# The information and its sharing

Validation of a theoretical model in an organizational context

Rita de Cássia Martins de Oliveira Ventura Armando Manuel Barreiros Malheiro da Silva Mônica Erichsen Nassif

hen proposing to study organizations, it is essential to remember that changes in the model of work organization, and also in the tasks that employees need to perform have occurred. Lúcio (2018, p. 1) states that in Brazil, the main vectors that created a "new work world" are focused on "accelerated and extensive technological innovation in all sectors," on outsourcing, on flexibility in work relations, on multifunctionality of employees, on reduction of job posts, which, consequently, leads to fierce competition among workers for scarce job opportunities. In addition to these aspects, Motta and Vasconcelos (2002), based on Max Weber, affirm that there is uncertainty in relation to the behavior of people when inserted into these organizational structures. While a cooperative behavior is expected, in many scenarios, it is still perceived an alignment with the Weberian Protestant Ethics where individualism prevails as a way of acting in these spaces. The cited authors point that the organizational subjects, defined as Organizational Man by the Structuralist Approach, "are beings who act rationally aiming to achieve their objectives" (Motta; Vasconcelos, 2002, p. 149).

It is in this perspective that Mintzberg (1995) asserts the necessity of considering the organization as a socio-economic-political system, indicating the macro nature of organizations. In this sense, Silva (2005, p. 29) states that to understand internal aspects (such as social relations, employee behavior, etc.), it is also necessary to focus on understanding processes, i.e., "how things are done" and how the organizational structure, culture, and power relations are designed, how leadership are exercised, and also which management strategy is adopted. And it is in this scenario that organizational subjects, the so-called organizational men, "act by creating maneuvering options within the bounds of rules and structure" (Motta; Vasconcelos, 2002, p. 149), creating an environment which was defined by Morgan (2002) as a political arena. Aware of this reality, organizations, as emphasized by Camargo de Oliveira *et al.* (2018), need to focus on creating an environment that mitigates conflicts and induces behaviors directed towards their established and desired goals. Specifically in this study, an environment that fosters information and knowledge sharing.

The relevance of information and knowledge, as pointed out by Kumar (1997), took place in organizations from the moment when the currency of value with workers shifted from labor to knowledge. In the author's analysis, this shift transformed the way of managing organizations, making then turn to human capital. Therefore, people, based on this assumption, in the organizational scenario, according to Davel and Vergara (2010, p. 3), "constitute the essential principle of its dynamics, giving vitality to activities and processes, innovating, creating, recreating contexts and situations that can make the organization to position itself in a competitive way."

Due to the importance of this theme in the organizational context, various research has been developed both in the search of a proposal for the knowledge management and in relation to necessary variables in the scenario which stimulate the information sharing. However, Wang and Noe (2010), in studies analyzing research results on knowledge sharing, found a lack of understanding regarding how organizational and interpersonal contexts, as well as individual

characteristics, impact knowledge sharing. Their work reveals a concentration of knowledge sharing research on five areas: organizational context, interpersonal and team characteristics, cultural characteristics, individual characteristics, and motivational factors. Overall, the research analyzed by them uses the analysis of influence on the attitude of sharing unilaterally without considering the dynamics existing within organizational limits. In this perspective, it is significant to consider that organizations are environments of social interactions and the pursuit of interests, environments of multiple behaviors caused by numerous factors, and that is why they fertile fields of research. Research that should take into consideration that humans are protagonists in any social context and not submissive beings, content with managerial controls that do not consider their subjectivity. Another study supporting this research is the findings of Ventura (2016), which point that the People Management model is the significant influence point in the availability for sharing, along with the existing trust with whom the sharing takes place, organizational layout, level of interaction with informal groups, and the degree of power of information.

In line with these analyses, Camargo de Oliveira *et al.* (2018, p. 54) argue that "organizations and their organizational subjects are not isolated, in other words, they are part of a context whose interconnections are real." Which means, "in the relationship between an employee and the organization, each party only participates for what it expects to receive in return for its participation" (Thomas Jr., 1997, p. 38). It is included in this analysis the relationship between people and their availability for sharing, as individuals have autonomy to share or not the information they possess, which makes any information management system to lose itself in face of their decision.

Based on these theoretical contributions, the present research proposal is justified by the need to understand the entirety of the organization, that is, consider all set of elements and assess their ability to influence the sharing behavior of their members, taking into consideration the theoretical assumptions from correlated studies, aiming at integrating them. In this path, the theoretical framework for this study is based on the assumptions of the Structuralist School, where the organization is understood as composed of interconnected and related

parts forming a dynamic whole greater than the sum of its parts. This way, the aim is to address the gap left by different studies, obviously without undermining their value, in understanding the influencing elements of a more cooperative behavior towards information sharing. It is also considered the arguments of Loureiro *et al.* (2018, p. 169), who, based on research results, emphasize that the sharing theme, despite the number of studies, is still underexplored, as "there is a tendency to consider the topic in a fragmented way", which in consequence allows for a shallow approach to the factors influencing people's availability for sharing information and knowledge.

Under this perspective, the objective is to understand how the main elements forming the organization, structure-culture-power-strategy, influence and what are their intensities in relation to the organizational subjects' availability for sharing information. Consequently, the goal is to develop and empirically validate a theoretical model capable of explaining the availability of organizational subjects for sharing information based on the organization's forming elements.

To achieve this, the methodological approach adopted for the study is a case study where documentary research and surveys were used to collect data on organizational culture and validate the intended model. The locus of analysis was a meat processing plant in Brazil, more specifically in the state of Minas Gerais, operating in the national and international markets. In general, the data demonstrates the significant involvement of people in information sharing, and that this behavior depends on their willingness and interests. However, one cannot deny the influencing effect that the forming elements of the organization have, acting either as stimulants or inhibitors of employees' availability for sharing. Among these elements, the role of organizational culture stands out, as it has the ability to develop identity and commitment along with the management model (power variable in the model) adopted, which must necessarily incorporate people as a crucial element in organizational development. Thus, the inclusion of people as a structuring element of the organization is relevant and has become significant for analyzing information sharing in organizations, as they are the main responsible for such behavior.

It is expected, therefore, that the provocation inserted in the research agendas of Information Management and organizations will bring significant contributions to the field of Information Science and Organizational Studies

### THE ORGANIZATION AND ITS FORMING ELEMENTS

Throughout the existence and development of organizations in our society, starting from the Industrial Revolution, organizations have emerged and expanded, occupying different spaces. In this direction, society has been taken over by a scenario increasingly dependent on organizations, and, of course, the insertion of humans into this context has led to different connections with work activities. Different relationships between humans and work have unfolded until we reach the contemporary society defined by some theorists as "post-industrial, post-Fordist, and post-modern" (Kumar, 1997, p. 9). However, despite being different, these definitions center around the idea of the information society associated with advancing technology, which is consolidating more each day. Bell (1980) explains this evolution using the Industrial Revolutions, where the first two were driven by steam and energy. The third had the computer as its central point, explaining the shift of knowledge and information to become "strategic resources and transformative agents of post-industrial society" (Bell, 1980, p. 531). Characterizing this "new" society, Naisbitt (1984)<sup>1</sup> states that it is produced "mass information, just as cars were mass-produced," making information the driving force that leads to a new "mode of production" (Kumar, 1997).

Regarding technology, Kumar (1997) emphasizes that the information society brings physical isolation, where people walk on the "information superhighway as isolated selves" (p. 168), not creating bonds of social relations but "a segmented and resolutely one-dimensional community" (p. 169). Not that technology is the sole villain in this process, but its use in organizations should be based on a culture of cooperation and sharing. Undoubtedly, technological development has opened up multiple possibilities; however, it also puts "the

<sup>1</sup> Cited by Kumar (1997).

power of knowledge at our fingertips, at the touch of a computer keyboard" (Kumar, 1997, p. 170).

As a result, the entire organizational context has changed, now valuing and revolving around information and knowledge, causing what Kumar (1997) describes as a profound shift, changing the origin of value from labor to knowledge. This shift transformed the management of organizations, making them turn also towards human capital, at least as a management proposal, even if in some corporate contexts, this practice is far from being realized.

In this process of organizational change, individuals who are part of it use their knowledge and, through the sharing of information, recreate it because, as Camargo de Oliveira et al. (2018, p. 59) state, "information is constructed in its life cycle." Defining information sharing, Tomaél (2012, p. 13) points out that it "constitutes in the exchange of information between partners, who produce increased visibility of the chain that supplies the processes in which they are involved." From this perspective, the fundamental point of the sharing process is the people who can be understood as a guiding thread that dimensions and, at the same time, redesigns knowledge. Barreto (2002) had already presented that information, in its "rite of passage," is characterized by its most interesting feature, which is the transcendence from its state of thought (from the sender) to configure itself as knowledge (for the recipient). In the information society scenario, Borelli and Tomaél (2012, p. 72) argue that the act of sharing information "meets the need to improve the development of capabilities" both in the internal and external environment of organizations, in the constant pursuit of innovation and competitive advantage.

Following the paradigms of the Structuralist Approach, organizations are understood as formally instituted institutions composed of various interconnected parts. And, as it could not be otherwise, the result of this interaction is a whole that is greater than the simple sum of its parts because the reciprocity relations established between them must be taken into account (Motta, 1970). In this direction, understanding organizations requires considering that, within the structuralist assumptions, the parts are not static; they are incredibly dynamic,

and the intersection between formal and informal organization makes them alive, mutable, and challenging.

Touching on the informal organization, Blau and Scott (1970, p. 16) state that it consists of social relationships that occur between individuals and groups and has a "system of shared beliefs and orientations that serve as standards for human conduct" as people work and interact. Considering these aspects and the forming points of the formal organization, Mintzberg (1995, p. 17) warns to the fact that "formal and informal structures are intertwined and impossible to distinguish." To understand this internal environment — which involves both the formal and the informal organization — Silva (2005, p. 28) alerts to the need to "have a global view of the business, that is, how things are done, and how the structure, organizational culture, power relations, existing leadership, and management strategy are characterized." Thus, Silva (2005, p. 37) suggests that organizational variables (elements) are "power/leadership, structure, culture, and strategy, with this set being the 'molecular' structure of organizations, thus giving us their physiognomic portrait." According to the cited author, each of these poles will determine the configuration and orientation of the organization. Figure 1 represents Silva's (2005) conception within the logic he calls the "Molecular Structure of Organizations."

Structure Strategy
Culture

**Figure 1** — Molecular Structure of organizations

Source: Silva, 2005, p. 35

Silva (2005) explains this structure as follows: the power pole involves the way of managing and how it is configured in the organizational context. The structure pole addresses the type of structural configuration, while the strategy pole encompasses the mission, vision, objectives, actions, and policies established by the organization that will give it direction. The culture pole involves values, patterns, myths, and organizational fears, among others. For this study, the molecular structure established by Silva (2005) will be used as a basis for understanding the organization, aiming to identify the influence of these poles on the organizational subjects' availability for sharing information and knowledge.

# INFORMATION SHARING IN THE ORGANIZATIONAL CONTEXT

Davenport (2000) considers information sharing as a spontaneous act, dependent on people's availability for sharing what they know, with interorganizational relationships being the main means (Wang; Chen; Chen; 2008). Tomaél (2012, p. 13) states that "information sharing constitutes itself in the exchange of information among partners, who produce an increase of visibility of the chain that supplies the processes in which they are inserted." Making the centrality of people in the act of sharing evident, Brookes (1980, p. 131) considers the "information as inseparable from the subject," because the "information is a human product, so the individual should not be excluded from the process." Reaffirming these aspects, Ajmal and Koskinen (2007) assert that technology is an extremely useful tool in communicating explicit knowledge; however, the communication of intrinsic knowledge and the creation of new knowledge require social interaction and human participation.

Thinking about information sharing in the organizational context, one must consider the organizational poles pointed out by Silva (2005), which establish the limits of people's actions, propelling, stimulating, or limiting behaviors. Power/leadership, structure, culture, and strategy, in general, have already been related and studied with the theme of information sharing. However, these studies considered these poles individualized, generally ignoring the

interconnection existing between them as pointed out by Silva (2005) and the protagonism of organizational subjects in their operation in the work scenario.

This aspect is important because, as suggested by Wang and Noe (2010), based on research findings, the organizational subjects decide whether to share their knowledge for different reasons. Some people, according to the authors, have attitudes favoring sharing due to altruism, as a result of reciprocity, by valorization of personal relationships with others within the organizational context, or through different intentions resulting from personal goals, as already pointed out by Thomas Jr. (1997) and Ventura (2016). This makes it significant for organizations to pay attention to establishing policies and developing a culture that is oriented towards cooperation, fostering more positive attitudes towards sharing. Wolfe and Loraas (2008) argue that when there is managerial support and incentives for a more cooperative sharing behavior, said behavior tends to flow better, bringing ideas, experiences, and creativity to the organization.

Reporting research findings relating power/leadership and information sharing, Wang and Noe (2010) point out a significant influence of management's role in people's sharing attitude. The authors emphasize that perhaps this positive influence of management on sharing is a consequence of the belief of subordinates that the manager/leader has experience in the field—competence power, as argued by structuralist authors—and/or has the power to reward them for a more cooperative behavior. Ventura (2016) found a significant relationship between managers' postures and availability for sharing. According to the author, "the managers with positive attitudes towards sharing can encourage sharing among their subordinates, confirming that there is an intersection between employees' attitudes and how they are managed" (Ventura, 2016, p. 183).

Another pole pointed out by Silva (2005) refers to the structure that emphasizes the architecture established and adopted by the organization, i.e., its structural design. Mintzberg (1995, p. 10) defines organizational structure "as the total sum of the ways in which the work is divided into distinct tasks and how coordination is achieved between these tasks." Expanding the concept of structure, Sahay and Gupta (2011) argue that organizational architecture concerns how work and workers are organized and divided into functional areas

of the organization, considering the competencies of organizational subjects, formal rules and procedures, and how power is delineated and distributed throughout the organizational hierarchical chain.

Relating structure and the availability for information sharing, correlated research indicates that the structure, depending on its form, can be an obstacle to sharing (Floriano, 2010)<sup>2</sup>. Supporting this statement, Wang and Noe (2010), analyzing various studies, point out that centralized structures tend to become an impediment to sharing because decision-making power is concentrated in the hands of a few, making, in this proportion, the environment more political. It is in this environment that information gains power, becoming a significant inhibitor to sharing. Studies reported by Wang and Noe (2010) demonstrate that the power of information and/or knowledge tends to turn those who possess into a "superior being" compared to those who do not have such information. Concepts such as "secrets" and "guardians of information" are used in reference to these individuals who, by personal decision, do not want to share what they know. In her studies, Ventura (2016) confirmed this perspective, finding data that indicates that Human Resource Management policies regarding job positions' distribution create an environment of competition and internal conflicts. In the studied case, these policies encourage the development of coalitions and strategies, as described by Morgan (2002), creating a scenario contrary to the exchange of experiences. This scenario configures the metaphor of the Political Arena proposed by Morgan when he argues that politics "[...] comes from the diversity of interests that gives rise to 'arrangements,' negotiations, and other processes of forming coalitions of mutual influence that so affect the life of the organization" (Morgan, 2002, p. 182-183).

On the other hand, decentralized structures provide more participative environments, facilitating interaction among organizational members, which can lead to more trustworthy relationships. In other words, relationships based on the "mutual feeling that none of the parties involved exploits the vulnerabilities of the other" (Barney; Hansen, 1994, p. 176).

<sup>2</sup> Cited by Queiroz et al., 2017.

Research conducted by Ho, Kuo, and Lin (2012) indicates that trust in the workplace is a significant stimulus for a person's availability for sharing information and/or knowledge. This relationship was confirmed by Ventura (2016), when she reported that the variables of trust and interpersonal relationships impact the availability for sharing. According to the author, interpersonal relationships, based on trust, developed in the workplace, tend to extend to "life outside of work," strengthening trust and being cited by organization participants as a justification for information sharing and as a way to nullify the existing politics in the daily work. The data found by Ventura (2016) indicate that trust and interpersonal relationships were the elements that stood out the most as stimulators for the availability to share.

Another element that is part of the molecular structure of organizations, according to Silva (2005), is organizational culture. Retrieving the concept of organizational culture, it is noted that, according to Morgan (2002, p. 125), it gathers characteristics that make organizations like "mini societies that have their own distinct patterns of culture and subculture" that can be translated "into shared beliefs or meanings, fragmented or integrated, supported by various operational norms" rooted in the organization's identity and routine. Thus, one of the roles of culture is to create this cohesion in the organizational daily life.

However, culture has another extremely significant role: to be a mechanism for behavioral control of organization members. Through subtle and consensual mechanisms, organization participants accept and reinforce the control that culture performs by outlining the limits and the format of action within the organizational space. Da Silva *et al.* (2009, sp) argue that "a deeper way to impose the values of the company is to condition employees through practices, infiltrating in these individuals a new identity, being modified concomitantly with the insertion of this individual into the organization." Thus, culture internalizes in individuals, performing what Motta (1970) points out as a "change in self-image," leading them to develop a new behavior that is more consistent with their organizational role.

Consequently, organizational culture sets the tone for the organization, establishes the colors and nuances that will internalize in people's identity,

transforming them into organizational beings. Corroborating this analysis, Pagès *et al.* (1987, 24) state that "the organization produces an individual in its image and likeness, capable of reproducing it." In this way, a culture centered on innovation, cooperation, and trust will stimulate innovative behaviors in the same proportion; in other words, culture will act as a mediator that, interacting with other situational elements, influences the availability of organizational participants to share. Or it limits behavior if the context is contrary to a cooperative system.

In the last pole of the molecular structure, the "strategy encompasses the mission, vision, objectives, and policies established by the organization" and that necessarily will guide the organization (Silva, 2005, p. 37). According to Chandler (1966), it is the strategy that will define the entire organizational context, meaning that the structure follows the strategy. In this logic, the importance of the environment is emphasized, which will cause organizations to modify and evolve linked to the variables that the market offers them. Supporting this analysis, Mintzberg (1995) states that aiming to maximize positive responses to environmental demands, organizations will improve their level of management and their processes, seeking to adjust to the pressures received.

Thus, seeking to meet these environmental conditions, organizations define strategic postures that will shape the management form and practices in their internal context. Miles and Snow (1984) state that the strategic position defined by the organization will emphasize certain positions within the management process, thus influencing culture, power relations, and organizational architecture for better alignment with environmental conditions. In other words, according to the authors, the strategic postures chosen by the organization will influence management processes and practices (Miles; Snow, 1984). Supporting this perspective, Silva (2005, p. 26) highlights that the organization, in its environmental analysis, must consider the factors that "block it, condition it, and pull it in certain directions or paths of development" so that they can manage them or adapt to them through new formats.

From these conceptual aspects regarding the poles that form the molecular structure of organizations, it is necessary to consider the human being as an

integral part of it. It is considered that the person who integrates different organizations acts reciprocally within this molecular structure. In the same direction that they are controlled and a key player in the political game articulated in organizations, organizational subjects are also rational and have as main focus their own interests. Thus, to complete the model proposed in this study, people will be considered as the central core within the molecular structure suggested by Silva (2005) as shown in Figure 2.

Power

Structure People Strategy

Culture

**Figure 2** — Conceptual Model of the research

Source: Adapted from Silva (2005).

The reason for incorporating people into this proposed molecular structure by Silva (2005) is justified by the centrality of people in the process of sharing information and/or knowledge. It also considers all the resources within organizations, such as technology, physical infrastructure, the layout adopted by departments, and the size of the organization. In the perspective of Chanlat (1996), when proposing to consider the human being in any study, one should avoid a fragmented perspective and consider them as a complete being composed of multiple dimensions. In other words, take them as a "generic and singular" being, a concrete being, but different from all others in their potentialities; an

"active and reflective" being that thinks and acts in function of the context perceived by them; a "being of words" because they have the ability to express reality, both internal and external, through language; "a being of desire and impulse," where rationality and irrationality are confronted in the search for pleasure and control; a "symbolic being" that uses signs, metaphors, and allegories in their actions; and a "space-time being" because they are inserted in a space and a temporal cycle that shapes their history (Chanlat, 1996, p. 26).

All of this justifies the relevance of this study so that an increasingly developed level of understanding aligned with the reality and complexity of the organizational universe can be achieved.

#### METHODOLOGICAL PATH

The methodological design that guided the paths taken in this study has as its central point the theoretical issues presented on organizational variables and information sharing. Aligned with the study's objective, both qualitative and quantitative strategies were used to shape the research. Following the conceptions of Gonçalves and Meirelles (2004), this research is initially classified as an empirical investigation of an exploratory nature and, in a second moment, as descriptive and explanatory through a case study. Gil (2012, p. 27) points out that exploratory research, from their central emphasis, aim to "develop, clarify, and modify concepts and ideas [...] [...] increasing the level of understanding about the subject," which is supported by the intention to develop and validate a model that reflects the organizational context in the information sharing scope.

The descriptive focus, as argued by Malhotra (2019), seeks to present data that describe characteristics related to a studied group, aiming to establish relationships between them. In the scope of explanatory research, based on Gil (2012), the goal is to make the theme more intelligible by identifying the factors that determine or contribute to the occurrence of the fact. In other words, the aim is to clarify organizational elements and their degree of influence on the availability for sharing among organizational subjects.

As for the data collection technique, documental research was used with the goal of diagnosing the necessary information about the researched unit in order for the Organization Structure and Strategy established by its managers to be designed and understood, as pointed out by Silva (2005). Thus, information about the company's strategic planning, its structural design, and the reasons for adopting its hierarchical architecture were sought, in addition to knowing its development history.

To identify and understand the organizational culture of the studied unit, a survey was conducted based on data collected through documentary analysis and informal conversations with some employees and managers, aiming to establish the organization's culture type based on Ferreira *et al.*'s (2002) study. This survey was conducted with administrative staff of the studied organization, taking accessibility as a parameter of choice.

Based on the data collected through documentary analysis and the survey on organizational culture, another questionnaire was constructed, associating the Molecular Structure of the Organization and the people in the organization regarding their availability to share information. This survey was designed with the intent of conducting a Path Analysis, which was used to support the achievement of the objective, i.e., the construction and validation of a theoretical model capable of explaining the availability of organizational subjects to share information based on the elements forming the organization. The Path Analysis is a statistical method that enables the identification of direct and indirect effects of explanatory variables on a dependent, or basic, variable, whose interactions and intensity degree can be explained through regression equations (Cruz; Regazzi; Carneiro, 2004). Souza (2013) points out that the construction of the causal diagram (path analysis) is made based on information from the theoretical framework on the researched theme. This way, the dependent variable was the availability for information sharing, and the considered explanatory variables were the poles of the Molecular Structure of the Organization elaborated by Silva (2005). This survey was applied online to all employees of the company, excluding only indirect employees, i.e., third parties. Respondents were stablished as employees from the 2 hierarchical levels of the company,

namely, managers and operational staff. Directors (2 people) were excluded due to their smaller number and their direct connection with the organization.

The researched unit operates in the food sector, producing processed products derived from pork, and is located in the state of Minas Gerais, Brazil. The slaughterhouse started its activities in the year 2000 and currently has a portfolio with over 230 products categorized and commercialized through its various product lines. They produce approximately 6,400 tons per month and 75,000 tons per year of products. The slaughterhouse has 1,845 direct employees and more than 900 indirect employees, making it one of the largest companies in its region of insertion. As a strategy for the coming years, the company has decided to continue growing with the goal of acquiring high-tech equipment and increasing its planted area, which will result in an increase in production capacity to slaughter 3,500 pigs per day, directly leading to an expansion of the client portfolio and an increase in market share nationally and internationally-currently, exports represent 12% of revenue, with the aim of increasing it to 20% of total revenue. In this perspective, the company envisions being recognized as a food industry both in the national and international markets.

To support this plan, the organizational structure of the company is designed following the theoretical assumptions of the functional approach. It is divided, starting from the General Shareholders' Meeting and the Board of Directors, into three hierarchical levels, comprising 2 directorates (Commercial and Administrative), 5 managers at the intermediate level, and the largest number of employees at the operational level. The sectors are harmoniously distributed and work synergistically to fulfill the objectives and growth strategy adopted by the company.

## ANALYSIS AND DISCUSSION OF RESULTS

The data collected through documentary analysis regarding the organizational structure indicate that the functional model adopted by the Frigorific, following the pattern of most Brazilian companies, shows a narrowing of positions with greater decision-making powers in relation to the base, turning the pursuit of these positions into a fierce internal competition. In this process,

rationally, employees create internal coalitions and engage in political games for personal objectives. The analysis made finds theoretical support in the writings of Morgan (2002) when he draws an analogy between the organization and a political arena. However, despite this formal design, in practice, employees do not perceive it as centralized. On the contrary, they point out that power is well distributed through the hierarchy, and that there are transparent forms of recognition for employees, although they acknowledge the difficulty of "making a career" in the company. Thus, they indicate a considerable level of competitiveness in the environment, and, in their perception, the company does not seek to reduce or eliminate this competition that arises among them.

Regarding the organizational culture, the data collected via survey were analyzed under the optics of the information gathered through documentary analysis and the theoretical assumptions of Ferreira *et al.* (2002). At the beginning of its activities, due to a shortage of professionals in the region, the company hired workers from the Southern region of the country to train new employees in their work activities. In addition to these, another part of the hired employees comes from another company where the existence of consistent and lasting informal ties is observed, a relevant aspect to foster information sharing. As expected, professionals from the Southern region did not harmonize with the local culture (the slaughterhouse is located in the state of Minas Gerais), and they were dismissed from the company. Thus, the company started its activities with a cultural mix from various sources, creating a mosaic of beliefs and values that, over time, rearranged itself and created its own identity with stronger webs that intertwined and are strengthening throughout the organization's existence.

As for values, it is inferred that the company's employees, the focus of the study, demonstrate a spirit of collaboration, i.e., cooperative professionalism (Ferreira *et al.*, 2002), which creates an environment conducive to information sharing. The analyses indicate that employees show initiative and are encouraged by their superiors to have this attitude, and they are also dedicated to the company. However, despite presenting, overall, a collaborative culture, we have to consider that there is perceived to be a very strong internal competition, intentionally camouflaged, which allows us to point out the existence of a

strong inhibitor to information sharing, encouraging secrecy and stimulating the appearance of information guardians.

In a general analysis, the majority of employees predominantly evaluate the company's environment as a place that promotes satisfaction, well-being, and security, creating a calm and conducive scenario for the creation of informal bonds. The employees recognize the company's efforts to create greater internal cohesion, but due to internal competitions and the favoritism by "bosses" for some employees over others, the company is not seen as "a big family," even demotivating those who "are good." Regarding the appreciation of ideas, employees point out that there is no formal appreciation despite there being a discourse to that effect, which, from the employees' perspective, serves to favor some, reinforcing the personal choices of those responsible for the ones who are closer to them.

From the employees' perspective, there is a significant concern from the company regarding its customers, and due to this, there is a more careful outlook towards the external environment when compared to the internal environment. This way, it is inferred that organizational decisions and practices are grounded in its strategy, often overlooking the internal knowledge that the company possesses.

The data collected with the second questionnaire were analyzed with the assistance of spreadsheet software. The values provided by each individual for each group of questions were summed, forming scores for the variables (1) Information Sharing, (2) Organizational Culture, (3) Power, and (4) Strategy. Variable (5) Structure was computed based on the hierarchical level of the individuals, where a score of 1 was assigned to each individual in the operational sector, a score of 2 was given to individuals in the administrative sector, and a score of 3 was assigned to individuals in managerial positions.

After forming the scores for each variable, they were standardized based on the mean and standard deviation, using the equation presented below:

Padronized variable = 
$$(Xi - \underline{X}) / S$$
 (Equation 1)

Where:

Xi: value of each element of the variable X;

*X*: mean of the variable X;

S: standard deviation of the variable X.

After standardizing all variables, a correlation matrix of the standardized variables was generated, and the correlations were unfolded through path analysis into direct and indirect effects. In this process, the information-sharing variable was considered the dependent or main variable, while the others were treated as independent or explanatory variables.

Following the unfolding of correlations between variables into direct and indirect effects (path analysis), the coefficient of determination of the causal model ( $\mathbb{R}^2$ ) and the effect of the residual variable ( $\mathbb{R}^2$ ) on the dependent variable were calculated. Both were calculated according to equations 2 and 3, respectively.

$$R^2 = \sum_{i=1}^n (De_i * T_i)$$
 (Equation 2)

Where:

R<sup>2</sup>: coefficient of determination of the causal model;

De;: direct effect of the variable i;

T<sub>i</sub>: total effects on the variable i.

$$Res = \sqrt{I - R^2}$$
 (Equation 3)

Where:

Res: effect of the residual variable on the main variable;

R<sup>2</sup>: coefficient of determination of the causal model.

As a first step, the values of simple Pearson correlations were established between the explanatory variables. The intention of Pearson is to establish, among the studied pairs, the degree of variation in one variable as a function of another, meaning that the two variables vary in the same direction or in opposite directions, represented by the positive or negative sign, respectively. The zero value indicates the absence of this linear relationship between the analyzed pairs, and the closer the value is to 1, it can be inferred that the linear relationship between the two is stronger. Sousa (2019, p. 19) states that 'correlation does not imply causality; that is, observing the existence of a relationship/ association between variables does not necessarily imply a cause-and-effect relationship between them.'

The values of simple Pearson correlations found between the studied variables are presented in Table 1:

**Table 1** — Pearson's simple correlation coefficients between study variables

	Information Sharing	Organizational Culture	Power	Strategy	Structure
Information Sharing	1,000	0,458	0,560	0,165	-0,126
Organizational Culture	0,458	1,000	0,662	0,394	-0,327
Power	0,560	0,662	1,000	0,530	-0,237
Strategy	0,165	0,394	0,530	1,000	-0,078
Structure	-0,126	-0,327	-0,237	-0,078	1,000

Source: Research Data (2023).

As observed in the table above, the highest correlation occurred between the variables Power and Organizational Culture, and the lowest correlation between the variables Structure and Strategy. The highest correlation of the dependent variable — Information Sharing — with the explanatory variables

occurred with the Power (leadership) variable, and the lowest correlation with the Structure variable. It can be inferred from the collected data that the Power variable has a direct association with the Organizational Culture variable, reinforcing the theoretical assumptions about organizational culture. Also, it can be inferred that Information Sharing is more likely to occur when power is more distributed in the organizational structure, which corroborates the theoretical assumptions about the topic. Associating the results of the Organizational Culture survey with these results, it is worth noting that employees, according to them, do not perceive the centralization that the company's organizational structure demonstrates. In their perception, power, centered on leadership, is exercised much more by individuals than specifically focused on the job position, which may explain the result obtained in the Pearson correlations.

Table 2 presents the results obtained through Path Analysis, that is, the effects of explanatory variables on the main variable, coefficient of determination values, and values corresponding to the residual variable. The Path Analysis process, developed by Wright (1921), facilitates the unfolding of the correlation coefficient into direct and indirect effects within a group of variables. Path analysis enables more accurate and rigorous estimates of the cause-and-effect relationship between variables.

Information sharing in the organizational context, based on theoretical assumptions about the theme, is practically affected by all the forming elements of the company — organizational culture, power, structure, and strategy — and by the most significant element, which is the people included in Silva's proposal (2005). From Table 2, it is observed by the coefficient of determination that the studied variables explained 35.7% of the information sharing that occurs in the company focused on the study. The variables Power (0.555) and Organizational Culture (0.185) respectively show the highest and lowest estimates in direct effect on the dependent variable, information sharing. The estimate value of the Strategy variable (-0.199) is noteworthy, being negative, demonstrating that directly it does not influence the variable information sharing. Focusing on the indirect effects of explanatory variables on the main variable, there are important results. The indirect effect of Organizational

Culture via Power was also high (0.367), which can also be observed in the Strategy variable via the indirect effect of Power (0.294), demonstrating that indirectly these variables influence each other and these, in turn, influence information sharing. They also demonstrate how these organizational forming elements are interwoven and connected, generating an ambiance that will converge to generate identities and behaviors of its employees.

The obtained residual value (0.802) is noteworthy, which in this study can be understood as the behavior of people as main actors in the act of sharing information, corroborating the research results conducted by Ventura (2016) and others previously described in this article. This value is higher when compared to the coefficient of determination (0.357), leading to the understanding that information sharing is centered and is entirely dependent on the will of the people, although indirectly influenced by the organizational forming elements. In other words, taking this value and associating it with the theoretical paradigms on the theme of sharing, it is understood that people, within the studied context, limited by the organizational forming elements, position themselves as protagonists of the act, acting based on their individual goals and on the aspects that guide their impulses.

Given these results, it is understood that the inclusion of people in the Molecular Structure of Organizations was pertinent, and it is pointed out that the theoretical model is relevant for the study of information sharing in the organizational context. And for the study of the availability for information sharing and knowledge construction, it is necessary to consider the limits and games that the elements structure-strategy-power-culture develop in the dynamics of the organization and understand that people are inserted and are an active part of this context.

**Table 2** — Estimates of the direct and indirect effects of explanatory variables on the dependent variable, together with the coefficient of determination and the coefficient of the residual variable

Variable	Effect	Estimative	
	Direct on Information Sharing		0,185
	Indirect via Power	0,367	
Organizational culture	Indirect via Strategy	-0,078	
	Indirect via Structure	-0,016	
	Total — Direct and Indirect		0,458
	Direct on Information Sharing		0,555
	Indirect via Organizational Culture	0,123	
Power	Indirect via Strategy	-0,105	
	Indirect via Structure	-0,012	
	Total — Direct and Indirect		0,560
	Direct on Information Sharing		-0,199
C	Indirect via Organizational Culture	0,073	
Strategy	Indirect via Power	0,294	
	Indirect via Structure	-0,004	
	Total — Direct and Indirect		0,165
	Direct on Information Sharing		0,050
	Indirect via Organizational Culture	-0,061	
Structure	Indirect via Power	-0,131	
	Indirect via Strategy	0,015	
	Total — Direct and Indirect		-0,126
Coefficient of Determination (R2)			0,357
Effect of the residual variable (Res)			0,802

#### FINAL CONSIDERATIONS

To propose studying information sharing in organizations is to face contextual elements that interweave and create a favorable or unfavorable ambiance for a sharing behavior. The need for knowledge creation and management in organizations has already materialized as one of the ways for them to achieve some degree of differentiation in an increasingly equal market. Technology has already established itself as one of the most important resources in our contemporaneity, and despite its importance, it is still treated as an appendix and not as a management tool embedded in organizations. Beyond the "isolated selves," technology needs to be used as a connecting point where one individual connects to another for the creation of a living network of information exchange and knowledge construction. In an organizational scenario, this aspect is more relevant.

People, when entering organizations, bring their goals and drives and expect that from then on, they will be realized. In this logic, they are willing to give themselves for the exchanges that will happen. However, the forming elements of organizations, structure-culture-power-strategy, harmonize so that organizational goals are fulfilled and achieved, not the interests of their employees. In this scenario, people are inserted and need to align themselves so that exchanges take place first in favor of the company's objectives. However, it must be remembered that there is no control sufficiently capable of controlling the human being. Within a Cartesian logic, the human being decides and, based on this decision, acts to achieve their goals. From this perspective, this study sought to understand how the main elements shaping the organization, structure-culture-power-strategy, influence and what their intensities are in relation to the availability of organizational subjects for information sharing.

As significant results, we have that these elements influence people's behavior, demonstrating that this context is interconnected and loaded with interests as the structuralist authors already preconized. The data obtained emphasize the role of power/leadership (centered on management) and organizational culture, which corroborate related research that brings the need for an environment of cooperation to encourage collaborative work and, consequently,

greater availability for sharing. Management, associated with organizational culture, stimulates, teaches, and propagates actions that lead people to understand that work, in different organizations, is essentially team-based, where collaboration is the main variable. Centralizing structures, management policies that encourage individualism, and the concentration of decision-making power in specific job positions favor individual work, which will generate fierce competition because everyone expects to achieve better positions in the organizational architecture. The logic of teamwork calls for the appreciation of people, leading to a more participative and collaborative management where the valorization of suggestions, discussions about what to do, and respect for employees' knowledge make a difference. Organizations need to understand that time is not the main aspect; in other words, it is necessary to overcome the Taylorist/Fordist paradigm, where mechanical execution is more important than building the activity. In addition to these aspects, organizational culture needs to stimulate social interactions so that trust, informal ties, and organizational identity can develop among employees. Information is shared only when it is known that it will also be received. Sharing is a two-way street, and information in organizations is vital for the process of developing any activity or any strategy adopted.

In addition to seeking to understand the degree of influence of these elements, the study sought to develop and empirically validate a theoretical model capable of explaining the availability of organizational subjects for information sharing, based on the forming elements of the organization. This model was validated and demonstrated that people are a significant part of this scenario and that they need to be considered as a fundamental element of the results that these organizations achieve. Understanding the forming elements of the organization and their influence on the behavior of people who work in it is essential so that encouraging aspects for a more conducive behavior for information sharing and, obviously, knowledge construction can be created, given the market moment in which we live, where the competitive differential is undoubtedly based on the knowledge that the organization possesses and its use for the organization's development.

#### **REFERENCES**

AJMAL, M. M.; KOSKINEN, K. U. Knowledge transfer in project-based organizations: an organizational culture perspective. **Project Management Journal**, v. 39, n. 1 p. 7-15, 2007. Available at: https://journals.sagepub.com/doi/abs/10.1002/pmj.20031. Accessed on: 5 Ago 2021.

BARNEY, J.; HANSEN, M. A. Trustworthiness as a Source of Competitive Advantage. **Strategic Management Journal**, v. 15, Special Issue, p. 175-190, Winter 1994. Available at: http://embanet.vo.llnwd.net/o18/USC/CMGT500/Week4/docs/CMGT500\_w04\_Trustworthiness\_as\_a\_source\_of\_competitive\_advantage.pdf. Accessed on: 1 Ago 2020.

BARRETO, A. A. A condição da informação. **São Paulo em Perspectiva**. São Paulo: v. 16, nº 3, 2002. Available at: http://dx.doi.org/10.150/S0102 — 88392002000300010. Accessed on: 1 Ago 2021

BELL, D. The Social Framework of the Information Society. In Forester, 1980

BORELLI, F.; TOMAÉL, M. I. Situações que envolvem o compartilhamento de informação por sistema informatizado. **Em questão**. Porto Alegre: v. 18, n. 2 p. 71-83, Jul/dez 2012. Available at: http://seer.ufrgs.br/index.php/EmQuestao/article/view/21850/24055. Accessed on: 11 Ago 2021.

BLAU, P. M.; SCOTT, W.R. Organizações formais. São Paulo: Editora Atlas, 1970.

BROOKES, B.C. The foundations of information science: Part I: **Philosophical Aspects. Journal of Information Science**, v. 2, p. 125-133, 1980. Available at: http://comminfo.rutgers.edu/~kantor/601/Readings2004/Week3/r4.pdf. Accessed on: 5 Ago 2021.

CAMARGO DE OLIVEIRA, H. *C. et al.*. A teoria dos jogos e a mediação da informação: uma proposta de contribuição estratégica para organizações. **Biblios**, n. 73, p. 51-64, 2018. Available at: http://www.scielo.org.pe/scielo.php?pid=S1562-47302018000400004&script=sci\_arttext&tlng=en Accessed on: 15 Jul 2021.

CHANDLER JR. A. O. Strategy and structure, chapters in the history of industrial enterprise. Cambridge, Mass. The Mit Press, 1966.

CHANLAT, J. F. O indivíduo na organização: dimensões esquecidas. v. 1. São Paulo: Atlas, 1996.

CRUZ, C. D.; REGAZZI, A. J.; CARNEIRO; P. C. S. Modelos biométricos aplicados ao melhoramento genético. 3 ed. Viçosa: UFV, 2004.

DA SILVA, J. R. *et al.*. Os mecanismos de controle comportamental nas organizações: uma análise do poder da instrumentalização da cultura. **VIII Simpósio de Excelência em Gestão e Tecnologia-SEGeT, Rio de Janeiro**, 2009. Available at: https://www.aedb.br/seget/arquivos/artigos09/219\_219\_artigo[1]\_v3.pdf. Accessed on: 15 Jul 2021.

DAVENPORT, T. H. **Ecologia da Informação**: por que só a tecnologia não basta para o sucesso na era da informação. São Paulo: Futura, 2000.

DAVEL, E.; VERGARA, S. C. Gestão com pessoas, subjetividade e objetividade nas organizações. *In*: DAVEL, E.; VERGARA, S. C. (Organizadores). **Gestão com pessoas e subjetividade**. 4 ed. São Paulo: Atlas, 2010.

FERREIRA, M. C., ASSMAR, E. M. L., ESTOL, K. M. F., HELENA, M. C. D. C. C.,

CISNE, M. D. C. F. Desenvolvimento de um instrumento brasileiro para avaliação da cultura organizacional. **Estudos de Psicologia.** Natal, n. 7, 271-280, 2002. Available at: https://www.scielo.br/j/epsic/a/38Jtgq6vs8bzHwpjn347w5f/abstract/?lang=pt Accessed on: 16 Set 2022.

GIL, A. C. Métodos e técnicas de pesquisa social. 6. ed. São Paulo: Atlas, 2012.

GONÇALVES, C. A.; MEIRELLES, A. M. Projetos e relatórios de pesquisa em administração. São Paulo: Atlas, 2004.

HO, Li An; KUO, Tsung Hsien; LIN, Binshan. How social identification and trust influence organizational online knowledge sharing. **Internet Research**, 2012. Available at: https://www.emerald.com/insight/content/doi/10.1108/10662241211199942/full/html. Accessed on: 05 Ago 2021.

LOUREIRO, R. S. *et al.*. Compartilhamento e proteção do conhecimento: um estudo realizado em uma empresa de conhecimento intensivo do setor sucroenergético. **Perspectivas em Ciência da Informação**, v. 23, p. 167-187, 2018. Available at: https://www.scielo.br/j/pci/a/hpgr4prhBWVzMVKgDtWK5YH/abstract/?lang=pt. Accessed on: 15 Jul 2021.

LÚCIO, C. G. O novo mundo do trabalho é flexível, precário e inseguro. **Carta Social e do Trabalho**, v. 38, p. 1-11, 2018. Available at: https://www.forumat.net.br/at/sites/default/files/arq-paginas/cesit\_carta-social-e-do-trabalho-38\_1.pdf#page=5. Accessed on: 15 Jul 2021.

KUMAR, K. **Da sociedade pós-industrial à pós-moderna**: novas teorias sobre o mundo contemporâneo. Rio de Janeiro: Jorge Zahar Ed., 1997.

MALHOTRA, n. K. **Pesquisa de marketing**: uma orientação aplicada. 7. ed. Porto Alegre: Bookman, 2019.

MILES, R.; SNOW, C. Designing strategic human resource systems. **Organizational Dynamics**, 13(1), 36–52, 1984.

MINTZBERG, H. **Criando organizações eficazes**: estruturas em cinco configurações. São Paulo: Atlas, 1995.

MORGAN, G. Imagens da organização. 2 ed. São Paulo: Editora Atlas, 2002.

MOTTA, F. C. P. O Estruturalismo na Teoria das Organizações. **Revista de Administração de Empresas (RAE)**, Rio de Janeiro, 10(4): 23-41, out./dez. 1970. Available at: https://www.scielo.br/j/rae/a/R8HwmGHXQpGD7ND9fTHWBQg/?lang=pt. Accessed on: 14 Ago 2021.

MOTTA, F. C. P.; VASCONCELOS, I. F. G. de. Teoria Geral da Administração. São Paulo: Thomson, 2002.

PAGÈS, M. *et al.*. As práticas de poder na gestão de Recursos Humanos. PAGÈS, M. **O** poder das Organizações. São Paulo: Atlas, 1987.

QUEIROZ, F. C. B. P.; SILVA, H. de F. n.; ALMEIDA, P. H. de. Determinantes do compartilhamento do conhecimento visando a cooperação internacional em ciência e tecnologia no Brasil. **Perspectivas em Ciência da Informação**, v. 22, p. 133-150, 2017. Available at: https://www.scielo.br/j/pci/a/cLng6cLmsftxjrQfhm8kvpx/?lang=pt. Accessed on: 05 Ago 2021.

SAHAY, Y. P.; GUPTA, M.. Role of organization structure in innovation in the bulk-drug industry. **Indian Journal of Industrial Relations**, p. 450-464, 2011. Available at: https://www.jstor.org/stable/41149462. Accessed on: 10 Ago 2021.

SILVA, P.R. **Teoria das Organizações e os Modelos Organizacionais**. Universidade de Évora, Évora, Portugal, 2005.

SOUSA, Á. Coeficiente de correlação de Pearson e coeficiente de correlação de Spearman: o que medem e em que situações devem ser utilizados? **Correio dos Açores**, 2019,19-19. Available at: http://hdl.handle.net/10400.3/5365 Accessed on: 10 Dez 2022.

SOUZA, T. V. de. Aspectos estatísticos da análise de trilha (path anlysis) aplicada em experimentos agrícolas. (Dissertação). Lavras: Universidade Federal de Lavras, 2013.

TOMAÉL, M. I. Compartilhamento da informação. Londrina: Eduel, 2012.

THOMAS JR., R. R. Nota de Harvard Business School: Como gerenciar o contrato psicológico. *In*: VROOM, V. H. **Gestão de pessoas, não de pessoal**. Rio de Janeiro: Campus, 1997.

VENTURA, R. de C. M. de O.. **Compartilhamento da informação e a gestão de pessoas: reflexões acerca de suas relações e implicações**. (Tese) Belo Horizonte: Universidade Federal de Minas Gerais, 2016.

WANG, C.; CHEN, C.; CHEN, Y.; Farn, C. Why Focal Firms Share Information? A Study of the effects of power and information technology competence. **PACIS**, 68, 2008. Available at: http://www.pacis-net.org/file/2008/PACIS2008\_Camera-Ready\_Paper\_068.pdf. Accessed on: 25 Mar 2015.

WANG, S.; NOE, R. A. Knowledge sharing: a review and directions for future research. **Human Resource Management Review**, v.20, n. 2, p. 115–131, 2010. Available at: https://www.sciencedirect.com/science/article/abs/pii/S1053482209000904 Accessed on: 14 Ago 2021.

WOLFE, Ch.; LORAAS, T. Knowledge sharing: the effects of incentives, environment, and person. **Journal of Information Systems**, v. 22, n. 2, p. 53-76, 2008. Available at: https://meridian.allenpress.com/jis/article-abstract/22/2/53/75339/Knowledge-Sharing-The-Effects-of-Incentives. Accessed on: 5 Ago 2021.

WRIGHT, S. Correlation and causation. **Journal of Agricultural Research**, Washington, v. 20, n. 7, p. 557-585, Jan. 1921.