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**WHAT DRIVES NETWORK GOVERNANCE? A MICROSTRUCTURAL
APPROACH**

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Tese apresentada como requisito parcial para
obtenção do título de Doutora em
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Orientador: Prof. Dr. Jorge Renato Verschoore

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“Conhece-se melhor o mundo à medida que melhor conhecemos a nós mesmos, que o conhecimento científico e o conhecimento de nós mesmos e da nossa própria inconsciência social avançam de mãos dadas, e que a experiência primária transformada em e através da prática científica modifica a prática científica e reciprocamente.”

Pierre Bourdieu

RESUMO

O desenvolvimento de redes de cooperação como uma forma de ampliar a competitividade e também de lidar com problemas complexos da sociedade, envolvendo diversos membros em prol de objetivos em comum, tem se tornado cada vez mais comum. Ainda que essas configurações sigam muitas das teorias já estudadas sobre organizações, existem particularidades que precisam ser compreendidas a partir da perspectiva da rede, considerando sua própria singularidade. A governança de redes como uma ferramenta de organização, planejamento e direcionamento da rede necessita de estudos que a interpretem vindo de baixo, das atividades mais rotineiras que fazem parte da governança de forma processual, a micro governança. Além disso, as redes apresentam a dicotomia da autoridade e autonomia, sendo um espaço onde os membros são autônomos mas interdependentes e onde às vezes é imperioso uma espécie de autoridade para tomada de decisões, mediação de conflitos e controle. A literatura apresenta algumas teorias pouco aprofundadas na prática sobre a micro governança de redes. Portanto, este estudo objetivou compreender os processos de micro governança que agem como fonte de autoridade e seu papel na governança de redes. Assim, foi realizada uma pesquisa qualitativa, com observações, análise de documentos e entrevistas (17) com membros da rede de saúde pública no Brasil, o Conass - Conselho Nacional de Secretários de Saúde. Através de uma análise de dados processual, utilizando a busca por padrões ao longo do tempo, as evidências foram analisadas. A escolha do campo empírico se deu por lidar com um problema social complexo, a saúde pública. A rede apresenta um longo tempo de formação, desde 1982, e uma extensa organização de câmaras técnicas, comissões e comitês organizados de forma a debater e tomar decisões sobre como organizar a capilaridade e questões orçamentárias para resultados em prol da saúde pública no país. Para tanto diversas atividades e processos de governança entram em ação, sendo estes o objeto deste estudo. Entre os resultados, ficou evidenciado que as funções de micro governança desempenham papel fundamental para que a rede se mantenha em funcionamento. Entre estas funções, algumas se destacaram nas evidências coletadas como alinhar, organizar, monitorar e arbitrar. Conquanto, foram criadas proposições sobre estas funções de micro governança de redes, desvendando suas aplicabilidades e aprofundando a teoria com a evidência empírica. Ficou demonstrado pelos resultados que as funções de alinhar e organizar auxiliam a nivelar expectativas e oferecem continuidade para a rede, considerando a constante possibilidade de entrada e saída de membros. A função de monitorar oferece uma legitimidade aos processos de governança, pois é usada para controlar resultados e oferecer retorno sobre o atingimento de objetivos. Também evidenciou-se que a função arbitrar apoia o ambiente colaborativo ao promover consenso, a forma como a rede decidiu por sua tomada de decisão de conflitos. E por fim que as funções de micro governança se tornam parte da estrutura e constroem uma realidade da rede tomando para si o papel de autoridade. Desta forma, nenhum membro ou papel de liderança se torna responsável por enfatizar ou coagir para o uso das funções, estas o fazem por si só. Os achados desta pesquisa demonstram que as funções de micro governança oferecem autoridade e autenticidade aos processos, contribuindo para um ambiente colaborativo mais horizontal entre os membros.

Palavras-chave: funções de micro governança; redes de colaboração, autoridade, problemas complexos.

ABSTRACT

Collaborative networks development, as a competitive strategy and form to deal with complex society problems with many diverse members working towards common goals, have become recurrent. Although these configurations follow steady theories for organizations, they present particularities that need to be comprehended from a network perspective, considering its own uniqueness. Network governance as an organizational and planning tool needs studies that interpret it from downstream, examining the routine activities of governance in a processual way, micro governance. Besides, networks present a dichotomy between authority and autonomy, a space where members are interdependent, sometimes it is imperative that some authority acts to take decisions, mediate conflicts and control situations. Literature presents some theories yet not deep studied about network micro governance practices. Therefore, this study has aimed to understand the processes of micro governance that act as authority source and their role in the network governance. So, a qualitative research was held, using observation, documents analyses and interviews (17) with members of a public healthcare network in Brazil, Conass. Using a process data analysis, searching for patterns along time, the evidence was analyzed. The empirical field was chosen based on it dealing with a complex social problem, public health. The network was formed in 1982, and it has a large structure with technical chambers, commissions and committees that debate and take decisions on how to organize the capillary and budgetary issues towards results for public healthcare in the country. Thus, many activities and governance processes work, and these are the objects of this study. Among the results, it was evident that micro governance functions play a critical role so that the network performs. Some functions were more highlighted within the evidence such as align, organize, monitoring and arbitrate. Based on those, propositions were created for these network micro governance functions, revealing their applicability and enhancing the theories with empirical evidence. The results have shown that functions of align and organize help to balance expectations and offer continuity for the network, considering the constant possibility of entry and exit of members. The function of monitoring legitimizes the network governance processes, since it is used to control results and offer feedback about the goals. Also, the evidence conveys that the function arbitrate supports the collaborative environment promoting consensus, the way the network decides on how to conduct the decision process and solve conflicts. Finally, the network micro governance functions become part of the structure and depicts a reality by playing the role of authority. Consequently, no member or leadership role is responsible solemnly to emphasize or force no one in the network to use the micro governance functions, they work on their own. The evidence demonstrates that micro governance functions offer authority and authenticity to processes, fostering a collaborative and horizontal environment among network members.

Keywords: micro governance functions; collaborative networks; authority; complex problems.

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1. INTRODUCTION

Considering the current economy and scientific knowledge in the business area, many organizations are choosing to use their resources as a group instead of competing isolated against one another. The new information technology and communication options, combined with the conception of a world without borders, increase the opportunities to find not only customers but also possible business partners.

The Air France/KLM, Delta, and Alitalia airlines operate together as an alliance based on a contract that guarantees the exact costs and revenues that they share, which activities are part of the alliance, and so on (Man, 2013). Another example of these new inter-organizational relations is the Star Alliance, founded in 1997 by five major airlines where a group of companies decided to join forces, and nowadays Star Alliance counts with 26 airlines in the group. The main purpose of the Star Alliance is to create a homogeneous product with a common system that allows each organization to recognize the program, provide quality goods and services to its customers, and constitute a global communication network in the world. Therefore, being part of these groups provides new advantages to the airlines, such as protection against the negative effects of competition, new possible destinations to offer, financing opportunities, ease of marketing, and new services. But these new cooperation arrangements come with new challenges: organizing these large structures such as the 26 different organizations that are part of the Star Alliance, managing different expectations and many diverse processes towards common goals is an obstacle that network governance tries to overcome.

In a similar situation, in 2003, Dow Chemicals and General Motors reached an initial understanding of fuel cell transactions, introducing, together with OneH2 and Navistar, more recently, a solution to implement a zero-emission system on vehicles (Wassmer, Paquin & Sharma, 2014). These companies gathered forces to provide new fuel options, eliminating gas emissions with environmentally friendly solutions, a value that all of them share. The network formed by them, many years ago, started with an idea and two companies that expanded to reach a possibility and more organizations that could add value and share knowledge to make the project a reality. The partnership provided these organizations with knowledge creation, shared risks, and innovation opportunities, although it also presented them with the challenges of managing such a partnership.

Another example, from a public perspective, is the Unified Health Care System in Brazil, which seeks to increase longitudinal care, managing healthcare services, and providing

ongoing coordinated actions for the population (Peiter *et al.*, 2019). It creates a network focused on public healthcare, from primary services to complex appointments and solutions, involving emergency units as well as great hospitals. This network is composed of many actors, from people to organizations and is coordinated for a public ministry. Though Brazil is not the only country which has such a network to deal with public health services, it is one of the great and most complex cases to study this type of network strategy (Peiter *et al.*, 2019).

The networks, as in the aforementioned examples, represent collaboration among independent organizations that join forces to achieve some advantage; the network must have joint goals and some forms of sharing revenue, costs, and risks among the members. Thus, the literature conceives inter-organizational relations as a group of three or more organizations connected through a network, searching to achieve a common goal that cannot be reached individually (Provan and Milward, 1995). Besides all the benefits, the collaborative networks have structures to integrate the activities, similar to how single organizations will find themselves, except that a network has a more complex structure and, probably, more complex problems to solve.

Maron and Benish (2021) proclaim that networks, as this complex structure with diverse links, may be seen as a form of governance in itself, of managing new firms' arrangements. But shifting the focus from that to the idea that networks need their means of managing their challenges, specific to their different reality and structure, is a better effort to avoid network failure. It means that, although networks are a new collaborative form of organizing firms and actors, it is also a very specific format and requires its own theories and studies.

Though network structures represent such a large and common new organizational form, they also bring new challenges, such as managing such a structure of different organizations and aligning it towards a common goal, avoiding conflict that may hinder the objectives, and pondering the more horizontal hierarchical structure of a network (Podolny and Page, 1998; Verschoore, Balestrin, and Perucia 2014). Challenges that present the field with many questions and few certainties. Ansell and Gash (2008) define such collaborative governance as:

A governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets. (p. 544)

Though the authors' definition thinks directly of collaborative governance in the public sphere, to manage public networks, it is not far from the idea of collaborative governance in any stance, as it could be easily applied to governance in interfirm networks. Additionally, the word governance weighs in with rules, decisions, practices, prescriptions, and constraints that at the same time provide a structural and formal idea of governing the collaborative process and enable collective decision-making that is necessary for a more untraditional and collaborative structure such as networks (Ansell and Gash, 2008).

Therefore, networks need governance to steer the collaborative process in a more structured and fashion manner. Scholars often view the network as a consensus practice, in which the network's members agree and resolve problems and disputes and create processes to advance the collective goals unitedly (Maron and Benish, 2021). While it may be partially true, it is also true that network structures will face many challenges that may not be solved by consensus or democratic practices, needing some processes that will guide the network toward its collective goals, consensus or not, without causing disruption.

Hence, transporting theories of governance from microstructures to networks is one path, though it must be done carefully and considering that the network as a whole is more than just its organizations; it is embedded in all the relations and ties and interdependent connections and the results that these interactions produce. As a result, we find fewer studies that aim to explain network governance in its practice, and when we do find them, they tend to be quite context-restricted.

Regarding this study, more than collaborative governance, it is about collaborative governance networks for public healthcare. So, we face what some scholars (Rittel and Webber, 1973; Henriques, 2018; Peters, 2017) called wicked problems. These problems are so complex that they cannot be confronted by single actors or organizations (Henriques, 2018); they need to be challenged by a network of actors and/or organizations. Peters (2017) defines wicked problems as the ones that are very difficult to delineate, where there is not only one solution but possible good or bad solutions, with little space for trying different paths; every wicked problem has its own idiosyncrasies, with many explanations and with no clear right or wrong. They are socially and politically complex; therefore, they require a complex approach.

Towards this perspective, Sørensen and Torfing (2021) indicate that most studies focusing on collaborative governance think about mainstream problems - such as the recruitment of members, building trust, and an inclusive environment - which, though valid problems, are not the downstream problems, those that should receive more attention.

Downstream problems are related to problems that emerge from the routine and daily activities and processes of the network, related to implementation and coordination evaluation and accountability of network governance (Sørensen and Torfing, 2021). These problems require approaching network governance from a more microstructural perspective, which analyzing micro governance functions may allow us to provide.

In the attempt to address this gap, some studies about network governance (Provan and Kenis, 2008; Ansell and Gash, 2008) suggest insights; however, there is still space for refinement to understand the practical functions of governance, the activities daily carried out by in the network, pursuing to reach the common goals. So, in the search to clarify network governance strategies, Wegner and Verschoore (2022) propose six micro governance functions that may be essential to collaboration networks' leadership; those functions affect daily activities, offering network governance support.

Accordingly, micro governance functions seem to fit into the categories of movement, constant changing, and evolution, as they are transformed into practices by the managers, seeking to reach the network results, working as guidance to activities in the network. The micro governance results bring balance to network governance, as it needs to consider several organizations and the distribution of advantages that keep participating in the network more attractive than acting alone. However, to organize a collaborative governance process, it is necessary to have varying degrees of cohesiveness, resources, and political relations; thus, many sources of income can affect the governance at the micro-level. Hence, Puranam's (2018) microstructures theory, where the central idea is to analyze large and complex organizations, such as networks, from a narrower point of view, in an attempt to comprehend how rational governance may divide and integrate activities trying to achieve the collective goals.

Some factors become prominent when we examine governance from a microstructure perspective, such as authority and autonomy, as they are an important part of network governance. Understanding authority and hierarchies depends on context, and inside the networks, this context becomes multi-level (Kramer et al., 2018). Thus, analyzing the functions inside micro governance, everything that is accomplished daily, many times informally, and comprehending these functions, interpreting which ones support which results in achievement is a possibility to understand the cooperation among organizations with better results.

This thesis proposes that micro governance acts as a source of authority, conducting the network governance process, helping to provide the network governance with the needed

authority to act but not hindering the autonomy process that gives the network a more horizontal hierarchical structure. And it aims to understand how authority embedded within network governance acts in shaping the micro governance functions and the processes that enable them. Notwithstanding, the collaborative process is non-linear and it happens at different moments and many times during network interactions (Ansell and Gash, 2008), so pointing out the microstructures, facing the problem of balancing authority and autonomy, through the processes that conduct the network micro governance functions may help to enlighten our knowledge on how to operationalize network governance.

1.1 Research Problems and Objectives

As a relatively recent perspective, the approach to networks through the lens of microstructures is emerging as a provocation, inspiring theories to delve deeper into the context of networks to better analyze their forms. Puranam (2018) implies that concerning the level of aggregation within an organization, they share the same fundamental design and encounter similar problems, albeit with varying degrees of complexity. Therefore, analyzing microstructures is a suitable approach to understand how to overcome these issues within different contexts. In essence, to comprehend any structure, even the most extensive ones, examining the same small subgroups that a smaller organization can be divided into works equally well, as stated by Martin (2009):

We have somehow managed to almost entirely avoid the fact that large structures, including institutional structures such as organizations, are generally concretes of smaller structures, and even more important, the larger structures tend to be the result of historical processes in which small structures were progressively aggregated. (p. 30)

Consequently, as organizations consist of small structures, networks consist of organizations made up of structures. These structures within networks are significantly influenced by cooperation and coordination when striving for cohesive success to positively impact the network structure. However, the failure of one of them is sufficient to negatively affect the entire network (Koçak and Puranam, 2019). In light of this, understanding challenges in cooperation and coordination structures within networks is of great interest for better directing the collaborative process.

Within a network structure, as noted by Martin (2009), there is a historical context

where small structures aggregate to create larger ones. While authority and hierarchies are prominent features in any organization and play a crucial role in its functioning, they also create a conflict regarding how to balance them with individuals' need for autonomy, particularly when discussing inter-organizational networks. In this context, it is essential to consider that organizations must maintain their individuality while being part of a larger group.

Similarly, there is a need to balance the management of strategies and processes within the network to provide guidance for the collaborative process (Klijn, van Meerkerk, and Edelenbos, 2020). However, strategies and processes are closely connected with governance structures and functions. Świerczek's (2020) study showed that more collective forms of governance may address the pluralistic perspective found in networks, suggesting that hierarchy can help establish a sense of common purpose, provided there is a proper balance between authority and autonomy among the governance functions processed by the network. Nevertheless, Świerczek (2020) also indicates that hierarchy can lead to lower levels of collaboration, emphasizing that there is no universal governance mode, but rather a need for different processes within governance, such as the functions proposed by Wegner and Verschoore (2022). These functions can serve as sources of authority while reducing the hierarchical influence centered on individuals or organizations, thereby providing the network with the necessary guidance toward its objectives.

Some studies, such as Provan and Kenis (2008), have pointed out that network governance can be categorized into three different types based on various network factors, including network size, levels of trust among members, the degree of goal consensus, and the need for network competencies development. Provan and Kenis (2008) suggest that the choice of governance should align with the network's characteristics. However, success is not guaranteed solely through governance selection, as other factors can also influence governance. Thus, when examining network governance, it is crucial to consider not only the general governance mode but also the specific processes that make it effective. Wegner, Teixeira, and Verschoore (2019) recommend deeper exploration of network governance, focusing on understanding the processes and mechanisms networks use to implement governance effectively.

Klijn et al. (2020) proposed that the collaborative process consists of interactions among network members that must be managed through specific arrangements and rules. Organizing network governance entails structuring processes that enable it to fulfill its primary purpose: guiding the network toward its goals. Accordingly, network governance

involves a set of structures to govern interactions, decision-making processes, communication, and the organization of network activities. These structures must be acceptable to the actors involved, as the network operates in a more autonomous environment that relies on consensus (Klijn et al., 2020).

Hence, examining processes can provide a better understanding of network governance from a microstructure perspective, generating knowledge about how network governance balances functions to create an organized environment with rules and guidance, without burdening members with hierarchical structures and authority that could hinder the collaborative process. Klijn et al. (2020) findings indicate that network governance must incorporate processes that formally organize the network, while also ensuring the active participation of members for effectiveness.

Governance is a vast and complex process, but when applied within a network context, the collaborative process requires even more methods, tools, effective leadership, and a non-coercive space to allow participants to exercise power (Purdy, 2012). These attributes are necessary for network governance to maintain its collective character, as the network, as an organizational arrangement, must preserve certain characteristics, including stable relations among interdependent actors.

As formal authority governance tends to rely on hierarchy and may not be the ideal environment for promoting innovation and knowledge sharing in a collaborative setting, Purcell (2019) suggests that network governance processes should reflect the diversity of individuals and ideas within the network. Therefore, examining network governance entails exploring different processes that unite the network's diverse members (Purcell, 2019). Given the diversity of the network environment, a variety of tools, in this research's case, functions, are required to guide governance.

Consequently, we propose that investigating collaborative network governance involves examining its microstructure, which is materialized through processes and analyzed from the authoritative sources that they represent. To study network governance, we suggest approaching it as a microstructure (Puranam, 2018), with a specific focus on governance: examining how governance functions evolve over time and in complexity, and how they are interconnected with the sources of authority within the network.

Considering the context of network governance, hierarchy, authority, and the functions that enable governance to function, it emerges as a fertile ground for the following research question: **how does micro governance develop as an authority source to guide the network governance process?** This question leads to the research objectives.

1.2 Research Objectives

The next sections describe the main and the specific research objectives.

1.2.1 Main Objective

This research is directed toward the main objective as follows: understanding the processes underlying micro governance in acting as an authoritative source and its role in network governance.

1.2.2 Specific Objectives

To achieve the main goal, specific steps were organized as follows:

- Identifying how micro governance is organized to act as a source of authority within the network;
- Exploring the hierarchy existing in network micro governance and when it relies on processes to endorse network governance;
- Describing how distinct moments within a network will adopt micro governance processes as authority sources differently;
- Designing a framework for the micro governance processes chosen to support the network collaborative environment.

1.3 Significance of the Study

In recent years, studies on networks have been increasing in number and receiving attention from special interest groups and researchers. It is not only a theory but also a practice used as a strategy among organizations. Among the many advances in these studies, governance is prominent. More than just a concept, it is a practice that networks use to organize their strategies, standing out as a very important feature of network structure. While there is a lack of consensus on the topic of network governance (Wegner, Teixeira, and Verschoore, 2019), some studies shed light on governance details, but there is a gap when it comes to closely examining governance processes and how they work.

Analyzing these functions will allow theory to demonstrate how network governance

organizes itself, materializing the necessary authority to operate within the network without creating an environment of power and high hierarchy. As Thomson (2006) asserts, the collaborative process requires structures to reach necessary agreements among network members - structures provided by network micro governance functions. These governance structures within a network imply that there should be as little hierarchy as possible, awareness among all participants of their roles as members, willingness to cooperate and understand other participants' interests, enthusiasm for information sharing, and an inclination to resolve conflicts (Thomson, 2006). While there are many network governance theories and studies (Agranoff and McGuire, 2001; Provan and Kenis, 2008; Wegner and Verschoore, 2022), they do not explain how governance functions or what processes represent different actions that network governance uses to solve conflicts, create awareness among members, diminish hierarchy, maintain an open environment for sharing knowledge, and preserve the collaborative process with just enough authority to govern the network. This is the problem that drives this study.

Lumineau and Malhotra (2011) state that understanding the processes that permeate network governance is imperative, looking at governance structures and processes to understand the outcomes. They also suggest that it is important to search for reasons that networks tend toward certain governance structures, as governance will design decisions, and the strategy may influence the relations among network members and its results (Lumineau and Malhotra, 2011). Therefore, considering the network governance structure also means considering how collaboration will shape its relations, probably affecting which functions will be more or less required to be active within the governance process to better provide the network with an effective environment.

Hence, microstructures play a role that has recently been brought to light in studies (Stan and Puranam, 2016), but the theory still lacks empirical evidence to show how these microstructures act on behalf of network governance. Although these structures are essential to support governance as they align collaboration, little is known about their processes and activities, and how network governance manages member behavior in the collaboration process (Bruin, 2018). Stan and Puranam (2016) indicate that some individuals may play a coordination role with some type of authority within network governance, but as network members are independent actors, it is necessary to find other authority structures to support governance without creating many formal hierarchies or hindering the collaborative environment.

Bianchi, Nasi, and Rivenbark (2021) outline that appropriate processes offering a basis

for the governance structure, as well as solid strategic plans leading to specific outcomes, are good starting points to overcome some challenges that collaborative governance faces. Among the suggestions, investigating how governance enhances processes and outcomes is highlighted, as well as creating a profile of network governance structures and processes to better improve the understanding of how governance operates within a network (Bianchi, Nasi, and Rivenbark, 2021), which this research attempts to undertake by examining micro governance functions and how they perform as authoritative sources in the collaborative governance process.

Much thought has been given to theories, but there is not much evidence of how micro governance functions act, how processes turn into activities that become sources of authority in network governance. This study contributes to filling this specific gap by creating a framework that closely shows what activities are performed to better utilize micro governance functions and the processes that lead the function to better support network governance, providing it with the necessary authority to organize and lead the network towards its goals. Revealing the mechanisms that underlie the structures of network governance, detailing the functions and the processes that make them work, will allow networks to function better by choosing the activities that are more important at that moment or knowing the processes that will allow a specific micro function to work properly, avoiding mistakes and providing network governance with a sense of direction and organization.

Therefore, the value of this study lies in both theory and practice, as it broadens the understanding of collaborative network theories and researches the practices that shape processes and lead to network governance as its setting. Addressing network governance from a microstructural approach presents the theory and practice with processes that demonstrate how micro governance functions organize authority sources to solve problems within the network collaboration structure.

1.4 Structure

The present study is structured as follows:

The first part introduces the topics of this research, along with its problem, objectives, and justification. It emphasizes its importance and contributions to the field.

The second segment comprises the main theories that underpin the concepts used to frame the research and anticipate its future results.

The third chapter provides a detailed description of the methods that will be employed

to collect and analyze the evidence. Initially, it includes a review of the literature on the topics, followed by a section on the methods that outline the steps and techniques necessary to achieve the research objectives.

Next, the results are presented. This section begins with a general overview dedicated to explaining and detailing the context of the analyzed case. Subsequently, the collected evidence is elucidated and analyzed through both theoretical and empirical lenses, aiming to further explore the theories and expand the field's knowledge.

This part includes chapters 4 and 5 that describe the evidence and analyze it through a theoretical lens, while also constructing potential drivers for governance and authority in networks.

Finally, the concluding remarks constitute the last chapter of this study, providing closure by weaving interpretations and theory into a final conclusion for the time being.

2. THEORETICAL BACKGROUND

As Van de Ven (2007) posits, scientific research involves an ongoing interplay between theory and practice. Therefore, this section presents the existing theories and the concepts that will serve as the foundation for the empirical evidence search. Tsoukas (1989) argues that while empirical analysis is crucial, the ability to conceptualize from abstract theories is what truly initiates an understanding of the generative mechanisms behind practices. The theoretical review highlights the primary theoretical interests and gaps in the area of this thesis.

2.1 Networks Governance

Networks, understood as patterns of social relations among interdependent actors, varying from networks of individuals up to scales of many organizations, are viewed as a system of combined authority that is more often based on expertise than on position or status (Cepiku et al., 2020). According to Krey and Perunovic (2019), inter-organizational relations define the behaviors they create, exchange, and explore knowledge and capacities, thus involving all formal and informal activities among network partners. Clement and Puranam (2018) argue that studies are beginning to develop network structures, complementing the comprehension of how these structures and other factors influence network dynamics, making it necessary to delve even further into the microstructures, the details that form the macrostructure, to gather more accurate information. Schilke and Lumineau (2018) define alliances as inter-organizational relationships that create a platform where organizations share different resources.

Considering networks as a group of organizations collaborating, making it very difficult to separate individual results when considering the success of collaboration (Ainsworth and Chesley, 2018), implies some consequences for studies. For example, it is necessary to align and guarantee that each and all collaborate toward the network's goal, offering every member the same advantages and results to be shared. Besides individual capabilities, researchers maintain that the organizational context, in this case, inter-organizational, has a great influence on how organizations perform their functions (Ainsworth and Chesley, 2018). Recognizing the functions held by the network to achieve its goals is a way to perceive the path to more effective results for inter-organizational networks.

Although networks are an organizational arrangement, this arrangement is more than

the mere sum of different units, and their relations should be valued in their context (O'Toole, 1997). As networks are more than a mere sum of nodes, where several actors with distinct backgrounds are connected, they result in an arrangement that requires guidance, planning, management, and governance, as these connections result in collaboration, and even collaboration needs to be guided by processes and rules (Klijn et al., 2020). Malhotra and Lumineau (2011) uphold that inter-organizational relationships create a competitive advantage, but it is not straightforward to cooperate in such arrangements, as there are obstacles to cooperation such as the possibility of exploitation by opportunistic behaviors, coordination failures, and others that may be resolved when a good governance system is in practice within the network structure.

Uniting forces is important when facing the obstacles posed by the context, providing solutions through partnerships that create and broaden networks and institutional links, those helping with strengthening all members and allowing advances to design a developed society (Ruffoni, Fischer and Amaral, 2021). These network forms help organizations realize numerous goals, such as gaining access to new markets and customers, sharing innovation-related risks, increasing efficiency through knowledge sharing, and gaining market power (Man, 2013). For all that, some governance structure is necessary to manage the path to achieving such goals. Governance refers to the relations among stakeholders in general, how they interact with one another, and collaboration is a key part of the governance processes, as there are several actors involved, affected by, and having responsibilities (Nunkoo, 2017).

So, the role of guiding network collaboration is provided largely by governance, as it has the responsibility to create and apply rules that will lead the network to its goals, representations that help to keep the organizations and their processes cohesive, such as authoritative superiors; centralization of beliefs and paths may be a useful feature for the administrative hierarchies (Puranam, 2018). Governance, as procedural, involves inputs, outputs, and bureaucratic measures (Fukuyama, 2013), acting as a guide for those network structures, steering the organizations toward the collective goals. As a result, network governance is an important part of the microstructure of a network.

Governing networks remains a challenge; at the inter-organizational level, it has the power to influence the activities of the network and stimulate activities in many other organizations, defining the decisions and actions that must be taken by network governance (Kreye and Perunovic, 2019). These governing activities aim to help achieve the network's goals, which, ideally, all organizations involved are aligned with, proposing network governance as a set of specific rules that impact the individual organization's activities as

well. Governance is directly connected not only to creating rules but also to applying those rules, situations in which the management of such activities becomes crucial to understand how the network was created and how it works, advancing to understanding the collective goals.

Klijn and Koppenjan (2016) define network governance as: "public policymaking, implementation, and service delivery through a web of relationships between autonomous yet interdependent government, business, and civil society actors" (p. 11). These structures end up dealing with complex problems, and the part where they are interdependent as actors means that dealing with the problems is a collective action, requiring coordination, such as governance. O'Toole (1997) considers that networks find it difficult to implement solutions because they do not have enough rules and procedures and agreements among members on how to process the activities to meet the collective goals; it is not possible to find a consensus when they have actors that think differently and even have some individual goals that may cloud their judgment of what is best for the network. These challenges may be solved by creating more structured network governance processes and structures, but to do so, it is necessary to understand the small parts that comprise network governance.

Puranam (2018) suggests that any set of large and complex organizations can be seen as a collection of smaller and simpler ones, encompassing the same problems at different degrees. So, approaching network governance from a microstructural approach means considering the same microstructures that would impact any organization from within. This approach takes into consideration that constructs such as authority, interdependence, coordination, power, hierarchy, conflict, design, and so on are of substance to understand organizations, whether on the shop floor or in the boardroom as well as strategic alliances and networks (Puranam, 2018).

Peters (2017) states that complexity requires a view that is not linear and the understanding that even small changes may cause vast differences in the end in any system, such as a network. Complex systems are open, which causes turbulence coming from the outside environment, and they must have many actors, features that make these systems complex from a political and technical point of view (Peters, 2017), therefore they should be approached as wicked problems.

This approach allows theory to reach further into network governance studies, looking deeply into the microstructures such as hierarchy and autonomy and their relations with the functions of micro governance, in an attempt to fill the lack of discernment within the thematic because it allows the theories to search for interpretations and a basis on the idea that

microstructures are basically the same whether we analyze teams, organizations, or networks. Provan and Kenis (2008) point out that network governance is more than the relations among its participants, involving the authority and collaboration mechanisms used to allocate resources, coordinate efforts, and control actions and results. The authors suggest that the lack in the subject is due to the fact that the network context is very complex, and the studies end with very particular results that very rarely extrapolate to a larger comparative context. When we look beyond interactions and focus on microstructures, a theory is built on the assumption that there is a possibility to universalize the results, as Puranam's (2018) microstructural approach suggests that any organization when analyzed within the microstructural lenses will show that they face the same problems.

The theory distinguishes between governance that cares about control and governance that cares about coordination (Schilke and Lumineau, 2018), as the former defines rules and obligations, minimizes possible hazards involving opportunistic behavior, and aligns incentives; and the latter refers to managing expectations, setting future goals and priorities, and guiding formal communication. The authors suggest that control and coordination are a continuum, not opposites; therefore, they coexist in governance settings, with different levels (Schilke and Lumineau, 2018).

As stated, the partnership among organizations needs a common goal, or more than one, which can only be achieved through collaboration, justifying the creation of the network; the sharing of advantages has to be more interesting than acting solo. In order to organize and administer the inter-organizational relations according to the plan, governance at the network level tries to define some rules for collaboration, ensuring that all organizations are going in the same direction with their efforts, aligned with the network goals. Understanding that networks are not a form of governance but a form of organization that requires a form of governance, Provan and Kenis (2008) theorize that governance in networks may be defined as one of three types: shared participant-governed networks, lead-organization governed networks, and network administrative organization.

The shared participant-governed networks model by Provan and Kenis (2008) is one of the most common forms of network governance, referring to when the network is governed by its members themselves, who are responsible for managing the network relationships, making the final decisions, and managing activities. The lead organization-governed network is also governed by an internal member, but it is a more centralized form, where one member is responsible for the major decisions, coordinating all activities (Provan and Kenis, 2008). Finally, for the authors, network administrative organization refers to the network which

chooses an external entity to govern the relations, a separate entity from the network members. The latter is also a centralized type of governance, and it may be a single person or a whole organization that takes this place.

The type of governance depends on factors such as trust, the number of members, network goal consensus, and the need for competencies at the network level. Vangen, Hayes, and Cornforth (2015) suggest that network governance is linked to structure and processes, a configuration that offers guidance to organizations for the network members, coordinating and allocating resources effectively to manage the network activities toward its final goal. These characteristics of governance, though presenting different aspects, remain with very similar microstructural problems to those examined in this paper: hierarchy and authority remain part of the governance structure, in a broader or smaller part.

Governance can be understood as the ability to make and enforce rules, deliver services, governance is about the agent's performance in carrying out the activities, though may not always be about the goals that were set (Fukuyama, 2013). Therefore, governance seems to imply some kind of order imposed by one or more actors that have the authority to decide the way and the rules to follow - if not the goals. Cochet, Dormann, and Ehrmann (2008) define governance as norms of behavior and codes of conduct that are not established in documents but are learned through socialization and act against conflicts, defining expectations of behavior among partners. Thus, governance helps to create an environment that allows transactions among members, either economical or social exchanges - such as knowledge, trust, culture, and so on.

To achieve such exchanges, hierarchical modes of governance are the most common to find because a central style of management is the tradition from the beginning of businesses. The traditional modes suggest that one central person or group or organization has free power to decide and dictates the rules and expected behaviors, though much criticism is made about this type of governance, as it leaves little room for cooperation and participation of others and there is little space to bargain or negotiate with the central power (Entwistle, 2010). Puranam and Vanneste (2009) claim that governance allows exchange relationships, cooperation, acting as a barrier against opportunism; however, to do so, it should be fulfilled with trust and a more democratic - therefore less bureaucratic and hierarchical - style of governance.

Considering these perspectives, it is possible to find literature that describes network governance as the problem-solving of all previous problems in governance modes, especially theories that place network governance as the complete opposite of hierarchical traditional governance type (Goodwin and Grix, 2011). The hierarchical mode of governance is generally

characterized by high central control over the activities, rules, and outcomes, full of bureaucratic interventions and levels, whereas the network mode of governance is filled with cooperation and consensus, where autonomy rules and agents interact freely (Goodwin and Grix, 2011). These characteristics of free interaction tend to display network governance as a perfect world to solve any conflicts generated by hierarchical and bureaucratic modes of governance or also known as more traditional modes of governance. Puranam, Alexy, and Reitzig (2014) suggest that networks are a possible way to solve old governance problems, but not necessarily eliminate all the traditional features, after all, networks are still a configuration for business. This indicates that even though network configuration tends to collaborate and diminish hierarchy and authoritative modes of governance, these features do not disappear as they are still needed to organize the network in a business-like manner.

Nunkoo (2017) maintains that network governance represents organizations or groups; therefore, it is essential to consider the structures at the organizational level, and collaboration in governance processes is embedded with power and hierarchical relations among the actors, thus making it even more important to consider these relations. In other words, governance in a network context must cover a pluralistic perspective, more socialized ways to govern, considering the need to collectively coordinate, steer effects, and influence different actors, in that case, organizations. Though it seems a very collective and social and equal perspective, it is also necessary to add some aspects of hierarchy that will allow the organizations to have a common purpose (Swierczek, 2020), even when at first it seems as polarized ideas: collaboration and hierarchy. Swierczek (2020) studied findings directed at the idea that governance with more hierarchical traits showed stronger relational embeddedness, facilitating the collaborative process.

Sørensen and Torfing (2021) imply that the collaborative governance process is chaotic, but it can be loosely divided for analytical reasons into stages such as recruitment and motivations of members; the beginning of collaborative interactions and the establishment of basic rules; definition of the challenges or goals to be reached; selection and development of possible solutions; implementation of solutions; evaluation and outcomes; accountability. In order to integrate these steps in unity, it is required some form of collaborative governance involving the members, where integration and implementation can be processed through design thinking, remaining a final challenge of coordinating - that is, practicing - these processes (Sørensen and Torfing, 2021).

Many network governance studies conceptualize and characterize governance and its modes, but they provide limited explanations for the activities conducted by the network to

exercise governance and ensure alignment among members towards a common goal. To map out network governance, it is necessary to examine the activities that shape and regulate the diversity of knowledge and interests held by different organizations (Hao, Feng, and Ye, 2017). This brings us to a more downstream or microstructural perspective: the functions of network micro-governance.

2.2 Networks Micro Governance Processes

Even though it is said that organizations cooperate as a network, it is not exactly organizations that collaborate, but people who represent those organizations (Ainsworth and Chesley, 2018). As a result, it is not feasible to try to understand governance at the network level without closely examining the relations that unite these people and organizations, as they perform activities that consolidate governance, translating network rules and activities into practices and results. Additionally, it is important to consider the organizational context as it influences the functions represented by individuals in the collaborative configuration (Ainsworth and Chesley, 2018). Therefore, assimilating the activities performed and the context of the networks is crucial to enhance the comprehension of network governance.

It may not sound as innovative or even very collaborative when network governance focuses on processes, ground rules, routines, instrumental construction of settings, and patterns, but literature indicates that it is necessary because network governance faces significant obstacles in steering members toward collective goals due to the lack of rules and procedures. The loose structures, which aim to avoid the more formal and hierarchical forms of corporate governance in order to foster a collaborative environment, may offer an insecure space (O'Toole, 1997). Thus, examining network micro-governance functions and analyzing the downstream structures and processes provide an approach to address this lack of instrumental and practical understanding of network governance.

Bianchi, Nasi, and Rivenbark (2021) state that collaborative governance is a task for leadership, suggesting that some forms of hierarchy must exist inside the network to create a vision, motivate, and lead to success. This dissertation argues that it is not a leader per se who represents authority in network governance, although we do not disagree that some form of authority is needed to facilitate the process. We posit that this kind of collective consciousness is materialized by the network micro-governance functions, guiding the members to behave and act in accordance with network rules and toward its collective goals.

Authority or hierarchy may be understood as the right to exercise judgment, make

decisions, and take action inside the network (Purdy, 2012). Therefore, those with more power or status within the institutional context may have more influence when it comes to leading the micro-governance functions. Bearing in mind the inter-organizational network context as a collaborative space, viewing these hierarchical structures as malleable helps network members perceive authority as something they can share with others (Purdy, 2012), thus facilitating the idea of collaboration for the micro-governance functions.

Hence, network members need to clearly understand the network functions to ensure that network governance works effectively (Popp et al., 2014). The more authority needed for functioning and the hierarchical levels any network has, the more levels governance has to consider to function properly. Also, the more authority and hierarchical levels a network presents, the more distant the members will feel from each other and from the network goals, hindering the governance objective, which is to help achieve the planned goals. Lumineau and Malhotra (2011) argue that it is necessary to have mechanisms to mitigate opportunism and conflicts among members in a network, processes that will help achieve the goals but also facilitate cooperation and reduce opportunism. Many inter-organizational networks rely on contracts to do so. However, it is possible to understand that micro-governance functions may replace contractual governance in some situations as a coordination mechanism.

These complementary perspectives on networks as an arrangement that requires governance to function allow this study to delve deeper and analyze the microstructures of network governance as a means to portray a better understanding of how network governance works as a design to solve network problems. Based on the literature, Wegner and Verschoore (2022) propose that network governance carries out several functions in the pursuit of aligning different perceptions and reaching the best way to achieve network goals, as Chart 1.

Chart 1: Functions of Micro governance of Network

FUNCTION	DESCRIPTION	AUTHOR(S)
ALIGNING	Identify and define the direction of network activities and their alignment to achieve the results.	Acar & Guo Yang, 2008
MOBILIZING	Stimulate members to act towards the collective goal.	Van-Veen-Dirks & Verdaasdonk, 2009
ORGANIZING	Organizing human, financial, technological, and legal factors to instigate organizational development as well as processes and routines.	Sørensen & Torfing, 2005; Cristofoli, Macciò & Pedrazzi, 2015
INTEGRATING	Integrate members and resources to share knowledge, plans, and activities aligned with collective decisions.	Sørensen & Torfing, 2005
ARBITRATING	Complements the Integrating function, dealing with conflicts, negotiating the cooperation in the network context.	Cristofoli, Macciò & Pedrazzi, 2015
MONITORING	Ensure that collective goals are being achieved and correct an action that goes out of the planning.	Van-Veen-Dirks & Verdaasdonk, 2009

Source: adapted from Wegner and Verschoore (2022)

These micro governance functions may be integrated into a microstructural approach to network governance, interpreting the subject from the perspective that they appear to require a certain level of authority or hierarchy and examining how authority plays a role within the micro governance functions. Schilke and Lumineau (2016) argue that governance functions are essential for routine interactions, which can reduce the chances of misalignment, misunderstandings, and disputes among network members. Therefore, the micro governance functions act as a shield against situations that could potentially undermine the network's cooperative purpose.

As a result, in Wegner and Verschoore's (2022) study, these functions represent specific activities that network governance should handle with care, as they are vital to the network's operation. The alignment function signifies the necessity of a shared vision among members regarding the network's interests and the directions it will take in its activities and outcomes. Mobilization is the function that encourages network members to combine their efforts to achieve goals; it encompasses communication and the creation of a conducive environment to inspire members to engage in collaborative processes. Organization is the

function that propels the network towards action, promoting the coordination of human, financial, technological, and legal resources to drive development and establish routines and processes that contribute to the network's goals. Integration involves assisting participants and processes in working as a cohesive mechanism, sharing knowledge and aligning goals, and facilitating joint decisions that support the collaborative process. The arbitration function is necessary for addressing conflicts, which can occur in any relationship, especially within organizations; they need to be addressed and require negotiation within a non-hierarchical environment, though as free of hierarchy as possible, while still retaining some authority to resolve conflicts within the network context. Lastly, monitoring is the function that closely examines actions and results, ensuring that activities were carried out and goals were achieved, which is essential to ensure that the network's collective goals, significant to all members, were met, and making any necessary course corrections.

The micro governance functions aim to create a collaborative environment among network members, not necessarily guaranteeing the achievement of network goals but guiding activities to align with these goals (Wegner and Verschoore, 2022). The authors' theory suggests that assessing the effectiveness of these functions depends on the results they produce. Provan and Milward (2001) indicate that network effectiveness, as perceived by the members, hinges on the integration and coordination of actions. Therefore, micro governance can help improve interactions among members and yield more effective results.

Bertrand and Lumineau (2015) reach an understanding that conflicts can easily arise among equal partners, particularly in situations with low hierarchies, where there are more conflicts because organizations and people perceive their relationships as horizontally structured in power. Network structures typically lack the vertical authority to control potential frictions. Hence, governance functions need to mediate conflicts, mitigating their adverse effects on cooperation, aligning goals, and sharing power in a way that doesn't disrupt the more horizontal structure commonly found in networks.

The governance role is carried out through network activities, employing functions that assign responsibilities to all network members in pursuit of common goals. These functions are governed by micro governance decisions that directly influence the decisions guiding network members in their activities and their perception of the goals. The specific goals may vary from one network to another, depending on context and other subjective factors, but some results are desirable in any network because their presence or absence impacts the pursuit of the network's more specific goals. To assess the effectiveness of network governance functions, Wegner and Verschoore (2022) suggest considering outcomes

such as trust, legitimacy, learning, power, and justice, as shown in Chart 2.

Chart 2: Network Micro Governance Results

RESULTS	DESCRIPTION	AUTHOR(S)
TRUST	A condition that promotes integration among members and aligns goals through communication and connection.	Zhong et al., 2017; Klijn, Steijn & Edelenbos, 2010
LEGITIMACY	Internal legitimacy is the network validation for its members with rules transparency; external legitimacy is the validation for the stakeholders.	Persson et al., 2011
LEARNING	Group learning is a mechanism that shapes the future functions and practices of governance in the network.	Knight, 2002; Gibb, Sune & Albers, 2017; Smith, 2020)
POWER	Influence capacity in others' actions, power when unbalanced in the network affects results and may cause misalignment for the network and its members.	Huxham & Beech, 2008; Smith, 2020
JUSTICE	Appropriate distribution of network advantages, generally associated with receiving the proportional amount to what is given by each member.	Park & Ungson, 2001

Source: adapted from Wegner and Verschoore (2022)

These results are a consequence of a carefully cultivated environment, especially refined by the network's micro-governance, fostering cooperation that will stimulate the results to be appropriate and lead the network to reach its goals. Trust, learning, legitimacy, power symmetry, and fairness create the suitable conditions for a network to have space for members to act collaboratively, but these are results of proper micro-governance, organized according to the network's needs to solve problems and create opportunities to develop as a cooperative mechanism.

The results are directly connected with the functions, which may take into consideration how to achieve the network's goals, keeping the results balanced. Wegner and Verschoore (2022) propose that micro-governance functions operated by networks influence the generation of results. So, assimilating the activities performed by the network that embody the micro-governance functions and how each of these activities helps to achieve one or more results is important to understand the emphasis that must be given to each function, in case there are unbalanced results in the network. Klijn et al. (2020) suggest that how a network is governed impacts the results it achieves directly. Therefore, understanding the hierarchical

role in the functions performed by network governance may improve the ability to comprehend the results achieved by the network. If studies show theoretical frameworks to think about how structures influence behaviors, and it is known that behaviors aggregate to inter-organizational goals, then capturing the connections between hierarchy and governance functions will help improve network design for better results.

To practice the functions described by Wegner and Verschoore (2022), networks comprise several organizations with distinct backgrounds that need to be connected and directed toward the same goals; thus, a certain kind of governance and authority is necessary to establish boundaries and common ground. After all, the micro-governance functions require a dose of hierarchy in the sense of who has the power to enforce those functions upon other members of the network, who has the final decision, and, as one of the functions well explains, who is responsible for monitoring whether the results have been attained. The interaction itself has to be managed, and it can be executed by appointing someone who invests time and energy connecting the functions, strategies, governance, knowledge with other involved actors. Although networks tend to be a group of interdependent organizations with horizontal relations, a certain level of hierarchy remains (Klijn et al., 2020). Consequently, creating some hierarchy involving the power to manage the resources, relations, and processes is necessary for the network to practice governance. So the existence of different perceptions and interests among actors, as well as different contexts from where they come, will lead to conflicts and complexity, which will require a certain vertical structure to deal actively with well-defined functions to organize activities and set a clear path toward the goals.

Hierarchy shapes processes, beliefs, and expectations about the collaboration procedures, including formality levels. According to Purdy (2012), an organization may challenge the notions about power by sharing the power to design processes. It means that though a certain level of hierarchy is necessary to govern the governance functions, it is also possible to share the power in a collaborative process, especially sharing the decision about these functions, giving the organizations that are part of the network the sense that they are also part of the process of designing the governance structure and strategies that will guide them to results.

For this research, it is proposed that the different micro-governance processes executed by the network affect the results differently and act as a source of authority within the network, mitigating the more traditional hierarchical governance forms and fostering the collaborative process in a more organized and autonomous environment. Literature seems to

suggest that less hierarchy will provide the network members with a better understanding of the micro-governance functions; therefore, these functions will lead to better results. On the other hand, a high level of hierarchy may help in organizing the network structure and functions, but it may negatively impact the members' perception of the fairness of their relations. The practical implications are that networks must find a balance between micro-governance processes according to the results the network has been achieving, constantly evaluating the goals, results, and governance planning. The theoretical implication is that network theory needs to look deeply into the hierarchical process as a whole at the network level, considering the complexity of interactions and power distribution among organizations that are part of a network structure.

2.3 The Role of Authority in Network Governance

Networks represent a specific type of organization, a gathering of many organizations that share common objectives, goals they cannot reach by themselves or that would be much more costly to achieve alone. Since networks have specific goals to reach, some form of organizing the activities and rules to achieve those goals is expected to be found among the collaboration, in the role played by network governance. Authority, as the legitimate power to make decisions, shape the organizational structure, and dictate actions, has been recognized as a defining feature of traditional organizations (Weber, 1922; Simon, 1951). When we convey the same idea of authority to the network structure, it has many differences, and it becomes harder to establish boundaries, similarities, and oppositions compared to traditional theories. Networks usually do not have the same employment ties that bind organizations to their members. Formal authority implies power imbalances and clear boundaries between individuals (Gulati, Puranam, and Tushman, 2012), creating vertical structures with hierarchical levels. These features are often in opposition to the network idea, which is embedded with cooperation, democratic decisions, a horizontal structure, and trust ties among members. Regardless of how decentralized the structures are, some sort of central position is required to coordinate certain activities, such as information flow, enforcing joint rules, and practicing network governance as a whole (Thomson, 2006).

According to Eth and Puranam (2020), organizations are systems of collaboration, whether we examine it at the individual level or consider interfirm, strategic alliances, joint ventures, partnerships, and ecosystems. Governance is one of the tools that shape collaboration. Cabral and Krane (2018) suggest that the network design will influence the

collaboration process, as well as it is the result of the same collaboration process, establishing the need for specific and new structures to govern collaboration. Using the approach of microstructure is interesting as we examine organizations as having the same basic problems, despite the level of aggregation. However, though the problems are similar, the possible solutions may be specific to network governance.

Authority hierarchies indicate some organizational problems that must be addressed when theorizing about their practice: power concentration, specialization towards the bottom of the hierarchy, increased bureaucracy and procedures, and difficulty in achieving results collectively (Puranam, 2018). This does not mean that authority is only a source of problems because it is also a necessary feature to organize and nurture collaborative arrangements. The key question is the exact role that authority plays in each part of governance and the balance when it comes to less hierarchical structures, such as networks.

Gulati, Puranam, and Tushman (2012) indicate that the lack of formal authority in what their study calls meta-organizations is only based on formal understandings of authority. Even in these new and more collaborative ways of organizing, authority is not absent. Network authority is found in relations based on expertise, reputation, status, privileges, and control over key resources inside the network. This means that while network governance is less hierarchical than traditional forms of hierarchy suggest, it does not completely eliminate hierarchy and authority from within its boundaries. They just have different sources and, probably, different roles and outcomes.

Authority remains an important microstructure to be analyzed as it creates a certain tension in the collaboration process. Autonomy among organizations carries significant weight, and the sense of all organizations having the same horizontal position and decision-making power inside the network creates an idea of unity required to create an effective integration perception (Eth and Puranam, 2020). Despite that, problems such as insufficient motivation, knowledge gaps, and different beliefs leading to evasion from the collaborative process are often portrayed as issues that could be resolved with some standard authority to overcome these challenges (Eth and Puranam, 2020).

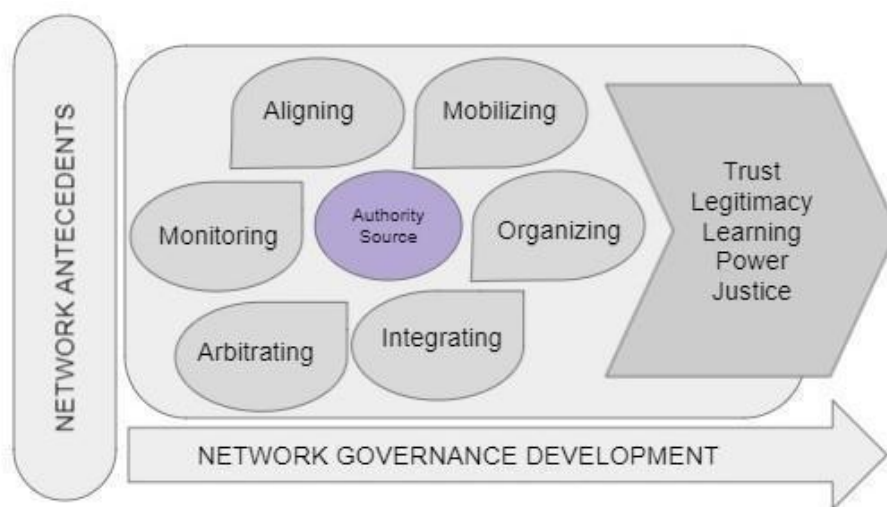
On the contrary, autonomy is positively related to better network performance. However, too much autonomy may leave the network and its members without a clear goal or direction, leading to possible failure. Therefore, some studies have shown that a balance is the better outcome when it comes to network governance related to autonomy and authority (Colla et al., 2018; Cochet et al., 2008). Entwistle (2010) recommends that balancing between degrees of autonomy and authority is the only option, as the network collaboration process

requires certain levels of interdependence. Thus, negotiating the set of priorities is necessary, but having some level of governance that indicates the boundaries and enforces some rules that will not always be negotiable is also necessary.

Eth and Puranam (2020) indicate that authority's importance is due to its primary role as a conflict manager. Many organizations rely on authority as their first tool to resolve any conflicts that arise from natural interactions among different people or organizations, in the network case. The authors suggest that conflicts are any ruptures in the coordination or cooperation process in the network, and understanding the authority or the lack of it passes through understanding how the network deals with conflicts. From that perspective, it becomes even more important to understand the functions of micro-governance, as many of them address conflicts by establishing rules for network members. These rules include aligning, which idealizes the direction of network activities and seeks to ensure that all members are on the same path to achieve the goals, and integrating, which aims to unite members and resources to envision collective decisions and activities (Wegner and Verschoore, 2022).

Therefore, it is possible to associate the micro-governance functions with authority sources inside the network's governance process, as they may work as a basis to direct network activities, resulting in the network's expected outcomes, as proposed by Wegner and Verschoore (2022) and represented in Figure 1.

Figure 1: Micro governance functions leading to network results



Source: the author, based on Wegner and Verschoore (2022)

Figure 1 represents the network governance process, where the network has

antecedents, a social context from which it emerges, with specificities. The functions performed by the network's micro-governance will act as authority, replacing the more traditional hierarchical forms of governance, without concern for who or which organization is practicing them, at a certain point when they will help alleviate the vertical structures of hierarchy needed in some cases to reinforce the processes within any business, fostering the collaborative process. These functions will lead to the network's results, specific to each network but designed by Wegner and Verschoore (2022) as five particular types of results. Considering the aforementioned, it seems that understanding how the micro-governance functions play the role of authority in the network, which processes support the functions to foster the collaborative environment, will help comprehend the details of network governance in practice.

Firstly, even though authority may be perceived as an obstacle to collaboration when it comes to applying the functions, especially those that require collective movements and interactions, some source of authority must give the network the authority to make the final decisions. Cabral and Krane (2018) postulate that roles of guidance and facilitating are essential to keep the network balanced when it comes to power perception and solving conflicts. This poses a contradiction, as to solve power conflicts, it is necessary for someone in a position or with some characteristics that give this member an advantage or some power to negotiate and arbitrate the conflict. Therefore, to act according to the functions, not only but especially the arbitrating one, the micro-governance will act as an authoritative source within the network context, and the authority source will mainly come from the functions themselves, reinforced by the network leaders that will put them into practice.

In their study, Schilke and Lumineau (2018) contribute by saying that conflict is an important process in a network structure and that governance will induce different types and levels of conflicts among partners' relationships. Thus, one of the governance functions that better correlates with the authority to solve conflicts is arbitrating, which deals with disagreements, negotiating, and cooperation among the members of the network. Therefore, for any network to not have authority, it has to crack the code of how to manage conflicts without relying on authority, and maybe the strategy must be steered towards prevention (Eth and Puranam, 2020). Once more, the other micro-governance functions may present some answers on how to prevent conflicts in the networks. So, authority has a significant role in collaboration, preventing or solving conflicts, which means that networks must either learn how to insert authority in the collaborative process without losing the autonomy advantages or find different forms to arbitrate conflicts or even completely avoid them. Lahiri et al. (2019)

study suggests that ambiguity in authority and conflict resolution may lead to failure, highlighting the value of creating either form to balance authority and autonomy in collaboration or finding substitutes that still give the network governance the same role in steering the collaborative process.

Entwistle et al. (2016) indicate that although many studies have been examining governance away from the hierarchical traditional system as if it is the answer to new types of business and arrangements, various results show that hierarchy - and by extension authority - has never stopped being relevant when it comes to governance, even for network governance. Bachmann (2001) postulated that the logic behind interfirm relations such as networks is much more complex, and tensions and contradictions are always part of the process. Then, analyzing hierarchy and governance in such a context means going deeper than just affirming that it is necessary to find a balance between autonomy and authority. Some scholars suggest that trust is a mechanism that could replace authority in network governance, working as a great barrier against conflicts (Uzzi, 1997; Adler, 2002; Bachmann, 2001; Puranam and Vannest, 2009), but even if it proves to have results, trust is very fragile as a mechanism, too uncertain to replace the entire network governance (Bachmann, 2001).

As the functions of micro-governance seem to be the field to understand network governance, with so many actors involved in the process, it is difficult to not have a set of well-designed rules and procedures that will guide these actors' performances (the governance itself). This invariably results in some sort of hierarchy and authority even inside a more horizontal structure like networks (Cristofoli, Markovic, and Meneguzzo, 2012). Although collaborative actions are tough to measure, using a microstructural approach, maximizing the understanding of the process through its authority mechanisms that will hinder, incentivize, or make no difference at all over the micro-governance functions may help understand how governance is designed for success in a collaborative process. Nevertheless, Koçak and Puranam (2019) argue that researchers cannot expect to understand any aspects of collaboration, especially those linked with values, norms, assumptions that will serve as the basis for governance, without understanding more cultural aspects that serve as context. This means that network governance studies will have to deal with deep and mainly qualitative research to find answers.

When dealing with the microstructures of organizations, Puranam (2018) states that some problems arise more commonly from organizations, and those are the problems that structure design should be focused on trying to solve, as it would be more relevant and generate better results as they are known to be happening easily. The author refers to three

main problems: process design, task allocation, or conflict resolution. Most of these problems would also be found in the network structure and could be addressed by the proper governance settings (Gulati, Puranam, and Tushman 2012). The solution to these problems may be found within the micro-governance functions, as they are responsible for organizing processes and routines. The authors question whether it is possible to find relevant differences between authority that is derived from different sources.

This means that it could be possible to find differences between the results when the authority is allocated according to knowledge, expertise, among the members of the network, or even allocated to better prepared or long-lasting organizations, founders, that will have some leverage over the other members, than when authority is allocated purely by power, by convenience, holding on to those who have more time to dedicate or show interest in doing so. If the proposition holds any truth, differences in the results of micro-governance (such as trust, learning, power, justice, and legitimacy) would be perceived by the network members. Also, this same difference in authority origin may lead to a difference in the choice of micro-governance functions that will be held or receive more attention or primary attention when it comes to planning and carrying out the functions. So theory suggests that the origin of authority, whether allocated by power or legitimated by knowledge, trust, or expertise will have an impact on how governance deals with the functions, creating more mechanisms or giving more attention to some of them more than others (given that the micro-governance functions are: aligning, mobilizing, organizing, integrating, arbitrating, and monitoring) (Wegner and Verschoore, 2022).

It is even possible to suppose that different modes of network governance, such as the ones proposed by Provan and Kenis (2008), will generate different sources of authority within the network, therefore leading to different mechanisms to organize, plan, define, and conduct the micro-governance functions, though it would lead to a different path than the objectives proposed for this research. Cao et al. (2018) study analyzes the fact that power distance is related to culture; in such cases, it depends on previous factors whether organizations will accept mechanisms of organization and hierarchy better or worse.

Maybe even the source of the power needs to be accentuated, as Purdy (2012) suggests that in collaborative processes there are different sources of power, highlighting three of them as more influential and useful to understanding network governance:

Authority: determined by status within the network context, usually achieved by social agreement inside the peers circle that delegates power to a specific organization, and it is important in a network to be used as a shared asset, in order to give a sense of inclusiveness

(Purdy, 2012). Power: determined by resource-based situations is also recognized among networks, especially power based on tangible resources such as financial, technology, and people, but also intangible resources as knowledge and culture may determine the power balance (Purdy, 2012). And finally, discursive power: related to the discourse, when the organization or network represents such an idea or value or principle that is recognized by the others as a status holder (Purdy, 2012), which is very common to find among networks that fight for social or environmental causes and it is a power utilized to negotiate in and outside of the network as well.

Accordingly, Purdy's (2012) distinction among the three sources of power highlights the authority's importance for network governance, as the authority implies a socially recognizable and accepted source of power. This is a relevant factor when we consider that network members are units in themselves, interdependent inside the network process, but very different from each other, and usually, members that have joined a collaborative process not only expect to reach some collective outcomes but to do so in a cooperative format, probably without considering the need for any governance and authority form.

This brings new light into theory as it does not assume that networks do not have any kind of authority, but it dives into the idea that different authority exists embedded in network governance - as well as autonomy, they coexist - and it shapes the network activities, though it may do it discreetly, leading to different ways to organize the micro-governance functions and also to different results for the network. Therefore, it is possible to understand that depending on the authority source, different styles of power will play different roles and be more or less necessary to reinforce the micro governance function. But, as autonomy and horizontal structures are very relevant in network governance, it is meaningful to consider that challenges arise when inserting authority in such a context, and balancing the authority with autonomy may cause variations in the perception of members about the governance process.

In sum, networks that want to avoid the idea of hierarchy and authority tend to depersonalize the leadership positions, using the micro governance functions as a means to validate their governance activities without evidently signaling for authority or hierarchy directly. When the participants of a network perceive a low level of authority, they have a better comprehension of the micro-governance functions, the planning, and allocation of tasks, they understand the aligning among the network members, they see the conflict resolution, and they perceive better results achieving. It implies that practice must be observed and analyzed in future studies gathering empirical evidence that supports or refutes this assumption.

Bruin (2018) states that for a strategy to be implemented successfully, a certain level of consensus must be in order. Even in hierarchical structures, the less involved the organizations feel in the governance process, the more they feel as if they do not belong to the process. So, the fewer hierarchical levels a network presents, the easier it will be for members to feel like part of the governance process, but it will also create more arena for conflicts and disruption, as members will sense a power balance that will permit them to see all participants as equals. Therefore, micro governance functions will take place to avoid long vertical hierarchical structures, but also create a space where consensus may be created without conflicts or several disagreements, as effective governance must ensure the development of common understanding (Bruin, 2018).

The challenges presented by this discussion face the balance between cooperation and coordination, the question of how to organize the network mechanism to pursue the results in a fashion manner but without losing sight of the collaborative context where the networks must be embedded. Both coordination and cooperation present important roles for network governance. Both authority mechanisms and non-hierarchical collaborations are not opposites, and it implies that scholars must investigate whether the presence or absence of one of them is enough to cause failure or success. Balance does not necessarily mean a half and equal division.

This study proposes that the micro governance functions will act as the authority inside the collaborative process, depersonalizing the idea of authority, giving the network a more democratic and horizontal structure. It does not imply that networks using the micro functions will lack authority, but that the authority will be more connected with the process itself than with members or a role of power, facilitating the adoption of functions that will lead to results and minimizing the negative impact of hierarchy in network structures. Rather than assuming that networks are perfectly balanced when it comes to authority and hierarchy, we intend to examine how micro governance shapes the processes according to the need for authority, according to the needs of different activities. We may articulate the important differences between different modes of network micro governance and how they create or surpass boundaries using authority or autonomy to certain degrees.

Despite the academic interest, to the best of our knowledge, there are gaps in the literature concerning the micro-governance functions and the authority role and their impact on network governance. Therefore, researching how these topics are related and how networks are governed is important to understand their functioning and to promote development and better performance (Wegner and Koetz, 2016). The micro-governance

functions are essential for network collaborative governance, but even to perform these functions, the network leaders should rely on some source of authority or hierarchy that empowers them in order to execute these functions. It is proposed that the functions themselves are the authority source, as the ones who know and conduct them will seem fit to lead the network activities. Cabral and Krane (2018) state that authority in a network configuration may be well tolerated when it is fed by knowledge, consistent information, and communication. The authors will refer to knowledge as a source of legitimacy, and an important feature for network governance (Cabral and Krane, 2018). Considering that legitimacy is in Weber's theory (1922) one of the types of authority, in such a case, the more comfortable the network leaders appear in conducting the micro governance functions, the more collaborative the network governance process will sound for its members. Though they do not guarantee the achievement of results, the micro governance functions may help foster an adequate environment for collaboration at the network level.

Lumineau and Malhotra (2011) assess that it is necessary to examine network governance structures and their processes to understand not only the media but also the results of such governance. The authors suggest that governance structures, such as the micro functions represented, shape the frame used by the network members to make judgments, influence the network and its members' behavior - that is, the processes (Lumineau and Malhotra, 2011). So, it is important to explore the network decisions when it comes to governance structure because it impacts network strategy and its relationships, performance, and, in the end, its outcomes, as proposed by this study.

We believe it is necessary to agree on what constitutes results in organizational theory, as there are various methods to measure them. In this case, we will consider that each network has different goals set and different paths to achieve them based on various plans coordinated by the same micro-governance mechanisms and functions. However, the results that will be considered relevant for comparing micro-governance modes and authority will be delineated according to Figure 1 and any emerging empirical evidence.

2.4 HealthCare System: Functioning as Networks

In 1978, the World Health Organization (WHO) defined the need to reach health for all by the year 2000. Surely, nowadays, it is clear that the goal has not been achieved and it is a challenge in many countries. Health care demands public policies, resource allocation, performance control, governance processes, as well as technical skills, knowledge and professionals. In order to reach health for all, or at least trying to do so, it is necessary to defend a good public healthcare system, working as a collective, towards the population needs and using the resources in the best way possible. It requires a network approach to such a complex situation.

Gibbons (2007) defines a public healthcare system as a complex network that includes government, private healthcare delivery and businesses, non profit organizations, practitioners and even academia. Therefore, understanding these networks is an enormous workload of study, as they present such complicated size and number of actors and it is impossible to measure the whole system and achievements.

According to Brito *et al.*(2018) networks present governance processes that vary from membership policies, data sharing, collaboration and research rules, attribution and coordination and each network decides how to organize their strategic plans and what roles these processes will perform, and also that all stakeholders in a healthcare network participates in their own way on those processes. Different from other networks, healthcare ones are structured to self-organize, as they have so many actors involved and they depend on collaboration from participants, adapting for the resources and contextual needs (Brito *et al.*, 2018). Since the creation of the national healthcare network in Brazil, one of the main challenges faced was the number of actors considering the country size, and decentralization of some specific primary care was one of the solutions found along time to deal with imbalances (Botega, Andrade and Guedes, 2020). This solution came from a network perspective of coordination, a governance action to deal with problems and searching for improvement in the network governance processes.

Many challenges come from the specific fact that a network comprises many actors, butt specially when we add other features such as a complex problem as public healthcare as the network main objective, as well as a country level network, mainly in a big country as Brazil, which has many municipalities, and low population density, governance processes of this network have many factors to take into consideration.

A public healthcare network is an activity with economic and administrative functions, used to optimize and impose decisions and measures and public policies aiming to optimize allocation and distribution of public resources (Bastos *et al.*, 2020). Coordinating these mechanisms and processes happens through this network that articulates assets and needs, acting as a central system operating the structure that serves the country's population, coordinating and governing the healthcare main areas. It involves a team of people, professionals from technical and administrative areas, responsible to ensure the functioning of the whole system, coordinating processes according to the complexity necessary required by the public users (Bastos *et al.*, 2020). All these processes and measures and people are necessary in order to keep the network governance, ensuring the coordination of the network specially to offer such a complex and important service as public healthcare.

The same research from Bastos *et al.* (2020) expressed the need that governance processes, depending on collective construction in a network, are considered as strengthening features in healthcare networks and establish a strong bond among partners in the network - users and providers. It also demonstrates the need for collective voices, performing actions for health accessibility, expanding results. In order to do so, training and education as well as clear processes and structures and coordinating procedures are required to offer support to the network to search for healthcare solutions and practices (Bastos *et al.*, 2020).

Finally Van de Ven *et al.* (2023) suggest that governance of networks must receive imperative attention, and healthcare networks are not different, because network governance is arduous to hold in practice, and practitioners experience from individual organizations is not enough to rule network governance. Hence, studying healthcare networks in its governance practice is a form to better understand how to provide such key public and complex service as well as better coordinate it from the network actors stand point.

Considering that healthcare networks provide attention to such a complex and necessary goal as people's well-being, especially when offering a public service, contributing to understanding its governance from a downstream perspective, focusing on processes and functions may be a key viewpoint to the collaboration process and better results. Behold the fact that better results in such collaboration provided by a more organized network governance prompt better public healthcare aid, and there is an urge to enhance public healthcare networks governance.

3. RESEARCH METHOD

This section describes the method used to collect and analyze the research evidence. It also presents the units of analysis, the research steps, and how the results will be analyzed. Additionally, a schedule is provided to clarify how and when this dissertation proposes to reach its objectives.

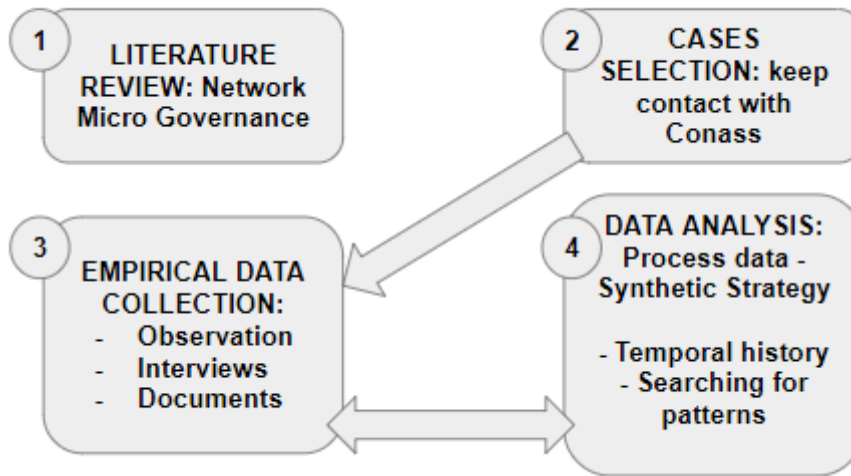
3.1 Research Design: Process Data

The choice of any methodological practice must be carefully considered and analyzed to avoid distortion, and it should prevent the repetition of prior research, as each research problem requires a specific approach to address its needs (Lerman, Mmbaga, and Smith, 2020). Therefore, it is necessary to understand and explain the research method to fully demonstrate that the researcher has mastery of its theory and techniques and will apply them according to the research needs.

The research process is a collaborative construction between the researcher and the theme to be developed. Science focuses on questions that drive the search for answers; thus, the research problem is crucial in any study, as it delineates the method that will be applied to achieve the research objectives. Van de Ven (2007) suggests that scientific research is a repetitive process involving theory and empirical evidence, and the gap between them creates an important space to be filled by researchers. This space can yield results that contribute to the advancement of science, utilizing different methods based on the research questions and context. Bianchi, Nasi, and Rivenbark (2021) indicate that learning from cases of collaborative governance improves our understanding of the topic, especially through comparative research.

Considering these factors and the research problem at hand, Langley's (1999) process research appears to be one of the more appropriate methods as it addresses "how questions." This study is designed as exploratory research, a preliminary study aiming to investigate a phenomenon using different techniques to broaden the understanding of the processes that permeate the micro governance functions in networks. Figure 2 provides a brief overview of the research steps:

Figure 2: Research Steps



Source: the author (2023)

Bizzi and Langley (2012) describe such an approach as one that examines events, activities, and choices over time, attempting to create meaning through theorizing patterns that emerge from evidence, with no focus on independent or dependent variables. Though process research aims to understand how and why things happen and change, the data tends to be very dynamic and disorganized, posing a massive challenge for the researcher. It takes time and a great deal of focus to employ sensemaking techniques that will help analyze the results (Langley, 1999). Process research centers on evolution and activities; therefore, data must be collected over a sufficient period to capture patterns not only for reconstruction but also to capture the activities as they occur (Gehman et al., 2018).

One common way to understand processes is by focusing on entities such as organizations, groups, or structures and how they evolve over time, assuming they have an existence that can be logically understood (Langley, 2021). This perspective involves tracing processes, identifying patterns that make them work, and comprehending how they operate within a feasible time frame.

The process of going beyond existing theory to make relevant contributions, using empirical data, may be termed abduction (Gehman et al., 2018). Abduction involves developing a deeper understanding of the world through theory, collecting data, and considering different angles that may complement or enhance our understanding of the theory. Abduction thus signifies a blend of induction and deduction, connecting theory and practice and expanding theory further.

Bizzi and Langley (2012) recommend paying special attention to process data

peculiarities, such as:

1. Temporal orientation - as process research can either trace processes back into the past or explore them in real-time. Real-time data is rich in details but lacks the depth that past investigation may provide. Both approaches need limits imposed by the researcher to find a moment to stop collecting data and start tracing patterns.
2. Unit of analysis - process data can use various techniques to collect data, but it needs field, spatial, and temporal boundaries, as it is context-dependent. In network studies, Bizzi and Langley (2012) suggest that drawing boundaries can be challenging due to broad network connections. Focusing on linkages or relationships or on the internal network of a multidivisional firm may help overcome these challenges.
3. Sampling - process data deals with cases, people, activities, and time periods, making it crucial to choose and explain the sampling process wisely. The coverage may vary in depth or superficiality, depending on the research problem's needs. Sampling in qualitative research involves an element of convenience, requiring deep access into organizations and having its idiosyncrasies due to the researcher's involvement.
4. Data source - for collecting data, it is essential to consider the triangulation of elements: observation, interviews, and documents. These approaches provide different sources of information, with observations relying on the researcher's abilities, documents offering a more formal and temporal source, and interviews engaging people's memories and interpretations. Different sources can compensate for each other's weaknesses.

Considering a circumstance processually means focusing on activities, as the process is not only considered as an action but as a world in itself, full of life, changes, and possibilities (Langley, 2021). For that purpose, it is important to choose techniques that allow observing interactions, activities, and occurrences at the moment they happen, understanding that theory will grow from practice.

Even though process data has many challenges, with time and complex data being common examples, it creates a fertile space to generate valuable outcomes from its analysis with fine insights into organizational problems and theories. Langley (1999, p. 694) asserts that "the complexity of process data is, of course, a reflection of the complexity of the organizational phenomena we are attempting to understand." Dealing with complex research is only natural when delving into the complex organizational field. To analyze complex data,

Langley (1999) suggests sensemaking strategies.

3.1.1 Selected Sensemaking Strategy

Sensemaking, according to Langley (1999), is a strategy chosen by the researcher to give or interpret the meaning of empirical data collected, including data from events and activities over time during the research. The role of the researcher becomes more significant as there are not one but seven strategies suggested by the author. It is essential to pay close attention to the research problem and data, constantly thinking about theory and the collected results to find explanations for the phenomena (Langley, 1999).

Langley (1999) proposes the analysis of process data through events and activities - the processes - over time, requiring the manipulation and interpretation of data to find patterns. It makes sense when approaching micro governance functions from the perspective of a set of activities or processes that will have patterns and produce results for network governance. There are seven possible sensemaking strategies, as demonstrated in Chart 3.

Chart 3: Process data strategies for sensemaking

STRATEGY	STRONG ANCHOR	DATA NEEDS	ATTRIBUTES
NARRATIVE	time	one or a few cases	high accuracy, low simplicity, and generality
QUANTIFICATION	events	one or few dense cases	high simplicity and generality, modest accuracy
ALTERNATE TEMPLATES	theories	one case	high accuracy, low simplicity and generality
GROUNDING THEORY	incidents - categories	one case	high accuracy, low generality and modest simplicity
VISUAL MAPPING	events	five or more cases	modest accuracy, simplicity, and generality
TEMPORAL BRACKETING	phases	one or two cases	modest simplicity and generality
SYNTHETIC	processes	five or more cases	modest accuracy, simplicity and generality

Source: based on Langley (1999)

Langley (1999) suggests that the strategies for sensemaking of process data may be

used as single tools or in combination, depending on the research necessities and the characteristics of each strategy. Although each of the strategies has its own characteristics and strong traits, for this research, the synthetic strategy was chosen. This strategy involves comparing one of the processes among cases, searching for patterns, and offering moderate levels of accuracy, generality, and simplicity.

It is clear that the strategies are not opposites; they can be mixed according to what the researcher wants to analyze. Some of them are more favorable for accurate results or more capable of resulting in testing theoretical generalizations. One specific feature is that the sensemaking strategy called synthetic seems to have the power to predict, as it looks at processes and tries to derive general measures from them (Langley, 1999).

Considering these features, this study consists of process data research, specifically relying on the synthetic strategy to analyze the processes that incorporate micro governance processes into the network in the search for patterns that show how they function as an authority inside the network governance.

Aaboen, Dubois, and Lind (2012) state that there are four great challenges when researching networks: the difficulty of establishing boundaries due to the many relationships formed by the network, the complexity due to the large structure that a network represents, the issue of time as the subject is in constant change in its processes, and the problem of comparison, as each network is unique in its context.

Considering that process research already deals effectively with the time problem, incorporating the change over time as one factor, and analyzing governance through its microstructures manages the complexity part. The boundaries will diminish as the researcher takes on the responsibility to study a matter and the context to acquire expertise to understand the field beyond the theory. Finally, the process research sensemaking synthetic strategy is the one that fits to deal with the comparison problem, using multiple cases that may help to capture a multitude of patterns in the functions processes. This strategy requires a more deductive approach, but it is a welcome approach as micro governance provides a base for it.

3.1.2 Field Selection

Approaching the research from a process data perspective and using a synthetic strategy to generate patterns from empirical data and evolve existing theories indicates that the research should involve at least five (5) cases for study. Although the chosen field in this research is one network, constituting one case, it is possible to consider the synthetic strategy,

as it encompasses many different committees and a highly complex network. When the primary data is processed and composed into processes for analysis, models emerge, identifying synthetically predicted processes and their consequences, resulting in network governance regarding authority issues in a collaborative environment (Langley, 1999). This suggests a robust foundation for data, potentially providing strong explanations for the processes, creating validity, and producing simple formulations that allow for some generalization, stemming from the observation of multiple cases. Although this research focuses on one major field - Conass, further explained in the results section - it may be considered a multifaceted field, divided into three larger sections (national, states, and counties), and further segmented into different committees, assemblies, councils, and technical chambers.

Even though process data is not a case study, it shares similarities as it collects its data from cases, and in many situations, the case is very specific and context-dependent, fundamentally altering the perspective of the research. A case study is the empirical method that allows us to delve into real contexts, such as processes, attempting to yield generalizable propositions to expand theories (Yin, 2009). Therefore, process data employs the case study approach to analyze the how, why, and when, but from a process perspective, utilizing process data strategies.

Although this perspective shows less dependency on context, given the increased number of cases and greater potential for generality from emerging patterns, it is important to cite the cases as their context remains a crucial part of the empirical data collected. For this dissertation, the chosen field is Conass, a National Council of State Health Secretaries, a civil association entity without profit, bringing together healthcare secretaries as managers of public healthcare across the national territory. Conass represents a network aiming to achieve collective goals in national healthcare, considering different actors from all Brazilian states, each with distinct needs and contexts. It also holds the responsibility of defining guidelines, making decisions impacting the entire national health system, and functioning as a consultative body shaping public policies, defining plans, documents, and conducting collective strategies.

3.2 Data Collection and Analysis

The research utilized observation of meetings, forums, documents, and interviews with managers and members of the committee using open-ended questions based on the

micro-governance processes to uncover the moments on which the network relies to guide its governance and provide it with a certain governance structure and processes.

Langley and Klag (2019) observed that qualitative research requires involvement, and that is paradoxical because it is believed that knowledge in such research comes from the proximity of the researcher and the object of study. However, too much involvement can be perceived as problematic. Nevertheless, the knowledge that can be extracted from qualitative research is rich, and it is the suitable approach for this research problem.

Some researchers suggest that committees are a difficult mechanism to implement, but they offer great possibilities because they are flexible. Governance in these situations shapes the functioning and design of these committees, although it is in constant change (Langley et al., 2013). Therefore, process research presents itself as the suitable method, considering the complex multiple cases and the slightly more deductive approach as the micro-perspective on governance. Some tools will be used to collect and analyze the data.

A combination of three data collection procedures will be employed for this research: 1) semi-structured interviews with Conass representatives; 2) archival analysis of network documents from websites, reports, and previous meeting minutes; 3) observation of meetings - Conass assemblies and meetings are available via video internet platforms. Both the documents and the observations were used to enhance the interviews with previous knowledge to better understand Conass history.

The interviews were based on a temporal approach, focusing on the micro-governance processes, establishing the history of the network, previous governance processes over time, conflicts, and situations that were deemed memorable. These three data collection techniques were used interchangeably, enabling the researcher to identify the predominance of certain processes and highlight the processes and the context in which they take place, observing patterns among different situations and cases. The interviewees were chosen according to the snowball technique, where the first contacts with Conass members indicated other possible participants and so on. All the interviews were conducted via video conference from November 2022 to June 2023, and observational and document data were collected from March 2022 to June 2023. Though time is not the only quality marker, in order to go back in time to analyze processes and understand the field deeply, considering its complexity, a large amount of time was taken to collect the data. The interviews were easier online, as the members of the committee were spread across the country. It also made it possible to have a more flexible agenda for the participants and the researchers. For example, one of the participants was interviewed during a car trip; he was moving from one meeting to another,

and as it was heavy traffic time and he had a driver, it was all for the best that he used this idle time to participate in the research.

The interviews generated 21 pages handwritten in notes, and transcribed they created 143 computer pages, there were also 24 pages of handwritten observation notes. These notes were generated from observation of virtual meetings, as Conass has the meetings in records that can be accessed by anyone interested in those. The observation notes were also result from documents analysis (specifically those available at Conass website).

The total of pages (from interviews and notes) was the data collected for this research, they were used as raw material to analyze the problem proposed by this study. The analysis was made based on searching patterns, ideas that were spoken directly or indirectly in many interviews, that appeared on the observations, that showed how the network micro governance was working along time in Conass. It is a work of unraveling patterns that are not obvious at a first glance, that requires thorough and clear sight from the researcher, to look into the data details and find those that converse with each other. And then, compare these with the literature, reinforcing or refuting previous studies. Moreover, searching to expand the knowledge in the field.

The interviews are better detailed in Chart 4, with the duration of each one, and showing that the interviewees had different backgrounds, but large experience with public healthcare networks in Brazil.

Chart 4: Interviews information

Interviewee	Gender	Time in Public Healthcare	Interview duration	Representative of State or Region
Interviewee 1 (I1)	Male	15 years	72 minutes	Conass
Interviewee 2 (I2)	Male	11 years	37 minutes	Conass
Interviewee 3 (I3)	Female	12 years	48 minutes	Conass
Interviewee 4 (I4)	Male	12 years	49 minutes	Conass
Interviewee 5 (I5)	Female	15 years	60 minutes	Conass
Interviewee 6 (I6)	Male	20 years	65 minutes	Rio Grande do Sul
Interviewee 7 (I7)	Female	17 years	53 minutes	Conass
Interviewee 8 (I8)	Female	25 years	51 minutes	Sergipe
Interviewee 9 (I9)	Male	16 years	41 minutes	São Paulo
Interviewee 10 (I10)	Female	30 years	53 minutes	Rio Grande do Sul
Interviewee 11 (I11)	Female	17 years	49 minutes	Paraná
Interviewee 12 (I12)	Female	30 years	41 minutes	Pernambuco
Interviewee 13 (I13)	Male	32 years	48 minutes	Conass
Interviewee 14 (I14)	Male	16 years	35 minutes	Tocantins
Interviewee 15 (I15)	Female	12 years	37 minutes	Paraná
Interviewee 16 (I16)	Male	13 years	37 minutes	Pernambuco
Interviewee 17 (I17)	Male	17 years	41 minutes	Paraná

Source: research data (2023)

Chart 4 shows some details of the interviews, in order to keep anonymity some of the specificities will be further explained but not regarding to any specific interviewee: participants were involved in public healthcare for long years and all of them are currently working; one of the interviewees was a Conass President and another one was a Vice-President at Conass; two interviewees were dentists, three were medical doctors, one physiotherapist, two administrators, all the other were nurses. All of them worked at some

point directly at Conass or as State Health Secretaries representing one of the Brazilian States, all interviewees are nowadays involved with public healthcare, either as participants in the network directly or indirectly as working in public healthcare facilities or public governing.

The interviews were recorded and transcribed, for the purpose of this thesis, they were translated trying to be the most loyal to the original content (as they were conducted in Portuguese). The observations and documents generated notes, as a field journal. The collected evidence was reviewed in order to search for the relevant content, exploring the patterns that may arise. Langley *et al.* (2013) considers that it takes a great deal of work to keep organizations functioning properly, which causes difficulty for researchers to decide when to stop qualitative research data collection as there is no clear end point, the network goes on, the processes continue to function and to change over time even during the research and after it, qualitative research is a constant questioning and interpretation and reinterpretation. Though at a certain point after the observations, interviews and documents analysis, it is expected that patterns about processes that constitute the functions and stand for the authority in the micro governance of the networks will emerge as relevant and important part of the governance and it will be possible to analyze these from a process research approach.

4. EVIDENCE DESCRIPTION

Governance is a process that implies in different results for different situations and actors, more so when considering network governance. Literature acknowledges the health system as an issue that can only be thought of under a united and strategic governance (Lim and Lin, 2021). The World Health Organization itself has defined that governance is one of the key functions to a health system's performance, therefore, understanding how governance mechanisms work in the health system is crucial in order to guide it for better achievements. This study considered the national level due to the complexity of having different regions and different analyses that might not present the best picture to study as a first analysis. So, this chapter will delineate the data and trace some of its meanings, using a process research approach, focusing on processes that have had occurred before this research was carried on.

4.1 The Public Healthcare System Network

The chosen field of research is called Conass - National Council of County Health Secretaries, part of SUS in Brazil.

It presents a mission to articulate, represent and support health departments to systematize SUS in Brazil, the National Public Unified Health System, sharing information, producing and sharing knowledge and innovation, as well as exchanging different experiences. Though it is not directly described in its mission, the context of the empirical field reveals that Conass acts as a governance source for the network, being responsible to guide the network.

Conass was created as a non-profit network in February, 03, 1982. It is guided by principles of public laws, having administrative, financial and patrimonial autonomy from the federal government. Its main goal was to strengthen the states' health secretaries in a participative manner to build a better healthcare system that could be representative of all country's needs. Conass is an important advocate for the health system in Brazil, it is a network that represents different needs and reaches for common goals in the public health policies.

Though Conass can be viewed as a large and complex network, made by multiple actors and links, it is a small part when considering the whole health system in Brazil. So, in order to try to understand how to govern such a complex network as the public health field, Conass was chosen as a representative part of a network that deals with public health policies.

It presents a profile (Chart 5) similar to many organizations, with a Vision, Mission and Values that help to guide the network actions, all of these built upon the need to care for the national public health system for all people.

Chart 5: Conass profile

Vision	Mission	Values
To be recognized by Brazilian society by 2030 as the main technical reference for articulation together with the states' governments, through protagonism and innovation capacity to improve public policies that generate healthcare and social wellness.	Articulate, represent and support Health Secretaries of all states; Formulate health policies; Promote and disseminate information; Produce and diffuse knowledge; Innovate and incentivise exchange of experiences; Act permanently to defend public healthcare.	Ethics Science Transparency Protagonism Effectiveness Cooperation Equity Democracy Social Commitment

Source: research data - Conass documents (2023)

Conass is an organization which was created to discuss, create and implement healthcare public policies. It aims to be recognized as a reference for its healthcare public policies that are the responsibility of its members, the health secretaries of each state. The network intends to do so through activities that promote information, sharing experiences, and articulating the different regions of the country, as it is shown in Chart 5.

The Vision is linked to not only fulfill its role but also to be recognized by the people as a reference in the field of healthcare, which is very relevant considering the Brazilian people are the final user of everything Conass stands for. Conass' Mission is to offer support to Health Secretaries of all Brazilian States, helping with public policies, also considering information and knowledge and innovation for the Brazilian people. And its Values are in consonance with ethics, transparency, cooperation, democracy among others.

Although this evidence is relevant, it is the visible part of the network, some interviews show a deeper perspective, the view of what people, who are part nowadays or were part in the past of the network consider that it represents:

“It is a governance and planning group, represented by the healthcare secretaries from all the states, where national health politics and issues are discussed, considering the regional needs and different realities, up until we get an agreement between all.” (Interviewee 3)

“Conass involves many actors, which is one difficulty of it, but mainly it revolves around commissions that discuss financial issues, the use of resources, analyses of goals and indicators of performance, with a broader perspective of the network, trying to take up in the whole of it.” (Interviewee 9)

In the excerpts of interviewees 3 and 9 it is explicit that Conass has many actors, it is constituted by government representatives, and cares about different issues related to public healthcare in the national territory.

Brazil has a whole country's health system, due to its federalization, though divided into different territories and regions geographically. One of the country's pillars is the union of autonomous states, forming one unity. This model causes some tensions as the need for action as a unity with harmony among so many different regions, though the collaboration of all parties when it comes to create national laws, rules, make decisions that impact all the country, creating a collective action, tries to mitigate the possible tension created by the idea of equality and no hierarchy among the states. Cooperation becomes a key force in order to avoid centralization, it is the government's responsibility to articulate different actors, from different regions, with different needs into only one health system process.

Considering the assumption that public policies are a product of negotiation among a diverse number of social actors, avoiding a hierarchical structure that reinforces a vertical power. Therefore, non-hierarchical arrangements may be capable of promoting interaction of different actors - both public and private - and highlighting a form of governance which is organized in networks that collaborate (Sørensen and Torfing, 2007).

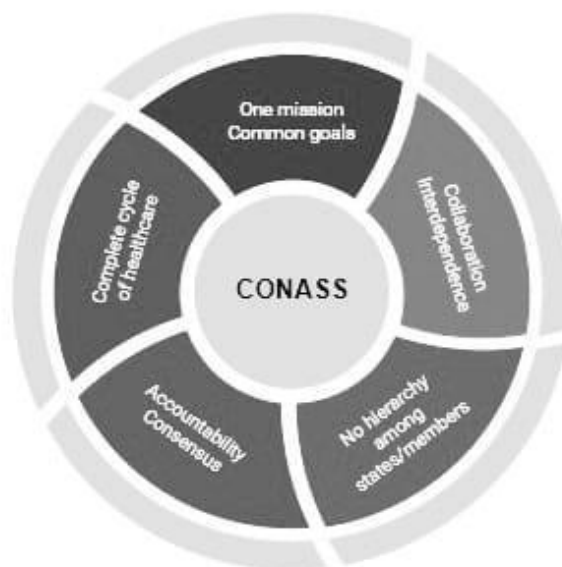
Collaborative networks are a stable arrangement, formed by actors with different backgrounds and resources that depend on each other to achieve certain goals that are not available if pursued individually. And it is complex because more than the different backgrounds and needs that each actor brings to the network, they also create a relationship that depends on each other but maintaining each and own autonomy, as portrayed:

“Conass acts like an organ responsible for the communication between people's needs and the system, it creates a collective responsibility link among all parties - that is: users, healthcare professionals, managers and bureaucracy.” (Interviewee 5)

These networks interact through negotiation, with distinct interests - but usually not completely opposed, only non-identical - and in case of Conass members, interact for one main purpose: maintaining the public health system working as a collective. As a country, Brazil has 26 states and one federal district, each of them possessing a health secretary, who is responsible for representing their state in Conass. This configuration, with many different actors acting together for one main purpose - aligning a national health system - one that negotiates constantly and tries to find a common ground to achieve goals through actors that come from separate backgrounds and needs, represents an example of a complex network that requires a complex network governance process. Conass (2019) has defined its network governance as an exercise of power and authority hand-in-hand with influence and negotiation, a structure that defines rules, processes, routines and procedures to limit autonomy among the actors, as well as delegate responsibilities and create the platform for sharing knowledge and resources to guarantee the network function.

Mendes (2016) defines the network for healthcare in Brazil as a set of services, tied by a common mission and goals, that act collaboratively, offering healthcare to a determined population, specially primary healthcare. As a public service, it aims to be perfected with effective costs and quality, in a safe and equal performance to all. Conass, as a network for healthcare, has some drivers, as shown in Figure 3.

Figure 3: Conass drivers



Source: research data (2023)

In order to represent the national healthcare system, as a network, through policies,

offering support to the Health Secretaries of all Brazilian states, Conass presents some features, shown in Figure 3. In no particular order, all of them are considered essential to Conass functioning:

It presents a well-described mission, accounting for common goals that bind all members onto one path; followed by collaboration and interdependence among its members (the Health Secretaries of all states, therefore, all the national territory must be in collaboration); adding a no hierarchy rule: although Conass has a president elected among its members, it is a purely administrative role, this member has no more power of decision than any of the other actors. Mostly, the consensus will be further explored as a important feature, but it means that all actions must be clear, decided upon agreement by all members, and accountability is not optional, as every move must be clear and in togetherness; and the complete cycle of healthcare stands for a priority of taking care of people from a scratch to a life threatening problem, from birth to deathbed.

Collaboration is a process that requires interdependency, the unity goes at certain levels to a second sphere as the collective needs emerge. According to Emerson, Nabatchi and Balogh (2012), consensus strengthens collaboration, which is essential in a complex network such as Conass, with so many different actors. One of the features that is important to highlight is exactly consensus: the committee does not work on a democratic basis so much as voting, all the decisions must be consensual, all the parties must agree in order to reach a final decision on everything.

Though Conass has its own hierarchical structure, composed of a president and vice president, their roles encompass organization and documentation, these figures are responsible solely for organizing meetings, documents, and signing the final agreements. All the decisions and functioning is through processes - these processes are mechanisms that develop and guide the activities of the network, different instruments and routines that do not depend on any person or role, they exist on the network. Some processes are more formal, others are informal and even temporary, being replaced or not used anymore according to the network needs. Considering Conass is a mixture of civil servants from several instances and private consultants, it has different teams and manages different groups and assemblies, as a way to organize the many needs presented by the national healthcare system. Some of the positive attributes of Conass, portrayed by the interviews, were the lack of hierarchy among members, the possibility of conversation with so many diverse people, support offered either to governance issues or to technical problems faced by the states, meetings with structured agenda that is not influenced easily by political controversies, being a platform where people

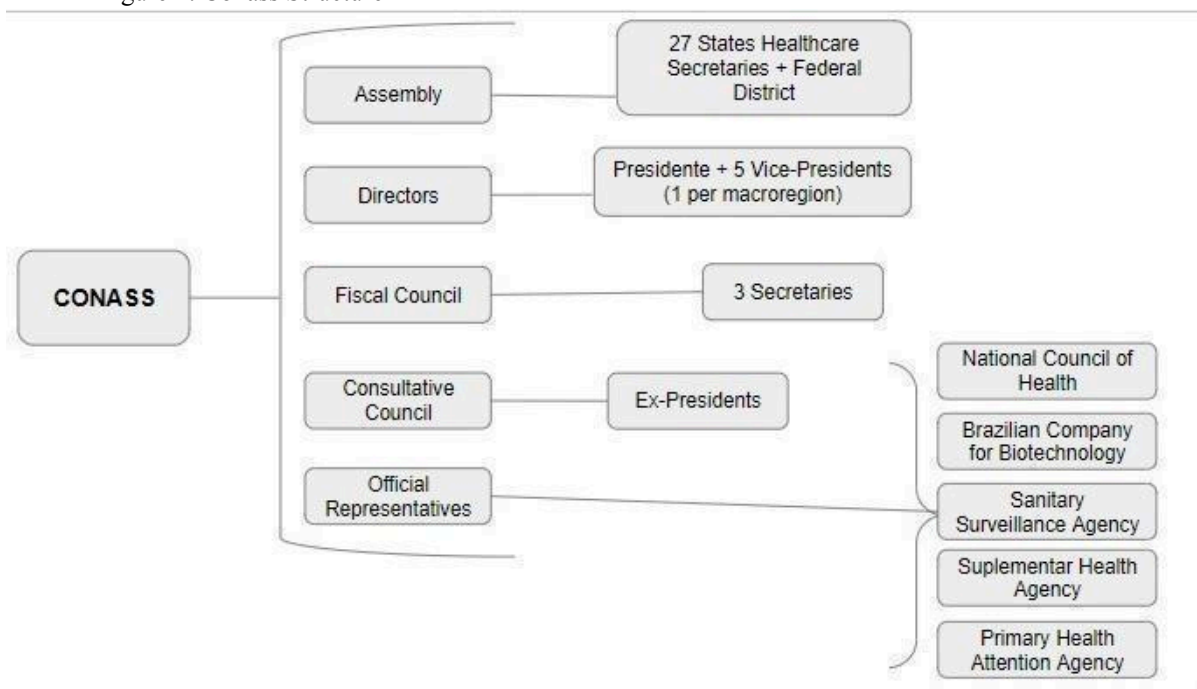
can be heard and listen to different sources to foster reflection, and to elaborate plans that are feasible and a collective construction by the network actors. Interviewee 2 evokes some of these features, mainly directed at the people, the most important characteristic of the network, the members that compose it and form bonds and connections, also presented by interviewee 9, where it delineates the fact that the network provides this collective structure.

“Conass has some technical areas that guarantees less change in personnel, which means that political reasons usually can’t touch us, as it is not easy to replace people requiring technical knowledge.” (Interviewee 2)

“Sometimes the representative is not the one who brings up the needs of its own region, and another member has to do it, which, if we think about it, is so communal. No one is self-sufficient or independent when it comes to healthcare in Brazil, the network is the only possible way.” (Interviewee 9)

Figure 4 shows Conass structure, demonstrating the instances from where the network acts more directly. Though it resembles a hierarchical structure, it does not bore a hierarchy among the teams and groups, it is more a structure to organize the various people from different domains that work with Conass and have different responsibilities.

Figure 4: Conass Structure



Source: the author (2023) - based on Conass website

Though Figure 4 may impart a sense of hierarchy, it works more as a flow, or a network. It shows that Conass exists through different teams, groups, areas of expertise, and

they are all related. It is not leveled in any way that some have more power of decision than others, just different groups are responsible for different areas of knowledge within the public healthcare system of such an immense country as Brazil.

Hence, Conass represents all the states in Brazil through their health secretaries, and during the meetings, they must keep those characteristics in mind, as it shows how the network must function. They guide the processes and activities that are held by the network through its members. Though the Assembly with secretaries has the responsibility to guide the pertinent discussions towards consensus, it also deliberates topics by majority, what goes into the agenda is decided by the simple majority of members, but the final decision about the issue must be consensual among all the members. Besides these, Conass also has a Executive Secretary, deliberating about technical issues with: Technical Coordination (formed by 14 Technical Nucleus and 14 Thematic Chambers); Administrative and Finances Coordination; Institutional Development Coordination; Legal, Parliamentary and Communications Advisory; and Strategic Information Center for State Management of Public Health.

Considering this background, Conass has a large responsibility to guide SUS (the country's public healthcare system), and uses its structure as a primary form of governance. It is not the sole manager for taking decisions when it comes to public healthcare, but it is one of the largest armlinks between the whole national healthcare system, coordinating the different members into one collaboration network. Even with such a structure in place, it is also necessary to keep some form of governance that guides the actors towards the common goals, paving an easier path whenever obstacles are faced. The Assembly with its secretaries is the most public and external organ of Conass, as it is responsible for directing, suggesting and approving the general laws and decrees that affect the national healthcare system.

“Rules and guides are not enough if we don't have a method, people qualified to organize and a structure that directs us. Conass has policies, regulations, law decrees and the Assembly follows them, together with the CIB and CIT.” (Interviewee 15)

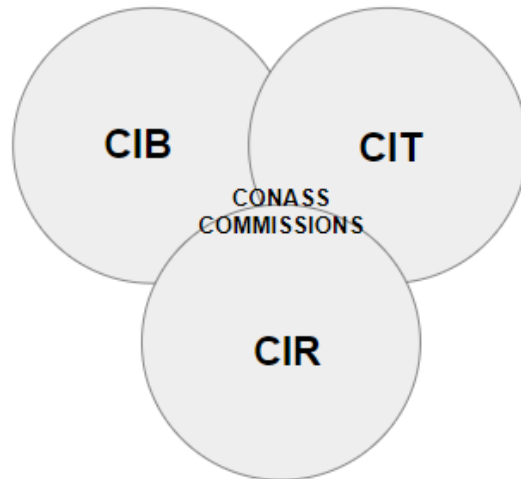
In Brazil some laws must be abided regarding public healthcare (specifically Portaria n.4279 from 2010 and Decreto n.7508 from 2011) and define that the network for healthcare must be integrated with technical and managerial support, aiming for a full network for healthcare in all the national territory. Therefore, more than focusing solely on the attention for health, Conass must worry about technical details such as management, which is: how the

governance of such a network must be placed and guided. In consonance with its characteristics, searching for an effective governance process that eases the network function for all the members involved in the collaboration (those who make decisions and those who are users of the public service).

Managing Conass requires network governance, this governance must ensure the articulation of the system, taking into consideration different levels, members, states, needs. Thus, the network governance must align key processes that will interact based on negotiation and consensus. Surely, every network governance has its own reality and mechanisms. But looking further into Conass provides a view of its history and a better understanding of a complex network governance process that may be of help for other similar structures.

Conass has many mechanisms to function as a structure, it is quite complex which is no surprise considering it has to represent the whole country. It is mainly formed by its assembly, comprising the Helthcare Secretaries of the States in Brazil, but it also has other forms of structure that help in its processes of governing the public health care network, as shown in Figure 5:

Figure 5: Conass Commissions



Source: adapted by the author (2023)

One of the structures of Conass, aiming to articulate the country towards a national health care system, comprises of the commissions as shown in Figure 5:

CIB represents the Bipartite Intermanagers Commission - constitutes a state level commission, equally represented by the State Healthcare Secretary and the Counties Healthcare Secretaries. It arises, develops, articulates and discusses matters that are relevant to their specific geographic regions.

CIR represents the Regional Intermanagers Commission - which has similar structure

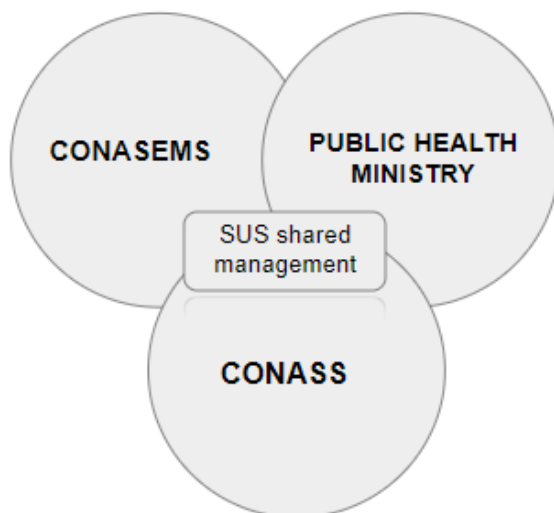
to CIB but it is formed by representatives of states and counties and cities that comprise a region, as aforementioned, since SUS is responsible for the whole country, more than geographical divisions, it also has divisions of parties by Brazilian regions, that are close by and help each other sharing health services of different types and complexity.

Lastly, CIT represents the Tripartite Intermanagers Commission, again equally formed by representatives from the Brazilian states, from the healthcare ministry, and from cities, all indicated by Conass. Though the Commissions were thought of as an equal space for all, sometimes they seem to sway according to actors' powers, as indicated in the next interview passage.

“I think CIT is very constrained by the national government, cities have little to no voice on it, there is much lobbying for certain decrees or documents of financial plans to be approved. The idea of the structure is good, but those who have interests are always searching for ways to influence CIT's decisions.” (Interviewee 12)

CIT, as it is the area where Conass has more scope of guidance, with its very own parts, is better explained in the format of Figure 6.

Figure 6: CIT



Source: adapted by the author (2023)

Figure 6 demonstrates the CIT - Commission for Intermanagement of Triparties, which is composed of the three biggest representatives of the national public healthcare: representatives from Conasems (which is the commission of healthcare public secretaries of the cities in Brazil), the national representative for the Public Healthcare Ministry,

representatives from the healthcare public secretaries of the states. These three parties represent the ultimate instance where decisions on national level are discussed, managing the entire healthcare system and guiding it.

4.2 Empirical Field: Implications and Theories

The field analyzed in this research, Conass, is a network constituted officially in the year of 1982. It is responsible for governing the healthcare system in national territory and it emerged from the desire of secretaries of states, then led by a medical doctor who was the healthcare secretary for São Paulo - this very same physician was also the first President of Conass, aiming to reach the motto: health for all in 2000. Unfortunately, it is 2023 and we still do not provide health for all in Brazil, though Conass as a governance network for public healthcare in the country continues to try to do so.

As a network created specially with the goal to improve governance, innovation, communication, strategic planning, competence development in public health - more specifically in SUS - Conass is an example of a complex network. Many actors are involved from all the country, and though it may present a common goal, it also presents different health needs and realities from the people. Therefore, governance is a topic that not only includes managing the network but also deals with a very sensitive topic. Conass' members are responsible for discussing, creating and implementing on each state of the country health public policies. The members represent the country's states, and there is a forum above them, called Tripartite Managers Committee, formed by Conass, Federal Government (Healthcare Ministry) and cities' representatives, as a way to link all the spheres that are responsible for public healthcare in the country.

Through documents, observation of meetings (those meetings are available online on web videos platforms, where Conass has a channel) and interviews, it was possible to first understand Conass structure and functioning, then analyze through process data approach (Langley, 1999) a historical understanding of the network governance. As presented, Conass has a great number of instances and members, providing a fertile terrain to analyze governance from the perspective of its processes and hierarchical bounds. Governance is not only the processes that share responsibilities among roles, but also the connections, the influence, the interlinks that permit the functioning of a network (Lim and Lin, 2021).

Interviewees gave a broad picture of Conass functioning. One of the main difficulties is that all members are related to the health area, working as a network and learning to govern

it by doing. It was a recurrent comment in many interviews, as some extracts show below:

“The network (Conass) is a communication center between people and system, it is necessary to create some responsibility among users and professionals towards managing it in a more professional way.” (Interviewee 1)

“Governance involves many actors, it is a factor that many times causes more difficulties than solutions, because the members focus on financial resources and not managing the network.” (Interviewee 4)

These extracts show that Conass works with its members, by means of its Assembly and Commissions, using public spaces of communication in order to provide governance. Which can be observed as well as in other interviews:

“Many times it is difficult to separate the nurse and the manager, and I see it in others as well. We are formed to help people directly, governance of the network is such hard work that I don’t know how many times we had to remind ourselves to think from a business point of view. A business that is public and concerned about public healthcare but business nonetheless.” (Interviewee 15)

“It is really difficult to think of such a big network as a whole, governance of it seems impossible, and we tend to sectorize it, segment into fragments that are regions, but it does not work as it is the real purpose of it.” (Interviewee 16)

All these excerpts demonstrate that governance is an issue that many Conass members think about, mainly concerned about it happening correctly, from their perspective. Most Conass members are doctors and nurses, people from health care background, though many of them have several years working with public healthcare policies, most tend to continue attending people - which makes it harder to separate their ideas from a primary care perspective to a managing care perspective. Lim and Lin (2021) divide the governance theories between those which are process driven and those which are outcome focused - sometimes a mix of these, though the authors do not address any as the best one. It seems that many of the interviews direct Conass governance as outcome focused, as many members say their drive was in having better results for the healthcare system. .

As one of the interviews mention:

“Conass has governance process, it is not something that is missing, but it kind of... it is difficult to focus on them, as we have several new people arriving to be part of Conass all the time, it is difficult to keep track of the history, every new person arrives and we have to start all over again, explaining how it works. Sure, I know it is politics, after all... there is the bad and there is the good of public services. But we need to rely all the time on the old ones (i.e. old members) that try to pass the knowledge from training and policies and years of experience to those who are new and sometimes they stay with us for a few months... It is tiring.”
(Interviewee 10)

This interview, alongside with others, shows that there are processes aligned in the network, but one of the obstacles to the functioning of these processes is the turnover of people. Conass being a public network is formed by public servers, indicated by the government. It is recurring in the interviews that any changes at the government level always lead to changes at Conass and all the spheres that work with public healthcare. And although these changes are routine every two years (as Brazil has major elections every 4 years, but they rotate: federal elections and two years later municipal elections) also it is possible that people change just for political disagreements or even political agreements during the years of public government.

“Every two years something changes at the government level and it impacts us. Not only healthcare secretaries change, but their entire teams, and also many major public hospitals directors, creates a wave that for some moments it is the only thing that we can focus on: who is who now.” (Interviewee 5)

“The only thing that I can really say is that time does not change the elections every two years. We align and organize all we can, but at least every two years we have changes that are not our decision but they impact the network governance tremendously.” (Interviewee 4)

With that in mind, it is easy to imagine that not only the fact that many Conass members are from the healthcare area and not from any business background but also the turnover of people makes the network governance vividly more focused on outcomes than processes. In Glücker (2020) cooperation must overcome obstacles such as having multiple participants and creating a governance process among uncertainties, though the author suggests such uncertainties come from the natural environment, even if we have steady members in the network. The most important aspect in network governance is controlling and

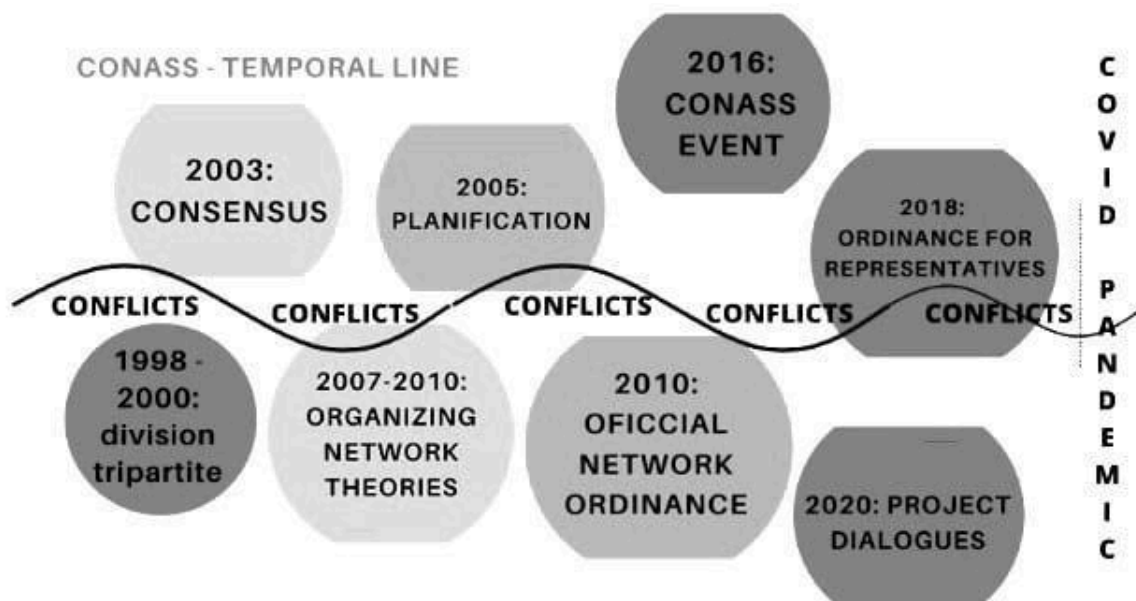
balancing interest and managing differences (Glücker, 2020) which seems obstacles possible to be dealt with clear processes.

Using the evidence collected it was possible to create a temporal line regarding important events that shaped Conass existence, as much as internal as external ones. Those events were repeatedly cited during interviews as remarkable regarding modeling Conass processes, exposing its governance strengths and flaws, and allowing Conass members to think about better ways to carry on its mission.

From the beginning of the network creation, in 1998, as a tripartite boarding of decision, considering the federative nation, states and counties as part of the process, going through 2003 when it was decided that Conass should work with consensus, meaning nothing can be decided unless all parties of the network agree, it is not a democracy for majority of votes. In 2005 the planification event caused - and even today it is still being discussed - a conflict because the health system had to be rebooted to offer health care in all regions aiming to develop effective teams to plan and offer healthcare focused on users needs, according to specific guides and models from Conass, thus creating the need to such guides being discussed and originated from the tripartite meetings. From 2007 to 2010 a series of studies aimed to unveil and create theories to support Conass as a network, from a scientific point of view, which is unusual since Conass was functioning as such since 1998, even without a theory to support it. In December 2010 a federal Ordinance established the guidelines to a Healthcare Network, which was a relevant point as it detailed its function as a type of law, helping to create limits and routes for all the national system. From 2012 to 2018 there were annual meetings called the Conass Debate, the 2016 being one of significant importance as it presented the theme of finance as an issue when talking about public healthcare. Though, for this research, the 7th meeting debated Governance in the Conass Network, and maybe the fact that it was not the most remembered or exceptional meeting should mean something in terms of how the network is being developed and organized in its governance processes. In 2018 a new resolution was proposed by the network in order to shape its divisions into the states and counties, considering micro and macro regions, ensuring that the micro regions should be the center for managing the health needs, and the macro regions responsible for financial decisions. In 2020 a new project called Diálogos Conass seeks to offer a space for dialogues between Conass and different organizations, amplifying the actors that are part of the network, dialoguing with the private sector and new technologies as well as the public health system actors. Surely, Covid Pandemic appeared in almost all interviews as a massive event that put heavy strains on the public health system and created a new environment.

All these occurrences were somehow remarkable as they shaped the network and even changed its course. Some of them are propositions to new dialogues, helping create the network as a collaborative environment, some are new guidelines that shape processes, and probably are very representative of how the network governance behaves in such a field. Therefore, they represent conflicts or situations that arose to solve some conflict and many of them result in a governance process or in new propositions to how the network governance could be.

FIGURE 7: CONASS TEMPORAL LINE



Source: the author (2023)

Figure 7 represents a temporal portrait of the most relevant events, according to the interviews. During these conversations many events appeared as relevant to each interviewee, and Figure 7 indicates those that repeat themselves, appearing as memories of conflicts or situations that shaped the network. Many of them were important as they exposed strengths and/or weaknesses and it helped to view Conass governance clearer, creating new processes or reshaping old ones into better ways to serve the network purpose, and will be further discussed in the next chapter.

In this temporal line the conflicts represent many things, from small routine details that impact on achieving a consensus or a goal, to major debates over structure or governance functions. These conflicts though many times represent an obstacle for governance, as they needed guidance through turbulent waters in order to navigate towards a decision and to diminish the disagreement, they also represented an opportunity. The opportunity to stop the daily routine of always following the same steps and look at the downstream problems of

governance, creating new solutions.

“When we have people who know about the network functioning, the structure it presents that helps to deal with discord, people who are also open to listen, to be questioned and to reflect before answering in a defensive or old way... the capacity to communicate undermines differences of power or hierarchy or thoughts. When people really listen and talk to each other, power has little effect.”
(Interviewee 12)

It does not mean that any conflict is positive, many times it hinders the network, the friction created may cause complications, may hasten or delay processes and decisions. Still, when the network has governance functions in place, that are embedded in the network functioning, it seems that many conflicts may be used as potential for moments where the network is impacted positively.

5. DRIVERS OF NETWORK GOVERNANCE: FUNCTIONS AS AUTHORITY

Network governance presents itself as a challenge, considering the network as a collaborative space where actors must feel encouraged to collaborate towards the same goals and low levels of hierarchy and authority foster a uniform environment. Therefore, governance in such an environment requires a range of processes, which are the essence of this study. Lim and Lin (2021) presented the idea that a subset of activities work as governance tools, processes that represent a subjective effort to rule a network of healthcare workforce. In this sense, during this research, from the evidence, some specific functions that are also in compass with the literature presented became clearer. Network governance is an alternative for the traditional hierarchical basis of governance, which creates a reduced authoritative environment, shifting the power from a central figure or role, providing plural levels and processes that embody power when necessary (Lim and Lin, 2021).

In a recent study, Wegner, Holsgens and Bitencourt (2023, p.3) argue that: “orchestrating distinct partners requires an alignment of interests, the integration and organization of resources, the mobilization and monitoring of partners, and the arbitration of potential conflicts between them”. Thus, this study results come to show empirically that these functions are present in a network governance, and they play a significant role towards creating the collaborative environment that will allow the network to navigate towards its goals.

Bastos *et al.*(2020) emerged results that indicate the need to restructure and reorganize network activities constantly, indicating that the success and better results of network governance are linked with coordination, establishing strong bonds, collective construction, a feeling shared by the members that they are the protagonists. It demonstrates how important it is to join voices to raise collective awareness towards actions of networks that address health services accessibility in an orderly fashion.

As in Wegner and Verschoore (2022) propositions, micro governance presents functions that are used to carry the network towards the best path to reach its goals. One of the functions is called Aligning, defined as identifying and defining the direction in which the network activities must be set. During many of the interviews, alignment was highlighted as some extracts show:

“CIT had a wonderful responsibility: to guarantee continuity, through technical knowledge and protocols but mainly through people, who shared experiences and held together the processes until the new ones were settled”. (Interviewee 12)

“In 2016 we felt a great shake, as many profound changes happened, especially with lots of people leaving Conass, new people arriving, the network could not be adrift! The remaining actors were fundamental to keep the machine working, though shaken, but working in the right direction, keeping the focus on the relevant goals”. (Interviewee 13)

The interviews show a pattern where the aligning process depends on people, as there is no organization if there are no people, though it is larger than the actors. The process exists, it is there and those who know the objectives and the planning, are responsible to carry them on to the next ones that come to the network. Actors change in a network, more often so in a public healthcare network. The governance process has to provide some process that keeps old and new actors aligned. Usually, Conass structure helps with that, as actors gather together during previously arranged meetings, with a predefined agenda and the results must be protocols or documents that will guide the decisions and provide information on how to govern SUS. As Provan and Kenis (2008) state, it is simpler to align and organize the network processes once governance has formed relationships.

So, the field remarks that aligning expectations and providing a path that must be followed by all members of the network is not only desired, as the literature reports, but also feasible. The aligning function is not necessarily written in stone, but it is carried on during the daily routine of the network governance, as a process that is naturally necessary, in order to keep all the actors on the same page, going through the same protocols and finding the same results as common ground. In the empirical field, these processes and protocols came in the format of structures that align expectations through meetings and public laws that require previous knowledge about public healthcare. And in the same manner, Organizing is defined by Wegner and Verschoore (2022) as organizing the human, financial, technological, and legal factors to instigate organizational development and processes and routines, appearing as an important function to the network micro governance.

“Training is a special opportunity for network managers, they help to organize the network, they provide structure, we study the protocols and regiments, establish processes that we discuss and improve during training. One helps the other, mainly the new people who have doubts and are insecure for a while, and knowing how the network works is very helpful so that we are not lost.” (Interviewee 14)

“Governance is little discussed in public governing, it is more than necessary to debate about it, to organize it through training, to build the network respecting its heterogeneity, building agreements that help with continuity, reaching more consistent results.” (Interviewee 16)

These interviews show that organizing the network governance appeared as something essential, and it was very much associated with training, because training results in new protocols or renewed understanding of factors that instigate the network routines. These routines help governance, organizing it in order to develop the network. Therefore, the function of organizing is present in the network micro governance. This function shows how members of the network perceive the routines and take them as something positive to network governance, little details that improve governance towards network goals and better results.

The evidence from interviews and observation of meetings and documents showed that there is a routine in Conass that is larger than the members. It is clear that after the initial moments of a new member, the routine settles and there is little doubt about processes. The network governance happens without questioning, as it is shown - aligned and organized - through documents and laws. Rosa, Del Ben and Wegner (2021) in their study suggest that the longer a network exists, the less it will use functions such as aligning and organizing, as members know each other and have a history of cooperation. The data from this thesis shows that even though the functions are not so prominently discussed as time passes, as they settle as something that is more certain, they are still very present and they are working in the background of the network. Surely, Conass has actors changing for political reasons at times, which requires alignment, but even after decades, the network governance still relies on aligning and organizing to go through many routine situations from a commission meeting to a technical chamber new protocol designed.

Therefore, governance is also about activities that require alignment to reach certain objectives, so that shapes governance as an ability to produce an organized path built on processes that will lead the network to its goals (Lim and Lin, 2021). Thus, the first proposition is that:

Proposition 1 - The functions of Aligning and Organizing are used significantly to set expectations and provide continuity for the network governance.

Also within the realm of Wegner and Verschoore's (2022) research, there is another function of network micro governance which is monitoring that appears repeatedly. It means that all decisions are taken considering multiple views and there is a need for a way to evaluate if the processes are going in the right direction, towards the goals that are important for the network and primarily cared by other functions as stated by Proposition 1. According to Klijn (2008) network governance has a non-linear development because it presents so many interactions among different actors, and these interactions weigh more over network governance than the intentional actions and plans. Therefore, monitoring if the processes are being carried out towards the intended path becomes critical for network governance.

"In the last few years, there was some inversion of understanding, where some people, mainly politicians, seem to think that a document, a protocol, solves everything. It is not like that. It represents an imposition of ideas sometimes that some people do not want to implement, it does not matter if it is a good protocol. So, more than thinking about it, meeting about it, agreeing about it in the commission, creating the protocol, I would say it is imperative to follow it. Is it being implemented? Does it work? The network cannot be focused solely on planning, it has to look for the implementation of processes." (Interviewee 17)

This interviewee reveals that monitoring becomes decisive to acknowledge whether or not a process is being held upon correctly, or it is really working properly. Therefore, during the formal meetings of commissions or the Assembly of Conass, a recap is always part of the agenda, going through the latest protocols, budgets, decisions that were implemented, and new processes. This is an activity that encompasses the monitoring function of micro governance. It is also a downstream activity, as it is routine, basically tethered with the accountability area (Sørensen and Torfing, 2021). Network governance embodies processes through time and routine, and evaluating the routines and processes through a micro perspective it is easier to highlight how the network shapes the governance.

In this context, a Brazilian public healthcare network, Conass presents a governance force that drives the network. This driving is made basically through some processes that are routine structures, activities held daily, available in the protocols and documents and even sometimes in the law that is written or decided upon, or twisted according to the particular

needs. Even when they are difficult, amidst Covid-19 pandemic, these processes, routines, functions of governance were not sided or forgotten. Conass held meetings - though of course considering the time matters, health protection issues and urgencies - in the same way, with the same functions' processes in place. New additions came due to the times reality, with new specialists and technical teams, but still inside the same structure that has been building as a network since 1982.

Regardless of the longevity of it and possessing such a large structure, Conass exhibits a particularity concerning its decision making process. Conass, with its quite uncommon decision making process through consensus, tries to pulverize even more the idea of authority and hierarchy. Puranam (2018) claims that any large and complex organization works as a collection of smaller and simpler organizations, therefore they present the same problems, except in a different scale, a more considerable scale. The author suggests the problems are always in the areas of authority, interdependency, coordination, power, hierarchy, conflict and design. Lim and Lin (2021) describe that in the healthcare workforce it is not possible to ignore the issues regarding politics and power influencing the network governance, which impacts severely on the network structure and functioning.

Rosa, Del Ben and Wegner (2021) suggest that over time, monitoring becomes irrelevant, and it has appeared in their results as fragile, with little regard to the network results. A different pattern of results was upheld in this study, as monitoring appeared underlying many activities in the network governance. Monitoring appeared at every observed meeting, with the construction of documents, reading of documents created before, approvals of reports and appraisal of proceedings and minutes. Monitoring was mentioned in many interviews, it is controversial as many interviewees did not agree with the results, as they expected, understandably, that public healthcare showed better results, but it showed as a present micro governance function. Also, Conass as a network brings up a wicked problem, public healthcare, which even complexifies its governance, different from other studied networks, such as Rosa, Del Ben and Wegner (2021). So it is possible that in a complex network, the micro governance functions have a further role, these networks do not stabilize easily, needing the functions to perform constantly.

Power control and authority are part of the legitimacy that is necessary as an element in network governance (Glückler, 2020), even though a network is supposed to be more pluralistic and horizontal than the average organization. Nonetheless, a network still needs a governance structure that guides it, in any form that it takes. Glückler (2020) assumes that any form of network governance tends to create a large amount of control and authority in huge

networks, thus endangering the relatively equality and need for horizontality. Therefore the author suggests that a lesson is taken from the democratic system placed in many countries where decisions must be taken among independent peers, with no hierarchical directives, described as a continuum of symmetric and asymmetric processes. Consequently, the second preposition becomes:

Proposition 2 - Monitoring is a micro governance function used to shape an endorsement of the network processes.

Monitoring results and plans, costs and benefits, interests and differences among members is a micro governance function that helps to minimize risks and highlights the advantages of collaboration, and represents a controlling micro governance function (Glücker, 2020). The study conducted by Brito *et al.* (2018) unveiled compelling findings suggesting that in healthcare networks, monitoring outcomes proves more effective as a means of supporting improvement rather than criticism. Furthermore, it emphasizes the importance of refining methods and processes while fostering connectivity to enhance collaboration. And that structure with policies and institutional rules engages the members and community to use the network resources providing valuable research evidence (Brito *et al.*, 2018), which aligns with this study evidence, it shows that network governance functions provide a base for the network to advance.

Moreover, considering that Conass is part of a governmental structure, in a country that follows a democratic system, it could run balanced on a principle of delegating the decision-making and controlling processes, the authority of formal network governance of the national public healthcare system based on democracy. Even though it presents a structure based on committees, assemblies, meetings, representatives, technical chambers, much like a democratic system, its authority is not based on the majority of votes, but on consensus. This controlling idea is alleviated with the notion that all are in control and monitoring the network.

This specific situation of a network governance via consensus appears strongly in the researched field and differs from much of literature (Colla *et al.*, 2018; Cochet *et al.*, 2008; Entwistle, 2010), adding an extra layer to think about network governance. Consensus is not a process. It is an ethical agreement that no one can disagree with the final decision, and consensus in Conass means that every conflict must be solved thoroughly. Figure 6 shows that Conass history is marked by many conflicts and most of them were fuel for changes,

specifically because of consensus. There is no hierarchy of authority in a person to tell who is right or wrong, which idea is more correct, consequently, in case of great conflicts the solution is usually a third way, not going with any of the dual directions, but finding a third and common ground, which many times leads to changes in the processes. Surely it does not mean that it works every time like that, sometimes one of the sides gains the debate, convinces the others, due to different reasons.

“Consensus is a way to minimize hierarchy. Usually we do not feel that the president (of the Assembly - Conass president) has to weigh in on anything, it is a figure to organize the meetings and not to decide upon anything. Sure, consensus means that we sometimes negotiate endlessly, sometimes it is so difficult to find a common ground, almost impossible, but up to now we have always achieved that through consensus.” (Interviewee 7)

“We keep getting better, you know? Decision making and conflicts were harder, but nowadays we are better equipped by our protocols and processes and routines to discuss and improve.” (Interviewee 5)

Consensus in Conass works for the better to decrease authority, although it does not lessen the structure even with some hierarchical positions, it gives everyone a more equal sense of decision power. Different than many authors seem to bring to the discussion, that even a network governance needs some form of authority balanced with autonomy (Colla *et al.*, 2018; Cochet *et al.*, 2008; Entwistle, 2010), while others suggest that trust can replace authority (Uzzi, 1997; Adler, 2002; Bachmann, 2001; Puranam and Vannest, 2009), and others place the authority directly on power arenas (Purdy, 2012), Conass shows a different perspective, where authority is not placed on people, notwithstanding there is a formal structure with positions. Throughout this research consensus showed as a pattern in many moments, such as arbitrating conflicts, helping to align expectations, creating goals, planning activities to reach these goals, defining solutions within the group for the whole national healthcare system, monitoring the results and processes using consensus in order to evaluate them, much like Wegner and Verschoore (2022) propositions.

“Consensus is a construction, a constant in Conass. We move forward and then backwards, sometimes something very polemic goes into our agenda and we need to find technical data, to debate over several committee meetings, to have side conversations, find allies, convince more people. It is exhausting, but it is also functional, as it is not the decision of one or the most of us.” (Interviewee 15)

As Cabral and Kane (2018) have suggested, the network design influences its governance processes, and each style will have the need for specific structures of collaboration. In such a case as Conass, different structures, processes and functions will take place in different situations, with different actors in the network, creating a structure that is asymmetric as not everybody participates in every step of it. Nevertheless, it is symmetric as it is governed in each step by the same processes, much as Glückler (2020) described but differently as it relies not upon democracy but consensus. So, during the research of Conass, arbitrating appeared working as a tool which minimizes the sense of hierarchy in network governance, leading to consensus. Also, it creates an environment where the function arbitrating has to be largely used by all network members constantly.

When faced with conflicts, members of a network tend to question the veracity of the information, discourses and facts presented (Baudoin and Arenas, 2022), which implies that a function of arbitrating right in place may dissolve those conflicts with less arguments and more processes, not giving into personal ideas and maintaining the processes neutral. Conflicts are inherent in any relationship among people, especially in network governance (Provan and Kenis, 2008), but in the same way that they create tension, this same tension may be used to reinforce the network governance functions, creating a friction that encourages conversation. In this research, arbitrating as a governance function had the role of searching for consensus, and governance functions, in Wegner and Verschoore's (2022) study, were meant to support the collaborative environment. Therefore, the third proposition becomes:

Proposition 3: Arbitrating fosters the collaborative environment by promoting consensus within the network.

Moreover, any network governance structure is not synonymous with equal relations among actors or members, there are always context factors, perceptions and interests that lead to disagreement or different perspectives that imbalance the horizontal nature of networks (Klijn *et. al.*, 2020). Though Conass has existed for a long time, it does not mean it has a perfect balance among its members, because there are always new people coming and going. Every person or organization that joins a network represents a new model of thinking, new understanding of the structure and processes, new learnings and relations formed. Therefore, network governance functions are apropos to its proper operation as a network.

“Conass is a technical and solid structure of governance, one that offers support and guidance.” (Interviewee 12)

In Conass, the network governance functions work in a way that advances alternative ways of collaboration among its members, compensating for different backgrounds, different geographical issues, different regional goals, different discourse and keeps on track a structure that is larger as a collective than the sum of its members. A well established network governance leads the collaborative processes independent of the members, however it always considers the imbalances and different perspectives (Maron and Benish, 2021).

Wegner and Verschoore (2022) have an understanding that collaborative network governance fosters the outcomes but not all and completely, basically it acts through stimulating cooperation. And inside this environment centered around trust, learning, power, fairness, symmetry and legitimacy, the micro governance functions create the necessary planning and actions, so that the network steers towards its common goals. Therefore, when micro governance network functions foster the collaborative environment they inspire relational value (Wegner and Verschoore, 2022).

It means that as well as the micro governance functions work they do in order to foster an environment, the collaborative one. Alone, it does not guarantee results, but fosters situations that encourage the collaboration among members, and intermediate the relations. It represents a path that endorses the authority through functions and processes, and not through people, keeping the relations in a more horizontal line among members, contributing to create a collective yet less hierarchical network governance. Dealing with authority and conflicts is complex within networks, as it is a circumstance where it is better when all members are active in creating and working on common strategies (Klijn *et. al.*, 2020). And even though networks have a more horizontal nature, there is still a need for certain structures in order to manage, organize, arbitrate, and so on. These structures represent an authority role that is better suited on processes than on people, such as in network micro governance functions.

“The history of the healthcare network in Brazil is one of collective construction, full of debates and alignment where no one is more powerful than the whole structure. I’ve never felt someone was in charge as if someone was commanding something.” (Interviewee 10)

The interview is consonant with observations of meetings and documents. It is usually a collaborative construction, even as it presents roles, Conass does not lay authority on people

or roles. Surely politics plays a role in a public healthcare network, and sometimes an actor seems to try to scale things up or down according to national politics, but the functions seem to mitigate these movements, absorbing the authority and paving the way that must be taken by the activities and processes. Candido, Medeiros Pontes and Silva (2023) study micro governance functions where the results showed that the leaders of the network were primarily the source of authority in moving the functions in order to obtain relational gains from the cooperation. Conass evidence has a different pattern from these other results, as there are no leadership roles that reinforce the micro governance functions. It was never observed any member pressuring others in order to go through with any of the functions, there were always dialogues and occasionally a heated argument, but not once a coercive situation in order to perform a micro governance function. It seems as no one felt they had the authority to do so, the functions speak for themselves. Also in no interview names or roles were mentioned as the ones who solved a conflict or aligned the expectations or monitored results, it was, mostly and remarkably, cited as a collective construction.

Brito *et al.* (2018) suggest that leadership in a network has not an authoritative role, but more of to understand the members, align their personal expectations with those of the network, they build a sense of shared responsibility. That is due to the fact that healthcare networks require a degree of transparency and as well as a facilitated learning environment to seek better solutions for all. It is important that everyone shares the network responsibility, feels responsible for the outcomes - and even the shortcomes. Therefore, the network micro governance functions play an important role, uniquely aligned with portraying authority inside the network, lightening that from people and placing its power upon processes and functions, objects instead of subjects, as a result there is little or no authority in such networks (Brito *et al.*, 2018).

Lim and Lin (2020) advocate that a bottom-up governance works better to counterbalance different perspectives, power and interests when it has firm processes and direct policymaking. Such as Conass presents in its structure, with delineated functions that embody the role of authority in order to steer the collaborative environment towards its goals. As Purdy (2012) reasons that power has different sources and plays in different arenas, this thesis proposes that authority and hierarchy assume different forms in network governance, where authority flows more freely through network micro governance functions and in doing so, keeps the collaborative environment leveled to its members.

Proposition 4: Established micro governance functions become part of the structure and construct a reality that depicts the role of authority in the network.

Considering the scenario, this research, combining theories and empirical evidence, proposes that micro governance functions embody the authority role, once they are well developed and ingrained in the network governance structure. This leads to a network governance where the authority gravitates towards the functions, creating a more fertile collaborative environment and focused on creating relational value for its members.

Thus, the propositions advocate that network micro governance, in accordance with Wegner and Verschoore's (2022) framework, is represented by functions and these work as they embody the authority role at the network level. It minimizes differences among members, helps in creating a more collaborative environment, fosters trust, diminishes power imbalance, assists in the processes and routines and provides a structure that is designed to keep the network more horizontal in its relations. Authority comes as a flow created by situations which network members go through together and learn to trust in the network micro governance functions as the definitive processes to solve problems and hold the network structure operational. Many situations shaped Conass, unsurprisingly Covid-19 pandemic was the greatest challenge the network had to face, and it held in collaboration, through rough patches and bigger conflicts, mainly due to its micro governance functions that did not change nor yield during inharmonious moments. During different situations one function will have more authority to support the collaborative process, according to the network needs, but it is a flow that when well structured happens in consonance with members more horizontal participation.

This thesis proposes that network governance in large and complex structures, when viewed from a microstructural point of view and treated like wicked problems, have a possible solution: established micro governance functions that carry on authority and hold the network structure.

6. CONCLUDING REMARKS

Deliberating over the issues presented by this thesis, the network structure and the governance challenges presented by it, this study proposes that there are micro governance functions that act as a source of authority inside the networks and conduct the governance process. This proposal is significant as network governance behaves in a different way than corporate governance because the latter has a traditional hierarchical structure that organizes the governance process. Network governance is not only a challenge as a practice, but it remains a study challenge, because it is hardly feasible to apply the same criteria of single organizations to study networks, as the latter presents specific conditions and settings (Provan and Kenis, 2008; Cepiku *et al.*, 2020), yet as a conglomerate of single structures, networks have similar behaviors as organizations, therefore it can be studied from a microstructural perspective (Puranam, 2018).

Network governance refers to guidance, encouragement and mechanisms that create a structure used by members to allocate resources, plan strategies, discuss actions, improve the network capabilities and create a collaborative environment that aims the fulfillment of common goals. This collaborative environment requires a certain level of horizontality, though it recognizes that different actors have different backgrounds that creates a certain power imbalance. This power imbalance may be solved by micro governance functions that allow processes to even the field and smoothen the communication. Nevertheless, some levels of authority are required to provide strength and help in organizing the network routine, specially in cases where some activity must be reinforced or decision made or conflict solved.

How, then, does micro governance develop as an authority source to guide the network governance process? This research problem led to a healthcare network in Brazil, called Conass. This thesis analyzed Conass as a network governance committee for public healthcare, through process research methods, using observation, document analysis and semi-structured interviews in an attempt to find patterns.

These patterns observed in network micro governance functions were in accordance with Wegner and Verschoore's (2022) theory of functions as tools that foster the collaborative environment. As Sørensen and Torfing (2021), collaborative governance is an alternative that gives space to a plural form of arrangement, and in order to understand this network the authors propose a downstream perspective. Borrowing from Puranam (2018) microstructures theory, as in analyzing complex organizations from a microscale stance, functions appeared as a daily routine of network governance. More than that, they seem to embody the authority to

lead the network governance process, without hindering its horizontal foundation.

This thesis contributes theoretically to advance the theory on micro governance functions, from a downstream perspective. These results demonstrate the operationalization of functions in a complex network, empirically showing evidence that supports the functions as drivers of network micro governance. The propositions from Wegner and Verschoore (2022) were advanced in theory with these empirical results from Conass. As proposed by Peters (2017), when considering wicked problems there is a standard component that makes these more than just complex problems, but the ones that must be solved and are possible to be solved once the pertinent policies are created. Once the micro governance network functions are performing, the network may use its collaborative environment as a space to create policies and plan actions that navigate directly towards the desired results.

The contributions of this thesis cover some domains. First, theoretical as it problematizes the idea of authority in network governance, as well as proposes to examine network governance from bottom up. This downstream perspective (Sørensen and Torfing, 2021) allowed us to understand the idea that authority is possible inside the network micro governance and even acts in an advantageous way when placed on the functions. Instead of creating a gap among members, it helps to create a more equal collaborative environment, where the monitoring and arbitrating are placed on functions that are somewhat neutral, and not on people or hierarchical roles.

Second, in practice, it improves the understanding of micro governance network functions, as it shows the use of some functions in a well established network throughout years and validates those as a significant part of network governance. The functions become part of the structure, and from a micro perspective (Puranam, 2018) they guide the network, they steer processes, plans and actions in the direction of common goals, constituting the collaborative environment.

Third, it contributes by creating proposals of how, in the management sphere, these functions act in order to keep the network governance operating and how through their routine use they become part of the authority that manufactures the reality of the network. The micro governance functions generate a foundation where the network bases its processes, constituting an operational routine. It frames a governance rooted on procedures that lead, control and direct towards the network results.

Empirically, this study of Conass reveals a network with many years of formation, rough patches that were part of its development, rules and processes that are nowadays recognized by its members. A formal structure does not mean a hierarchy and processes and

routines do not mean necessarily someone leading and enforcing them through authority of person or role. Managing different committees and spheres, Conass legitimate network micro governance through its functions that represent the authority at the network level, searching for consensus in all its decisions and dealing with conflicts as a natural part of the process to reach the collective understanding. Also, Conass itself may use this knowledge from outside in order to reinforce its structure and authority through micro governance functions, fortifying their use and allowing more of its members to understand them.

Though the results are empirically connected with Conass reality, as it represents a complex problem, or wicked problem as called by Peters (2017) - the public healthcare system - it represents results that extend pragmatic applications in other complex networks. The study shows that many of the micro governance functions proposed by Wegner and Verschoore (2022) when implemented by the network governance do encourage a collaborative environment that is healthy to nurture better results. The micro governance functions work as a soil that absorbs many problems and toxins, but also stores water and nutrients, leading many of the problems away and nourishing the network with the benefits. It shows that networks would gain from strengthening the micro governance functions, trusting them as part of the network structure that carries authority to solve conflicts, align objectives, organize activities, and monitor results. The micro governance functions provide the network with authority and authentication of the processes, contributing to a more horizontal collaborative environment among members.

Every research has its limitations and this thesis was no different. First, it was based on one large and complex case, though it is a great representative of a network, it has a whole unique context. Culturally speaking, it is also dependent on its reality. Moreover, there are numerous Conass representatives, the interviews used a snowball effect to choose the interviewees. In-depth interviews provide a deep context and are rich in details, which allowed the patterns to surface, but they lack covered ground as they were limited to a number of people. Other fields may experience network micro governance functions and authority in a different relation, as this one has public healthcare, a national and public policy involved. Time is also an issue, even though a thesis has a longer research period, but it had to come to an end determined by the exhaustion of the interviews, as well as time offered for the research for the interviewees, the same time that tempers memories.

Despite these limitations, this thesis is valuable for drawing meaningful remarks. The research on micro governance functions and downstream problems in networks is an open field, and these results provide indicators that looking to understand the processes that

underlie these functions is interesting. Moreover, associating the functions with authority sources in network micro governance bestows with a fresh look, implicating that authority is a structure and not necessarily a source coming from people. It opens the possibility to further investigations.

Further studies may continue these results from a perspective of authority as a structure, taking from sociological approaches that analyze power and authority as social structures that shape all relations and whether they may be found in people or directly in those structures, as network micro governance functions. The results themselves brought problematics that could not be addressed such as: how to deal with deadlines when conflicts arise and arbitrating takes time; how to monitor different results from different perspectives in such a complex network; and what is the range of structure and micro governance functions. Also, during a few interviews, the insertion of technology in the medical field appeared as something notable and capable of changes in the network, something this research was not able to follow deeper. As well as broadening the study in other fields, less large and complex networks or a network that presents less time of operations, trying to understand if authority is created through time or from the beginning is present in the functions. Also, it is possible to investigate whether networks with a more or less hierarchical structure present the same arrangement with micro governance functions. Finally, if consensus plays any role in how authority rules conflicts in a different configuration of decision making.

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APPENDIX

Semi structured interview (in Portuguese)

1. Conte um pouco sobre a trajetória do comitê/comissão/ Conass. (Explorar aqui a história desde o começo, participantes, formação da rede, momentos - usar desenhos, linha do tempo).
2. Como funciona o Comitê Gestor nesta macrorregião do SUS?
3. Quem foram as pessoas que fizeram parte da rede ao longo do tempo? Do início até o momento atual.
4. Como acontece o processo de funcionamento do Comitê?
5. Como foi, na sua visão, o processo de adaptação ao sistema de Comitê Gestor desde a sua implementação até agora?
6. Desde o início, como vocês tomam decisões dentro da rede?
7. E de que forma lidam com os conflitos que surgiram desde o início até agora? (situar essas situações ao longo da linha do tempo)
8. Existe algum fluxo de processos ou atividades que são seguidos pela rede? Qual e como? (Usar papel, desenhar).
9. Ao longo do tempo, muitas mudanças políticas e sociais ocorrem entre os membros e na sociedade, como a rede lida e se adapta a essas mudanças? (Situar na linha do tempo).
10. Você gostaria de acrescentar algo mais sobre a história do comitê/comissão/rede?