THE FIRM AS ORGANIZATION AND THE LIMITS OF RATIONALITY IN
KATZ AND KAHN’S APPROACH

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Abstract

When the neoclassical theory, based on an atomistic and reductionist economic agents conception, axiomatically translates individual rationality to the firm, it gives up a research of the firm as a complex organization and as an environment of individual economic agent actions, also omitting the explanation and description of the subsystem dynamics that comprise it. Omitting these aspects it also omits the relational nature of the firm’s inclusion in its environment, aspects of significant importance to understanding organizational behavior. By disregarding the actor’s multiplicity that constitutes the firm, in the same way, the traditional microeconomic theory has shortcomings in the treatment of the crucial elements in determining collective rationality. The aim of this paper is to present the firm as an organization in dealing with the Katz and Kahn approach (KKA), guided by the discussion of rationality postulated by economic actors in the traditional microeconomic theory. The KKA, unlike the neoclassical approach, recognizes the actor’s multiplicity in social organizations and attaches great importance to their ability of to develop mechanisms for human action coordination, rationalizing it in terms of organization. A “collective rationality”, or organizational rationality, must therefore be addressed as the development of organizational mechanisms for the coordination of an “individual’s irrationality”. Exploring in this way the individual “irrationality”, the KKA makes it possible to reset the behavioral assumptions of economic man. More precisely, based on the structuralist method and guided by the notion of system, it allows individual economic behavior to be analyzed in the context of theoretical and methodological principles that differ essentially from the prevailing principles of axiomatic and reductionist neoclassical microeconomic theory.

Keywords: firm; organization, rationality, Katz and Kahn.

1. Introdução

The isomorphism between consumer theory and the theory of the firm, based on behavioral assumptions intrinsic to methodological individualism, have substantially weakened the normative and prescriptive potential that prevails in the microeconomics training manuals of many economists in higher education institutions in the country. In order to construct a more consistent theoretical framework, new approaches are being set up to reinstate the pragmatic role of economic theory and the elementary attribution to contribute to the understanding, explanation and transformation of economic phenomena in all their different manifestations. Such initiatives, mainly multi-and interdisciplinary, using systemic and structuralist methods, underscore the complexity of economic actors recognizing the importance of contextual differences in the definition of their actions and calling for new theoretical subjects.
In the light of the structuralist analytical framework of social psychology, for example, we have the social man as a character that is substantially different from homo æconomicus. Unlike the rational-maximizing, atomistic, homogenous and isolated economic man, social man is complex, multiple and heterogeneous. He is not only selfish, and maximizing – or profit utility – is not his only goal, his perceptions, impressions and predictions are not always accurate and, above all, his attributes are not inherent. Social man builds in and through relationships. Social man defines and participates in the morphology of the relations that constitute social organizations. His behavior is outlined in specific social contexts, being adjusted and adapted according to circumstances.

The company, however, ceases to be an amorphous individual and is now taken as an organization, system and subsystem in its heterogeneous complexity. In this sense, the environment that a social and economic organization provides to its members in different ways can affect their ability and their cognitive performance, directing and conditioning the selection, interpretation and review of information they have access to: the individual and collective rationality are interdependent. The context in which human behavior is a social figure among the concerns outlined in this article, whose purpose is to introduce the firm as an organization in the approach of Katz and Kahn (KKA), from the confines of rationality postulated for economic actors in the traditional microeconomic theory.

2. The individual and the microenvironment

Understanding the role of the environment in the behavior of individuals is a challenge that has for centuries justified countless studies in philosophy, psychology, sociology and even economics, when concerned with the determinants of choice and decision making, sometimes considered the foundation of economic logic. It is a challenge that is intensified when one assumes a priori that institutions, organizations, groups and even businesses can be analyzed as or by individuals.
Neoclassical microeconomics explains the industry supply curve from the choices made by individual companies\(^1\). The allocation of resources is determined, from this perspective, by the decisions of price and production of the individual entrepreneur, given the market structure established ex ante. The assumptions necessary for this analysis are noteworthy. Ferguson (1992) highlights two: the open market and maximizing profit. The open market is characterized by the absence of control and government intervention. The profit maximization hypothesis is fundamental to the neoclassical theory of the firm\(^2\), and, for those who are more convinced, to explain the behavior of economic activities it would suffice to assume that entrepreneurs act as if trying to maximize profit, and the hypothesis “as if” would be the only one justified in predicting the behavior of economic activities.

By restricting the firm to a production function, the maximization can be achieved by choosing an optimal combination of production factors, maximizing the firm’s profit, analogous to the consumer’s utility maximization, enabling the development of normative criteria for business “strategies”. The firm is analyzed as a unit, whose only plausible behavior would be to maximize profit. As a unit of analysis of the neoclassical theory, the firm does not appear as an organization formed by people with different preferences and purposes. The work is summed up by a factor of production\(^3\) and input, and it would suffice to assume that the firm behaves as an individual maximizer. This concept of the firm is in accordance with what Tigre (1998) calls the “black box”, a phrase that sums up the paradoxical condition of the neoclassical firm assisting in resource allocation and price theory.

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\(^1\) “Taken together, revenue and cost to the individual entrepreneur, demand and supply for the overall market determine the market price and the firm’s production and economic activity. Consequently, these forces also determine the allocation of resources for activities and economic sectors.” (FERGUSON, 1992, p. 273).

\(^2\) “The assumption of profit maximization is the only one that produces a general theory of the firm, market and resource allocation that is successful in explaining how to predict the performance of economic activities”. (FERGUSON, 1992, p. 273).

\(^3\) “The production in a market governed by free competition is a process by which services can be combined in the products of nature and quantity of its own to cause the greatest possible satisfaction of needs within the limits of the double condition that each service as well as each product has a single market price, the one where supply and demand are equal, and that the selling price of goods is equal to its cost price of services.” (WALRAS, 1983, p. 135).
In this sense, the considerations of Possas are relevant (1990, p. 24): “Neoclassical microeconomics is not a theory of the firm, this is just a passive conduit through which the logic of the rationality of the maximizing of each individual converges with the balance (harmony) of the whole.” The purpose of the neoclassical approach is not to explain the behavior of the firm. This is only a theoretical link between cause and effect, equivalent to a theoretical construct that does not claim an imaginary empirical counterpart. Thus, the agents are not the object of analysis:

The 'household' in price theory, is not an object of study, it serves the Theoretical Link Between changes in prices and changes in labor services supplied goods and consumer demand. The reactions of an imaginary hypothetical decision-maker on the basis of assumed, internally Consistent preferences serves the functions and the simplest heuristic explanation. satisfactory empirical relationships between changes in prices and changes in quantities. In other words, the household in price theory is not an object of study (Machlup, 1967, p. 9).

Nevertheless, the most damning statements came from Walras (1983, p. 121):

The entrepreneur is therefore the character (individual or company) who buys raw materials from other employers, then rentsthrough a lease, the land of the landowner, with a salary, the worker’s personal faculties, through an interest, the capital of capitalism, and finally, by applying production services for raw materials he sells them their own output. The agricultural business purchases seeds, fertilizers and lean cattle; leases land, buildings and tools to plow; engages workers, harvesters and passers-by; He then sells agricultural produce and fattened cattle. The organizer of industry buys raw textiles and raw metals; rents plants, workshops, machinery and tools; hires weavers, blacksmiths and machinists, and sells manufactured objects; textiles and metal work. Shopkeepers buy goods wholesale, then leases warehouses and stores; employs cashiers and travelers, and sells retail goods. When any of them sell their products and goods for more than the cost of raw materials, rents, wages and interest, he obtains a profit, otherwise, he suffers a loss. That is the choice that characterizes the role of the entrepreneur.

There is just one firm in this approach. There is an individual responsible for organizing production and the coordination of production factors. Thus, neoclassical theory does not recognize the firm as a specific environment for the action of different individuals, i.e., the firm as a type of social organization, the neoclassical firm:

It is only the place that brings together factors of production that are arranged according to commonly known available technology. It is nothing more than a plant subject to the laws of income. Thus, in neoclassical economic theory, the firm is where one or more technological changes are processed in a given good or service. The firm is portrayed as a passive actor that takes the technology, factor prices and organizational capacity as data and reacts to changes in supply and demand for replacement in the margin. Organizational aspects or relationships with customers and suppliers are ignored, so the firm can be represented by a production function whose inputs are the various inputs required to produce the products and outputs produced by it (FEIJÓ; VALENTE, 2004, p. 354)
Given these theoretical methodological limitations, social psychology has provided a valuable theoretical framework for understanding the firm as a type of social organization. It allows the organization to be perceived as an environment, context and setting for the action of various actors. Rather than allow this frame of reference, Social Psychology is examining the structure and dynamics of organizations in a constructivist perspective, recognizing, as Weick (1973, p. 1) did that: “... processes that create, maintain and dissolve social collectivities, such processes are the work of organizing, and the ways in which processes are continually executed are [emphasis added] organization.” In this approach, the framework and the unit of analysis are substantially more complex:

The individual in an organizational context is more of a basic unit of analysis, he carries his own internal environment, derived from past experience. In varying degrees, he is influenced by the social pressures one faces inside and outside the organization that he is part of and, in turn, may facilitate or inhibit, to varying degrees, the organization’s activities. What happens today in an organization is determined not only by immediate and observable events; organizations, like people, have a history and are subject to internal and external pressures, some of which can be controlled whereas others cannot (GLEN, 1973, p. 13).

In this context, in which different reference frames overlap and come into conflict, the organization can be described using a structuralist approach. The traditional view that finds the explanation and description of organizational processes in the concepts of individual psychology, opens up, for Katz and Kahn (1974), the structural approach to organizations. The interdependence and complementarity of the behavior of various individuals must, according to the authors, be open to a more appropriate conceptualization at the collective level, since this as an open system, constitutes the organization.

The open system approach here provides the framework necessary for integration of the sociologists’ macroapproach and the psychologist’s microapproach. The difference between them is the fact that the former is global, dedicated to understanding and explaining the pattern of all events under analysis, while the latter identifies general aspects of all social situations. The authors’ proposal, therefore, is the study of organizations through a combination of micro and macro approaches, which becomes possible with the use of the open system theory.
Among the characteristics of open systems presented by Katz and Kahn (1974), are the principle of negative entropy, the principle of feedback, homeostasis, differentiation, and finally, the principle of equifinality. According to the principle of negative entropy, the survival and maintenance of the system of “internal characteristics of order” are subject to the system’s ability to import from the environment much more energy than the amount that the system spends throughout the transformation and export. The second principle, the principle of feedback, refers to “input of information is a special quality of energy imports,” i.e., “a kind of signal to the system concerning environmental conditions and the functioning of the system in relation to its environment.” (Katz, Kahn, 1974, p. 45).

The importance of feedback is due to the possibility that the system has to correct its imperfections and work to adjust to the changing environment, both necessary adjustments for maintaining homeostasis. It is emphasized that this “steady state” is a dynamic equilibrium, since open systems tend toward differentiation and development, processes resulting from the dynamics of subsystems and the close relationship between growth and survival.

The concept of equilibrium differs from the assumption of equilibrium in a neoclassical theoretical construct, since it assumes a new meaning. According to Weick (1973, p. 39):

Organizations continue to exist only insofar as they can maintain a balance between flexibility and stability (...) The reason for the instability of the organizations and arrangements that need to be continually rebuilt is that the requirements of flexibility and stability are mutually exclusive. Flexibility is necessary to modify current practices, so that you cannot achieve temporary adaptation to changes in the environment. This means that the organization needs to identify changes and retain a sufficient number of new solutions to accommodate such changes. However, total flexibility prevents the organization from retaining a sense of identity and continuity. Any social unit is defined partly by its history, what we repeatedly do and choose. Stability also provides an economic resource for facing new circumstances, there are regularities that an organization can exploit, if [emphasis added] has memory and ability to replicate. However, full acceptance of the wisdom of the past would be as disturbing as total flexibility, because the economic means to respond would never be discovered and new aspects of the environment would rarely be observed.

The principle of equifinality, in turn, determines that the same final state can be achieved by the system starting from different initial conditions and following different trajectories. The authors criticized the use of physical models, which have an identifiable anatomical structure and are anchored in physical and physiological certainties for the understanding of social structures.
The metaphors, or “figurative reasoning that establishes between the physical structure and surface structure social relations of analogy, tend, according to Katz and Kahn (1974, p. 47-48), to result in poorly built structures and misconceptions, such as organizations considered in the theory of the machine or interpret social outcomes as individual decisions, equating roles with personalities.” By equating roles with personalities, they lose the psychosocial dimension that sees the organization as a specific configuration that prevails in the multiplicity of the individuals who constitute that diversity, which sometimes raises barriers against organizational activities.

Although convenient, to overlook these barriers, which are empirical and recurrent in daily life, inexorably incumbent in the management of their many members, compromises the relevance of theories grounded in idyllic behavioral assumptions. One cannot omit human variability as a determinant of organizational performance without compromising its potential normative.

3. **The social organization and human variability**

Social structures are, according to Katz and Kahn (1974, p. 47-48), imperfect systems created by man and cemented by psychological elements. It is through attitudes, beliefs, habits, perceptions and expectations that social systems are constituted. These systems “represent patterns of relationships in which the constancy of the individual units that engage in them is very low” (p. 49-50). This means that the high turnover of manpower in an organization does not prevent it from remaining active because the constancy of an organization is due more to the kinds of relationships among its constituent elements than its elements per se. Thus, the social system is able to replace parts and components and continue operating indefinitely. Therefore, the organization should be able to reduce the human variability that constitutes it.

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4 The analogy organization / machine has the basic principles of specialization of tasks and processes, standardization of role performance, unity of command and centralization of decision making, the uniformity of practices and non-duplication of functions. As an example, there is the classic approach of administration, influenced by a selfish concept of economic man, moved, in this interpretation, by monetary and material factors.
The forces that reduce human variability may be due to environmental pressures, shared values and expectations and the imposition of rules. The pressures of the external environment lead to coordination of group effort in solving certain problems. The division of labor is such an example. The achievement of common goals, likewise, requires the existence of shared values, goals and mutual expectations about the mode of action to ensure that these objectives are achieved. The imposition of rules or “... formal requirements in the social systems in which the functions are performed remotely and indirectly related to the needs of members ...”, in turn restricts the variability of behavior in that it imposes sanctions and penalties for non-compliance with established norms (Katz, Kahn, 1974, p. 52-53).

Formal organizations reduce the variability of human behavior by indoctrinating its members with the norms of the system. The imposition of rules and their enforcement are essential characteristic of organizations. The trust that members of social organizations confer to the formal requirements of acceptable behavior in relation to the unacceptable is the main difference between formal organizations and less structured social systems. The understanding of social organizations permeates, therefore, the investigation of norms and values subjacent to formal patterns of behavior, i.e., the roles determined by the imposition of rules. These papers had already been analyzed in the approach of March and Simon (AMS):

Roles in the organization compared to many other roles that individuals play, tend to be very thorough, relatively stable and broadly defined in explicit terms, and even writing. The role, besides being set for the individual who will play it, is also known in some detail by other members of the organization who have to deal with that individual. Consequently, the environment consists of other people around each member of the organization and tends to become very stable and predictable. (March, Simon, 1972, p. 20)

The concept of organization that supports this characterization of the role system is found in Simon (1970, p. XIV):

The term organization refers to the complex system of communication and inter-relationships that exist in a human group. This system provides each group member with parts of the information, assumptions, goals and attitudes that enter into their decisions, also giving them a set of comprehensive and stable expectations about what the other group members are doing and how to react to what he says and does. Sociologists have called this the systems of roles, although many people call it the intimacy of the organization.
It is also in the context of systems that Katz and Kahn (1974, p. 62-63) analyze the relationship between roles and the division of labor within the organization: “Every organization has a formal and elaborate pattern of roles, in which the division of labor results in specific functional roles. Thus, more than other groups, social organizations use roles this way, separating the surplus from the elements of traditionalism, bonds and personal charisma.” Thus, the organization becomes integrated as a result of functional interdependence of the roles played by individuals, either in the production process or the subsystems that serve to support it. The norms and values function as a cohesive element in the integration of the system: it is not enough for the worker to carry out the technical functions of his role, it is necessary to perform his task Roles, norms and values therefore provide the three inter-related bases for the integration of organizations.

It should be noted that KKA integration is not a permanent condition of social organizations. If roles, norms and values enable the integration of social systems, it is because these elements reduce human variability, but do not eliminate it at all, “Norms and values, and therefore roles and institutional structures in general, not specifying concrete behaviors, are rules or guidelines that are more or less general and do not contain sufficient ‘information’ to specify the detailed operation of the system or ‘map’ more than a small part of the ‘variety’ of the middle or internal system.” (BUCKLEY, 1967, p. 229 ). In this sense, these are elements that aim to increase the predictability of the behavior of others, by creating a certain “artificial order.” For Turner⁵ (apud BUCKLEY, 1967, p. 214), the role system “… will operate as frames of reference loosely designed for optimal performance, much more clear than as a set of formulas.” It is therefore a creative process in which:

The interaction of roles is a process of tentative response of self and other, reinforcing or challenging our conception of the role of the other and, consequently, stabilizing or modifying our own role as a product of this transaction test, which is essentially feedback. The roles of conventional design, which highlights a complementarity prescribed expectations, gives way, so the design of an assumption of roles as a process of

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ideation of a performance in the role of an outsider, in which a large part is represented by cognitive processes of verification of inference (BUCKLEY, 1967, p. 211-212).

An approach to the firm as an integrated organization of norms, values and roles is substantially different from the neoclassical firm. Unlike the concept of the firm as an individual, under the analytical framework of Social Psychology, Katz and Kahn (1974) argue that in organizational terms, the firm cannot be confused with its owner(s). In this sense, the authors “disaggregate” the organization into smaller units, “generic” types of subsystems, ranging from technical subsystems or subsystems for production management, moving the subsystems of support, maintenance and adaptation.

The technical subsystem consists of the production itself, i.e., the processing of raw materials and product information that the system intends to produce. Subsystems relate directly or indirectly to support the system in its environment, either as an extension of the production activities or as perpetrators of institutional functions (of legitimation, for example). These support systems that react with the environment include specific structures of demand and provision, as well as more general activities whose purpose is to guarantee favorable relations with larger systems and structures (Katz, Kahn, 1974, p. 56).

The subsystems are directed to the maintenance of outlined human behavior. A structure of roles is not a sufficient condition for the maintenance of organizations, because it ensures that individuals who play such roles continue accepting and playing them. Therefore, the maintenance of the bonds that make individuals functional parts of the organization is made possible by the operation of subsystems for recruitment, indoctrination (socialization), reward and sanction. The subsystems include subsystems for maintenance of rewards and sanctions, which aim to maintain role compliance through suitable rewards. The reward must attract and keep members playing their roles as close to the optimal as possible. Not restricted monetary rewards, individuals remain in the system for as long as they are satisfied with the task, which gives them prestige and status and provides an identification of the individual and the group (Katz, Kahn, 1974, p. 58-59).
Adaptive subsystems must establish communication between the internal and external environment. The organization must translate the signal and changes to the outside world that the organization is able to adjust. Changes in internal structure are needed to keep up with changes that occur in the external environment, whether they are cultural, changes in values, tastes, political or economic changes, or changes that require adaptation. As an example, there are systems for research and development, market research and long-term planning (Katz, Kahn, 1974, p. 59).

Finally, the managerial subsystems are found at all levels of the system and must coordinate and aid the adjustment of the whole system to the environment in which it belongs. It falls to the subsystems to manage control, and coordinate and direct the subsystems of the structure. Their actions should allow for the feedback of information to the overall system. Management subsystems may take KKA in the form of regulatory mechanisms and structures of authority. The regulatory mechanisms make it possible, through feedback of information, to build the structure of roles, which, in turn, provides the continuous operation of the system. The authority structure refers to how the management system is organized in terms of decision making (Katz, Kahn, 1974, p. 62-63).

It can be seen from this “unbundling” of the firm as a social organization that the internal structure of the firm is a complex environment for the actions of individual actors. This conception of the firm, however, has been neglected by neoclassical theory, to the detriment of realism that tends to provide the theoretical constructs with greater consistency. The firm’s “inside view” provides a rich framework for investigating the behavior of individual economic agents. Nevertheless, the behavior of firms could not be explained solely by the internal dimension, since different frames of reference can (and should) be coordinated. The firm must also be “seen from the outside.”
4. The organization and the macro-environment

The understanding of the activities and operation of social organizations requires an understanding of the relationships and ongoing transactions with the environment in which it operates. This relationship can be understood and explained in KKA using the concepts of a subsystem, supra, open system, coding and borders.

The criteria for characterizing a given organization as a subsystem, system of supersystem may be the aims and interests of the researchers or the degree of autonomy that the organization enjoys for the fulfilment of its functions. The operation and activities of an open system, like the firm, are linked and integrated with one or more larger systems, from the perspective of the larger system as a society. A company may be perceived as a system, consisting of subsystems related to their activities of production, marketing, recruitment and retention of employees. From this perspective, industry and society can be taken as the supersystems. The openness and dependence on the system is not necessarily confined to national or territorial: borders international relations form relevant systems, capable of weighting analysis (Katz, Kahn, 1974, p. 76-77).

As for the method for the KKA (1974, p. 76): “A system theory dictates a research strategy that is in opposition to the basic policy of reducing the immediate displacement or forced to a more elementary level with the aim of understanding socio-psychological phenomena.” Thus, “the first step should always be to the next highest level of system organization, so that dependence of the system under consideration to be studies is supersystem that it is part of, since this sets the limits of variation of behavior of the dependent system” (p. 76). The case outlined by the authors refers to the most appropriate procedure for studying patterns of internal conflict and cooperation in an industrial company. The first step should be to study the company in the industry as a whole, not the informal patterns in work groups: “Its marginality or leadership position in the field, the position of its local trade union compared to
the larger trade union organizations and other such organization, Will be reflected on the internal life of the organization.” (p.77).

With regard to the degree and type of autonomy, in the KKA an organization must have some degree of freedom for decision making on important issues such as, product type, admission of members, distribution of rewards, etc.. The criterion of liability may be convenient, but it requires some adjustments, because it omits some important relationships, as in the case of when a company that produces raw materials for another company, may be under full control of it, albeit without any legal ties between them. However, the subunits that compose it may have broad organizational autonomy. The assessment of the degree of autonomy of the supersystem also requires additional criteria in terms of profit. These are criteria of practical significant and they take into account the place where profits can accumulate and where decisions are made use of those profits. Besides these criteria, factors such as the power to provide input sources, to determine the target population for the export of the product and the development of internal mechanisms of organizational rules are important for assessing the organization’s autonomy. These criteria can be summarized in a specific aspect of organizational activity, or the difficulty or ease with which the organization has to cross a border, “The harder this action and the more extensive the changes it brings, the greater the degree of organizational autonomy.” (Katz, Kahn, 1974, p. 78).

The degree to which the system is open to all kinds of input from its environment defines the opening of the system. There is considerable variation between systems in regard to opening certain types of input and the general range of inputs capable of absorption. The boundaries of the system in turn “... are the demarcation lines or regions to define the appropriate activity system for the admission of members and other imports.” (p. 79). These boundaries define the degree of openness of the system, covering the types of conditions of the boundaries between the system and its environment. The frontier, beyond the limitations of various types of interaction between individuals within and outside the organization, maintains devices to facilitate
transactions and activities essential to organizational functioning. The boundaries that maintain the integrity of the system can be physical or psychological. This second type of boundary can be maintained by symbols or provisions that seek to reduce individuals’ susceptibility to external influence, since this would not be controlled and would vitiate the intra-system influences. As organizational activities require exchange with the environment, expressed by service exports and imports of ideas and people, some members have to fill these border positions. These members “... have views facing the world and deal with the public, are subject to conflicting pressures, both from their own organization and the social environment.” (p. 80). Like the export process, the boundary conditions are perceived in the admissions processes of the organization members.

The barriers that separate the system from its environment are determined by the encoding. It is the principal mode of action of systems to ensure the specifications of absorption of energy and information in accordance with the nature of the system: “Social systems develop their own mechanisms to block certain types of foreign influence and to transform what is received, according to a number of categories of code.” (Katz, Kahn, 1974, p. 79). The concept of code, to the authors, is used in the sense of information processing, also fitting the description of selective absorption and processing of all types of input in the system.

The process of deleting information can be developed and occasionally deliberated. In the KKA, social organizations in general do not systematically create rules for the exclusion of information, nor do they create formal criteria for rejecting certain types of input. As the most common procedure is the composition of specialized structures in the reception of information, every message should “... go through and survive the” appropriate channels “so it can be heard.” (p. 79). The formality of the selection criteria for specific information is a social organization of inputs essential to the flow of information, including communicative acts within and between systems.
5. Rationality and organizational decision making

In orthodox microeconomics, the decision-making of the firm is relatively simple, but subject to “situational determinism” as noted by Blaug (1993, p. 219):

... As an independent decision maker with a well-behaved profit function in a perfectly competitive market receives perfect information about the situation he is facing, there is nothing he can do but produce a single output level or exit the market. There is no internal decision-making machine, no search for information and no rules to help deal with ignorance and uncertainty, nor any kind of enterprise, nor is there any business initiative in any form. The problem of choosing between alternative lines of action is reduced to the simplest elements, so that the assumption of profit maximization automatically choose the best course of action.

Using the methodological structuralism inherent in the analytical framework of social psychology, as configured by the KKA, has resulted in organizational decisions taken in the context of collective actors, and, as such, are necessarily social constructions: “Decisions are human constructs. They are not natural phenomena in the world that we discover. They are ‘made’ (and so designated) by theorists, observers, and participants.” (O’Conner, apud CHRISTENSEN; WESTENHOLZ, 2000, p. 1307).

In this sense, the process of organizational decision-making must be understood in terms of his relational and constructivist dimensions. It is the actors in the organizational context that make decisions. For Goffman (apud CHRISTENSEN; WESTENHOLZ, 2000, p. 1308): “In order to prevent the occurrence of incidents and the embarrassment consequent upon them, it will be necessary for all the participants in the interaction, as well as those who do not participate, to possess certain attributes and attributes to express these practices employed in saving the show.” Nevertheless, the actors are not always in possession of the attributes that are necessary to the organization. Such is the case of rationality, so thoroughly questioned by Simon (1970, p. 79-80), to whom rationality must be qualified, with appropriate adverbs required:

... A decision may be called objectively [emphasis added] rational if it represents [emphasis added] the correct behavior to maximize certain values in a given situation. It is subjectively rational [emphasis added] that maximizes the achievement with reference to the actual knowledge of the subject. It is consciously [emphasis added] rational to the extent that rational adjustment of the means to an end as pursued is a conscious process. It is deliberately [emphasis added] rational insofar as the adequacy of means to ends has

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been deliberately induced (by the individual or organization). A decision is *organizationally* [emphasis added] rational if it is oriented in the direction of the organization and it is *personally* [emphasis added] rational when it is rational to target the individual’s goals.

The concept of organizational rationality, according to Weick (1973, p. 9), “... does not necessarily mean that the organization’s actions are logical and sensible, but, rather, that they are planned, calculated to achieve a certain goal ( ... ) Rationality is the various means used to achieve the goal.” In the context of the organization, “... it is likely that rationality characterized mainly small groups of actors and that, at any time, organizations have several different and contradictory rationales.” (p. 10). In this sense, Simon (1970, p. XXII) argues that “... human behavior in organizations is, if not entirely, at least in part, *intentionally* [emphasis added] rational. The behavior in organizations is, or appears to be largely oriented towards the completion of tasks, and occasionally effective in achieving these goals.”

Katz and Kahn (1974, p. 322) allude to the approach of March and Simon⁸ (1958) to examine rationality and organizational decision making. This is due to convergence and the affinity provided by methodological structuralism and the systems approach inherent in the theory of both pairs of authors. It should be clarified that for March and Simon (1972, p. 30), the man who makes up the organization is limited: “It is the portrait of an agency that makes choices, making decisions, solving problems, and can only do one or few things at a time, which can only serve, at a time, a small portion of the information recorded in the memory and achievements of the environment.” Hence, instead of the model of rationality of neoclassical economics, the authors present a model in which considering the cognitive limits of rationality, the choice criterion is not improving / maximizing, but rather to “satisfy” (satisficing). The most significant cognitive limitations, the authors refer to the knowledge of alternative courses of action, the relative utility of these alternatives and the consequences of courses of action (Katz, Kahn, 1974, p. 322; MARCH, SIMON, 1972).

In the *Theory of organizations*, in 1972, AMS (p. 19) adopts an analytical psychosocial framework: “Looking through the prism of the social psychologist, we are interested in knowing what influences the human suffering by virtue of the environment, and what their reactions are.” For the authors, the context of behavior and the decision-making process is important as it affects the organizational framework of individuals: “The organizational and social environment where the decision maker is located determines which consequences He will predict and which he cannot foresee, which alternatives that he will consider and which he will ignore. In organization theory, these variables cannot be treated as unexplained independent factors, but have to be determined and predicted by theory.” (March, Simon, 1972, p. 195-196).

In the formulation of a rational choice theory, March and Simon (1972, p. 196) highlight the importance of considering both aspects. Firstly, we must consider the fact that the choice is always made on the basis of a model of the real situation. This model is restricted, approximate, simplified and represents the definition of the situation by the individual making the choice. Secondly, the elements of the definition of the situation can not be regarded as data, i.e., “… they do not take them for granted in our theory – but they are the product of psychological and sociological processes that include the activities of the person making the choice and the other members of the environment.” (p. 196).

For the authors, organizational activities may have a point or routinized activities can evoke troubleshooting. In the first case, the stimuli that evoke certain reactions have occurred previously, and the reaction that resulted was suitable for this type of stimulus; it was learned and routinized. In the second case, the problem-solving is introduced so that steps can be taken to complete the action and may be abandoned as soon as the problem-solving action has been learned. The activities of the kind of problem-solving involve searching for the discovery of alternative actions or predicting the consequences of those actions: “Finding alternatives can mean *inventing and developing* [emphasis added in original] complete programs of action when
there is nothing that can serve this purpose in the repertoire of the individual engaged in solving the problem.” (KATONA⁹, apud MARCH, SIMON, 1972, 9. 197).

According to March and Simon (1972, p. 197-198), the types of search and problem-solving activities should be preceded by the decision of the criteria for governing choice. Accordingly, satisfactory patterns are different from optimum patterns. An alternative would be optimal: (a) when there are patterns that allow comparison of all alternatives, and (b) when the relevant alternative is preferable, according to these patterns, to all the rest. An alternative would be satisfactory, in turn, when: (a) there are standards that establish minimum requirements for a satisfactory alternative, (b) when the alternative in question meets or exceeds all of these minimum requirements.

The discovery and solution of optimal alternatives is the exception rather than the rule. The processes involved in finding the optimum are much more complex than those involved in satisfactory processes: “It is, for example, the difference between searching a haystack in search of more pointed needle and searching the haystack to find a needle pointed enough to sew.” (March, Simon, 1972, p. 198). These different stances make economic man substantially different from the administrative man, as defined by Simon (1970, p. XXIV):

While the economic man maximizes his efforts, selects the best alternative among those that he finds, his cousin, a man whom we will call administrative contemporizes, i.e., seeking a satisfactory or fairly good course of action(...) economic man deals with the real world in all its complexity. Administrative man recognizes, however, that the world is perceived by him only as a drastically simplified model of the busy and confusing real world. It conforms to this gross simplification because he believes the real world is, for the most part, empty, that is, most of the facts that integrate do not have much relevance to any particular situation facing him and that the relation of cause and most important effect is simple and brief.

The main implications of the administrative features of man are, in this context, two:

First, because he contemporizes rather than maximizes, the man can perform administrative choices without having to first examine all possible behavior alternatives and without having to make sure that they are [emphasis added] in fact all that is offered. Second, because he considers the world as being relatively empty and ignores the interrelatedness of all things (the observance of this compliance is so paralyzing for thought and action), the man is able to make administrative decisions guided using relatively simple empirical rules that do not overwhelm his ability to think. (Simon, 1970, p. XXIV-XXV)

Individual and collective differences in rationality should also be considered. As noted by Simon (1970, p. 254-255):

A decision is rational from the standpoint of the individual (subjectively rational, that is) if it is congruent with the values, alternatives and information deemed to take it. A decision is rational for the group (objectively reasonable) if it is congruent with the values that guide the group, and the information available and that it is relevant to the decision. For this reason, we must structure the organization so that a decision is (subjectively) rational from the standpoint of the individual who takes it, keeping it rational when it is evaluated according to the group’s interests.

6. To attempt to deal with organizational problems, executives and simplifies the size of these possible alternatives:

Simplifications have numerous features: (1) The organization is replaced by satisficing – the requirement to achieve the satisfactory levels of criterion variables. (2) The alternative actionss and their consequences are discovered sequentially through the research process. (3) The repertoires of action programs are developed by organizations and individuals serve as alternative choices and recurring situations. (4) Each specific program of action deals with a restricted range of consequences. (5) Each specific program of action is likely to play in semi-independence from the others – and are only loosely bound (Katz, Kahn, 1974, p. 322-323).

Executives in such a situation do not consider all the possibilities for solving problems. The establishment of limits, beyond which the rational alternatives cannot pass, is characteristic of organizations: “The organization represents the walls of the maze and, in general, organizational decision making is aimed at solving the problems of the labyrinth rather than rebuilding its walls” (Katz, Kahn, 1974, p. 323).

In the organizational context of individual cognitive limitations, the rational process of searching for programs to achieve organizational goals is not, for these authors, a process of objective logic. It is rather a process of limited psychology. First, attention will turn to variables that are under control of the decision maker or his organization. If this attempt fails, his attention will turn to variables that are not, in principle, under organizational control. If this attempt fails too, a new, satisfactory program can be outlined, after He has reexamined and flexibilized the criteria of the previous program. This means that, in general, people do not move to new stages of research and evaluation unless they are able to promote some type of satisfactory adjustment at an earlier stage: “Objective rationality requires a full assessment of all possibilities, limited only by the organizational objectives of the research costs. Psychological rationality means
accepting more immediate and least costly action.” (Katz, Kahn, 1974, p. 323-324). This “psychological rationality” refers to the cognitive process.

7. Limiting factors of cognitive rationality

The understanding of cognitive boundaries requires something further, some description of the cognitive process, and especially the fallibility inherent to it. This is particularly relevant when one considers that rationality should be regarded as a relational reality, observable in specific social contexts. It is not the absolute refutation of a minimum requirement of rationality, it is rather a need for the contextualization and restriction of the generality and universality of the principle:

Certainly one cannot lead his life in rational calculation or intention, but a life (or in the context of an individual trajectory) is never fully controllable, predictable, breadmaking, etc., Actors can sometimes develop strategies, more or less rational calculations in this or that field, at this or that practice. Therefore, the critical remarks about rationality, intentionality and conscious calculation are valid for a particular type of construction of contexts of action, but not universally (Lahiri, 2002, p. 154).

In the KKA there are seven principles that give rise to the fallibility of judgments, namely the determination of reasoning for social position in space, identification with external reference groups; projection of attitudes and values, global or undifferentiated reasoning; dichotomized reasoning; cognitive myopia and oversimplified notions of causation.

The position occupied by individuals in the organizational space affects their experiences, attitudes, knowledge and judgement. This type of determination of reasoning applies to the information and knowledge and the Standards of judgement used in evaluating these same information and knowledge. In the case of the firm, “... the organizational leaders are particularly prone to a system of centrism, i.e., a tendency to evaluate everything based on the framework of his own organizational environment.” (Katz, Kahn, 1974, p. 324). The risk arising from this centrism of the executive can be exemplified with the “weakness” of the vitality of the organization, the result of choice, on the basis of kin, successors and subordinates.

In the KKA, members of an organization, including executive decision makers, follow rules not only of the organization. Groups outside the organization with which they identify also
affect the decision process of executives and determine, in part, the lifestyle of individuals. These groups generally tend to be at the same level of executive power and status, allowing their identification. Groups of less power and lower status receive less weight in relation to values and information. Relations with the reference groups outside the organization contain elements of rational and irrational reasons. Considering the information and values of powerful groups is rational in that they can become useful to the organization. Irrationality is characterized when the spotlight is on the power groups, but without the relevant knowledge to the detriment of junior groups who are hierarchically inferior but possess relevant knowledge.

Identification with reference groups exert a strong influence on individual selective perception. In the KKA and AMS, the very nature of organizational meetings has that effect, when the roles are similar. There is in this context a process of mutual reinforcement for maintaining a common frame of reference in relation to organizational problems: “The division of work and communication within the narrow focus of subgroups reduces the information received. This leads to differentiation and persistence of subgoals, the resulting focus of attention.” (Katz, Kahn, 1974, p. 327).

While in the process of identification individuals find themselves with similar groups in the design process, other individuals are seen as similar to them, i.e., the projection is reciprocal of identification. The belief in shared values and ideas is one of the characteristics / conditions of the organization: “When those who choose not to think directly when confronted by reality and are not entering data research goals, they often assume that the groups within their own organizations share them and have the same values as they do.” (Katz, Kahn, 1974, p. 327). The errors that can arise from projection are exemplified by the emergence of trade unions, although there was no reason for this linkage in view of the directors of an industrial business. The assumption of the directors in this case fails to recognize that the frameworks, beliefs, goals and guidelines are not shared between the two categories – employees and directors.
As the understanding of reality is simplified, for the KKA, details and differentiations of the world are compromised, the prevailing perception is of other people and other groups as homogenous entities, undifferentiated. This trend toward global and undifferentiated thinking is increased the greater the distance of the group in terms of psychological contact. Similarly, dichotomized thinking is a kind of (over)simplification of the reasoning that the facts are learned in just two opposing categories (e.g., good and evil, or good and bad).

The principle of cognitive myopia points to the temporal and geographic limitations of the individual frame of reference. The perception is primarily focused on what is immediate, visible and palpable. Therefore, the dimensions of the problems that are more distant in time and space are neglected, compromising actions and organizational performance in the long term: “The politics of organizational success requires a higher standard of reference, both spatially and temporally, than that readily at hand for most people. This human limitation results in a preponderance of the immediate pressures on organizational decision making.” (Katz, Kahn, 1974, p. 329).

Decision-makers in the organizational context are subject to the use of oversimplified, and therefore fallible, notions of causation. These include oversimplified notions of animistic conceptions attributing causes to personal agents and acceptance of exciting events as the main causes. Furthermore, it is common for the actor to attribute the causes of observed actors to a faculty to perform a certain activity: “The faculty of thinking is thus a form of tautology which consists essentially of using a name or synonym to report the observed process (just as we think we have an explanation for a disease if we can find a name for it).” (p. 329). Another shortcoming inherent to the oversimplified notions of causation is linear thinking. This reasoning ignores the cyclical nature of interaction between cause and effect, with a revailing perception of a “one-way street in the sequence of cause and effect” into which dialectical aspects are not incorporated (p. 329).
To all these limitations and cognitive fallibilities, personality attributes should also be added as factors that influence decision making.

a. **Idiosyncratic factors of limited rationality**

To the extent that organizations cannot bring to themselves only the convenient “psychological slice” of the individual that deals with organizational activities, in addition to the cognitive limitations mentioned above, the attributes of personality (i.e., the individual “as a whole) also affect organizational decision making. The four aspects of personality viewed by the KKA as the greatest influence on the decision process are: guidelines for power versus ideological orientation, emotionality versus objectivity, creativity versus conventional wisdom, and guidance for action versus contemplative qualities.

In the conflict between ideology and orientation for power, the extremes involved are the fanatic and the businessman: while the former is unable to disrespect organizational guidelines because of the ideology of the organization has been intensely internalized in him, the latter is capable of working skillfully within different organizational frameworks. The most important consideration to be made is that: “An organization dominated by power-motivated leaders finds that their decisions on policies tend to favor the survival and enhancement of such leaders rather than a healthy development.” (Katz ; KAHN, 1974, p. 332). It is possible for the interests of the leaders to coincide with the well-being of the organization. However, such situations in general tend not to last long.

Two types of emotionality may affect decisions: pré-conscious affection and defensive needs. The first type of decision can lead, for example, to dismissals that are not based on objective criteria. The second type can block or distort the analysis of a problem, leading to erroneous and biased weighting of certain types of solution. The perception of information in this case can also be affected, resulting in a denial or distortion of its contents. An illustrative case is delineated by the authors:
A major weakness in an autocratic structure is that the defense mechanisms of leaders will receive institutional support rather than correction. Subordinates will protect their own positions by screening the facts according to the emotional tendencies of the head. All the institutional environment may become modified to confirm the pathological tendencies of the men at the top. The realities of the immediate social environment ordinarily constitute a good barrier to the views of the fictional universe of systems and illusory. But in the autocratic organization, as amended, now social realities reinforce the fiction, false perceptions and false beliefs. In these circumstances, criteria for the assessment of organizational performance are avoided because they pose a threat to the current comfortable way of life of the leaders, intruding with objective facts. The leaders are unable to modify the guidelines and, unless they are replaced, the organization is faced with disaster. Any organization that cannot adapt to the forces of the environment will be destroyed by them (Katz, Kahn, 1974, p. 333).

Individual differences in personality also involve aspects such as originality – or the ability to perceive new relationships or impose new facts on an old structure – and common sense – or the ability to make balanced judgments and appropriately consider plausible notions that compete with each other, thus ensuring accurate predictions of likely outcomes. In the organization there are two complementary attributes, which are hardly ever found simultaneously in a single individual. The formulation of corporate actors is generally delegated to common sense, which may in turn admit subordinates responsible for innovative features: “The complexities of organizational life with its many conflicting requirements imposed on executives mean that at that level critical capabilities and judgement are a requirement.” (Katz, Kahn, 1974, p. 334). As for guidance for action versus contemplation, the authors argue that the ability to act on judgments is a personality characteristic that is important to the organization: brilliant ideas are not enough unless they are translated into actions.

Together, the cognitive factors and idiosyncratic factors permeate the decision process of irrational acts. If these are can be excluded from the theoretical constructs of the characteristics of neoclassical microeconomics characteristics taught to the vast majority of empirical companies, irrationality expressed in irrational acts reduces organizational efficiency, making containment measures necessary.

b. Containment devices systemic irrationality

To counter the “irrational” individual and to promote and facilitate the rational solution of business problems, social organizations develop specific devices. Although they do not operate perfectly or work in all situations and involving costs (recognized and unrecognized), these
devices prevent errors and minimize risks. The specifics of these devices involve the immediate pressures that solving problems entail, deeper analysis of the problem, increased demand for alternative courses of action and assessment of utility functions of these courses. The development of these devices is favored and supported by the automation processes and the introduction of computerized systems for information processing in organizational activities. For the KKA:

Until now, the contribution of the computer is more easily appreciated in the fields of memory and complex calculation. The abilities of human memory are well known and often affect decision-making. The computer memory is perfect not only for specific items of information stored in it, but also because of the weights assigned to items in relation to its significance to results. The computer can quickly do such fantastically complex calculations about courses of action and, for certain types of problem, you can actually test alternative solutions in experimental environments (Katz, Kahn, 1974, p. 335).

The rationality of this device is prominent in the translation process of organizational problems into programming language. This is an exercise that requires a clear definition of the variables and parameters to be considered, the sequence and priority of decision criteria and influence involved. This exercise, therefore, requires the undefined terms to be removed, allowing the passage from a situation of decision making to another more stable situation. Given this, much of the erratic and unreliable elements of organizational decisions can be eliminated, if the data and procedures are subject to fundamental programming. However: “The general procedures to protect against certain types of organizational and individual fallibility can be developed and used, whether they have been programmed into computers or not.” (Katz, Kahn, 1974, p. 336).

Decisions made in relatively short periods of time are subject to the fallibility that is inherent to immediate pressures. For this reason, formal organizations determine periods of waiting and deliberation. The extension period is advantageous because it allows new plans to be considered, in addition to information that can be analyzed in greater detail. Furthermore, this device that prolongs formal periods allows the veracity and realism of the pressures for change to dissipate.
Turning to consultants, according to the KKA, whether internal or external to the organization is one way of overcoming a kind of limitation on solutions, which consists of limiting the cognitive range of a policy’s formulator and decision maker. Two types of errors may occur in choosing the consultant. The first is inaccurate identification of experts in a field of knowledge that are not the right people to solve the organization’s problem. The second error is choosing consultants who are very similar to the executives already working in the organization, so that their interaction does not lead to more alternatives, only to the kind of solutions that already exist in the organization.

In addition to outside consultants, another alternative for expanding the search for solutions is to rely on actors who are in direct contact with the problem, actors from the organization itself or from similar organizations. We should consider here that the expansion of alternatives may be provided by more than one subsystem of the overall structure: “The search procedures (not necessarily the final choice of who makes the decision) must cross organizational lines both horizontally and vertically, and the guideline of the company may determine that it will.” (Katz, Kahn, 1974, p. 337).

The use of quantitative data and parameters is a means by which organizational action can be subjected to rational evaluation, in the case of devices to assess alternative solutions. Another important requirement is the evaluation of adverse events. Although, by definition, such events are of limited predictability, the use of temporal patterns tends to be fortuitous. This procedure consists of monitoring the performance trajectory of the plan for months or years from its implementation. Another benchmark to be considered is socio-technical in nature, like the KKA. This pattern is particularly suited to the times when the new guidelines of the plan alter the sociopsychological configuration of the system, meaning an evaluation of effects on technical processes during the task itself. This is a procedure which, while necessary, is not common. The introduction of technical innovations into this context means that attention must be paid to the actors affected in terms of movement and disturbance.
All the devices listed tend to “contain”, in part, the irrationality of the organization, but “... the possibility of such procedures and the resources of larger organizations make it possible to have more rationality of decision making for the system than for individual decisions.” (Katz, Kahn, 1974, p. 338).

**Final Thoughts**

From the presentation of the firm as an organization in the context of the KKA, there is sufficient evidence to argue that individual rationality is impossible, as postulated by the neoclassical theory. The limits of individual rationality are derived from the nature of the cognitive process and its interaction with motivational and idiosyncratic aspects. Omniscient rationality is also limited by situational factors, coexistence, overlapping and interaction with reference frameworks, values and socialization processes that are different and often contradictory. Given the cognitive idiosyncratic, motivational and situational limitations of rationality, organizations set parameters and develop mechanisms to contain acts of the “irrational” individuals that compose them.

The systems of roles, norms and values define the morphology of formalized organizational relationships, reducing human variability and allowing the formation of relatively consistent interpersonal expectations. Coding systems establish the parameters and organizational criteria of selection and interpretation of information relevant to the organization. The institution of these parameters and organizational (and therefore formal) criteria is intended to guide the selection of individual information, the idiosyncratic principle, in order of relevance to organizational activities. This is how the devices for containment of systemic irrationality aim to ensure rational organizational procedures.

More than questioning the omniscient rationality postulated by neoclassical theory, by adopting the KKA as an analytical reference, one may question the possibility of an individual rationality, i.e., rationality as an attribute of the individual. The constitution of the individual, his
cognitive characteristics and his motivation is necessarily an interdependent process that involves constant social interaction. His attributes are not intrinsic and immanent.

While both organizational social structures and mechanisms/devices and systems and subsystems are social constructs, they are also human creations and imperfect. A social organization is a complex system that works through the coordination of human activities. Individuals who enter productive organizations are not necessarily able to be rational in the neoclassical sense. This rationality is not an innate attribute of the individual, and if allowed to use their own coding systems in organizational activities, idiosyncratic criteria that do not necessarily converge with the purposes of the organization will certainly prevail. Organizational rationality refers, therefore, to the mechanisms and devices that shape the actions of individuals in the organization. Insofar as these mechanisms/devices are social constructions and that they are not fully present in the organization nor entirely in the individual rationality, they can only be understood as a relational reality.

When the neoclassical theory, based on an atomistic and reductionist conception of economic agents, axiomatically translates individual rationality to the firm, it gives up a research of the firm as a complex organization and an environment for the action of individual economic agents, also omitting an explanation and description of the dynamics and logic of the subsystems that comprise it. Omitting these aspects also means omitting the relational nature of the firm’s inclusion in their midst and the significant importance of these aspects when it comes to understanding the behavior of the organization. By disregarding the multiplicity of actors who constitute the firm, in the same way, the traditional microeconomic theory has shortcomings in the treatment of crucial elements in determining the collective rationality.

The KKA, in contrast, recognizes the multiplicity of actors in social organizations and attaches great importance to the ability of these to develop mechanisms for the coordination of human action, rationalizing it in terms of organization. A “collective rationality”, or organizational rationality, must therefore be addressed in light of the development of
organizational mechanisms for the coordination of “irrational individuals”. Exploring individual “irrationality” in this way, the KKA makes it possible to redefine the behavioral assumptions of economic man. More precisely, based on the structuralist method and guided by the notion of system, it allows the economic behavior of the individual to be taken in the light of theoretical and methodological principles that are substantially different from axiomatic principles and prevailing reductionist neoclassical microeconomic theory.

References


