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eParticipation practices and mechanisms of influence: An investigation of public policymaking

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ABSTRACT

This paper investigates eParticipation practices and the mechanisms of influence that help promote changes in public policy formulation. We use the perspective of power as a lens for our investigation. We analyze eParticipation processes in the drafting of three public mobility policies in major Brazilian cities. Based on comparative and retrospective cases, we propose a processual framework for understanding eParticipation practices and the mechanisms used over time to influence decision-making. We show how the actors involved, tools chosen, platform design, interactions on the platform, mediation, and mechanisms used by engaged citizens and the government influence public policymaking. Our study contributes to the literature concerning eParticipation with an original processual framework to explain actors' practices and the mechanisms of influence on policymaking in digital participation spaces. Additionally, we broaden the discussion regarding the complementarity between possession and practice views of power. We argue that a better understanding of the eParticipation platform interactions that influence public policy decisions requires attention to formal authority and critical resource control. However, it is also necessary to recognize the interactions and mechanisms implemented in practice. Our findings are helpful for policymakers seeking to create effective participatory processes while considering citizens' opinions.

1. Introduction

This paper investigates eParticipation practices and the mechanisms of influence on policymaking. Policymaking is a complex interactive process that involves many stakeholders and addresses problems from a wide variety of topics (Birkland, 2019). Citizen participation is considered a valuable element in this democratic decision-making process (Michels, 2011), as it promotes a more egalitarian version of the democratic ideal, prevents corruption, diffuses power, and strengthens citizenship (Cassell & Hoornbeek, 2010; Fung & Wright, 2001).

Aspects of policymaking are fundamentally changing because of technology, which can improve the ability to inform the public by visualizing information, providing feedback, and increasing the speed of deliberations (Janssen & Helbig, 2018). The Internet allows for unprecedented levels of policy communication between the government and the citizens they represent, serve, and regulate (Rethemeyer, 2007). Digital technologies, while possessing no deterministic capacity to shape political relationships, could offer a means of overcoming the distances between representatives and those they represent (Coleman & Sampaio, 2017).

The massive use of information and communication technologies (ICTs) and the Internet has provided new ways to link citizens and governments and has given rise to the concept of electronic participation (Criado, Ruvalcaba-gomez, & Madrid, 2018). This article focuses on electronic participation (eParticipation), distinguishing the idea from other eDemocracy instruments (Macintosh, 2004). We employ the definition relating eParticipation to ICT to support the dialog between the government and citizens in public decision-making to facilitate online deliberations and consultations (Macintosh, 2004; Susha & Grönlund, 2012).

While some eParticipation studies have concentrated on ICT tools (e.g., Janowski, Estevez, & Baguma, 2018; Lee, Tsohou, & Choi, 2017), others have focused on government stakeholders, including political parties, citizens, and public administrations (Medaglia, 2012; Wirtz

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et al., 2018). In this study, we investigate eParticipation practices and mechanisms to understand the influence of citizens on policy formulation. Knowledge regarding innovative technologies and their actual effects on the policy process is limited (Luna-Reyes, 2017). Increasing our knowledge of the potential contribution of citizens to the formulation of public policies is essential (Kamal, 2009; Rodríguez-Bolívar, 2016; Rodríguez-Bolívar & Muñoz, 2019; Susha & Grönlund, 2012). Many issues related to public interest and decision-making are still poorly investigated in eParticipation studies, and there is scarce evidence of initiatives that significantly influence the shaping of policy outcomes (Coleman & Sampaio, 2017; Ricciardi & Lombardi, 2010). Additionally, some studies identify the frameworks encompassing eParticipation practices (Ainsworth, Hardy, & Harley, 2005; Porwol, Ojo, & Breslin, 2016; Susha & Grönlund, 2012; Wirtz et al., 2018) but do not show how such practices can lead to changes in the trajectory of policymaking. A lack of citizen empowerment results in a democratic deficit, decreased political engagement, disconnection between citizens and their elected representatives, and a consequent decline in the legitimacy of political institutions (Rose & Sæbø, 2010).

Given these gaps, this study seeks to answer the following question: *How do eParticipation practices and mechanisms improve citizens' influence on public policy decision-making?* To answer this question, we investigate three eParticipation platforms in three major cities in Brazil (São Paulo (SP), Rio de Janeiro (RJ), and Curitiba (CWB)). Brazil provides a fertile field for understanding the impact of eParticipation platforms on the public policy process. The country has continuously been applauded as a creator of innovative ways of engaging in public policy and urban mobility and has inspired many other countries worldwide (Gustafsson & Kelly, 2016; Pogrebinschi & Ross, 2019; Sampaio, Maia, & Marques, 2011; Spada, Mellon, Peixoto, & Sjoberg, 2016).

To increase the understanding of the mechanisms and maneuvers that can influence the eParticipation process, we use the literature on power from the perspective of possession and practice (Marshall & Rollinson, 2004; Tello-Rozas, Pozzebon, & Mailhot, 2015). Most studies on eParticipation that analyze power relations focus on the government's motivation to control resources and maintain authority over decisions. We argue that integrating two perspectives of power, namely, practice and possession, might better explain how to implement more representative and inclusive eParticipation processes.

To present our work, after this introduction, we provide a literature review covering aspects of eParticipation and power. We introduce the perspectives of possession and practice as a theoretical framework. Next, we present the methodological steps followed in the research. We show the findings regarding eParticipation practices and mechanisms in each case and compare them. We discuss the implications for the research on eParticipation, power, and policymakers. We conclude by revisiting the significant contributions for practice and theory and by presenting our suggestions for future studies.

2. Theoretical background

Public participation involves citizens who participate in consultations, contribute by providing opinions and answers to questions defined by the government, and receive information about public policy (Charalabidis, Triantafillou, Karkaletsis, & Loukis, 2012). In this process, ICT offers the potential to allow policymakers to reach citizens directly (Tambouris, Liotas, & Tarabanis, 2007). Public policy can be generally defined as a system of laws, regulatory measures, courses of action, and funding priorities for a particular topic made widely known by a government entity or its representatives (Evans, 2008). Birkland (2019) argues that there is no single definition of public policy but that there are some common characteristics, which are as follows: i) a public policy is created in response to a problem that requires attention; ii) it is created for the "public"; iii) it is oriented toward the desired goal or state, such as solving a problem; iv) it is ultimately implemented by governments, even if the ideas come from outside the government or through the interaction of governmental and nongovernmental actors; v) it is interpreted and implemented by public and private actors, who may have different interpretations of their problems, solutions, and motivations; and vi) it is what the government chooses to do or not to do.

Citizens' participation is a valuable element of democracy and the content of policy decisions (Michels, 2011; Saebo, Rose, & Molka-Danielsen, 2010). People participate in the policy process because they either perceive that there are problems for which the government can provide solutions at some level or believe they can contribute to public administration (Birkland, 2019). Thus, more effective public policy can be formulated with citizen participation (Loukis, Xenakis, & Charalabidis, 2010). Although citizen participation may not always serve the government's intentions, it can facilitate interactions among citizens in defense of their interests (Meijer, Burger, & Ebbers, 2009).

2.1. eParticipation domain

Technological advances over the past decades have forced governments at all levels to rethink how they should engage with citizens (Cassell & Hoornbeek, 2010). The rapid evolution of ICT has enabled the transformation of deliberation and decision-making processes, connecting the government and society and allowing citizens to play a more active role in the state's decisions (Coelho, Cunha, & Pozzebon, 2017; Saebo et al., 2010). eParticipation is one of the main building blocks in the democratic decision-making process, and it has improved the global democratic scene (Roberts, 2004; Rose & Sanford, 2007;).

eParticipation refers to interactions mediated by technology between the government and citizens (Zissis, Lekkas, & Papadopoulou, 2009), with a view to citizens (individually or collectively) influencing public decisions. Through digital platforms, participation allows citizens to influence decision-making to achieve reliable and reasonable solutions (Susha & Grönlund, 2012). Participation mediated by ICT connects governments and citizens, creates spaces and new opportunities for collaboration, and influences public decision-making. The government can use various online platforms to allow citizens to provide input that influences policymaking (Luna-Reyes, 2017). Such platforms have functions that facilitate citizen participation and engagement. Platforms can be developed to display public information (less collaboration with citizens) or create opportunities for citizens to collaborate with the government (Sandoval-almazan & Gil-garcia, 2012). To conceptually divide the different forms of eParticipation into categories, we draw on an established categorization from the literature. We highlight the following three dimensions: actors and stakeholders, eParticipation platforms, and levels of engagement.

2.1.1. Actors and stakeholders

The literature describes the different actors/stakeholders involved in eParticipation, including citizens, government, private organizations, and collective agents, such as NGOs, activists, and groups (Medaglia, 2011; Susha & Grönlund, 2012; Wirtz et al., 2018). Susha and Grönlund (2012) grouped these stakeholders into the categories of citizens, collective agents, and government. The engagement of these actors is fundamental to improving the quality of public policies (Wirtz et al., 2018). In this sense, eParticipation promotes changes in the interactions between citizens, private companies, NGOs, politicians, and public administration (Sandoval-almazan & Gil-garcia, 2012; Susha & Grönlund, 2012). The degree of interaction of these actors depends on the design and type of eParticipation platform.

2.1.2. The design of the eParticipation platform

Many governments have shown consistent interest and have made considerable efforts to enable citizens to engage in public policy formulation through different platforms (Sandoval-almazan & Gil-garcia, 2012). Some researchers have indicated that tool design may be an essential factor in increasing citizens' interest in participating in the public decision-making process (Janowski et al., 2018; Lee et al.,

2017; Porwol, Ojo, & Breslin, 2018). The choice of tools to promote eParticipation concerns functionalities that connect and facilitate communication between the government and citizens (e.g., blogs, forums, chats, e-mails, and surveys) and the political process (e.g., ePetitions, eConsultations, eVoting, and digital participatory budgeting). Each tool has specific characteristics and should be chosen according to the needs and objectives of the particular government entity (Zissis et al., 2009). The tool choice affects the efficiency and effectiveness and the overall outcome of the policies implemented (Ainsworth et al., 2005; Karlsson, 2012; Schulz & Newig, 2015; Zissis et al., 2009). The potential success of eParticipation initiatives may be related to the strategies and factors adopted in the process. Aspects such as accessibility, transparency, interaction, information, and security are associated with the positive eParticipation effects (Panopoulou, Tambouris, & Tarabanis, 2014; Wirtz et al., 2018).

The choice and use of a specific application can be influenced by factors related to the institutional context and the types of democratic ideals. This choice establishes the type of interaction that the platform will provide (Sandoval-almazan & Gil-garcia, 2012). The interaction could be restricted, unidirectional, exchanged, or focused on a determined group. Like e-consults and surveys, unidirectional tools enable citizens to give their opinions concerning public policies or decisions. Nevertheless, such tools can fail if a lack of feedback from the government and citizens' contributions are rarely recognized and included in public policy or decision-making (Porwol et al., 2016; Sandoval-almazan & Gil-garcia, 2012). On the other hand, e-government could be a starting point for several citizen interactions, such as using a forum for discussions and posting online where users, usually those with shared interests, can interact (Karlsson, 2012). This type of platform allows governments to observe citizens' debates and recognize constructive suggestions, including the results of deliberations on their agendas (Porwol et al., 2016).

This study focuses on the formal interaction platforms offered by the government aimed at including citizens in the decision-making process (Porwol et al., 2018). Other types of participation platforms, such as bottom-up platforms that are typically accessed through social networks (Alarabiat, Soares, & Estevez, 2021; Criado, Sandoval-Almazan, & Gil-Garcia, 2013), are not included in our analyses.

2.1.3. Levels of engagement

There are different levels of citizen involvement in decision-making. Macintosh (2004) reported the following three levels: e-enabling (a citizen can participate without influence), e-engaging (citizens can consult with the government when it allows contributions), and e-empowering (citizens have the opportunity to influence a political agenda). According to the author, these levels facilitate understanding how ICT has contributed to the democratic process. Other models have emerged over the years to describe different degrees of citizen involvement in decision-making (Koussouris, Charalabidis, & Askounis, 2011; Tambouris et al., 2007). Lower ICT levels characterize the use of technology to enable participation and engage citizens, providing technology to meet citizens' technical and communicative skills and offering relevant information in a format that is understandable and accessible to everyone (Macintosh, 2004). Initially, the government uses ICT to inform citizens about policymaking (Janssen & Helbig, 2018; Koussouris et al., 2011). The use of a platform for these functions represents unidirectional communication between decision-makers and citizens (Wirtz et al., 2018).

High ICT levels allow for closer ties between the government and society, greater collaboration between them, a better understanding of public information and public issues, exchange roles and responsibilities, and more significant participation in decision-making (Charalabidis & Loukis, 2012; Diirr, Araujo, & Cappelli, 2014). Collaboration involves citizen participation in identifying solutions and developing public policies in partnership with the government (Tambouris et al., 2007). Applications such as forums, wikis, Facebook, and Twitter have created different modes of interaction and increasingly produce more collaboration (Sandoval-almazan & Gil-garcia, 2012). The highest level of eParticipation with empowerment is found when a platform for participation achieves a result in which citizens play an active role in public decision-making (Koussouris et al., 2011; Macintosh, 2004; Tambouris et al., 2007). This type of eParticipation platform places power directly in the hands of citizens (Cropf & Benton, 2019). In the next section, we argue that a better understanding of the role of power is critical for advancing the understanding of how citizen eParticipation influences policymaking.

2.2. Power from the perspectives of possession and practice as a theoretical framework

In this study, power is addressed by two complementary epistemologies, possession and practice (Cook & Brown, 1999; Marshall & Rollinson, 2004). Tello-Rozas et al. (2015) also recently addressed this complementarity. In the epistemology of possession, power is treated in static terms as something to be possessed and exercised by individuals or groups (Marshall & Rollinson, 2004). From this perspective, power is related to the ability to guarantee positions of authority, the control of resources, or the legitimacy of actors (Hardy & Phillips, 1998). In this sense, whoever has authority, access to resources, or legitimacy will have a better chance of influencing the domain.

In the epistemology of practice, power is relational and cannot be acquired, maintained, possessed, or incorporated into a person, structure, or institution (Tello-Rozas et al., 2015). This perspective views power as situated, provisional, and capable of being reviewed. It is always provisional; therefore, when studying it, it is fundamental to observe in detail the practices, strategies, and concrete techniques through which it is enacted (Marshall & Rollinson, 2004). From this perspective, rather than understanding who has power or the type of power possessed, it is more important to understand the effects caused by power, how power is modified globally, and why specific tactics are used (Foucault, 1980). According to Foucault (1980), power is exercised through various microstrategies, tactics, and maneuvers. Therefore, the phenomenon of power can be investigated historically by identifying how control mechanisms have worked, unfolded, and caused changes in a given context.

In an integrative approach to power, we argue that eParticipation connects citizens and the government, creating spaces and new opportunities for collaboration and influence in public decision-making. Such platforms can also create spaces that are limited by power. Fig. 1 presents a schematic of the study's theoretical framework, which is built based on the concepts of power and eParticipation.

Aspects of policymaking are fundamentally changing due to new technologies informing the public regarding public policy, including the types and amounts of feedback, and involving citizens in the deliberation process (Janssen & Helbig, 2018). eParticipation includes several aspects that must be considered, such as actors and stakeholders, platform design, and levels of engagement. These aspects have a substantial traceable influence on the design, planning, and implementation of electronic participation (Porwol et al., 2016; Susha & Grönlund, 2012; Wirtz et al., 2018).

eParticipation has the potential to generate increased participation and trust in government. On the one hand, it can be used by the government to manipulate and create its identity (Ainsworth et al., 2005). Additionally, a digital infrastructure can facilitate information control and surveillance, increasing the gap between the powerful and powerless. On the other hand, it can serve as a tool of resistance, as follows: "the internet presents a means by which groups can try to influence and resist those in power over them" (Ainsworth et al., 2005). The concept of power as possession is particularly relevant when efforts are made to influence the formulation of public policies (Hall, 2003). eParticipation can be used to propagate government authority and/or legitimize government will (Åström, Granberg, & Khakee, 2011).

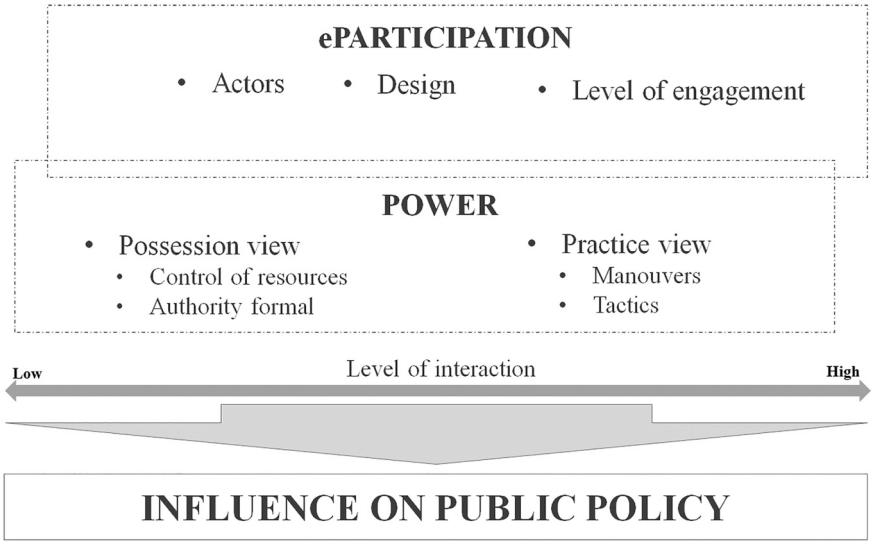

Fig. 1. Integrative approach of power and eParticipation.

The relational dynamic of power is evident, for instance, when participants can verify intermediate results and influence the policy process (Van Lieshout, Dewulf, Aarts, & Termeer, 2014). In this view of power as practice, the focus shifts to how interaction affects policy formulation and implementation. This perspective explains how the process is deliberative in considering participants' viewpoints in the process (Torfing, Peters, Pierre, & Sørensen, 2012). The government uses electronic spaces to facilitate communication with citizens but, at the same time, has rules and limits for the discussion space. Moreover, dominant actors can articulate the discourse in ways intended to influence other citizens (Ainsworth et al., 2005).

We argue that an important bridge can be built between power and eParticipation to explain how citizens can be included in public decision-making. ICT, particularly the Internet, presents a means by which groups can seek to influence public policy (Janssen & Helbig, 2018; Rethemeyer, 2007; Susha & Grönlund, 2012). However, it is necessary to consider how influence can be used to intervene in the relationship between government and citizens through a digital participation platform. In this sense, our investigation answers the call for more research investigating the potential for citizens to contribute to policymaking (Kamal, 2009; Pozzebon, Cunha, & Coelho, 2016; Rodríguez-Bolívar, 2016; Susha & Grönlund, 2012) and for research explaining how the power dimension affects the eParticipation process involving citizens and governments in public policy formulation.

3. Research methods

We used comparative interpretative case studies (Walsham, 1995) to investigate the eParticipation processes of the following three digital platforms in three major Brazilian cities: 1) the São Paulo Mobility Plan (PlanMob) (Case-SP), 2) the Rio de Janeiro Sustainable Urban Mobility Plan (PMUS) (Case-RJ), and 3) the Urban Mobility of the Curitiba Master Plan (Case-CWB). The methodological design was influenced by the works of Pettigrew (1973) and Langley (1999), which follow a process-based approach. Three comparative studies were chosen to enable a continuous examination of the process in different contexts, revealing multiple sources and cycles of interaction and connectivity. The studies were crucial for identifying and explaining the patterns in the process of change that influenced the policy design.

3.1. Case selection

Brazil is a representative democracy, and the people choose the members of legislative power (those who make and vote on laws, including deputies, senators, and councilors) and those in executive roles (mayors, governors, and president of the republic). Elections take place every four years, alternating between every two years. By voting, citizens elect their representatives, who make decisions anew for those who elected them. The Federal Constitution of 1988 established the Democratic Rule of Law in Brazil, which promulgated a series of principles and guidelines concerning citizen participation in the design, implementation, and social control of public policies that were regulated and operationalized in various institutional mechanisms in the three spheres of the Federation (Federal, State, and Municipal). There are institutional spaces for popular participation in public decision-making, such as councils, political conferences, and public audiences (Elstub & Escobar, 2019). Participatory budgeting began in 1989 in the city of Porto Alegre, representing an example of a collective decision-making process that involves both the government and citizens in voting concerning the city's budget (Pinho, 2011; Pogrebinschi & Ross, 2019; Pozzebon et al., 2016). Porto Alegre's participatory budgeting was recognized and replicated worldwide.

All Brazilian municipalities must prepare their Master Plan and Mobility Plan. The City Statute ensures the population's participation in discussions and debates regarding the future of all Brazilian cities. Therefore, public management must provide methods for the population to participate in discussions and debates while preparing these plans. Each municipality must provide a means to involve citizens in the discussions and debates to develop public policy. However, there is no standard to be followed concerning citizen participation; thus, the options regarding how municipal management should be approached are left open.

Thus, the context of this research involves complexity in the configurations of the municipal executive arena. We understand that this configuration directly influences power structures. In the three cases studied, face-to-face and eParticipation were established for the preparation of mobility plans. However, we focused on the eParticipation process and how the digital space shaped power relations.

Our cases represent the implementation of urban mobility policies at the municipal level on digital platforms. We chose SP, RJ, and CWB for several theoretical and practical reasons. First, we focused on the importance of urban mobility and its significance for improving societal well-being. Second, we considered the learning opportunities offered by these three cases, as they used an eParticipation platform in their agenda-setting and policy formulation. Additionally, the possibility of personal participation in meetings and public hearings was significant.

Third, we chose these cases because of their contextual richness. These three major cities underwent substantial infrastructure changes because of their mobility policies. Finally, the urban mobility of these three cities is important in Brazil, and they provided valuable variations for the study. Additionally, at the time of data collection, these cities had government strategies led by different political parties and presented different models of digital participation.

The three cases in question and their respective digital platforms are the mobility plans of the cities of São Paulo (Case-SP), Rio de Janeiro (Case-RJ), and Curitiba (CWB) in Brazil.

Case-SP – São Paulo Urban Mobility Plan and the PlanMob platform: SP is the most influential and populous city in Latin America, with 12 million inhabitants. According to data from City Hall, more than 14,000 buses circulate throughout SP daily. SP has the most extensive and the busiest metro transportation system in Brazil, with 101.1 km of lines through which approximately 25 million passengers circulate daily. There are approximately 34,000 registered taxis and more than seven million registered cars. Additionally, SP has 680.0 km of roads for bicycles. These characteristics show that SP has complex urban mobility systems that comprise several transportation modes, such as buses, trains, subways, planes, taxis, shared cars, cars, and bicycles. PlanMob is the city's instrument of planning and management that guides the municipal urban mobility policy on behalf of the collective interest. It sets forth the policy's principles, directives, and actions over 15 years (2015–2030). PlanMob was drafted by the SP City Hall (PMSP) with technical support from the Municipal Transport Secretariat (MTS) and the state-owned enterprise SPTrans with other municipal secretariats involved in urban mobility and development. The PlanMob platform (https://www.prefeitura.sp.gov.br/cidade/secretarias/transportes/planmob/) is a portal hosted within the domain of the PMSP, which was created exclusively to present information related to Case-SP to the public. The website created a digital space where citizens could seek information concerning the plan. The schedule, agendas for every meeting and current legislation are available on the site. The platform was created and developed by the MTS, the agency responsible for drafting the plan. The eParticipation aspect was only consultive, implemented through a survey that resulted in approximately 7600 responses. The format chosen to publicize the documents did not allow the participants to engage in debate.

Case-RJ – Rio de Janeiro Sustainable Urban Mobility Plan and the Desafio Agora Rio and Mapeando platforms: RJ is the second largest city in Brazil, with 6.5 million inhabitants. According to data from Data Rio, more than 6000 buses circulate throughout RJ daily. There are approximately 33,000 registered taxis and more than two million registered cars. Additionally, it has 450.0 km of bike lanes. Daily, an average of approximately 2.2 million passengers are transported by road, rail, water, and air transportation in the city. The PMUS defines the directives for public investments in mobility in RJ over ten years (2016–2026). The plan was coordinated by the Municipal Secretary of Transportation - SMTR with external consultancy and civil society institutions. Desafio Ágora Rio (https://desafioagorario.crowdicity.com/)[1] is a digital platform for discussing and proposing public policies and improvements in urban mobility. Citizens can leave suggestions based on the themes offered by the PMUS. Mapeando is an interactive platform where citizens can identify the issues that they wish to address on a map in a georeferenced form. The SMTR used eParticipation tools to draft the Plan, which led to some exciting changes. In terms of practical results, the technical staff included unforeseen routes (not initially planned), and the Mayor authorized the drafting of a plan for bicycle paths in the city. Approximately 2770 citizens participated in the platforms, sending 400 proposals and casting more than 18,000 votes.

Case-CWB – Curitiba Master Plan and the PlanDirector platform: CWB has 2 million inhabitants. The transportation system consists of approximately 1550 buses that transport 1.23 million passengers per day. The city is recognized nationally and internationally as an innovative city in terms of its urban planning, particularly with regard to innovations in mobility. CWB developed the bus rapid transit (BRT) system that cities in several world regions use today (Gustafsson & Kelly, 2016). Master plans are the primary instruments used for policy development for Brazilian cities, and they are updated every ten years. Directives, principles, goals, and other urban planning rules originate from the master plans. In 2014, in CWB, the Institution of Research and Urban Planning (IPPUC) coordinated a procedure for reviewing the city's master plan. The IPPUC is a municipal autarchy that coordinates the urban planning and monitoring of the city. The PlanDirector platform (http://www.curitiba.pr.gov.br/planodiretor) is a portal hosted in the domain of the CWB city government. It is the digital link between citizens and the government team in charge of drafting the master plan. On the website, citizens provide their suggestions through a forum. Approximately 1600 contributions were left on the forum, and of all the themes of the master plan, urban mobility received the most significant number of posts, i.e., 316.

3.2. Data collection

We used three sources for the data collection as follows: 1) semi-structured interviews, 2) written and electronic documents, and 3) nonparticipant observation. We conducted 32 in-depth interviews with representatives of the government, private companies, citizens, and social movements for a total of approximately 32 h of recordings. We began the interviews with the coordinators of the mobility plans in each city, each of whom had in-depth knowledge of the process. With these initial interviews, we began to understand policy formulation and the role of digital participation in each plan. At the end of every conversation, following a purposive snowball logic (Miles & Huberman, 1994), we asked the interviewee to recommend other relevant respondents who could provide information about government members and citizens who had participated in the process. As our data analysis progressed, we sought more people (Glaser & Strauss, 1967), as we noted the need to fill gaps that appeared during the analysis. We interviewed representatives of the government and private companies involved with digital participation platforms and citizens who were active on those digital platforms. The citizens were engaged in the mobility cause; some were activists or social movement members. The interviews lasted between 30 min and 90 min. All of the interviews were recorded and transcribed, resulting in approximately 430 single-spaced transcribed pages. We developed scripts to conduct the interviews. The questions sought to identify elements that could support the understanding of the eParticipation process in the context of policymaking and concerning power relations. We invited the interviewees to detail their experiences in drawing up the plan; they were asked for their recollection of the events, especially regarding participation, both in person and electronically. The interview protocols contained questions regarding the history of the plan's elaboration, the actors involved, the dilemmas, the difficulties and challenges, the decision-making process, participation, and contribution.

In addition to the interviews, we collected documents on the three cases to which we had access. As the studied phenomenon was public participation, most of the documents were available on the platforms, including a) documents, such as terms of reference and methodologies; b) presentations, such as explanatory infographics created to present the plans at public events or in internal meetings; c) intermediate documents, such as workshop reports, diagnoses, and minutes of meetings; d) final reports and reports on policy formulation; and e) supporting documents, such as attendance lists and participation statistics. Fifty-one

[1] The link is not active. In Brazil, it is not uncommon for management to inactivate information or websites from the previous management that do not have their publication requirement guaranteed by law. For example, information regarding the budget, accountability, and government plan is permanent.

documents were collected totaling approximately 1100 pages. We also collected texts published on participation forums. We downloaded 317 contributions and 285 responses posted on the participation forum of the PlanDirector platform on the theme of urban mobility. We also analyzed 382 proposals and the corresponding comments posted on the digital platforms. The data from the interviews, observations, and documents were useful for obtaining different points of view and making sense of the analyzed participation paths. They also provided a history of the process and allowed data triangulation.

3.3. Data analysis

The data analysis was conducted in two phases, combining inductive coding (Corley & Gioia, 2004) with an analysis of events using visual mapping (Langley, 1999). The processual data consisted of stories about what happened and the participants' actions as events occurred. We aimed to understand the planning process over time by highlighting the meanings, experiences, and contingencies of events. We employed inductive coding (Corley & Gioia, 2004) inspired by grounded theory (Glaser & Strauss, 1967). We read the collected data on Atlas.ti®, identified critical points, and examined the events leading up to them, exploring how the practices were developed over time. We identified several episodes that served as a basis for comparison. We began the open coding process within each case, searching for phrases that revealed key actors and the activities and tactics they performed (practices). Next, we grouped the codes into first-order themes to visualize the data into a higher level of theoretical abstraction (Corley & Gioia, 2004). We performed a systematic analysis, constantly comparing the data to group the first-order themes into categories representing the emerging theoretical concepts. We then refined the categories into several cycles. We established the following eParticipation practices: 1) actions for designing the platform (practices that create and design the platform), 2) mediations (activities related to the mediation of technical and popular discourse), and 3) mechanisms of influence (elements used to create forms of influence).

In the second phase, we examined the eParticipation process over time. Adopting a process-based logic (Langley, 1999), we sought to understand what happened during eParticipation, when it happened, what the actors were attempting to achieve, what changes occurred through eParticipation and why, and the function of power in each action. To do so, we used the visual mapping technique (Langley, 1999) and preliminarily identified patterns in each case (visual within-case analysis). Visual mapping allows the simultaneous representation of several dimensions that can be used to show precedents, parallel processes, and activities that occur over time (Langley, 1999).

For each case, we examined the collected data and built a sequence of actions from each event, plotting the data on flow charts with the aid of Visio software. After describing the actions in each event, we noted that the interactions of the actors appeared to show different paths. We divided the ordinates of the maps into horizontal bands, one for each type of practice, as follows: 1) actions for designing the platform (practices that create and design the platform), 2) mediations (activities related to the mediation of technical and popular discourse), and 3) mechanisms of influence (elements used to influence the process in some form). As the visual maps were developed, we found multiple flows of activities that were connected over time. From these flows, we identified patterns. The graphical representations (visual maps) were important in providing details of how the eParticipation process occurred in each case and helped us understand the power relationships. After the maps were drawn, we identified the critical events in which the power relationships were evident. We understood which strategies were used to maintain power over strategic decisions and how the citizens attempted to influence the process. We drew more than 20 maps. However, because of space limitations, we cannot reproduce them here.

4. Results

This section presents the findings of our inductive data analysis. We illustrate the main actors and the platform practices for digital participation. Additionally, we detail the process of eParticipation and the practices of influence in each case.

4.1. Recognizing the actors

Various actors are involved in the eParticipation process (Medaglia, 2011; Susha & Grönlund, 2012; Wirtz et al., 2018). In our cases, we identified three actor groups, namely, the government, engaged citizens, and enterprises. Table 1 summarizes these groups.

The three actor groups can be summarized as follows. The government was represented by technical specialists and actors experienced in participation. Technical specialists are government experts in city planning that have knowledge of and experience in drafting strategic plans. The actors experienced in participation are people linked to the mayor's office and can legitimately discuss platform participation. Engaged citizens are participants who contributed proposals on the platform. They take on informal leadership roles on the platform, submit more proposals, and question the government. Social movements and activists are participants engaged in the eParticipation process. However, they cannot be categorized on the platform because they are registered and studied individually.

Enterprises are organizations that assist in the participation process. Exclusively in Case-RJ, the government hired a consultancy firm to help explain the mobility plan and participation. Additionally, a nongovernmental organization assisted the technical specialists in preparing the report of the face-to-face workshops. Other enterprises are involved in urban mobility policymaking, such as bus companies, trade unions, and political associations. However, despite the power and influence, these enterprises were not identified on the platform and were not included in the study.

We investigated a single type of public policy area. We recognize that this area of public policy can have an impact that is unique in the configuration of actors in the policy formulation process. After presenting the actors in the eParticipation process, we describe the eParticipation practices.

Table 1
Summary of actors involved in the eParticipation process.

Case-SP	
Government	Technical specialists and public executives who have formal authority and resource control. They are career professionals from the government who make technical contributions and have expertise in urban mobility.
Engaged citizens	Citizens who participate on the platform and have information and internet access.
Enterprises	There are no enterprises involved in the eParticipation process.
Case-RJ	
Government	Technical specialists and public executives who have formal authority and resource control. Actors experienced in participation who have skills from previous eParticipation experiences. Actors linked to the Mayor's office, which gives them legitimacy in the discussion of participation.
Engaged citizens	Active participants recognized for contributing proposals on the platform. They have expertise in mobility and informal authority.
Enterprises	Consultants contracted to conduct the PMUS process.
Case-CWB	
Government	Technical specialists and public executives who have formal authority and resource control. They are specialists in urban planning.
Engaged citizens	Citizens recognized as assuming an informal leadership role on the platform.
Enterprises	There are no enterprises involved in the eParticipation process.

4.2. eParticipation practices

The data analysis of the three cases enabled the design of a model to represent the interaction of actors on a digital platform. A set of practices performed by the actor to improve the eParticipation process and its influence on public decision-making emerged from our data. We categorized these practices into the following four categories: 1) *design*, 2) *interaction*, 2) *mediation*, and 3) *mechanisms of influence*.

1) *Design of the platform:* This includes *recognizing the coordination team* and *defining the characteristics of participation.* These actions facilitate our understanding of how the government designed the platform and how that design affects the interaction. The practices in this category consist of determining who is responsible for the participation process, the type of tool(s) employed, the selection of participants, and the decisions regarding the content that will be made available. These practices reflect the government's interests and help connect the participants. *The proposition is that the actors' interests are reflected in the design choices for the platform design*. The position of authority and the possession of specific resources influence the decision-making process.
2) *Interaction*: This group of practices includes *accessing the platform*, *sending proposals/responses*, and *promoting debate*. Citizens performed these actions on the platform with the intention of influencing public policy. The platform offers a configuration that intervenes in the interactions between the participants. It also provides information about the available resources to citizens and the government to shape platform interactions.
3) *Mediation* includes various actions aimed at facilitating the connection between the government and citizens, such as *educating* citizens about public policy, *translating documents*, *curating* the content created by the participants, adapting to professional requirements, and *facilitating* knowledge sharing with citizens regarding technical processes. The arguments of better-informed citizens have a greater influence on public decisions. The government must understand the language of the citizen to better engage in the participation process through productive dialog.
4) *Mechanisms of influence:* The actors operate multiple mechanisms to modify the participation results. These are tactics and maneuvers practiced by the government and citizens to influence public policy. This category encompasses the ways in which citizens and the government create mechanisms that help empower citizens and influence policy. We identified the following four types of mechanisms created by the government and citizens: *mobilizing, bombarding, exposing, and publicizing*.

We identified the actors involved and described the eParticipation practices. Now, it is possible to understand the relationships and interactions that occur during participation on the platform and how such participation influences public policy in each case.

4.2.1. Practices on the Case-SP - PlanMob platform

In SP, the design of the eParticipation platform limits the relationship between government and citizens. The first action in **platform design** is *recognizing the coordination team*. The technical specialists who have the power to conduct the process are responsible for drafting the plan, which includes deciding how participation will be approached. They centralize this action and perform all the functions. *Defining the characteristics of participation* consists of choosing the tools to enable participation, directing access to the platform, and determining the permissions that citizens will be given. We noticed that a centralized coordination team opted for platforms with consultative characteristics through use of a survey.

Interaction does not take place on the platform. *Accessing the platform* is limited to those who have access to information and technology. The design of the platform does not permit debate, only consultation. The citizens participated by sending responses on the platform. Communication is vertical, and there is no dialog with or between participants.

eParticipation suffers from the influence of **mediation**. Mediation is different from interaction. While interaction involves citizens' abilities to access and debate within the platform, mediation is related to activities that create the conditions under which eParticipation occurs. *Educating* emerges from the practice of mediation. *Educating* means teaching citizens about public policy issues. Using the role of educators, the government instructs people on policy issues. The government believes that it is essential to inform the population about public policies because it is likely that most citizens are unaware of them. This practice includes initiatives to define the content to be made available on the website, to produce training, and to share presentations concerning plans.

We identified only the **mechanisms** of influence used by the government. Through the survey, the technical specialists added information relevant to the process of drafting the plan. They used *publicizing* to legitimize the public policy, publishing the survey results in a text format as follows: *"There was this concern over divulging what was being done by publicizing it"* (Technical specialist_ESP01).

eParticipation in Case SP had little influence on public policy. However, the final text was written in partnership with engaged citizens through face-to-face participation. A direct communication platform was created with a focus on the themes of pedestrian mobility and cycloactivists. The drafting of PlanMob/SP was collaborative in the traditional modality. Thus, engaged citizens played an essential role in drafting proposals that were fully incorporated into the final text of the plan. Regarding eParticipation, "*It is important to show that some problems, some solutions that we point out about mobility are already part of the citizen's life. In fact, I think it ends up giving more strength to the plan"* (Technical Specialist_ESP01).

4.2.2. Power in case-SP eParticipation

In Case SP, the platform designed by technical specialists is focused on defending government interests. In the eParticipation process, power emerged through processes of formal authority and the control of resources (possession view) from start to finish. The government had the formal authority to define the rules and guidelines of eParticipation. The definition of the platform design was centralized and sought to defend the individual interests of the government. Citizens who had resources such as information, time, and internet access dominated the platform. From a practice perspective, only the publicizing mechanism was identified. The government used this mechanism to legitimize the public policy and recognize the groups that were able to collaborate in person, such as cyclist and pedestrian representatives. Thus, the government's interests prevailed, and there was little influence on public policy through the eParticipation platform.

4.2.3. Practices on the Case-RJ - Desafio Ágora Rio and Mapeando platforms

In RJ, the **design** of the platform amplifies the relationship between the government and citizens. Technical specialists and people with experience in participation are *recognized to share coordination efforts*. In the early stages of eParticipation, formal authority was mobilized to control the resources (technological, financial, and human) necessary for shaping public policy. However, recognition of the experience of other actors in participation altered the trajectory. Technical specialists in participation have easy access to the mayor, previous experience, information, and credibility *to define the characteristics of participation*.

Our analysis shows that shared coordination occurs when those who have the power to develop public policy recognize that they do not have all the skills required to realize the eParticipation process and seek to unite with those who do. This sharing is crucial in defining the characteristics of the eParticipation platform. An example is the following comment by a technical specialist:

"We weren't going to do eParticipation. […] There wasn't going to be the kind of tool they need. We would not be able to do it. […] So the collaboration [with those experienced in participation] *made all the difference"* (Technical specialist_ERJ01).

The design allows **interaction** on the platform without government moderation. *Accessing the platform* is limited to those who have the necessary information and technology. Although the technology provides a broader reach, citizens who do not have those resources (such as an internet connection, information, devices) do not participate. To prevent exclusion, the government needs to create conditions that enable more people to participate. One interviewee observed the following:

"*Today, everyone buys a computer, but there is still a large portion* [of the population] *that has no access and is unaware that these things exist"* (Technical Specialist_ERJ02).

Once the platform has been accessed, the next practice is *sending proposals/responses*. The rules of submission are created by the coordination team when defining the platform characteristics. Proposal/response submission can be opened to any citizen with no restrictions, but it can also be controlled by requiring prior registration and user identification. Our analyses show that it is essential for the government to create a platform where the rules allow citizens to feel free to send proposals. For example, the participants did not need to identify themselves on the platform and used avatars or nicknames. For example, an interviewee said the following about the adopted mode of electronic participation: "*I think people are freer to reflect more […] and to send your contribution"* (Consultant_ERJ08).

This practice involves at least understanding the questions, and prior knowledge of urban mobility issues is essential to have a more significant influence on the platform. The proposals/responses sent include initiatives where citizens use their knowledge to formulate proposals, articulate posts, send their proposals, and make choices among the suggestions presented on the platform.

The platform design can not only permit sending proposals but can also promotes debate. *Promoting debate* is the action of creating a space that allows participants to not only express their opinions on the platform but also discuss issues with other participants, including making new suggestions and debating existing ones in a collaborative environment, as exemplified by an engaged citizen as follows:

"You can answer, you can debate, you can complement, include an idea, take an idea. I think this is a great democratic construction" (Engaged citizen_ERJ12).

Promoting debate is quite different from sending proposals. It provides favorable conditions for sharing knowledge among participants and creating collective action. This practice encourages engaged citizens to meet, make decisions, and produce proposals together. For example, an excerpt from the Desafio Ágora Rio platform shows participants discussing a proposal to standardize the buses that circulate throughout the city. The participants engaged in a debate regarding the initial proposal and complemented it, creating a guideline for the city.

Mediation helps connect the government and citizens. The government provided education to instruct citizens on issues concerning the PMUS. Therefore, *educating* is crucial for shaping policy and opens opportunities for further debate.

"*It is important to make this kind of more technical information available to people who wish to make use of it"* (Actor experienced in participation_ERJ10).

Another critical action is connecting the technical discourse to collective *translating documents*. Translating does not mean expressing the sense of the text in another idiom. It involves the provision of adequate text for citizens who do not have an engineering or architectural background and might have difficulty understanding technical terms. For example, the content on the site was submitted to a linguistic review to adapt the technical language to make it easier for citizens to understand. A journalist from the city press office was assigned the task of translating the technical texts into the form to be released to citizens.

Curating consists of analyzing and verifying the technical feasibility of each proposal. The proposals and suggestions that emerge in the debate must be curated. In other words, each proposal is organized, managed, and technically analyzed to determine what will be considered in the public policy. A team was invited to analyze all the proposals posted on the platform and to select the pool of proposals that would be included in the PMUS concerning technical issues, relevance to society, and mitigation of social and environmental costs.

"It was necessary to make the first selection and give an order because they are matters about a simple bus stop; there is a general planning guideline" (Technical specialists_ERJ04).

In addition, actors experienced in participation facilitated the connection between the technical and collective aspects. *Facilitating* technical work involves holding meetings for discussions among technical specialists, sharing information, and preparing material resulting from participation in a format that technicians can understand. Facilitating differs in nature and focus from other practices as it functions to help the government include eParticipation in public policy and connect with citizens.

"It has an adaptation of the technical content to the lay content; it is a communication content that people can easily understand" (Technical specialists_ERJ01).

With a space free of moderation, the participants feel as if they own the platform and used **mechanisms** to influence the eParticipation results. The *mobilizing* mechanism consists of inviting a significant number of actors to participate on the platform. Engaged citizens use their knowledge to inform people about mobility, exchange documents and share information, with the aim to engage as many participants as possible. Citizens also mobilize outside the platform and use ICT to communicate through messenger applications (e.g., WhatsApp and Telegram), social networks (e.g., Facebook), and cloud platforms (e.g., Google Docs and Dropbox). An example of this mechanism being articulated in practice is the network engagement of some civil society organizations in RJ:

"We put the documents on Google Docs, asked people to read, and some people participated. […] We posted a lot on Facebook" (Engaged citizen_ERJ11).

The bombarding mechanism consists of a "flood" of proposals and comments on a specific topic as the participants begin to bombard the platform with posts and "likes." Through the articulation of groups, people are invited to discuss, like, and vote for the desired proposals, and by doing so, they influence the results, as one technical specialist stated, *"The activists flood the tool"* (Technical specialist_ESP01). This mechanism reaches many people and generates a positive reaction. Bombarding acts as a driver for proposals, likes, and interactions, using the platform to generate more action. The central idea is that the greater the level of bombardment, the greater the power of influence over public policy:

"The citizens voted a lot there. I think there were many votes from people who nobody knew too, but we were also able to mobilize family, friends of the collective staff" (Engaged citizen_ERJ11).

Through *mobilizing* and *bombarding mechanisms*, informal leaders *expose* themselves. *The exposing mechanism* consists of presenting oneself and putting oneself in evidence. Therefore, these leaders are recognized as collaborators in the drafting of policy. They are active and have the knowledge required to make proposals and, thus, gain the legitimacy to

collaborate in policy formulation. The following statement by one of the interviewees illustrates this point:

> *"The greatest legacy for our collective was a better dialog with the municipal government. […] We now have connections at city hall. […]"* (Engaged Citizen_ERJ11).

Finally, some actors were almost continuously present on the platform, thus making a more significant contribution. By exposing themselves, these citizens became recognized by the government and were invited to collaborate in person. For the government, this recognition was a way of identifying the demands and the most active citizens.

The government also creates a mechanism for a closer relationship with citizens, namely, *publicizing*. The *publicizing* mechanism ensures that the results of the eParticipation process will be used in public policy drafting. *Publicizing* is the act of making the participation process public. Incorporating the eParticipation results into the final documents will *legitimize* the public policy. In RJ, those with experience in participation used their authority to publicize eParticipation. City hall officially issued the following document:

> *"There is an effective political result that exists today in Rio de Janeiro on the Internet with a document with 10 proposals for urban mobility that have passed through the population. […] You can use it as an official document, prepared by the city, that consolidates the 10 most important ideas about urban mobility through the eyes of the population of Rio who participated in this process" (Actor experienced in participation_ERJ10).*

eParticipation in Case-RJ allows collaboration between the government and citizens. The learning and recognition of informal leadership represent an essential legacy of participation on the platform. These practices influence public policy and learning regarding the eParticipation process. In the final eParticipation report, the suggestions from citizens were consolidated as directives to be incorporated into the Mobility Plan.

4.2.4. Power in Case-RJ eParticipation

The interactions on these platforms occurred in a multidirectional manner, allowing proposals to be produced through collaboration. The government had authority and dominated the process (possession). However, this formal authority was shared with technicians and those experienced in participation. They used their legitimacy to ensure that participation was incorporated into the PMUS. The design allows participants on the platform to interact without government moderation. The platform permits wide-ranging debates, and the government does not control eParticipation. There is space for interaction among engaged citizens in which the participants post proposals and information, engage in discussions, and collaborate. eParticipation is influenced by the following different types of mediation: educating, translating, curating, and facilitating. It is proposed that the best-informed citizen will be most able to contribute to public policy. The government has the formal authority to control resources and instruct citizens. Upon realizing that the government cannot engage in dialog with people, linguistic support emerges to ensure the interplay between technical and collective knowledge. Despite all the debate and discussion, the dominant actor who has formal authority controls the process by deciding how the interaction will be used. However, some mechanisms enable citizens to interfere with the results (practice view). Citizens mobilize, bombard the platform, and expose themselves. Informal leaders emerge on the platform and are empowered. Mobilizing and bombarding are used to engage more participants on the platform to attract more attention to the government. However, eParticipation is dominated by those who control resources and mobilize to discuss urban mobility and those who engage on and bombard the platforms with proposals. These practices influence public policy and learning about the eParticipation process. As a result of eParticipation, it is possible to view the final report, in which suggestions from citizens were consolidated as directives to be incorporated into the PMUS Mobility Plan.

4.2.5. Practices on the Case-CWB - PlanDirector platform

In CWB, technical specialists have been given legal power to coordinate and manage the drafting of the plan (Laws 2660/165 and 11.266/2004). These experts have the institutional power to conduct the public policy formulation process and the eParticipation process. *Recognizing coordinated team* action is centralized by technical specialists. The government mobilized formal authority to control the process, to decide on publicity strategies, and to control the information about and direct access to the platform, i.e., *defining the characteristics of eParticipation*. Formal authority and control over resources define the work model, and the experts make decisions concerning the eParticipation process:

> "*The platform was developed exclusively by the staff here, exclusively with our resources"* (Public executive_ECWB09).

The **interaction** was limited to *accessing the platform* and *sending proposals/responses*. Citizens make as many suggestions as possible on the platform and read the recommendations and replies posted, while technical specialists moderate participation by replying to the contributions. To participate, citizens needed to register on the platform and were allowed to post only their responses. The interaction on the digital platform is one-way; the platform does not permit debate between participants, and the only interaction is between citizens and a technician who replies.

Mediation emerges to inform citizens and announce proposals that could be included in public policy. In terms of *educating*, the government uses the platform to instruct people regarding public policy issues. The view is that citizens must have knowledge and experience in mobility to engage in coherent discourse regarding public policy formulation.

> *"We found that it was necessary to train the population to participate in the master plan process because it is a technical term. So it would have to contextualize"* (Technical specialists_ECWB10).

Curating means analyzing and deciding which citizens' proposals should be included in the plan directory. The technical specialist was tasked with curating contributions and responding to citizens on the website and providing transparency in the participation process.

We found that citizens use one **mechanism** of influence. The *exposing* mechanism consists of presenting oneself and putting oneself in evidence. Therefore, these leaders are recognized as collaborators in the drafting of policy. They are active and have the knowledge required to make proposals and, thus, gain the legitimacy necessary to collaborate in policy formulation. The following statement by one of the interviewees illustrates this point: "*It was the channel of exposure"* (Engaged Citizen_ECWB11b). Additionally, the government *publicizes* the results in text on the platform to legitimize eParticipation.

It is difficult to identify the direct influence of citizen participation in public policy drafting. However, it is possible to locate the formal leaders who are eventually called upon to contribute personally. Furthermore, moderation allows the policy to gain legitimacy, as contributions are responded to with justifications about whether it is possible to comply with each suggestion. Although the forum enables citizens to make suggestions regarding public policy, it is challenging to identify the proposals that have been incorporated into the final text of the plan. As (Public executive_ECTA04) stated, "*There is no mechanism for measuring how much of what was effectively demanded is incorporated into the Plan*." According to the technical experts, some proposals were included in the final text. For example, a suggestion on shared transport became a directive of the plan. However, the format of standardized responses and the lack of feedback have a negative impact on how people view the contribution of eParticipation.

4.2.6. Power in Case-CWB eParticipation

In Case-CWB, the platform exposed government-citizen interaction

through a government-moderated forum where participants could leave suggestions that would be reviewed, evaluated, and answered by a technical specialist. This type of configuration is dominated by linear and vertical interactions (Ainsworth et al., 2005), which produces a moderate effect on public policy. The technical specialists had the power to coordinate and manage the process of drawing up the master plan. In addition, they made decisions about the electronic participation process. Formal authority was mobilized to control resources and protect the interests of the dominant actors (possession). Formal authority was also used to control the process, decide on publicity strategies, control information, and manage access to the platform (critical resources), in other words, to define the characteristics of eParticipation. The platform does not permit debate or interaction among participants; the only interaction is between citizens and technical specialists. Educating and curating stand out as forms of mediation. People need to have information to participate and exercise their rights as citizens. Therefore, eParticipation first requires a predisposition to listen to the citizen to mediate and commit to making information available. In addition, the government can inform, analyze all citizens' proposals, and decide on the guidelines that would be employed in public policy.

On the other hand, the citizens who used the platform exposed themselves and were recognized by the government (practice). They began to contribute in person. These practices result in eParticipation outcomes regarding the shaping of public policy.

5. Discussion and implications

The findings show the interests and actions of the different actors, including the government, citizens, and civil society organizations, influencing the eParticipation process. We then used this within-case analysis to understand the eventual effects on eParticipation, as shown in Section 4.2. We also conducted a comparative analysis of the different cases (cross-case) to understand the identified patterns and divergences. Table 2 shows a summary of this analysis.

We summarize the use of the platform in Case SP as eParticipation leveraging. Regarding the actors, the government (represented by technical specialists) dominated the eParticipation practices. The design of the eParticipation platform provides functionalities to connect the citizens and government by a unidirectional tool (Sandoval-almazan & Gil-garcia, 2012). They use their formal authority and control of resources (power from a possession perspective) to create a consultive platform that does not allow interaction between citizens. Concerning the levels of engagement, the government's central preoccupation is to inform and consult citizens regarding public policy (Janssen & Helbig, 2018; Koussouris et al., 2011). The display of information is the basic function of this platform and lessens citizen collaboration (Sandoval-almazan & Gil-garcia, 2012). The publicizing mechanism legitimizes the process (power from a practice perspective). However, as a result of the level of interaction, the use of the platform creates an opportunity to leverage other forms of participation whereby citizens are recognized and allowed to collaborate in person.

Case-RJ shows the use of the platform as a learning opportunity for eParticipation. Regarding the actors, the government and citizens collaborate in the decision-making process. Technicians and people with experience in participation share the formal authority to design the platform. They have the resources to develop the platform and conduct the process (power from a possession perspective). The design of the eParticipation platform provided an unmoderated forum that allows citizens to advocate for their interests (Meijer et al., 2009). The platform's design enables debate between citizens and acknowledging constructive suggestions (Porwol et al., 2016). The mediation (educating, translating, curating, and facilitating) process assists the

Table 2
Comparison of the three cases.

	Case-SP	Case-RJ	Case-CWB
Actors	Public executives, technical specialists, engaged citizens	Public executives, technical specialists, actors experienced in participation, engaged citizens, consultants	Public executives, technical specialists, engaged citizens
Platform	Survey	Unmoderated Forum	Moderated Forum
eParticipation practices	*Design*	*Design*	*Design*
	• Recognizing the coordination team, defining the characteristics of participation	• Recognizing the coordination team, defining the characteristics of participation	• Recognizing the coordination team, defining the characteristics of participation
	Interaction	*Interaction*	*Interaction*
	• Accessing the platform, sending proposals/ responses	• Accessing the platform, sending proposals/responses, promoting debate	• Accessing the platform, sending proposals/responses
	Mediation	*Mediation*	*Mediation*
	• Educating	• Educating, translating, curating, facilitating	• Educating, curating
	Mechanisms of influence	*Mechanisms of influence*	*Mechanisms of influence*
	• Publicizing	• Mobilizing, bombarding, exposing, publicizing	• Exposing, publicizing
Power	Formal authority prevails throughout the process; the platform is developed without resources (possession). The publicizing mechanism legitimizes the process (practice).	Formal authority is shared between technicians and people with experience in participation; resources are expanded to develop the platform and conduct the process (possession). Mechanisms such as bombardment, mobilization, and exposure are used by engaged citizens to influence the policy (practice).	Formal authority prevails throughout the process; the platform is developed internally without additional founding (possession). Mechanisms such as exposure and recognition influence the policy (practice).
Results of eParticipation	• Insights into the public policy draft and the legitimacy of government proposals.	•Influence on the public policy draft through eParticipation. •Learning about the eParticipation process.	•Some proposals based on eParticipation included in the public policy draft.
Use of the platform	***Leveraging*** eParticipation as an opportunity to leverage other forms of participation.	***Learning*** eParticipation as openness to citizen empowerment.	***Exposure*** eParticipation as an opportunity to provide exposure citizens.

bidirectional connection between the government and citizens and allows sharing knowledge. Engaged citizens use mechanisms such as bombardment, mobilization, and exposure to influence public policy (power from a practice perspective). Concerning the levels of engagement, the use of this platform creates openness to citizen empowerment (Koussouris et al., 2011; Macintosh, 2004). Then, as a result of the level of interaction, eParticipation practices confirm the potential of ICT to increase citizens' contributions to public policy formulation (Charalabidis & Loukis, 2012; Luna-Reyes, 2017; Rodríguez-Bolívar & Muñoz, 2019).

We describe the use of the platform in Case-CWB as an exposition. In this case, concerning the actors, the government centralized the decision-making process. The government uses formal authority and the control of resources (power from a possession perspective) to create a unidirectional platform between citizens and the government but does not allow citizen interaction. The design of the eParticipation platform provided a unidirectional forum that enables citizens to express public policy concerns (Koussouris et al., 2011; Sandoval-almazan & Gil-garcia, 2012). To engage citizens, the government engages in educating and curating provide information, and select proposals. However, concerning the levels of engagement, this design involves citizens in public policy formulation but decreases the possibility of engagement among citizens to defend their interests (Meijer et al., 2009; Tambouris et al., 2007). To influence public policy, citizens use exposing mechanisms (power from a practice perspective). As a result of the level of interaction, the eParticipation platform promotes citizens' engagement through exposure.

The three cases show different trajectories in promoting online interactions that influence public policy. We reaffirm that the platform design can influence the type of interaction that will occur, which affects the types of interactions, as has been indicated in previous studies (Ainsworth et al., 2005; Zissis et al., 2009). Why do practices influence the result of public policy? What patterns are diagnosed over time? We analyzed the manifestations of power (possession and practice) of the different actors in each eParticipation practice to gain insights into these questions. To summarize the results, we present a processual model that reflects the studied eParticipation practices to influence public policy.

5.1. *The processual model of eParticipation practices*

Fig. 2 shows the processual framework of eParticipation practices. This model expands the approach of power and eParticipation, considers the actors involved in the process, describes the design actions and interaction on the platform, including the mediation action, analyzes the

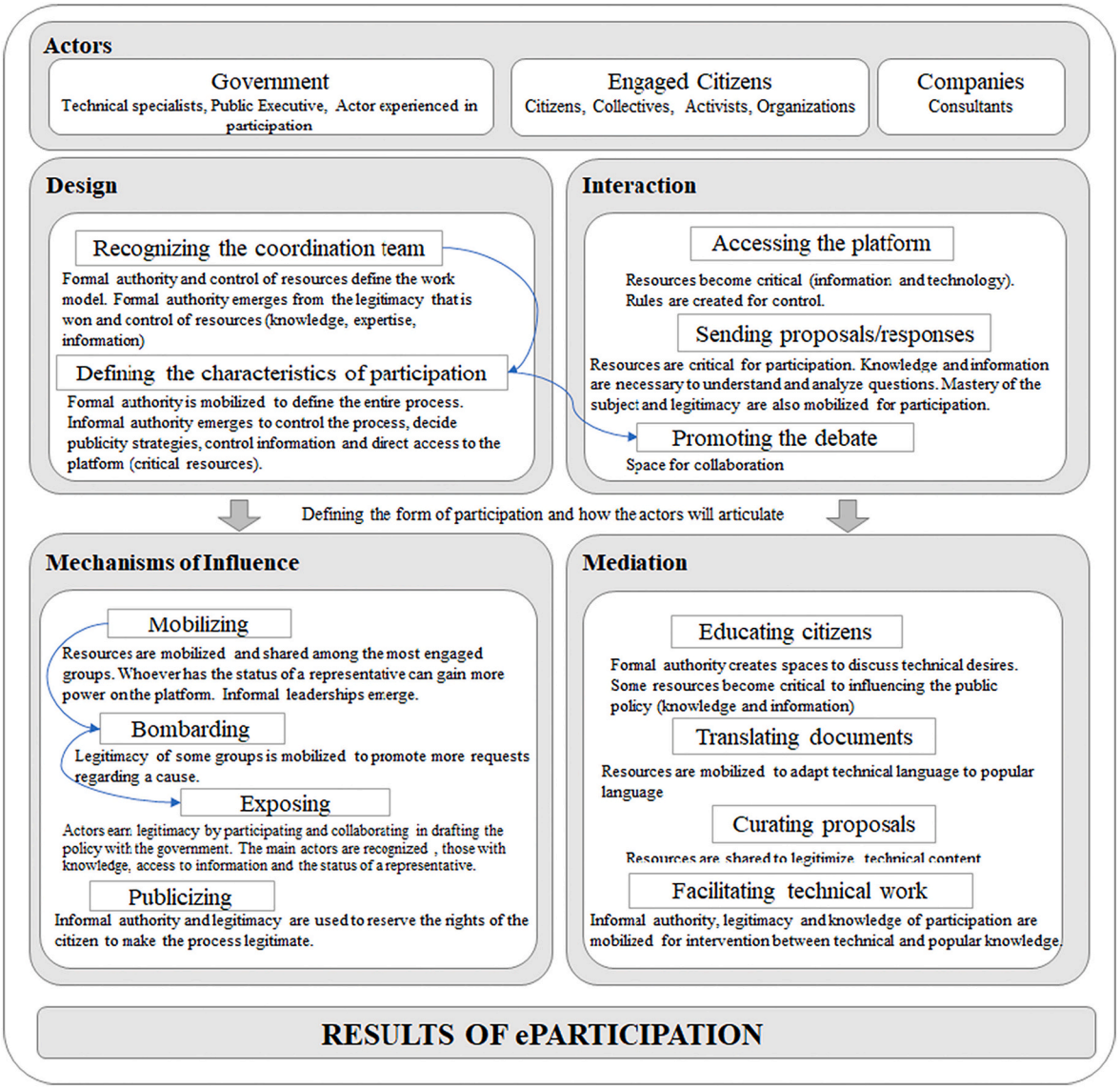

Fig. 2. Processual model of eParticipation practices.

mechanisms of influence, and discusses the impact of eParticipation on public policy formulation. The framework helps us understand the sequence of actions during the eParticipation process and the interdependence among these actions. The chain of practices that occur over time influences the results of eParticipation and modifies policy. The arrows in the model indicate where on the chain an action directly influences the next outcome. The processual model starts with the actors. Formal authority and resource control by the government (Hardy & Phillips, 1998) define the working model for platform design, which can be centralized or decentralized. They also define the spaces for eParticipation and the level of interaction on the platform.

The platform design influences the type of interaction that will occur. Rules can limit platform access, delimit the discussion space, or moderate the interactions among participants. Design practices define the participation format and how actors articulate themselves to expand the power of influence on public policy. We reaffirm that the choice of tools affects the effectiveness and results of eParticipation (Ainsworth et al., 2005; Schulz & Newig, 2015; Zissis et al., 2009). The platform design is a variable that can affect the level of interaction between the participants and promote different effects of eParticipation on public policy formulation (Ainsworth et al., 2005; Janowski et al., 2018; Porwol et al., 2018; Saebo et al., 2010; Zissis et al., 2009). Additionally, the success of eParticipation initiatives depends on the strategies adopted in the process (Panopoulou et al., 2014; Wirtz et al., 2018). The government centralizes decision-making on consultative platforms and moderated forums (power from possession perspective). Therefore, eParticipation can legitimize government actions (Åström et al., 2011). On the unmoderated forum, we recognize more collaboration among the actors and less control over their actions by the government. This configuration has the potential for citizens to influence policymaking (Rethemeyer, 2007; Van Lieshout et al., 2014).

Mediation facilitates action. Our findings present the practice of mediation as important in the process of participation. There are several challenges to reaching the highest levels of eParticipation. We argue that to obtain a more significant influence on policymaking, citizens need to develop the necessary skills to interpret and understand policy documents. On the other hand, the government needs to develop the skills to listen to and collaborate with citizens. Mediation helps build these skills, creating the necessary conditions to improve the relationship between the government and citizens. The basic function of a government platform is to inform citizens, which is the first level of eParticipation (Macintosh, 2004; Sandoval-almazan & Gil-garcia, 2012). Accessible language is necessary to keep citizens informed and involved in the process. Additionally, we identify numerous actions that are essential to facilitate communication between the government and citizens. Translating and educating practices assist in developing the communication skills needed to interpret public documents and the ability to transfer the information necessary for citizens to be involved in public decision-making processes.

The government could control the eParticipation domain and draft public policy (power from possession perspective) (Ainsworth et al., 2005, Åström et al., 2011, Hall, 2006). However, engaged citizens use various mechanisms to influence policy via the Internet (power from a practice perspective). These include mobilizing, bombarding, exposing (by engaged citizens), and publicizing (by the government). Traditionally, the government promotes eParticipation solutions that do not favor the recognition of citizens' contributions to public policy (Porwol et al., 2016). However, we identified some of the mobilization mechanisms that facilitate the inclusion of these contributions in the public decision-making process. Citizens use these mechanisms to change the power structure and influence policymaking. Bombarding is the submission of many simultaneous proposals on a given issue. Exposing is related to people introducing themselves and becoming known. The recognition of actors can promote legitimacy and influence. Publicizing is making the participation process public, and recognition consists of identifying important actors to form closer relationships.

The processual model shows the eParticipation dynamics and the interdependence among participation practices. The combination of eParticipation practices (design, mediation, and mechanisms) can result in different influences on public policy. Learning about the eParticipation process occurs when collaboration between technical specialists and those with experience in participation drives electronic interaction with participants on the platform.

5.2. Theoretical implications

eParticipation seeks to connect the government and citizens through ICT to support public decisions (Macintosh, 2004; Medaglia, 2012; Susha & Grönlund, 2012). The topic is widely debated in the literature, but some gaps still need to be filled. Based on our analyses, we present the following contributions to the field of eParticipation.

First, we explore how the participation process can influence policymaking. We present a processual model that describes the practices of the participation process in the elaboration of public policies. The processual model of eParticipation practices expands the approach of power and eParticipation while considering the actors involved, the platform design, the interactions, the mediation actions, and the mechanisms of influence used to promote different results in public policy formulation.

Second, it is known that platform design influences eParticipation (Ainsworth et al., 2005; Porwol et al., 2018; Zissis et al., 2009). We advance the knowledge of this issue by exploring the factors underlying platform design choices. In a situation of authority and the control of resources, the tendency is to centralize the decisions regarding platform design. This type of configuration is dominated by a linear and vertical interaction that produces moderate effects on the final public policy. When there is collaboration on the design, the policy formulation is characterized by greater participant involvement. In this case, the government can provide citizens with an opportunity to influence the drafting of public policy (e-empowerment) (Macintosh, 2004).

Third, the literature indicates that the eParticipation process involves actors/stakeholders, design, and levels of engagement (Susha & Grönlund, 2012; Wirtz et al., 2018). Our process model identifies mediation among the actors involved as a practice in the eParticipation process that has not previously been mentioned. We show the actions to facilitate communication between the government and citizens as essential to engaging citizens in the eParticipation process.

Fourth, the eParticipation literature also notes that reaching a high level of interaction among citizens in public decision-making processes is challenging (Cegarra-Navarro, Garcia-Perez, & Moreno-Cegarra, 2014; Fedotova, Teixeira, & Alvelos, 2012; Linhart & Papp, 2010; Macintosh, 2004; Porwol et al., 2016; Sandoval-almazan & Gil-garcia, 2012). Our study provides a new approach in this regard by investigating the mechanisms of influence as critical factors for the empowerment of citizens. Moreover, a lack of knowledge of political issues is considered one reason why citizens do not participate in public policy formulation (Helbig, Ramón Gil-García, & Ferro, 2009). Platform design can be a factor in increasing citizens' interest in participating in a public decision-making process (Lee et al., 2017).

Finally, we show how manifestations of power from the possession and practice perspectives can influence the participation process. Previous research indicates that eParticipation can connect the government and citizens, but it can also create power-limiting spaces (Ainsworth et al., 2005). We advance this discussion by demonstrating the manifestations of power throughout each practice of eParticipation and identify that the mobilization of resources, in practice, changes the course of eParticipation. Power affects the opportunities for actors to fulfill their roles in eParticipation practices. The possession perspective (Hardy & Phillips, 1998) helps us understand how the government uses its formal authority to control public policy. Authority and the control of resources are essential in comprehending power (Hardy & Phillips, 1998). However, the structural influences on power, including the

schemes and rules reproduced in social practices (Marshall & Rollinson, 2004), should not be ignored. The relational view (Marshall & Rollinson, 2004; Tello-Rozas et al., 2015) helps us understand how mechanisms become a source of power. Influence mechanisms also help us understand that certain maneuvers are made to alter power structures. We reconcile the two perspectives and propose that they can be complementary. More powerful actors can control participation, and less powerful actors (without resources such as access, information, legitimacy, etc.) may not be involved in the process (Åström et al., 2011). We show that the government has the formal authority to control the process. It also has the resources to make public decisions (power from a possession perspective). However, the power is dealt with and redistributed in practice. The less favored actors can use certain mechanisms to increase their chances of influencing policy (power from a practice perspective).

5.3. Implications for policymakers

eParticipation involves different actors, nonconverging interests, and power differences. Promoting eParticipation is challenging, and different platforms will bring about different policy-making outcomes. Our results show that, first, in eParticipation practices, the platform design influences participation and the potential for citizen involvement in policymaking. Second, the interaction practices between the actors on the platform are also fundamental on the path to more significant citizen influence in the direction of public policy. Third, the identification of mediation practices may be the most important contribution of this study. Mediation plays a significant role in improving the interaction between the government and citizens and even in bridging the understanding between technical and popular knowledge. Our processual model helps policymakers plan the eParticipation process. It also provides opportunities for reflection on participation processes, the possibility of comparing the different formats of eParticipation, and identifying points of improvement to be implemented. Additionally, we have observed the mechanisms that emerge to expand citizens' capacity regarding public policy. Another implication for practice is that, even on platforms designed to limit citizen impact, these mechanisms will improve the positioning of citizens' interests.

This study is helpful for policymakers seeking to create compelling digital participation processes and to consider citizens' opinions in formulating public policies. The paper identifies a set of practices that can be used to launch more interactive eParticipation platforms. The mediation practices performed by translators and educators can leverage the results. Additionally, we show that the government can maintain power structures by designing less interactive platforms.

The findings are also helpful for improving the design of participation platforms to broaden the scope of relationships between the government and citizens through ICT. Furthermore, citizens' motivation is related to their empowerment (Fedotova et al., 2012). We confirm this assumption, emphasizing the importance of eParticipation platforms that allow interactions among citizens. We underscore the importance of understanding the actions that impact the collaboration between the government and citizens so that the population will have the power to make decisions. Additionally, we highlight the interactions and mechanisms that affect the desired results of eParticipation. Thus, we expect that government agencies will be able to more easily identify issues in society through electronic participation and that this will be reflected in the satisfaction of citizens. In addition, the findings of this study may benefit the improved monitoring of policy implementation in collaboration with citizens.

5.4. Limitations and future research

Despite using multiple data sources, we cannot discard alternative explanations for the dynamic presented. Although we used comparative cases, data captured in real time could reveal details that cannot be identified in a retrospective study. Future studies can use netnography to observe power relationships and the mobilization of resources throughout eParticipation. We also do not discuss how the perspective of power varies in different political or democratic systems. Activists can place substantial pressure on governments and open opportunities for structural change in the context of public policymaking (Federici, Braccini, & Sæbø, 2015). Future research can explore these aspects.

Although eParticipation and eDemocracy are closely related (Susha & Grönlund, 2012), this paper did not address the literature concerning democratic innovations (Coleman & Sampaio, 2017; Hendriks, 2019) and the interplay between different models of democracy and the perspective of power relations. Future research could investigate the different models of democracy and the distinctive configuration of actors in the policy formulation process.

In Brazil, municipal elections occur every four years, resulting in changes in each mayor's government plans. The research context involves the complex configuration of the executive and legislative levels. The government transition is an aspect of the power structure, especially in terms of the continuity of public policies. We suggest that future research advance the discussion and seek to understand the impact of government transitions in implementing and evaluating public policies, especially concerning eParticipation and power.

Finally, a limitation of the study is the analysis of eParticipation cases for a single type of public policy area. Our study focuses on the use of eParticipation to formulate public policies on urban mobility at the local and municipal levels. Future research should explore other public policy areas. For example, in Brazil, the master plan of a city guides the construction of different levels of planning, such as sector plans, which are general guidelines for a given region or segment. The processes for drawing up plans and projects must provide methods of participation. Future researchers should investigate the eParticipation process in terms of the elaboration of these different public policies. The comparative results can support the theoretical construction of eParticipation and power. Another critical focus is to observe the participation initiatives of state and federal governments. Subnational governments and the federal government have different characteristics, especially concerning infrastructure and IT governance, which could impact the distinctive configuration of actors in the policy formulation process. These aspects open space for investigation for future research.

6. Conclusion

This paper aimed to understand how eParticipation practices and mechanisms improve citizens' influence on public policy decision-making. Our findings allow us to explain what, how, and why practices and mechanisms of eParticipation are essential to enhance the contribution of citizens to the formulation of policymaking. The eParticipation practice processual model presents the recognized actors, platform design, interactions, mediations, and mechanisms that produce eParticipation results. Additionally, we show how the power to influence public policy emerges throughout the eParticipation process through different actors' practices and mechanisms. Formal authority and the possession of resources (Hardy & Phillips, 1998) are sources of power, but maneuvers and tactics can be created over time to change the process. The research results make further contributions to the eParticipation field, especially toward a better understanding of the power relationship, and they extend the study of practices. We show that engaged citizens on digital platforms can use mobilizing, bombarding, and exposing practices to overcome barriers and influence public policymaking. Our findings also shed light on mediation among the actors involved, a dimension that has not previously been mentioned.

Our paper contributes to the literature by improving our understanding of essential issues related to the uses of ICT in eParticipation practices and the implications for drafting public policy. We explain the power relationship in this process. The paper is also relevant to policymakers and developers of eParticipation platforms, as it provides

insights into creating mechanisms to improve their relationship with citizens in public policy formulation.

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