



OPEN STRATEGIZING AND ORGANIZATIONAL RESILIENCE CONSIDERING THE ENVIRONMENTAL UNCERTAINTY

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Abstract

Objective: Amidst troubled times, strategy as an emergent practice has been seen as a possibility to deal with uncertainty from openness, converging to the theory of organizational resilience. Thus, this theoretical essay is guided from the research question: "How does the phenomenon of open strategizing relate to organizational resilience, in situations of environmental uncertainty?"

Methodology/Approach: The development of this study followed two steps that enabled the search for the (theoretical) answer to the defined (research) question: (I) selection of studies on the proposed topic from international databases; and (II) elaboration of the constructs (definitions) regarding open strategizing, organizational resilience and environmental uncertainty.

Originality/Relevance: Our intention was to theoretically discuss the relationship between open strategizing and organizational resilience, considering environmental uncertainty, approaching the concepts from the literature with studies that have used the theoretical essay as a way to provide knowledge advancement through discussion and reflection on developing themes.

Main results: Relating open strategizing to organizational resilience, we understand that (I) organizations with reactive preparation overcome uncertainty through inclusion and flexibility; (II) high-risk or process-based organizations do not converge to the phenomenon of open strategizing; (III) resilience-focused organizations overcome uncertainty through past learning, information transparency, and the inclusion of stakeholders in strategy formation.

Theoretical and methodological contributions: We reflect on the relationship between open strategizing and organizational resilience in the face of environmental uncertainty, enabling the advancement of studies from the strategizing perspective.

Keywords: Open strategizing. Organizational resilience. Environmental uncertainty. Theoretical essay.

OPEN STRATEGIZING E RESILIÊNCIA ORGANIZACIONAL CONSIDERANDO A INCERTEZA DO AMBIENTE

Resumo

Objetivo: Em meio a períodos conturbados, a visão da estratégia como uma prática emergente tem sido vista como uma possibilidade de lidar com a incerteza a partir da abertura, convergindo para a teoria da resiliência organizacional. Assim, este ensaio teórico se norteia a partir da questão de pesquisa: "Como o fenômeno de open strategizing se relaciona com a resiliência organizacional, em situações de incerteza ambiental?"

Metodologia/Abordagem: Para desenvolver este ensaio, seguimos dois passos que possibilitaram a busca pela resposta (teórica) à questão (de pesquisa) definida: (I) foram selecionados estudos sobre a temática proposta em bases de dados internacionais; e (II) foram elaborados os construtos (definições) sobre open strategizing, resiliência organizacional e incerteza ambiental.

Originalidade/Relevância: Nossa intenção foi discutir teoricamente a relação entre a open strategizing e resiliência organizacional, de modo a considerar a incerteza ambiental, aproximando os conceitos por meio da literatura, com estudos que têm utilizado o ensaio teórico como forma de

proporcionar avanço do conhecimento pela discussão e reflexão sobre temas em desenvolvimento.

Principais resultados: Ao relacionarmos a open strategizing com a resiliência organizacional, entendemos que (I) organizações com preparação reativa superam a incerteza por meio da inclusão e da flexibilidade; (II) organizações em alto risco ou baseadas no processo não convergem para o fenômeno de abertura da estratégia; (III) organizações focadas na resiliência, superam a incerteza por meio de aprendizados passados, transparência de informações e da inclusão de atores na formação da estratégia.

Contribuições teórico-metodológicas: Apresentamos reflexões sobre o relacionamento entre a open strategizing e a resiliência organizacional frente à incerteza ambiental, possibilitando o avanço de estudos na perspectiva de strategizing.

Palavras-Chave: Open strategizing. Resiliência organizacional. Incerteza ambiental. Ensaio teórico.

ESTRATEGIA ABIERTA Y RESILIENCIA ORGANIZACIONAL CONSIDERANDO LA INCERTIDUMBRE DEL ENTORNO

Resumen

Objetivo: En medio de períodos convulsos, la visión de la estrategia como una práctica emergente se ha visto como una posibilidad para enfrentar la incertidumbre desde la apertura, convergiendo hacia la teoría de la resiliencia organizacional. Así, este ensayo teórico está guiado por la pregunta de investigación: "¿Cómo se relaciona el fenómeno de la estrategia abierta con la resiliencia organizacional en situaciones de incertidumbre ambiental?"

Metodología/Enfoque: Para el desarrollo de este estudio se siguieron dos pasos que permitieron la búsqueda de la respuesta (teórica) a la pregunta definida: (I) se seleccionaron estudios sobre el tema propuesto en bases de datos internacionales; y (II) se elaboraron constructos (definiciones) sobre estrategia abierta, resiliencia organizacional e incertidumbre ambiental.

Originalidad/Relevancia: Nuestra intención fue discutir teóricamente la relación entre la estrategia abierta y la resiliencia organizacional, considerando la incertidumbre ambiental, abarcando los conceptos de la literatura con estudios que han utilizado ensayos teóricos como una forma de avanzar en el conocimiento a través de la discusión y reflexión sobre temas en desarrollo.

Principales resultados: Al vincular la estrategia abierta con la resiliencia organizacional: entendemos que (I) las organizaciones con preparación reactiva superan la incertidumbre a través de la inclusión y la flexibilidad; (II) las organizaciones de alto riesgo o basadas en procesos no convergen al fenómeno de apertura de la estrategia; (III) las organizaciones enfocadas en la resiliencia, superan la incertidumbre a través del aprendizaje pasado, la transparencia de la información y la inclusión de actores en la formación de estrategias.

Aportes teórico-metodológicos: Presentamos reflexiones sobre la relación entre la estrategia abierta y la resiliencia organizacional ante la incertidumbre ambiental, posibilitando el avance de estudios desde la perspectiva de la estrategia como práctica social.

Palabras Clave: Estrategias abiertas. Resiliencia organizacional. Incertidumbre ambiental. Ensayo teórico.

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Introduction

The formulation of strategy in organizations has been changing over the past few years. It has moved from a traditional macro view, in which top management formulates the desired strategy from its objectives (Chandler, 1962), to a micro view that understands strategy as an emerging practice (Golsorkhi, Rouleau, Seidl, & Vaara, 2015; Mintzberg & Waters, 1985, Whittington, 1996) entering the phenomenon of open strategizing (Tavakoli, Schlagwein, & Schoder, 2017), in which it seeks to understand the inclusion of other members of the organization in the strategic process in practice, considering the perspective of strategy as practice, from the studies of Whittington (2006) and Jarzabkowski, Balogun and Seidl (2007).

In parallel to this micro perspective of strategy, seeking to understand the adaptation of organizational strategies in periods of crisis, we found studies on organizational resilience (Linnenluecke, Griffiths, & Winn 2012; Prayag, Spector, Orchiston, & Chowdhury, 2020; Vasconcelos, Cyrino, D'Oliveira, & Prallon, 2015; Vogus & Sutcliffe, 2007). One of the pillars of organizational resilience involves anticipating trends in the internal and/or external environment, so we can understand it as a strategic idealization of companies in facing turbulence in their areas of operation (Annareli & Nonino, 2016).

The sudden changes in the organizational context, given the dynamics and turbulence of the environment, cause organizations to readjust to the new scenarios (Hrebiniak & Joyce, 1985). Because of these characteristics of the environment, these approaches converge on the uncertain environment context (Jarzabkowski, Bednarek, Chalkias, & Cacciatori 2019) visualized, for example, in the Corona Virus pandemic (Sars-Cov-2).

Difficult times such as the aforementioned pandemic context since March 2020 caused companies to close down and led to organizational restructuring by reducing and readjusting the number of employees, remote work, adapting the organizational layout for customer service, among others. In the face of this reorganization, it is possible to realize the need for organizations to deal with an uncertain environment with a lack of information and predictability (Backes, Arias, Storopoli, & Ramos, 2020; Duncan, 1972; Lavarda, Perito, Gnigler, & Rocha, 2021; Raasch, Silveira-Martins, Tondolo, & Moura 2020), since organizational actions and the events in their environment are not dissociable (Donaldson, 2001; Lawrence & Lorsch, 1967).

Based on the above, we understand that the phenomenon of open strategizing, plus the optics of organizational resilience can relate directly to environmental uncertainty, given that the study by Jarzabkowski et al. (2019) points to open strategizing as a way to address environmental turbulence, from the inclusion of people and information transparency (Whittington, Caillaet, & Yakis-Douglas, 2011). The factors pointed out by Whittington et al. (2011) enable emergent strategy from lower hierarchical levels, providing insights not previously considered that can foster anything from organizational survival to superior performance (Kim, Sting, & Loch, 2014; Whittington, 2019).

Moreover, it is also possible to relate the active and passive perspectives of resilience to the phenomenon of open strategizing, since the first turns to a strategic idealization of the entire organization in the search for anticipation of uncertainty (Annareli & Nonino, 2016), while the passive perspective of resilience seeks to absorb the impact of uncertainty by modifying aspects of the organization when necessary (Burnard & Bramhra, 2011).

Thus, this theoretical essay, aligned with the precepts of Sutton and Staw (1995) and Whetten (1989), is guided by the research question: *How does the phenomenon of open strategizing relate to organizational resilience in situations of environmental uncertainty?*

To answer this research question, we developed a theoretical discussion based on Whetten (1989) with the aim of deepening the discussions around the perspective of strategy as a practice through its relationship with organizational resilience in the face of environmental uncertainty.

As contributions of this theoretical essay, considering the absence of studies relating our constructs in the consulted databases, we aim to provide researchers in the strategy field with an outlook on the dynamics of the relationship between open strategizing and organizational resilience in an uncertain environment. We also aspiration to provide a new vision of the field of strategy to the managers of organizations, since our discussions indicate paths that follow an opposite line to traditional strategy, envisioning new possibilities for organizations to respond to the uncertain environment. Furthermore, with our reflections, we seek to indicate possible research paths that may emerge from the discussions in the sequence of this study.

In this way, we hope to provide discussions on the relationship between open strategy and organizational resilience in the face of environmental uncertainty, since this relationship allows advances in studies concerning to strategy as a practice, as well as regarding the manager's performance in practice that guide to decision making.

This theoretical essay is divided in five parts. In addition to this introduction, we present the method used. After that, the study consists of a theoretical framework covering open strategizing, organizational resilience, external environment and environmental uncertainty. Next, there is a discussion section in which we seek to understand how the dynamics of the relationship between the research constructs occurs, as well as the elaboration of propositions about the theme. Finally, the conclusion section concludes this essay by pointing out the contributions, limitations, and future lines of research.

Method

To develop this study, we followed the theoretical discussion based on Whetten (1989) recommendations to seek a legitimate contribution to science in order to advance current theory through the presentation of new ways of investigating a phenomenon. As well as the narrative literature review approach that according to Rother (2007), allows subjectivity in the choice of authors or studies for

analysis, without openly informing the source of the information being used. The criteria for selecting the papers to be reviewed may not be explicitly clear and specified.

Moreover, supported by the search for theoretical deepening of the themes in focus, we followed two basic steps that enabled the search for the (theoretical) answer to the defined question: (i) selection of studies on the proposed topic from international databases (by the criterion of domain and depth of the theme, contemplating the state of the art, according to Rother, 2007); and (ii) elaboration of constructs (definitions) regarding open strategizing, organizational resilience and environmental uncertainty.

By following those steps, it was possible to theoretically discuss the relationship between open strategizing and organizational resilience, considering environmental uncertainty, linking the concepts from the literature (Golsorkhi et al., 2015) with studies that have used the theoretical essay as a way to provide knowledge advancement by discussing and reflecting on developing issues (Golsorkhi et al., 2015; Hosseini, Barker, & Ramirez-Marquez, 2016; Kohtamäki, Whittington, Vaara, & Rabetino, 2021; Tavakoli et al., 2017).

The set of the selected articles that formed the main database for the theoretical discussion, are exposed in Table 1.

Table 1

Articles that form the basis of the theoretical discussion

Theoretical Construct	Title	Authors	Year	Journal
<i>Open Strategizing</i>	A communication perspective on open strategy and open innovation	Dobusch, L., Kremser, W., Seidl, D., & Werle, F.	2017	Managementforschung
	It's Practice. But is it Strategy? Reinvigorating strategy-as-practice by rethinking consequentiality.	Jarzabkowski, P., Kavas, M., & Krull, E.	2021	Organization Theory
	Managing Organizational Legitimacy through Modes of Open Strategizing.	Morton, J., Wilson, A., & Cooke, L.	2018	Academy of Management Proceedings
	Opening strategy: Evolution of a precarious profession.	Whittington, R.; Cailluet, L., & Yakis-Douglas, B.	2011	British Journal of Management
<i>Organizational Resilience</i>	Strategic and operational management of organizational resilience: Current state of research and future directions	Annarelli, A., & Nonino, F.	2016	Omega
	Organisational resilience: development of a conceptual framework for organisational responses.	Burnard, K., & Bhamra, R.	2011	International Journal of Production Research
	Building Organizational Resilience: Four Configurations	Burnard, K., Bhamra, R., & Tsinopoulos, C.	2018	IEEE Transactions on Engineering Management

Theoretical Construct	Title	Authors	Year	Journal
	Managing adversity: understanding some dimensions of organizational resilience	Sawalha, I. H. S.	2015	Management Research Review
	Characteristics of organizational environments and perceived environmental uncertainty	Duncan, R. B.	1972	Administrative Science Quarterly
<i>Environmental Uncertainty</i>	Open strategizing e incerteza ambiental percebida: o enfoque estratégico e contingencial no enfrentamento à crise causada pela pandemia do Covid-19	Lavarda, R. A. B., Perito, B. Z., Gnigler, L. M., & Rocha, R. V. C. da.	2021	REAd
	Productive dynamics capability, environmental uncertainty, and organizational performance: as analysis of micro and small-sized agroindustries in Southern Brazil	Raasch, M., Silveira-Martins, E., Tondolo, V. A. G., & Moura, G. L. de.	2020	REA UFSM

Source: Research data

From the previously set of selected articles, we moved on to the theoretical discussion and reflections on them.

Open strategizing

The study of strategy as it is currently worked began in the 1960s with the approach beyond the internal limits of organizations from the Harvard Business School (Hafsi & Martineti, 2008). From this point of view, several studies emerged approaching the strategy through the contingency approach. For instance, Chandler (1962) highlighted that the structure of companies has undergone continuous adaptations, adjusting the organization's strategy envisioned from the view of the external environment. While, Mintzberg (1978) point out that, in general, there is no optimal structure, with a continuous adjustment of internal trends to contingency occurrences.

From these seminal concepts, we can move on to the perspectives on strategy research addressed in the strategy schools of thought (Mintzberg, Ahlstrand, & Lampel, 2010) have undergone a break from a proper sociological view, that is, one that aspires to understand the process of strategy formation through career paths, skills, and technologies (Whittington, 1996).

According to the studies by Jarzabkowski (2005), Jarzabkowski et al. (2007), and Whittington (2006), we can define strategy as a practice based on situations that involve actions, interactions, and negotiations among organizational actors seeking the best strategic construction so that this can later be translated into a specific activity.

Johnson, Langley, Melin and Whittington (2007) emphasize that the main characteristics of strategy as practice involve the idea of: (i) plurality of levels of analysis – the existence of different levels of analysis for strategy, but with an interrelationship between them, (ii) plurality of actors – the

presence of other organizational levels, in addition to the top level, in strategic formulation, (iii) plurality of dependent variables – strategy as practice works with variables at the level of individuals, strategy development groups, planning tools and systems, and (iv) plurality of theories – given all theories that make up strategy as a practice, it is not feasible for only one of them to provide all the answers to a research question.

From Whittington (2011), Tavakoli et al. (2017), Whittington (2019) and Lavarda, Perito and Rossi (2020), the approach and evolution of open strategizing is perceived as a developing phenomenon in the perspective of strategy as practice, since the construct mainly involves the idea of plurality of levels of analysis addressed earlier.

According to the studies by Jarzabkowski (2005), Whittington (2006), and Jarzabkowski et al. (2007), we can define strategizing as a situation that involves actions, interactions, and negotiations among organizational actors (practitioners) seeking the best possible strategic construction so that it can later be translated (the situation) into a specific activity (practices). Also from this perspective, strategy as practice involves people who elaborate the strategy, the tools for formulation/implementation, and *praxis* or the actions that specify how the activities are actually carried out. Given the three elements listed (practices, praxis, and practitioners), the study by Jarzabkowski et al. (2007) presents a theoretical framework for understanding the 'strategy making' that occurs at the intersection of these elements.

Starting with the practices, which are directly connected with the "making" of strategy, these allow us to understand how strategy is made considering the various aspects that form it, such as cognitive and behavioral issues (Jarzabkowski et al., 2007). Praxis can be defined as the interconnections between actions of groups postulated in different positions aiming at contributing to their institutions, being of utmost importance in view of its operationalization on several fronts (Jarzabkowski et al., 2007). Finally, practitioners are the actors who use practices and praxis to shape the organization's strategy through their actions (Jarzabkowski et al., 2007).

From strategy as practice, new paths have been opened for studying strategy. Among these studies, the term open strategy emerged, which was first developed by Chesbrough and Appleyard (2007) arising from the openness of innovation. Jarzabkowski (2005) and Whittington (2011) point out that, from the perspective of strategy as practice, new possibilities for studying strategy research have opened up, since according to Proterius (2016), there is a relevant gap between the strategy formulated by the organizational top management and the one that is actually executed.

The construct open strategizing (the term 'strategizing' adopted from the perspective of strategy as practice) or open strategy is in the literature within the context of how the openness of the firm's strategy to its employees and stakeholders affects organizational planning (Faraj, Jarvenpaa, & Majchrzak, 2011; Luedicke, Husemann, Furnari, & Ladstaetter, 2016).

According to Stieger, Matzler, Chatterje and Ladstaetter-Funsenegger (2012), Hautz, Seidl and Whittington (2017) and Schafer, Lavarda and Lunkes (2019) open strategizing allows the inclusion of a

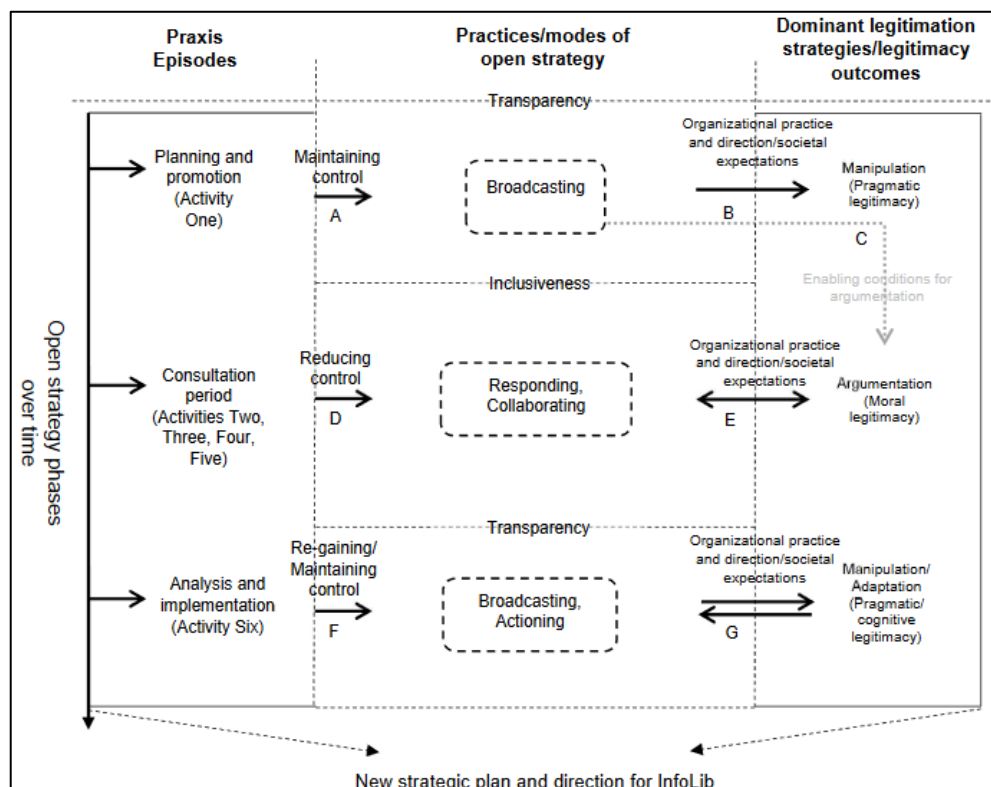
larger number of actors in the organizational strategy, which tends to facilitate the understanding and commitment of all members of the company aiming at the best decision for the future.

Whittington (2011) points out that open strategy presents as prominent dimensions the inclusion of people and the transparency of information, considering all organizational actors in the strategic process, thus ensuring that all members of the company participate in the decision-making process and have an understanding of the organization's plans. Transparency can be understood as the visible strategy, both in terms of its formulation process and its implementation (Whittington, 2011). Dobusch, Kremser, Seidl and Werle (2017) highlight transparency as access to sensitive information. However, they point out that one should pay attention to how the information was accessed. Inclusion, on the other hand, refers to the people who are involved in strategy formulation (Whittington, 2011). The study by Dobusch et al. (2017) characterizes the inclusion of actors in strategy formation through more or less participatory practices.

Based on the prominent dimensions of inclusion and transparency presented (Dobusch et al., 2017; Whittington, 2011), Morton, Wilson and Cooke (2018) indicate transmission, feedback, collaboration, and action as forms of open strategizing. Over time, such forms culminate in legitimation strategies, these being: manipulation (pragmatic legitimation), argumentation (moral legitimation), and adaptation (pragmatic/cognitive legitimation), Figure 1.

Figure 1

Open strategizing as a legitimation process



Source: Morton, J., Wilson, A., & Cooke, L. (2018, p. 40).

Transmission, as a way of practicing open strategizing, relates to the transparency dimension, and it is possible to understand it as a pragmatic legitimation through manipulation, given its one-sidedness, since stakeholders are only informed of what has been decided by the organization (Morton et al., 2018).

The ways of practicing open strategizing through feedback and collaboration are understood through the dimension of inclusion, with legitimation occurring through argumentation. Furthermore, control is reduced by the discourse of strategy openness. Also, regarding these two forms of open strategizing practices, in feedback, one-way dialogues occur, while in the collaborative form, discussions have a greater degree of freedom (Morton et al., 2018). The action practice also relates to the transparency dimension, through adaptive legitimation. It is important to highlight that action as an open strategizing practice evaluates and implements new strategies through its legitimation strategy for adapting to stakeholders' wishes (Morton et al., 2018).

Open strategizing expands the range of strategic activities plausible for organizations, since there are more people thinking of ways to achieve what had been previously proposed. Open strategizing also leads to better levels of employee commitment and understanding, since the inclusion of people and the transparency of information help teams understand their tasks with greater depth and act with more commitment in the pursuit of achieving organizational goals (Hautz et al., 2017; Lavarda, et al., 2020; Whittington, 2011; Whittington, 2019).

We understand that, for understanding and achieving this openness of strategy, there are some key elements (Hautz et al., 2017). Among them are process flexibility and resilience (Herban, 2019; Hosseini et al., 2016).

Organizational resilience

The concept of resilience can be understood from various fields of scientific knowledge, as Hosseini et al. (2016) point out when they expose that, over the years, resilience has moved through the fields of physics and engineering, ecology, psychology, and organizations. Among all these areas, Gunderson's (2000) research presents a general idea of resilience, which comprises the ability of an element or an individual to return to its original state after facing turbulence or suffering external pressure.

In the organizational field, resilience came to be approached from the seminal studies of Staw, Sandelands and Dutton (1981), which does not address the concept directly, and Meyer (1982) who brought up the vision of organizational resilience. Both studies analyze how companies respond to threats from their external environment, with the potential to generate turmoil, responding to them based on lessons learned from past knowledge.

Based on this relationship with elements and/or individuals, it is noted that this construct started to be studied in the organizational sphere as a response from managers, employees, or the company itself

in crisis situations, either by supporting them and recovering its main characteristics that were altered during the turbulent moment or by adapting to uncertain environments, changing some characteristics and/or behaviors, overcoming the crisis, with a vision of overcoming possible new periods of turbulence in its environment (Burnard & Bhamra, 2011; Crichton, Ramsay, & Kelly, 2009).

Vogus and Sutcliffe (2007) and Linnenluecke et al. (2012) explain that, in periods of constant crises in the environment where organizations operate, research has turned to the concept of organizational resilience in an attempt to understand the way in which companies survive in a turbulent environment. Thus, resilience in the organizational context can be understood through proactive and agile actions for the minimization of crises generated by turbulence in the environment, aiming for a prosperous future for organizations (Bhamra, Dani, & Burnard, 2011).

Along this path, Annarelli and Nonino (2016) understand organizational resilience as a strategic idealization linked to the company's operational execution in the face of environmental turbulence, whether internal or external. From this, it is possible to understand organizational resilience as an ability of companies to face crises arising from their internal or external environment in advance, through strategic planning (Jarzabkowski & Kaplan, 2015) and tacit knowledge of managers of business operations (Annarelli & Nonino, 2016).

Brown, Seville and Vargo (2017) state that resilience is composed of a series of skills that companies must possess in the quest for survival in a turbulent environment, in order to be able to develop in a sphere where there are constant crises. Herbane (2019) sees resilience in companies as a crucial factor for maintaining business, since it is related to the adaptive process to crises through decisions made with agility in the face of the strategic planning of organizations. This means organizational resilience helps the business to respond to the turbulent environment, performing an organizational change in specific aspects of the plans previously outlined.

The highlighted ideas and definitions can be understood from two theoretical perspectives of organizational resilience, which we consider as a basis for some reflections and discussions. Such perspectives can be developed under the theoretical lens of active and passive resilience by Valastro (2011) and Sawalha (2015) based on five stages of resilience maturity, namely: decline, survival, recovery, anticipation, and resilient culture.

Valastro (2011) understands these stages with an inclination towards organizational evolution throughout the period of turbulence, initially passing through a period of decline, which is characterized by the acceptance of the consequences of uncertainty; of survival, where the resources to act are reduced; of recovery, in which the organization begins the process of reestablishment after uncertainty; and of anticipation, that is, risk management beyond surviving, the organization seeks to benefit from future uncertainties.

Sawalha (2015) adds a fifth stage: resilient culture, which develops from an integrated structure of the organization aiming to anticipate any adversities in the environment. From this view, we understand that the first three stages (decline, survival, and recovery) can be perceived as reactive

resilience, while the last two (anticipation and resilient culture) are perceived as proactive resilience (Sawalha, 2015; Valastro, 2011). From the perspective of reactive resilience, organizations begin their crisis period facing numerous difficulties, needing to devise ways to survive and recover from environmental turbulence. While in the perspective of active resilience, organizations aim to be prepared for the uncertainties of the environment, seeking not only to survive, but to take advantage of adversity in order to grow (Annareli & Nonino, 2016; Sawalha, 2015; Valastro, 2011).

The other theoretical lens mentioned involves Burnard, Bhamra and Tsinopoulos (2018) perspective regarding four configurations of organizational resilience. In this conception, we find the understanding that the characteristics of organizations fit into some resilient configuration. More specifically, this adjustment stems from the adaptive characteristics of rigidity or agility, and the reactive or proactive preparedness of organizations (Figure 2).

Figure 2

Resilience Configurations

Adaption	Agile	<p style="text-align: center;">Resourceful</p> <p>Flexibility to deal with unexpected disruptions.</p> <p>Strengths: Quickly evaluate unpredictable disruption and develop appropriate response through improvisation. Response dependent on the event and type of operations.</p> <p>Weakness: Highly resource intensive and contingent on skills of individuals. Less able to learn due to lack of processes.</p>	<p style="text-align: center;">Resilience Focused</p> <p>Long-term, strategic orientation. Detailed planning for predicted disruptions and resources for dealing with the unexpected. Systems and processes for learning and prediction.</p> <p>Strengths: Flexible, prepared, able to learn.</p> <p>Weaknesses: Highly resource intensive, requires continued engagement with stakeholders and evolving processes.</p>
	Rigid	<p style="text-align: center;">At high risk</p> <p>Short-term, operational orientation. Lack of coherent preparation and no flexibility. Vulnerable to most disruptions. Highly dependent on individuals' ability to respond to disruptions and improvise.</p>	<p style="text-align: center;">Process Based</p> <p>Focus on development of rigorous plans for different disruptions.</p> <p>Strengths: Prepared for most eventualities. Able to learn through the implementation of new processes.</p> <p>Weaknesses: Vulnerable when something unpredictable happens. Relatively rigid, reallocation of resources difficult.</p>
		Reactive	Proactive
Preparation			

Source: Burnard, K., Bhamra, R., & Tsinopoulos, C. (2018, p. 357).

Burnard et al. (2018) view does not involve the evolutionary aspect throughout the process, but it classifies organizations into a specific configuration based on the relationship between their preparation for uncertainty and adaptation to the new reality, such configurations being: Resourceful, At High Risk, Process Based, and Resilience Focused.

Thus, certain factors lead organizations to fall into the configurations presented. The *resourceful* configuration involves organizations dealing with environmental uncertainty in a flexible way, that is, through managers' learning from past periods, there is a rapid assessment of the possible consequences that an uncertainty may cause, and they respond to the environment through improvisation. However, organizations that fall into this type of configuration are on standby for a turbulence in the environment to react, which can cause a delayed response to environmental uncertainty (Burnard et al., 2018). The configuration *at high risk*, on the other hand, involves reactive organizations that are not flexible to change, since their previously formed plans are maintained regardless of what happens in the environment, that is, they are vulnerable to any crisis in the environment.

Organizations classified as *process based* are those that have strict plans to be followed, yet are prepared to deal with possible environmental turbulence that is anticipated. Process based organizations carry a learning baggage of positive and negative experiences from past adversities to make their current plans. Finally, *resilience focused* organizations exhibit flexible characteristics of bringing management together to think of new ways to deal with uncertainty: proactive by interacting with stakeholders to alter the initial plan; and learning, whereby, in addition to using past knowledge for the current situation, a knowledge base of current occurrences is formed for future uncertainties. Such characteristics provide preparedness for expected interruptions, as well as resources to deal with unexpected situations (Burnard et al., 2018).

Thus, both the openness of strategy, through the inclusion of other actors and information transparency, and resilience, active or passive, are phenomena that emerge prominently in organizations as a response to the uncertainties perceived in the environment. They are increasingly dynamic, current, and relevant, and the answers as to how to adapt to this environment are continuously being sought.

External environment and environmental uncertainty

With the systemic approach, studies have come to understand organizations as an open system that relates to the external environment (Katz & Kahn, 1978), with such a relationship being clearly addressed in the contingency approach (Burns & Stalker, 1961; Donaldson, 2001; Lawrence & Lorsch, 1967). Gardelin, Rossetto and Verdinelli (2013) consider this open organizational system as a network of information inherent in internal and external aspects, which can be referred to as the environment.

The environment in which organizations operate, especially in terms of external aspects, is characterized by complexity and dynamism (Anderson, 1999; Rodrigues & Costa, 2021). Within these characterizations, Miller (1993) works with the idea of environmental uncertainty, that is, the

unpredictability of any actions that may occur in the organizational environment. Such environmental uncertainty has been studied over the last decades, and it is possible to highlight the studies by Lawrence and Lorsch (1967), Duncan (1972), Govindarajan (1984), Miller (1993), Donaldson (2001), Silveira-Martins and Rossetto (2018), among others.

Environmental uncertainty can be understood through three main components, namely: (i) the lack of information about the environment for decision making, (ii) not knowing whether an organization's decision would result in loss, and (iii) inability to assign probabilities of a phenomenon occurring in the environment (Duncan, 1972). Based on these components, Duncan (1972) works with four environmental dimensions that generate, by their intersections, different degrees of uncertainty: (i) simple, (ii) complex, (iii) static and (iv) dynamic. Within these dimensions, the organizational environment can be considered to have low perceived uncertainty (simple/static), moderately low perceived uncertainty (complex/static), moderately high perceived uncertainty (simple/dynamic), and high perceived uncertainty (complex/dynamic).

The dynamism factor that accompanies the discussions inherent to environmental uncertainty can be understood as unpredictable situations accompanied by rapid changes in various aspects, such as: technology, customer need, among others (Mikalef & Pateli, 2017; Raasch et al., 2020). Also, the complexity of the environment involves the factors that influence the organizational decision, for example, events inherent to the environmental context.

According to Jansen, Rotondaro and Jansen (2005), organizations that know their environment tend to make decisions with proactive actions, not facing serious consequences of uncertainty. Within this idea, Silveira-Martins and Rossetto (2018) address the need for organizations to clearly interpret environmental situations with a view to reducing uncertainty in order to leverage performance. Furthermore, it is also worth noting that high levels of uncertainty require high degrees of cognition when it comes to strategy formation (Nobre, Tobias, & Walker, 2011).

Given the above about environmental uncertainty and in view of the Covid-19 pandemic that caused several environmental uncertainties for organizations in various sectors, which can be listed as the main environmental event of recent years (WHO, 2021), among the dimensions presented by Duncan (1971), as well as in the study of Lavarda et al. (2021), the complex and dynamic nature of the environment was defined as the background for this theoretical essay, since this dimension encompasses a large number of factors and elements in the environment, which differ from each other and are constantly changing.

Discussion and propositions of the study

In the midst of uncertain environments, characterized by complexity and dynamism (Duncan, 1972), organizations require readjustments to seek the maintenance of their activities (Hrebiniak & Joyce, 1985). Among these readjustments, it is possible to list the phenomenon of open strategizing and

organizational resilience as phenomena that complement each other and that have occurred (consciously or unconsciously) in the development of organizational practices and activities, in an attempt to circumvent this environmental uncertainty (Kohtamäki et al., 2021; Jarzabkowski et al., 2019; Jarzabkowski, Kavas, & Krull, 2021; Lavarda et al., 2020; Vasconcelos, Cyrino, D'Oliveira, & Prallon, 2015).

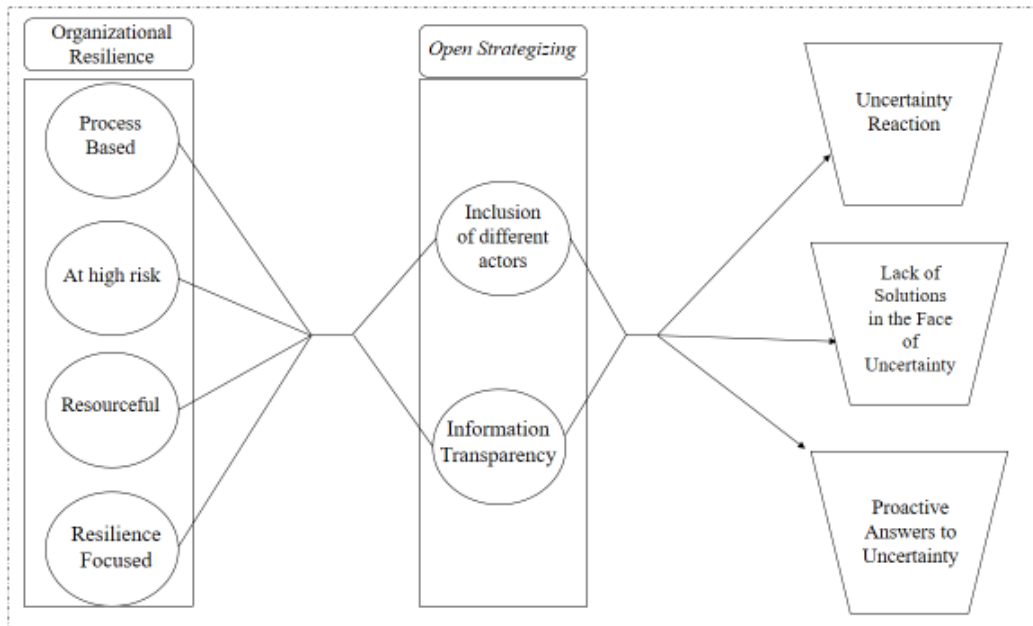
That said, and in view of the understanding of the phenomenon of open strategizing with the effective inclusion of other participants in strategy making and the increased transparency of information (Whittington, 2011; Dobusch et al., 2017; Hautz et al, 2017), as well as organizational resilience as a strategic idealization of the organization through the anticipation of environmental trends (Annareli & Nonino, 2016) or the decision to wait for environmental events so that a decision can be made on which path to follow (Burnard & Bhamra, 2011), we seek to *understand how the phenomenon of open strategizing relates to organizational resilience, considering environmental uncertainty*.

The studies that address strategy making, in recent years, have cast a new look on the practices and processes of strategy (Burgelman, Floyd, Laamanen, Mantere, Vaara, & Whittington, 2018) and are starting to perceive this phenomenon with a view from inside the organization (Johnson et al., 2007). This micro view allows us to understand the actual "strategy making" (Jarzabkowski *et al.*, 2007), as well as the phenomenon of openness of this strategy (Tavakoli et al., 2017), through which it is possible to visualize resilient factors, especially in the midst of periods of environmental uncertainty (Linnenluecke et al., 2012).

In light of this, we understand that, in the midst of the uncertain environment, the phenomenon of open strategizing occurs (to a greater or lesser degree) when the resilient factors of passivity or proactivity can be identified and encouraged (Figure 3).

Figure 3

Resilience dimensions and the phenomenon of open strategizing in an uncertain environment



Source: Prepared by the authors (2022).

Our intention is to understand whether or not the resilience dimensions can provide the phenomenon of open strategizing in order to respond to uncertainty proactively, reactively, or not at all. The discussions and propositions that follow seek to present to the reader these relationships and how they can help organizations in the midst of contexts of environmental uncertainty.

That said, our discussion starts with environmental uncertainty guided by the complex and dynamic nature of the environment (Duncan, 1972; Lavarda et al., 2021; Raasch et al., 2020). Environments of this nature (Duncan, 1972) generate changes in organizational actions for a readjustment to the new environmental scenario (Hrebiniak & Joyce, 1985). Crises arising from environmental uncertainty can elicit different types of responses from organizations, which promotes organizational resilience (Burnard et al., 2018). Through the insights from Valastro (2011) and Sawalha (2015), we consider two resilience configurations that we understand as reactive and proactive organizations.

The characteristics of organizations allow us to classify them into one of four resilience configurations [(i) resourceful; (ii) at high risk; (iii) process based; and (iv) resilience focused]. Among these characteristics, we start with the configuration (i) resourceful, that is, organizations with their reactive preparedness and agile adaptation (Burnard et al., 2018). This configuration refers to those organizations that act flexibly, but wait for the emergence of some crisis that generates uncertainty to react (Burnard et al., 2018), that is, a reactive organization (Sawalha, 2015; Valastro, 2011).

Organizations that choose reactivity require a large number of resources in order for them to overcome the crisis period (Burnard et al., 2018). The availability of resources enables the flexibility of organizations when making their strategy because of the tacit knowledge of managers (Burnard et al., 2018). This allows us to relate this configuration to the strategizing of Jarzabkowski et al. (2007), since the strategy is made in the micro perspective of the organization, in micro-actions, to face the uncertain period (Jarzabkowski et al., 2019).

Moreover, during uncertain periods, strategy making at the micro level allows the inclusion of various organizational actors in strategy making through more or less participatory actions (Dobusch et al., 2017). Based on Morton et al. (2018), these actions of inclusion refer to moral legitimation, and it is possible to interpret them as feedback (less participation) or collaboration (more participation), favoring the process of open strategizing articulated by the strategic discourse (Heracleous & Barrett, 2001; Taylor & Robichaud, 2004).

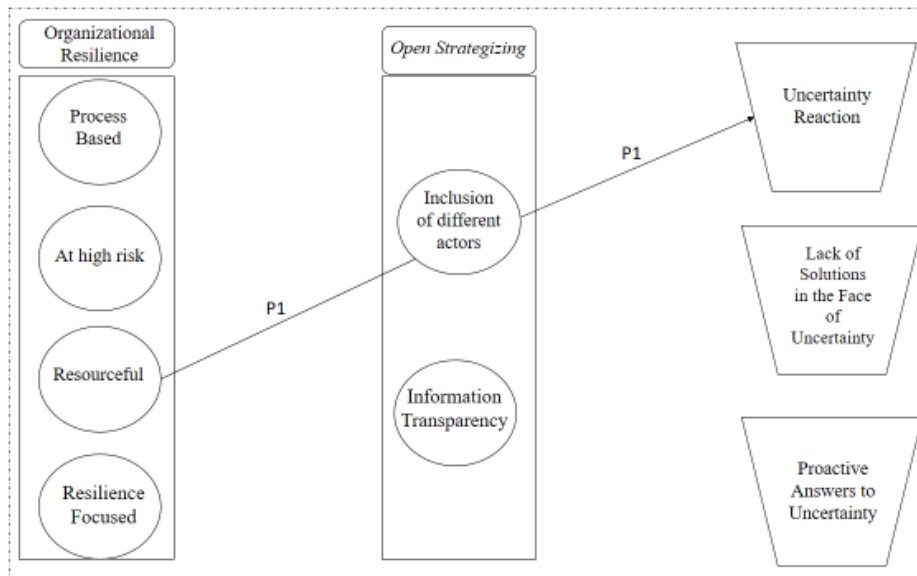
These practices (Morton et al., 2018) enable views not previously considered (Dobusch et al., 2017; Lavarda et al., 2020; Whittington, 2011) to overcome the period of crisis, and we can understand this inclusion from the organizational flexibility arising from the abundance of resources (Burnard et al., 2018). Thus, we understand that the learning acquired by managers enables internal discussions between the different hierarchical levels of an organization, which favors the generation of solutions to react to environmental uncertainties.

Therefore, returning to the guiding research question (how does the phenomenon of open strategizing relate to organizational resilience, considering environmental uncertainty?) and the ensuing reflections, we understand that it is possible to formulate a first study proposition (Figure 4):

Proposition 1: Resourceful organizations enable open strategizing through the inclusion of people, favoring the generation of solutions to react to environmental uncertainties.

Figure 4

Visual Presentation of the First Proposition



Source: Prepared by the authors (2022).

In this illustration, it is noticeable that the relationship of the resourceful configuration with the actor's inclusion dimension provides a reactive response to uncertainty. We understand that this occurs because the abundance of resources allows for a waiting period for a more accurate perception (by the actors involved in the decision making process) of environmental events.

On top of this, it is worth mentioning that the dimension of information transparency is not related to the resourceful one, since that waiting period does not allow enough time for the organization to exchange information with the other actors, considering that the uncertainty may already be causing reverberations in the organizational daily life.

In cases of environmental uncertainty not previously experienced (such as the Covid-19 pandemic), even well-structured organizations with strength in the market have faced difficulties (Lavarda et al., 2021). If this type of organization can face difficulties, it is noticeable that more fragile organizations tend to have a greater degree of difficulty with uncertainty. To explain this, next we will present discussions around organizations that fall into the (ii) at high risk configuration of resilience, that is, organizations with fewer resources. We can perceive them as not very flexible, which results in vulnerability to the uncertainties of the environment (Burnard et al., 2018). Consequently, this type of organization can also be perceived as reactive (Sawalha, 2015; Valastro, 2011), since the limited amount of resources makes anticipatory actions impossible.

Little organizational flexibility, in addition to causing vulnerability to uncertainty (Burnard et al., 2018), can also be understood as a factor that makes the phenomenon of open strategizing impossible, since the lack of flexibility can be seen as incompatible in the face of elements of paramount

importance in strategizing openness, that is, the inclusion of actors and the transparency of information (Whittington, 2011).

In addition, there are also (iii) process based organizations, which have rigidity in their plans and structure, geared towards various situations of environmental turbulence, and it is possible to perceive this type of organization as proactive but rigid (Burnard et al., 2018).

As with the (ii) at high risk configuration, the (iii) process based organizations are also incompatible with the phenomenon of open strategizing, given that the characteristic of organizational rigidity (Burnard et al., 2018) is understood to oppose Whittington's (2011) ideas, that is, the inclusion of actors and the transparency of information for strategy making at the micro-level.

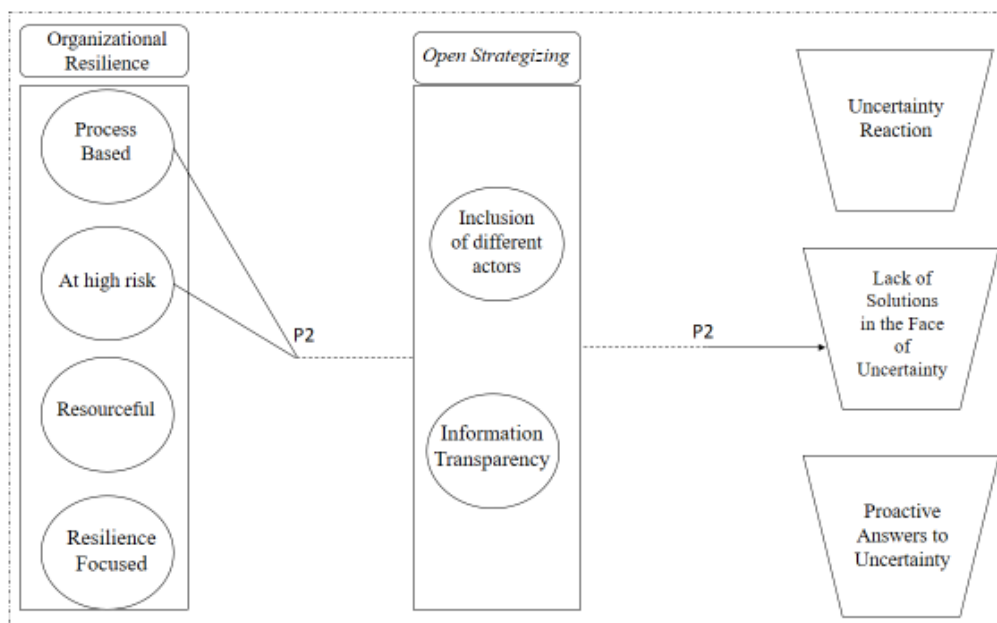
Additionally, the characteristic of organizational rigidity is also incompatible with the phenomenon of open strategizing, since with the absence of inclusion and transparency, the actions, interactions, and negotiations among the organizational actors become null, that is, organizational rigidity makes it difficult or impossible to open the strategy. This reflection occurs based on the transmission practice of Morton et al. (2018), considering that, in this practice of open strategizing, the strategy is legitimized through pragmatism, that is, it only passes on the information already defined to the other actors.

Thus, we believe it is possible to formulate the second study proposition (Figure 5):

Proposition 2: the scarcity of resources (at high risk) and the rigidity of the organization (process based) limit the phenomenon of open strategizing, not favoring the generation of solutions to deal with the uncertain environment.

Figure 5

Visual Presentation of the Second Proposition



Source: Prepared by the authors (2022).

In light of this, it is noticeable that the characteristics of these configurations [(ii) at high risk and (iii) process based] do not converge towards the phenomenon of open strategizing, since the rigidity of the organization and its plans make inclusion of actors and information transparency, inherent to strategy making, impossible.

Further developing our considerations, we ponder that organizations (iv) resilience focused are those that have flexible plans and learn from past situations for dealing with current or future uncertainties (Burnard et al., 2018), and we can understand this type of organization as the best example of a proactive organization (Sawalha, 2015; Valastro, 2011).

Through the characteristic of flexibility and learning (Picoli & Takahashi, 2016), it is noticeable the occurrence of open strategizing, which, added to the aspects of organizational resilience (Burnard et al., 2018; Sawalha, 2015; Valastro, 2011), allows the perception that the inclusion of actors and information transparency in strategy making (Whittington, 2011) are positive for generating learning and providing responses to the environment. We perceive the inherent aspects of manager flexibility and process transparency amidst uncertain periods through pragmatic/cognitive legitimation (Morton et al., 2018). Practitioners (managers) remind us of the learning acquired from past uncertainties (Burnard & Bhamra, 2011), which enables us, through the inclusion of other actors and information transparency, to expand the range of strategic activities (Whittington, 2011), as well as to adapt and implement the demands (Morton et al., 2018) arising from uncertainty (Duncan, 1972).

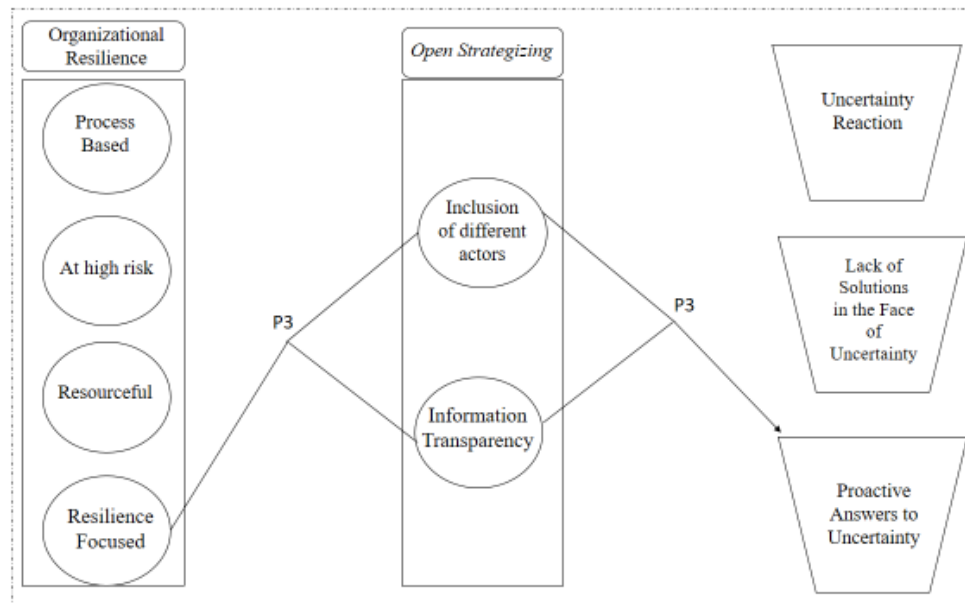
Therefore, it is possible to overcome a nature of complex and dynamic uncertainty (Duncan, 1972; Lavarda et al., 2021;) through the relationship between open strategizing, which makes it possible to create a strategy from inclusion and transparency (Whittington, 2011) amid this type of period (Jarzabkowski et al., 2019), with organizational resilience, which, from certain characteristics, enables the inclusion of organizational actors through their tacit knowledge of past events (Annareli & Nonino, 2016; Burnard et al., 2018).

In the same way, we proceed to the third study proposition (Figure 6):

Proposition 3: the process of open strategizing and organizational resilience are directly related, favoring organizational learning and enabling proactive responses to environmental uncertainties.

Figure 6

Visual presentation of the third proposition



Source: Prepared by the authors (2022).

From this proposition and its respective illustration, we perceive the relationship between open strategizing and organizational resilience, considering that these constructs can provide relevant elements for the management of organizations during periods of environmental uncertainty. The strategy that emerges through the proposed relationship provides the readjustment of the organization in the face of uncertainty, from the dimensions of inclusion and transparency of information (Whittington, 2011), plus the possibilities arising from learning, flexibility and proactivity (Burnard et al., 2018; Picoli & Takahashi, 2016) that favor survival or anticipation (Sawalha, 2015; Valastro, 2011) to adversity (Duncan, 1972).

We emphasize that these propositions are not exhaustive; rather, they are possibilities to address a scientific concern and to foster future research that contributes to the advancement of knowledge in the field of strategy as a process and practice, following the suggestions for future research in the studies reviewed here, such as Kohtamäki et al. (2021).

Thus, we move on to the final remarks of this theoretical essay.

Final remarks

This theoretical essay was guided by the research question *How does the phenomenon of open strategizing relate to organizational resilience, considering environmental uncertainty?* To answer it, we developed a theoretical framework regarding open strategizing (Dobusch et al., 2017; Jarzabkowski et al., 2007; Jarzabkowski et al., 2019; Jarzabkowski et al., 2021; Tavakoli et al. 2017; Whittington, 2006; Whittington, 2011; Whittington, 2019), organizational resilience (Annareli & Nonino, 2016;

Burnard et al., 2018; Gundernon, 2000; Sawalha, 2015; Valastro, 2011) and environmental uncertainty (Burns & Stalker, 1961; Duncan, 1972; Miller, 1993), through which it was possible to discuss and reflect on the interrelationship between the researched themes.

Based on the discussions, we understand that the relationship between open strategizing and resilience to overcome a period of uncertainty should be explored and deepened. We understand this from those organizations that are focused on resilience, that is, organizations that are flexible and learn from past events. These resilient characteristics allow organizations to have a vision of including people and information transparency in strategy making, since the inclusion of more organizational actors allows them to point out their perceptions based on past learning, so that strategy making and operationalization can occur.

However, the same cannot be said for those organizations that have scarce resources or that have rigidity in their structure and plans. Besides their vulnerability to the environment, they are also incompatible with the phenomenon of open strategizing, since their few resources cause inflexibility and, consequently, lack of inclusion of people and transparency of information.

As theoretical contributions, we reflect on the relationship between open strategizing and organizational resilience in the face of environmental uncertainty. Such reflections enable the advancement of studies from the perspective of strategy as practice, in the creation of organizational strategy in a micro perspective (Jarzabkowski et al., 2007; Jarzabkowski et al., 2019). Furthermore, in light of the theoretical discussions, we developed propositions to guide future theoretical discussions, as well as empirical research.

As for practical contributions, our theoretical discussions provide organizational managers with a new perspective on strategy, and may promote reflections on how to conduct their decision-making processes and face crisis in uncertain situations and environments, based on the inclusion of organizational actors and information transparency, as well as on the relationship of this way of acting with resilient characteristics of flexibility, proactivity, and learning.

As limitations, we highlight the inherent weakness of the theoretical approach per se (Whetten, 1989) devoid of the empirical step. Additionally, we acknowledge that we have not discussed the epistemological aspects that are inherent to the topics addressed, as they originate from distinct epistemological and ontological propositions (Golsorkhi, et al., 2015; Kouamé & Langley, 2018). Thus, we note that Burgelman et al., (2018) minimally provide the support for addressing discussions between different research paradigms when we address research in strategy as process and practice.

As future research, we highlight the possibility of a theoretical-empirical study based on the discussions carried out in this essay. In the face of the propositions listed, conducting an empirical study can fill the gap related to the dynamics of the relationship between open strategizing, organizational resilience and environmental uncertainty, from a more inclusive proposal of organizational actors, going through the humanization of strategy (Kouamé & Langley, 2018, Nonaka & Takeuchi, 2021).

We finish this essay with the insight that the relationship between open strategizing and organizational resilience can provide relevant elements to be further explored to support decision making and dealing with crises in a context of environmental uncertainty.

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