, in a matrix

structure, a "mechanism of double hierarchical dependence"[43] emerges, since participants are subordinate either to the project manager, or to the manager of the functional division where they perform their job, at the same time. The not always easy consistency between the two managements represents a weak point of matrix organizations, as potential conflicts may arise which tend to hinder the organizational functioning.

As Bonazzi underscores, from a research conducted by G. Gemmil e D. Wilemon on NASA suppliers, structured on the basis of a matrix model, five forms of power can be identified: 1) formal-authority; 2) rewards; 3) punishments; 4) expertise; and 5) referent power. The first three forms of power are found in traditional power, not in the power of the project manager, always associated to his experience and to his being a referent for the rest of the team.

The continuous job rotation creates stresses among the employees. But it is the balance of power to create greater difficulties. The employees are, in fact, under a two-fold authority, and each of them has to possess interpersonal qualities needed to solve conflicts and, at the same time, they have to adopt a joint, rather than vertical, attitude.

3.5.   Network Structure

A recent approach to organizations – which requires a long time since it implies a substantial change of culture, planning and managerial philosophy – is represented by the horizontal structure, which offers alternative paths to the usual way of organizational structuring. Activities are grouped around key processes through a reengineering methodology, described by daft as follows, "Reengineering, or business reeingineering, basically means to redesign of a vertical organization along its horizontal work flow and processes."[44] As a result, managers,

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[43] Tosi and Pilati, (2008), *cit.*, p. 313.
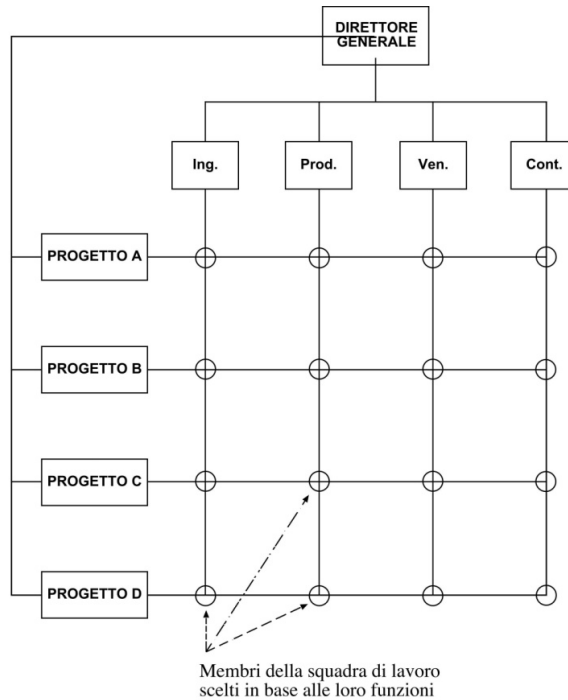[44] Daft, (2002), *cit.*, p. 115.

Figure 4: Matrix structure (adapted from Hatch, (2006), cit., p. 340).

rather than limiting themselves to tasks circumscribed within separate functional units, emphasize the key processes that cut horizontally through the organization, forming teams of employees who work together to serve customers.

The swift technological and information progress we are witnessing in the last years, has made it increasingly necessary to overcome old organizational models based on a vertical structure and to adopt horizontal models.

The elimination of intra- and inter-organizational boundaries, along with a radical restructuring of relationships, are the main characteristics of a network structure.[45]

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[45] On network structure, see Powell, (1990).

Network forms of organizations are completely distinct from the previous forms, mainly in the area of work management and of relations with other organizations. Besides economic factors, relations are based on complementary forces, reciprocity, mutual agreement and trust among organizations. A network organization replaces vertical communication flows with lateral or horizontal relations. As a consequence, the formal ties which characterize traditional structures are here replaced with relations of partnership between the different organizations. Businesses like Benetton, Sasch and Promod offer examples of network-based organizations, since, by providing the tools and facilities needed, at times also the capital, rely on hundreds of small manufacturers and thousands of franchised sales outlets arrayed around a central distribution channel with a common information and control system.[46]

As Hatch underlines, the advantages of a network structure lie in its rapidity to convey information, as well as in its ensuing ability for innovation. The greatest challenge in managing network relationships is developing and maintaining an organizational identity and sense of purpose in the face of geographic displacement of the different activities, and/or cultural diversity and loosely coupled interests; a further challenge is planning teamwork, an essential prerequisite, yet not always easy to fulfil.

Each of the above-described structures represents models not so easily identifiable in their pure form. In the actual world, hybrid forms, that is, the result of a mixture of different structures, do prevail. We have to remember, moreover, that each organizational chart has the aim to define and highlight a structure, yet, the roles of leading actors are always performed by the employees, those who provide actual behaviours and give life to the real social structure, a fluid dimension in continuous movement.

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[46] For a careful description on network based organizations, see Hatch, (2006), *cit*, p. 305.

Whereas, positivist approaches rely on the analysis of organizational charts, rules and technology, the advocates of interpretive-symbolic approaches assume a subjective stance, stating that the social structure of an organization does not exist independently of human consciousness and social interaction, and is the result of a process of social creation. Structure are viewed as human creation "They are dynamic works-in-progress that emerge from social interaction and collective meaning-making".[47]

4.   Final Consideration

The classifications discussed in this paper – from Mintzberg's theory, in whose view there exist five main organizational configurations, through Weber's model, that places bureaucracy along a continuum, and distinguishes more or less bureaucratized organizations, to Ansoff and Brandenburg's model and the different typologies of organizational structures – although among the most important, represent only a fraction of the possible classifications, and their value remains merely theoretical.

Moreover, even if many organizations tend to resemble each other, it is virtually impossible to find two similar organizations, since each one interacts with its environment in a peculiar way, thus giving rise to an infinite number of organizational combinations.

Therefore, rather than concentrating on structures as such, we need to focus on their designing criteria, trying to achieve an identification of those behavioural and functional regularities, of an ideal type, which prove to be applicable to specific organizational realities, besides being very useful at an interpretive level.

In order to know the actual structure of each organization, we have to consider the range of management modes of differentiation and integration mechanisms, along with an assessment of the "de facto" structure, operating within the reality

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[47] Hatch, (2006), *cit.*, p. 124.

under study. We need to focus on reality if are to understand how an organization actually functions in a daily dimension, in the implementation of strategies and in the performance of activities, since what matters is "The identification of real and specific criteria of differentiation and integration".[48]

Therefore, we cannot design with absolute certainty the ideal organization, but only the one which is "mostly coherent with the situation in which one performs his tasks".[49]

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