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The Use of Paradox Theory in Public Administration: A Systematic Literature Review

ABSTRACT

Public Administration (PA) managers and employees deal every day with competing but equally valid demands from multiple and heterogeneous stakeholders. Paradox theory provides, in this sense, a powerful analytical lens as it offers an approach to accommodate and find synergies between competing interests simultaneously despite their contradictions and interdependency. This article aims to systematically review the application of paradox theory in PA research, adopting the replicable and transparent PRISMA methodology, for unravelling and critically interpreting whether and how this theory has been applied, according to both the explanatory potential of this framework and the specificities of the PA context. In this regard, the findings show that extant literature is under-exploiting the paradox theory framework's potentialities, as (i) paradox theory appears to be only partially applied, and (ii) its applications seem to conceive PA as a 'normal' organization, underrepresenting its unique peculiarities. The findings present relevant implications for PA scholars and practitioners and PA educators.

Keywords:

Paradox, Paradox theory, Systematic review, Public administration, Competing demands

Organisations and their management act in an increasingly complex environment, where competing demands and heterogeneous interests have to be accommodated (Lewis, 2000; Smith and Lewis, 2011), and multiple institutional logics coexist over time (Røhnebæk & Breit, 2022). As underlined by Gaim et al. (2018: 1), ‘where competing demands are deemed to be of comparable importance for managers and decision-makers, tensions arise over resource allocation and prioritization’, ultimately prompting different responses. Hence, since organizational success relevantly depends on the management’s ability to address competing demands and the tensions that spur within the organization (Smith & Tracey, 2016), it is not surprising that a significant strand of literature focuses on how to deal with them.

In classical theories, scholars mainly assumed that there is one best way of doing things (Taylor, 1911), so that competing demands can be solved by prioritizing alternative some at expense of others (in a slogan: is it better *either A or B?*). More recently, contingency theory (Lawrence & Lorsch, 1967) assumes that contradictory elements and related tensions should be managed by the organization through the selection of a strategy according to contingencies (in a slogan: under what conditions *either A or B?*). In the last years, the increased complexity and nature of the environment which organizations face requires the ability to find synergies among competing demands, even though, at first, they appear incompatible (Audia et al., 2000). In this regard, paradox theory emerged as an innovative theoretical lens (Lewis, 2000), that consider any organization as hosting inherently paradoxical tensions emerging from “competing demands that are contradictory yet interdependent” (Gaim et al., 2018: 4). Paradox theory offers a powerful lens for management, by providing a deeper understanding of persistent tensions within organizations (Lewis, 2000; Schad et al., 2016, 2019), and assuming that every organization is inherently paradoxical: the coexistence of multiple factors such as organizational routines, resource allocation, and compliance towards

norms, are permeated by paradoxes (Clegg et al., 2002; Cunha & Putnam, 2019; Schad et al., 2019). These are represented by two poles that seem logical in isolation but absurd and irrational when juxtaposed (Miron-Spektor et al., 2018), like exploitation-vs-exploration, change-vs-stability, alignment-vs-flexibility, and control-vs-autonomy. For example, by analyzing the stability-vs-change paradox it can be noticed how one pole defines the absence of the other. Change is the opposite of stability, yet one is understandable only in the presence of the other, underlying a struggle between the comfort of the past and the uncertainty of the future (Lewis, 2000; Smith & Lewis, 2011). The ‘modernity’ of paradox theory made it a suitable lens for developing insights on how businesses can effectively and simultaneously respond to competing demands (in a slogan: how to engage *both A and B* simultaneously?).

However, this approach has been only rarely and recently applied in the context of Public Administration (henceforth PA), even though this is naturally characterized by a variety of goals and a diversity of stakeholders’ demands (Fossestol et al., 2015). A key foundational trait of PA is exactly to simultaneously incorporate and balance different, vague and, at times, conflicting interests into their operations (van der Wal et al., 2011). For example, public employees should concurrently pursue apparently conflicting objectives (i.e., equity of treatment, transparency and effectiveness) in delivering public services (Aleksavska & Schillemans, 2022).

In view of this context, the present article aims to systematically review the paradox theory contributions in PA literature, to understand whether and how scholars used this theoretical lens to analyze PA organizations. To our knowledge, no previous study has already accomplished this goal. Therefore, the main contribution of this paper is to critically unravel the unexpressed opportunities of paradox theory in order to reimage the extant understanding of how to deal with complex and competing demands increasingly characterizing the PA. This paper wants to

contribute not only to the PA literature, by opening avenues of progress in theory development, but also for different practitioners (public managers and employees, policymakers and PA educators) by highlighting the importance of learning to live with inherent contradictions and finding synergies among competing demands. To reach this goal, we conducted a systematic literature review, following accurately the ‘Preferred Reporting Items for Systematic Reviews and Meta-Analyses’ (PRISMA) approach (Moher et al., 2009). The PRISMA methodology ensures indeed a rigorous and replicable way of analyzing data (Littell et al., 2008) thanks to its transparent and detailed reporting (Pandey et al., 2022).

The paper is organized as follows: in the next section, we introduce the key elements of paradox theory, by specifying our research questions. Thereafter, we discuss our methodology and then present the results of the literature review according to each research question. Finally, the results are discussed in the fifth section, and future research and implications for PA scholars and practitioners are drawn in the final one.

THEORETICAL BACKGROUND AND SPECIFIC RESEARCH QUESTIONS OF THE STUDY

Differently from classic and contingency theories, the paradox perspective addresses the issue of organizational long-term sustainability through the simultaneous meeting of multiple and divergent demands. To better understand its full potential and introduce the specific research questions of this article, this section introduces the key concepts of paradox theory as summarized in Figure 1. Paradox theory looks at multiple competing demands as paradoxes, namely, as a set of two or more contradictory incompatible, and interrelated poles (Poole & Van de Ven, 1989). The persistence

and interdependency of multiple poles generate paradoxical tensions, which can be conceived as an outcome of the complexity of the organizations, a normal presence in every organization. Paradoxes can be defined as ‘contradictory yet interrelated elements, that exist simultaneously and persist over time: elements that seem logical in isolation but absurd and irrational juxtaposed’ (Lewis, 2000). The symbol that better represents paradoxes is the Taoist Yin-and-Yang because elements seem distinct and opposites but define each other in a net of reciprocal mutuality (Schad et al., 2016). This symbol denotes (i) elements that are oppositional to one another, yet also synergistic and interrelated within a more extensive system; (ii) boundaries separating those elements highlight their distinctions and differences (encouraging either/or thinking) but at the same time the external circle integrates them in the overall system (highlighting potential synergies, and encouraging a both/and thinking); but (iii) this external boundary also binds and juxtaposes opposing elements and amplifies their paradoxical nature, creating a dynamic relationship between dualities and ensuring their persistence over time. Examples of paradoxical tensions are flexibility vs efficiency, short-term vs long-term, and collaboration vs control: they are oppositional to one another yet also synergistic and interrelated within a more extensive system (Quinn & Cameron, 1988). Paradoxical tensions are embedded in the process of organizing and are both latent and salient (figure 1): they persist in organizations as ignored and unperceived (i.e., tensions are latent), until forces - like environmental conditions (plurality, change, and scarcity) or cognitive efforts - accentuate their oppositional nature to organizational actors (i.e., tensions become salient). Once

latent tensions become salient, they spur responses, which, depending on the types of coping strategies used to manage such paradoxical tensions, may give rise to vicious or virtuous cycles. Vicious cycles occur when organizations focus on one single pole, deciding to eliminate it through an ‘either/or’ approach: the suppression of one pole intensifies the need for the other (Lewis, 2000). This approach exacerbates tensions in the long run and is associated with missing alternative perspectives and organizational inertia (Smith & Lewis, 2011). By contrast, virtuous cycles emerge when organizations develop an awareness of tensions and accept all the poles rather than suppress them. Despite choosing among competing elements, the paradox perspective argues that multiple and divergent poles can be addressed by organizations simultaneously, though it may be perceived as unrealistic. This approach, based on a ‘both/and’ perspective, encourages actors to embrace or live with paradoxes as persistent and unsolvable puzzles (Clegg et al., 2002). This ultimately enhances long-term sustainability and fosters radical as well as incremental innovation.

Insert Figure 1 about here

This systematic literature review aims to address five research questions referring to the main key elements of the paradox theoretical framework, and a final general question related to how this approach has been used by PA scholars:

1. What are the paradoxes that have been identified in the PA context?
2. What are the factors that render paradoxical tensions salient?
3. What are the coping strategies implemented for addressing paradoxical tensions?
4. What outcomes are achieved after the implementation of coping strategies?

5. Who are the actors that experience salient paradoxical tensions and implement coping strategies?
6. How comprehensively paradox theory has been applied by the reviewed literature, i.e., have the reviewed studies covered all the aforementioned key elements of this theory?

LITERATURE REVIEW METHODOLOGY

For the purpose of this article, we systematically review the articles applying paradox theory in the context of PA, using the PRISMA method. We here conceive PA, as “those parts of the economy that are either in state ownership or under contract to the state, plus those parts that are regulated and/or subsidized in the public interest” (Flynn, 2007: 2). We articulated two main search strategies, conducted in June 2022, to identify appropriate studies (Figure 2) and for each of them, we present the search terms and the eligibility criteria employed to make inclusion and exclusion decisions.

Insert Figure 2 about here

Literature search strategy and eligibility criteria

First, we search on Scopus and Web of Science (WoS) databases the word “paradox” - and the related words used among paradox scholars, “dilemma”, “duality”, “dialectic”, and “ambidexterity” - in the title, keywords and/or abstract of articles published in 40 PA journals. These have been identified from the Academic journal guide (AJG) of the Chartered Association of Business Schools, by excluding journals (n=15) that refer to specific policy sub-fields (Health, Education). The inclusion of the most common synonymous of paradox (Putnam et al. 2016),

allowed to us be as much as broad as possible in searching for eligible publications. Consequently, the first search leads us to identify 968 articles.

The second search strategy consisted in finding articles that contain the terms “paradox (or its aforementioned synonyms) and “public administration”, “public organization” and “public sector” (including phrase and Boolean searches) within the title, abstract and keywords of publications from every field of study. This second search ultimately retrieved 1788 publications, after discarding duplicated articles appearing both in Scopus and WoS. As results of the two search strategies, we thus identified 2756 articles, that were reduced to 2001 after discarding the duplicates. We then obtained bibliometric information (the journal, article’s title, publication year, keywords, abstract, the complete reference list) from either Scopus or WoS for the 2001 papers. However, since the purpose of this paper is to review theory-informed application of the paradox theoretical framework in PA, we verified, through an automatic analysis of the references listed within the 2001 selected papers, that these articles referred to at least one of the eight “foundational works” of paradox theory (Table 1), namely, academic publications that have been particularly influent in setting and describing paradox theory. This inclusion criteria, also used by Schad et al. (2016) in reviewing management literature, ensures that we focus intently on studies that directly applied the paradox theory and not just mention the general concept of paradox or its synonyms. In addition, we considered only English-written articles and reviews. Consequently, we identified 49 articles, for which we obtained the full-text copies.

Insert Table 1 about here

To empirically analyze the 49 identified articles, we first used some of the bibliometric information retrieved, and we then coded each article through a qualitative content analysis process. The coding

aimed to synthesize and classify both some research design information (methods, country of the empirical analysis, type of PA) and the key elements of the paradox theory framework (Fig. 1), namely, the paradox poles, the factors that render tensions salient, the coping strategies, the actors perceiving tensions and implementing strategies, and the outcomes of coping strategies. To code the elements of the paradox framework we used an inductive approach for paradox poles and actors, and an abductive strategy for the factors that render tensions salient, the coping strategies and their outcomes. In this way, we move back and forth between the empirical data and previous categorizations of these concepts (Putnam et al., 2016; Schad et al., 2016; Smith & Lewis, 2011) to fully preserve and catch the specificities of PA context. Table 2 summarizes our coding scheme.

Insert Table 2 about here

RESULTS

General description of the corpus of articles

Before answering the six research questions, we first generally describe the dataset of 49 articles identified through the review process. Figure 3 shows the growing attention toward PA analyzed through a paradox lens between 1992 and 2022. As depicted, the first article applying the paradox framework to PA was published in 1992, and from 2014, we can see a notable jump in the number of publications though this is not steady over time.

Insert Figure 3 about here

The 49 articles were published in 36 different journals as reported in Table 3. The majority of journals published just one article (n=28), while Public Administration Review (4), Public Management Review (4), and the Journal of Public Administration Research and Theory (3) contain most of the studies. Moreover, although the majority of journals present a specific focus on PA (53%), we found articles also in other fields, such as business, accounting and management, marketing and other social sciences (e.g., psychology), signaling that the application of paradox theory in the PA context is not confined to just PA journals.

Insert Table 3 about here

Regarding the research design of the reviewed articles, the empirical articles (n=40, 82%), employed predominantly qualitative methods (35, 88%) such as case studies (55%), interviews (20%), action research (5%) and ethnographies (5%). By contrast, there is a shortage of papers using quantitative approaches. Only 5 articles (13%) used them by conducting surveys or using secondary data and analyzing them through exploratory factor analysis or structural equation modeling. Additionally, we found no article using mixed-methods. Table 4 shows that paradox theory has been applied to all PA levels. The local level is the most investigated (43%), followed by studies that consider multiple levels of PA (29%), i.e., by jointly analyzing reforms that impacted both central ministries and municipalities. Concerning the type of PAs analyzed, the municipalities (28%), and the government departments (20%) are notably dominant. As municipalities are on the front line of public service delivery, by daily interacting with different stakeholders (citizens, businesses, non-profit organizations), it is not surprising that their organizational complexity and the need to handle multiple environmental tensions have been objects of interest among scholars. Around 20% of the paper focus instead on professional-based

PAs as hospitals (9%) or schools/universities (9%), whereas only a minority of articles on public companies (4%) or inter-organizational networks where both public and private subjects jointly participate (9%).

Insert Table 4 about here

Finally, Figure 4 illustrates that data on paradoxical tensions have been predominantly collected in specific empirical contexts, such as Europe and North America and, in particular, Anglo-Saxon countries. No article has been found adopting a cross-country perspective. African, Oceanian, South American, and Asian countries (except for some articles on Israel and China) are still under-represented.

Insert Figure 4 about here

Research question 1: What are the paradoxes that have been identified in the PA context?

This section presents the paradox poles identified by specifying the levels to which they occurred and analyzed, namely, individual, team, leadership, organization, PA system, and PA ecosystem. In particular, while the first three (individual, team, leadership) are intra-organizational levels, the PA system and the PA ecosystem levels represent inter-organizational spaces. The PA system level refers to the system of public organizations embedded in a net, and their different governmental levels, with the complexity and the challenges proper of the public sector (Pandey, 2010). By contrast, the PA ecosystem level, denotes the relations and the work arrangements between PA, profit and non-profit partners, as well as users and citizens (Bryson et al., 2015; Vangen, 2017).

However, despite recognizing different levels where paradoxes occur, we found that the same paradox can be investigated across different levels (Lüscher & Lewis, 2008).

Insert Table 5 about here

As a result of the coding process, we identified 10 main paradoxes as reported in Table 5. At the individual level, e.g., *autonomy-vs-dependence* addresses the nature of contributions, named the willingness to be autonomous and free and the need to be accountable and act on behalf of their organizations, reporting the tasks (Hernandez, 2018; van der Kolk et al., 2020). *Competition-vs-collaboration* is transversal to more levels, meaning that individuals (Majgaard, 2015), organizational units (Robbins et al., 2021), and partners of the ecosystem (Bate & Robert, 2006; Schmidt, 2019) struggle to work toward larger collaborative goals and, simultaneously, protect their own interests (Sedgwick, 2016). The team composition is informed by the *unity-vs-diversity* paradox, that expresses the need to have different skills and backgrounds to reach creative solutions, opposed to the recognition that more homogeneous teams are easier to be managed and coordinated (Amyar et al., 2019; Vangen, 2017). Another recurrent paradox is *control-vs-commitment*, which refers to vertical coordination among leaders-followers (Kelman & Hong, 2016), organization-employees (Bennani et al., 2021), and PA-partners (Saz-Carranza & Ospina, 2011). This emphasizes rigidity and control by outlining constraints, and the need to preserve autonomy and flexibility by conferring opportunities (Hermanson et al., 2020).

At the organizational level, *accountability-vs-effectiveness* emphasizes the need for public organizations to be accountable, and simultaneously be able to achieve the goals they are expected to reach (Brorström, 2015), while *continuity-vs-change* reflects the struggle between investing in

innovation without affecting traditional and path-dependent routines/processes (Bate & Robert, 2006).

Then, two paradoxes refer specifically to the PA-system level and aim to capture the level of specialization of tasks and decisions among PA organizations both vertically (*local-vs-central*) and horizontally (*differentiation-vs-multiplicity*). On the one hand, the *local vs central* paradox displays the tensions arising from the interactions between central (national) and top-down decisions vs local and bottom-up needs and specificities (Yang, 2020). On the other hand, *differentiation-vs-multiplicity* refers to the trade-off of being specialized in the context of functional and institutional differentiation (e.g., identifying with the increasing productivity of large-scale organizations) or, instead, emphasizing and promoting the pluralization of identity, namely the ‘lived experience’ of the subject, and the diversity of human social experience (Jun & Rivera, 1997; Kuoppakangas et al., 2020). Two paradoxes present three poles: *self-vs-public-vs-procedural interests* and *effectiveness-vs-efficiency-vs-consensus*. The former identified the coexistence of different values inside the professional identity of public employees. On the one hand, PA displays public and service-oriented goals for the “common good”, while, on the other hand, it needs to pursue goals that can be polarizing, and employees are expected to act fairly by strictly following procedures (Talbot, 2011; Zahav et al., 2016). Simultaneously, employees display their self-interest and integrity, which may influence work tasks and purposes (Arshed et al., 2021; Chow, 1992).

The latter paradox, *effectiveness vs efficiency vs consensus*, refers to governance arrangements and styles of PA. While public actions need to be effective and efficient, especially where value for money and management-by-results mechanisms are crucial in the operation of PA (Hytti et al., 2015), they also concurrently strive for external legitimacy, i.e. consensus towards PA’s actions, if they want to achieve their results (Bjerger & Bjerregaard, 2017; Norman & Gregory, 2003). For

example, Murphy et al. (2017) speak about a leadership tension which contrasts removing/excluding dissenting actors (consensus) to the protection of actors from politics and top-down directives as inhibiting forces of creative processes (effectiveness). At the PA ecosystem level, Yang (2020) discusses how governance needs to balance both expertise to function effectively and political/ideological-driven principles in order to reach consensus.

To conclude, the analysis of the reviewed articles points to two main results. First, around half of the studies focused on paradoxes occurring at the organizational level (49%), whereas only a minority investigated paradoxical tensions occurring at sub-organizational levels. Interestingly, relatively few articles examined paradoxes arising at public sector specific levels, as the PA system (8%), or the PA ecosystem (14%). Second, the most-studied paradoxes are *control-vs-commitment* (21%) (Saz-Carranza & Ospina, 2011; Xiao, 2018; Zeier et al., 2021) or *continuity-vs-change* (20%) (Di Domenico, 2015; Lindgren et al., 2015), which are still typical of any organization (Smith et al., 2017). The paradoxes that better address the specificities of PA, such as *self-vs-public-vs-procedural interest* (7%), *local-vs-central* (4%), *effectiveness-vs-efficiency-vs-consensus* (13%), and *accountability-vs-effectiveness* (13%) are still overlooked.

Research question 2: What are the factors that render paradoxical tensions salient?

Table 6 synthesizes the factors that render tensions that emerged from the articles of this review, and groups them into two main categories (consistently with Smith and Lewis [2011]): the *actors' paradoxical cognition* and the *environmental factors*. Generally, many of the articles analyzed introduced more than one factor that renders tensions salient.

Insert Table 6 about here

The table shows that only one article addresses the actors' unreceptiveness through cynicism/doubt as a factor that activates paradoxical tensions (1%) (Kuoppakangas et al., 2020), even though this factor proved to be highly relevant according to paradox theory articles outside PA. On the contrary, all the other papers identified environmental factors, such as *plurality* (32%), *change* (46%), and *scarcity* (19%) as the key factors rendering the tensions salient. *Plurality* denotes, e.g., the multiplication of differentiated and potentially conflicting demands (Pandey, 2010; Hermanson et al., 2020), the need to simultaneously respond to several complex social problems (Jun & Rivera, 1997), or the presence of different but equally important goals, practices, and values come from multiple layers (Backhaus et al., 2022). Similarly, other authors emphasized how the existence of different organizational forms (autonomy-related and bureaucratic structures) within the public organization (Xiao, 2018) or the collaboration and partnership among multiple PA and non-PA actors as exacerbating tensions (Vangen & Huxham, 2012).

Change is the factor most represented, and it involves new opportunities or threats from within or outside PA. From within the PA, the implementation of new reforms (Kozica & Brandl, 2015) or path-breaking practices, such as new control management tools or innovative training programs (van der Kolk et al., 2020; Zeier et al., 2021), or the introduction of new technologies (Qiu & Chreim, 2021), appear relevant for rendering paradoxical tensions salient. From outside the PA, some authors underlined the crucial role of environmental turbulence or complexity (Hermanson et al., 2020), by emphasizing, e.g. the raise of various emergencies such as the pandemic (Yang, 2020), financial crises (Murphy et al., 2017) or the management of migration flows (Chow, 1992; Schmidt, 2019).

The last factor that makes paradoxical tensions salient is *Scarcity*, which involves sub-factors like resource limitations, whether these are temporal, financial, or human resources (Amyar et al., 2019;

Hermanson et al., 2020). For example, cuts in the public budget (van der Kolk et al., 2020), austerity policies (Majgaard, 2015), and the lack of effective strategic planning management (Parikh & Bhatnagar, 2018; Kuoppakangas et al., 2020) are all factors related to scarcity.

Research question 3: What are the coping strategies implemented for addressing paradoxical tensions?

We classified the coping strategies following Putnam et al. (2016), that identified three main categories of strategies to address and manage paradoxical tensions (Table 7): *either-or*, *both-and*, and *more-than* strategies.

Insert Table 7 about here

The strategy less present in the papers is the *either-or* one (23%). This strategy aims at preserving only one of the poles of the paradox by: (i) denying the existence of paradoxes; (ii) selecting among competing interests and accentuating the differences rather than accommodating them (Norman & Gregory, 2003; Schmidt, 2019); or (iii) confining poles in a separate setting. For example, Amyar et al. (2019) show that team leaders ignore the existence of paradoxes, performing superficial supervision and downplaying their responsibility, providing at the same time discretionary space for team members to downscale the processes by avoiding legitimate tasks. Similarly, Robbins et al. (2021) and Schmidt (2019) illustrate how actors may separate the poles and allocate across different times and places, i.e. restring the access to information according to employees' job profiles or creating working groups based on the division of labor.

Differently, *both-and strategies* were found in 34% of the articles. These strive to accept and accommodate the opposing demands stemming from the paradox poles, and can be represented as

(i) the ability to recognize poles and live with their contradictions, or (ii) the ability to seek compromises between poles. The former includes, e.g., the need to update skills to be more flexible and creative, or to encourage followers to accept paradoxes as inevitable, showcasing how to deal with them. This is the case of paradoxical leadership (Backhaus et al., 2022), namely, the ability to balance competing structural and relational demands over time by using creative practices and solutions that can ultimately enable fast-paced, and adaptable decision-making (Franken et al., 2020; Lewis et al., 2014). The latter focuses on the need to negotiate a compromise, by using “a pick and mix” solution through the integration of different approaches (Bate & Robert, 2006; Kelman & Hong, 2016), where all the parties involved cannot lose their voice but need to collaborate.

Finally, the *more-than* strategy is the most studied by current PA literature (43%). This strategy assumes that contradictions can be transcended or synthesized at a higher level of abstraction, moving outside them and situated in a new relationship (Berti et al., 2021). The *more-than* strategy includes three sub-categories: (i) reformulating the contradictions between paradox poles as a learning opportunity, (ii) dialoguing, i.e. establishing spaces where poles dynamically interplay, and (iii) reflecting on current practices, i.e. viewing contradictions between poles as an opportunity for new practices by accepting the strengths and weaknesses associated with them (Vangen, 2017). The first occurs, e.g., when subjects reframe the paradoxes, by participating actively in creating a new basic understanding of the contradictions and enhancing the contribution to organizational ambidexterity (Parikh & Bhatnagar, 2018; Saz-Carranza & Ospina, 2011). Similarly, Di Domenico (2015) and Røhnebæk and Breit (2022) illustrate how emphasizing communicative practices through open discussion about the problem and the provision of feedbacks throughout the entire process, ultimately help to go back and forth between the two poles of the paradox.

Research question 4: What outcomes are achieved after the implementation of coping strategies?

Based on Schad et al. (2016: 76), we grouped outcomes into potential *positive* and potential *negative*. Table 8 shows that over the half of the reviewed article depicts positive (66%) rather than negative (33%) outcomes.

Insert Table 8 about here

Authors identified different types of *positive outcomes* such as enhanced creativity and the innovation of traditional processes (5%), their increased effectiveness (33%), new learning opportunities (19%), or the generation of employees' positive attitudes (9%). For example, the introduction of inspirational controls, which allow freedom of choice to employees and offer more autonomy, had a great positive impact on innovations and the enforcement to shift the focus from tasks to superiors was important for creativity (Ganguly & Das, 2020). Functional coping strategies may also enable actors to pursue collective outcomes or helping them to direct the tension to a positive side, ultimately improving performance (Hernandez, 2018; Kelman & Hong, 2016). A paradoxical mindset, defined as experiencing "tensions as paradoxes rather than either/or dilemmas [and] gain a deeper understanding of opposing elements and seek more integrative solutions" (Miron-Spektor et al., 2018: 27), has a positive outcome through cascading learning effect: managers that embrace it in dealing with tensions will make even employees accept the positive potential of tensions in their work the organization becomes more effective. Consequently, the uncertainties and the practitioners' anxieties are reduced by emphasizing why there cannot be just one optimal solution (van der Kolk et al., 2020; Vangen, 2017). Similarly, Backhaus et al. (2022)

illustrate how a paradoxical leadership (*both-and* coping strategy) leads to employees' positive attitudes, such as job satisfaction and work engagement.

Concerning the *negative outcomes*, the authors mainly described them as negative attitudes from PA employees (19%) and reduced organizational effectiveness (14%). Regarding the former, it is claimed that if paradoxes are not properly coped with, these contribute to create a hostile context, that often make PA employees feel anxious, threatened, or uncertain and thus defensive in their behavior, which may ultimately lead them to experience burn-out or deterioration of their commitment (Chow, 1992; Kuna, 2017). Concerning the latter, Robbins et al. (2021) show that dysfunctional coping strategies, such as the inability of the hospital to turn efficiency gains into better patients' outcomes, may exacerbate the contradictory nature of organizational objectives as combine lower cost and offer high quality. Cascading, this reinforces organizational paradoxes which, in turn, reveals organizational problems as inadequate planning (Amyar et al., 2019).

Research question 5: What are the actors which experience salient paradoxical tensions and implement coping strategies?

According to the paradox theory framework, the role of actors emerges in two different moments: when they perceive the tensions and when they implement coping strategies to handle them (Table 9).

Insert Table 9 about here

This review reveals paradoxical tensions are experienced the most by PA employees (37%), and PA managers (29%). By contrast, the viewpoint of other types of subjects of the PA ecosystem, such as external partners (13%) users (as citizens) (8%) and professional consultants involved in

public organizations (5%) have been much less investigated. Furthermore, none of the articles considered politicians as actors that experienced salient tensions. This picture only partially changes concerning actors that implement coping strategies. These are claimed to be mainly implemented by PA managers (48%), PA employees (37%), while stakeholders and professional consultants seem to have marginal roles. Lastly, only Norman & Gregory (2003) recognized a role for politicians in grappling with paradoxical tensions.

Research question 6: How comprehensively paradox theory has been applied by the reviewed literature, i.e., have the reviewed studies covered all the aforementioned key elements of this theory?

Finally, we verified whether and how the articles of this review have comprehensively embraced all the aforementioned key elements of the paradox theory framework (Fig. 1) in their works. In this regard, not all the articles have identified and described, step by step, all the key elements described by paradox scholars: only 14 articles (29%) applied the paradox framework as a whole whereas the vast majority of them adopted only a partial perspective. Some articles describe either the paradox poles and factors that render tensions salient without describing the coping strategies (15%) or their outcomes (57%). Others do not make explicit the actors that take perceive tensions (35%) or implement strategies (45%). In addition, we have examined which of the paradoxes identified have been comprehensively analyzed through the paradox framework (Table 10). In other words, we analyzed, for each paradox, the presence of (at least one) factor that renders latent tensions salient, actors that experience salient tensions, the adoption of coping strategies and the description of actors that implement them and, finally, the outcomes of coping strategies. This

allows to better appreciate for which paradoxes the potentialities of paradox literature are fully covered.

Insert Table 10 about here

Table 10 shows that for paradoxes at the individual, team, and leadership level, it is possible to recognize all the key elements of paradox theory, from the factors rendering salient tensions to the outcomes of coping strategies. However, at the organizational level, this picture partially changes: only for the *continuity-vs-change* and *accountability-vs-effectiveness* paradoxes the authors report all the above-mentioned elements, while this is missing for mainstream paradoxes, such as *competition-vs-collaboration*, *control-vs-commitment*, and for the *consensus-effectiveness-efficiency* paradox, that is very typical of PA context. For the paradoxes at the PA system level, it emerges that scholars comprehensively constantly apply the paradox analytical framework, apart from describing the outcomes of the coping strategies while at the level of the PA ecosystem, a complete account is provided solely for the *consensus-effectiveness-efficiency* paradox.

DISCUSSION

The findings of this systematic review highlight that although PA scholars are increasingly interested in using paradox theory to address the complexity of the public context, the extant literature appears to be under-exploiting the potentialities of this theoretical framework. We here discuss this overall result through a twofold interrelated interpretation: (i) the application of paradox theory seems to not fully recognize and take into account the specificities of PA; (ii) PA scholars are under-exploiting the paradox theory by partially applying it throughout their works, ultimately not theorizing the processes under study as a whole.

The first interpretation can be corroborated by looking at how each of the key elements of paradox theory framework (Fig. 1) has been studied by the authors of the reviewed articles. Starting from the paradoxes, the most studied (*control-vs-commitment* and *continuity-vs-change*) are very typical of every type of organization (Smith et al., 2017; Sundaramurthy & Lewis, 2003; Sutherland & Smith, 2011). By contrast, paradoxes such as *self-vs-public-vs-procedural interests*, *local-vs-central*, *effectiveness-vs-efficiency-vs-consensus*, and *accountability-vs-effectiveness*, have been much less studied even though they capture the essence of competing demands where PA is naturally and traditionally embedded. The same argument can be claimed concerning the levels where the paradoxes have been examined. We found that scholars focused mainly on the internal dimension of PA, i.e. the organizational level, while multilevel and multi-actor levels of analysis, such as the PA system and eco-system, have been mainly overlooked. This is particularly interesting considering that the provision of public goods increasingly involves multiple and heterogeneous stakeholders (proper of the PA ecosystem level) needing the collaboration of different PA entities (proper of the PA system level) (Bingham et al., 2005; Bryson et al., 2015). Similarly, only few of the reviewed articles underline *scarcity* (of financial, human, and strategic resources) as a key factor that may render tensions salient, stressing instead *plurality* and *change*, which are very common also to non-PA organizations (Schad et al., 2016). In this regard, although scholars often address resource scarcity as a crucial condition that shapes the operation of PA (Dickinson et al., 2011), in the reviewed articles this issue is considered more as a matter of fact, rather than a factor that could render latent tensions salient.

Regarding the coping strategies, the often-perceived unsatisfactory results of PA action would have us to expect a significant number of articles on *either-or* strategies. These types of decisions usually lead to suboptimal results, by favoring one competing demand/interest over the others, ultimately

leading to vicious cycles. However, the findings of the literature review display a widespread and focused interest especially in *both-and* and *more than* strategies, namely those that activate virtuous cycles. This might lead to a risk of neglecting or not comprehensively addressing some specific criticisms of PA by highlighting only ‘what works’.

The peculiarities of PA are often somehow neglected also in the description of the outcomes of coping strategies. The authors of the reviewed articles tend to heavily stress the effectiveness dimension of outcomes, without giving enough attention to how legitimacy is affected as a result of coping with paradoxical tensions (Clark et al., 2016). However, legitimacy is a key issue for PA since that being perceived as a legitimated actor is a key asset when productivity and effectiveness are not immediately measurable, and the mediation of competing interests is a foundational mission of PA. When presenting the outcomes of coping strategies, the reviewed articles very often present an inward-looking perspective that do not almost consider the viewpoints of the main beneficiaries and external stakeholders of PA. As aforementioned, this perspective is at the odds of the current transformation of PA, which is increasingly open to external and new actors by involving them in the provision and evaluation of its activities (Bingham et al. 2005). The same consideration can be done in relation to the actors that perceive the tensions and implement the strategies. While the role of PA managers or employees have been comprehensively described, those of less traditional and external actors like professional consultants or partners of public networks is still to be adequately considered. In addition, the role of politicians, both in terms of perception of tensions and implementation of strategies, is also underestimated, even though they play a key strategic role in PA (e.g., setting overall strategic goals) but tend to naturally represent just one side of competing interests.

In conclusion, it seems that the extant literature not does not fully and adequately consider the peculiarities of PA in applying the paradox theory. The employment of this theoretical framework seems to be still too anchored to the empirical setting, the business, where the theory originally emerged. This is clearly visible in the tendency to focus on PA as a weakly connected system of entities and other stakeholders, intending them as single units rather than a multi-level setting composed of multi-actor, multi-level actors and multi-level decision-making (van Popering-Verkerk & van Buuren, 2016). The paradox poles and the outcomes of coping strategies identified, rarely adopt a multi-level PA-oriented perspective, ultimately neglecting the involvement of multiple actors across levels of government and the private and nonprofit sectors, which is at the odds of the current evolution of PA (Nabatchi et al., 2017).

Concerning the second overall interpretation, namely that (ii) PA scholars are under-exploiting the paradox theory by partially applying it throughout their works, two main empirical elements support it. In general terms, the two search strategies have highlighted that Public management scholars tend to use extensively the word ‘paradox’ to describe issues related to public settings: the first literature search found 968 articles using ‘paradox’ or its synonyms in journals of PA. However, the application theory-informed makes the number of articles dramatically decrease: only 49 articles studied the PA through the paradoxical lens. Furthermore and more importantly, the analysis of the reviewed articles highlighted that only a limited number of these publications fully adopt and empirically developed the paradox theory framework throughout their texts. The majority of them do not describe at least one elements of the aforementioned framework (Fig. 1). In particular we found that the actors involved are rarely qualified, as their role may be underestimated, and that both coping strategies and the outcomes are poorly operationalized and

clearly and concretely outlined. Indeed, they are not effectively measured but only qualitatively reported, with the risk of low-actionable produced knowledge.

RESEARCH GAPS AND IMPLICATIONS FOR A BROAD AUDIENCE

The findings of this systematic review could be interpreted in light of the four research gaps we identified, which could equally be the main challenges for further research.

First, most paradox poles identified seem not to adopt a multi-level PA-oriented perspective and a predominant inward-looking perspective. Moreover, the majority of paradoxes are very typical of every organization, not sufficiently including the distinctiveness of the PA context. In this regard, future studies should consider more of the peculiarities that characterize the PA setting, providing an articulation that better fits the multi-actor multi-level context, by ultimately reimagining the application of paradox theory into PA. For example, scholars might consider more comprehensively the role of users, politicians, and external stakeholders (advisors, private companies, non-profit organizations) conceiving them as a (more or less informal) network of actors, where paradoxical tensions may emerge from their mutual and interdependent interactions (Bryson et al., 2015). The empirical approach may adopt a more relational perspective where all actors' contributions are considered holistically instead of examining them individually.

Second, we found a lack of attention toward individuals' paradoxical cognition (exceptions are, e.g. Backhaus et al., 2022; Franken et al., 2020), namely, those 'frames and processes that recognize and juxtapose contradictory demands' (Smith and Lewis, 2011: 390). The PA literature has indeed investigated individuals' cognitive implications, mainly by looking at how intrinsic (Ritz et al., 2016) and extrinsic (Larsson et al. 2022) factors (e.g., public service motivation or monetary rewards) lead to the prioritization of the option/choice/alternative that best fit with

organizational goals or ethos, whereas much less how individuals recognize and live with multiple and contrasting priorities. In this regard, behavioral studies showing that cognitive attitudes may deviate public managers' decisions from pursuing a single optimal solution (Bellè et al. 2018) may represent an interesting reference to deeper analyze how PA members perceive and understand ambiguous and multiple demands/interests/goals, and whether this ultimately makes paradoxical tensions to become salient.

Third, the reviewed articles report predominantly functional (*both-and*, *more-than*) coping strategies, while the '*either-or*' ones have been much less investigated. In addition, the description of coping strategies is often too general, without a clear specification of both how they have been operationally investigated as well as the relationships between strategies and outcomes, especially for paradoxes at the level of PA system and ecosystem. Future studies that will follow this pattern, will also be beneficial for practitioners to really understand how paradoxical tensions can be handled.

Similarly, a fourth gap is the predominance of papers that do not adequately specify the outcomes of the coping strategies. We suggest that future studies go beyond a mere qualitative reporting of the outcomes, by trying to measure and make them explicit. This would enhance and make more fruitful the understanding of the potentialities of paradox theory in managing competing but equally valid demands for both scholars and practitioners.

Lastly, two additional research paths can be provided. First, competing demands have been studied both through the established institutional logic framework and the emerging paradox theory: future studies may integrate these strands of literature to enrich the understanding of how widespread competing and paradoxical demands can be conceptualized and handled (Brandl et al., 2022).

Second, the application of paradox theory in PA could be furtherly enriched by adopting different definitions of PA, related to specific public policy sub-sectors such as education, higher education, and health, as well as focusing on specific types of PA entities, such as municipalities or central government. By using different search strategies and sources, such as more specific journals regarding the sub-sector of interest, scholars could analyze how paradoxical tensions and coping strategies differ and how their inherent logics are deployed through a paradox-theory lens.

Finally, this study presents also important implications for different PA practitioners, namely, public managers, employees, policymakers, and PA educators. First, our findings may help PA managers to develop a potentially constructive reaction to paradoxical tensions, by considering paradoxes as opportunities instead of incompatible alternatives. Managers may look for compromise solutions to manage paradoxical tensions through the promotion of partnerships and collaborations of the multiple parties involved (Hernandez, 2018; van der Kolk et al., 2020). This means favoring the creation of places where dialogue and creative solutions may arise, ultimately ensuring that competing demands, interests, and contributions are equally and concurrently considered. Moreover, managers that embrace a paradoxical mindset (Miron-Spektor et al., 2018) generate cascading learning responses in employees by inducing them to accept the potential of tensions in their work, by, for example: (i) making more explicit what is expected from employees (i.e. through one-on-one meetings or individual weekly informal meetings, e.g. at the coffee machine), or (ii) emphasizing horizontal feedback between colleagues engaged in similar tasks rather than vertical feedback from supervisors. Second, we believe that our findings are important for public employees too. Looking at public management and the operations of PA as an ongoing balance of competing interests may help them to live with contradictions and conflicting demands, without reducing intrinsically complex processes to just one blind alternative as well as stress and

anxiety that often arise from paradoxical tensions (Kuna, 2017). Third, our findings have highlighted that changing the status quo is one factor that renders paradoxical tensions salient. For example, the introduction of business-based instruments/mechanisms such as performance appraisal (Kozica & Brandl, 2015), new management control practices (Ganguly & Das, 2020), or the introduction of branding activities (Kuoppakangas et al., 2020) proved to be factors that may activate paradoxical tensions and usually request multifaceted and complex responses as *both-and* and *more-than* coping strategies (Qiu & Chreim, 2021; Røhnebæk & Breit, 2022). Policymakers should thus be aware that these unintended and unpredictable consequences may arise when designing PA reforms.

This last consideration has relevant implications also for PA educators too. To activate functional (*both-and*, *more-than*) strategies, it is fundamental to display a paradoxical mindset and skills, that is the ability to recognize and cope with paradoxical tensions. Therefore, PA educators should enlighten future and current employees that neglecting one side of the paradoxical tension may generate unintended negative behaviors, such as increasing frustration, procrastination, and may also reduce job effectiveness by making hasty judgments or delegating their tasks to someone else. Furthermore, educators should also promote the importance of paradoxical skills, such as working through collaborations and living in networks with multiple heterogeneous actors, by providing them with reflective and relational practices, as well as communication skills. Managers should also be trained to be more receptive to proposals being developed by each actor of the PA ecosystem, for example by facilitating two-way interactions or by combining both top-down and bottom-up approaches.

In conclusion, we unravel the potentialities of paradox theory for a broad audience to better understand and deal with complex and competing demands that increasingly characterize the PA

context. Indeed, paradox theory may be beneficial to synthesize competing demands that are pervasive and inherent at every organizational level, helping to find synergies among contradictions that at first seem incompatible, considering a whole range of complex social dynamics (Berti et al., 2021).

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FIGURES

Figure 1 - dynamic representation of the key elements of paradox theory

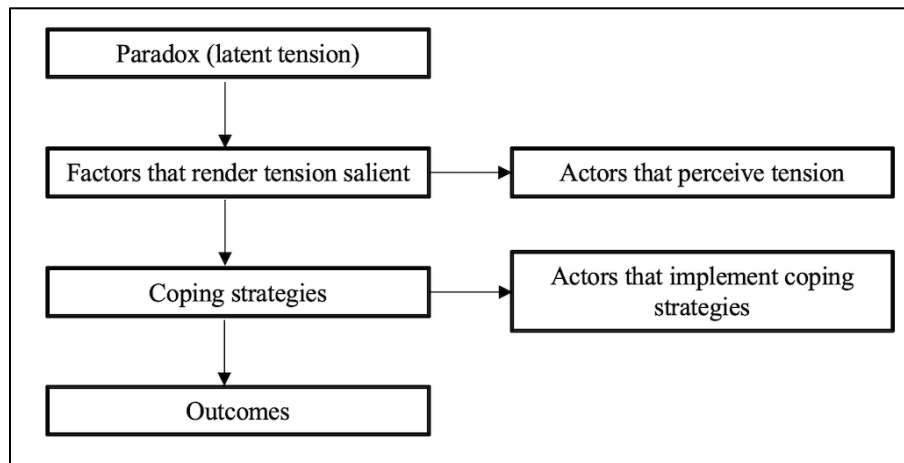


Figure 2 - flowchart of the search strategy

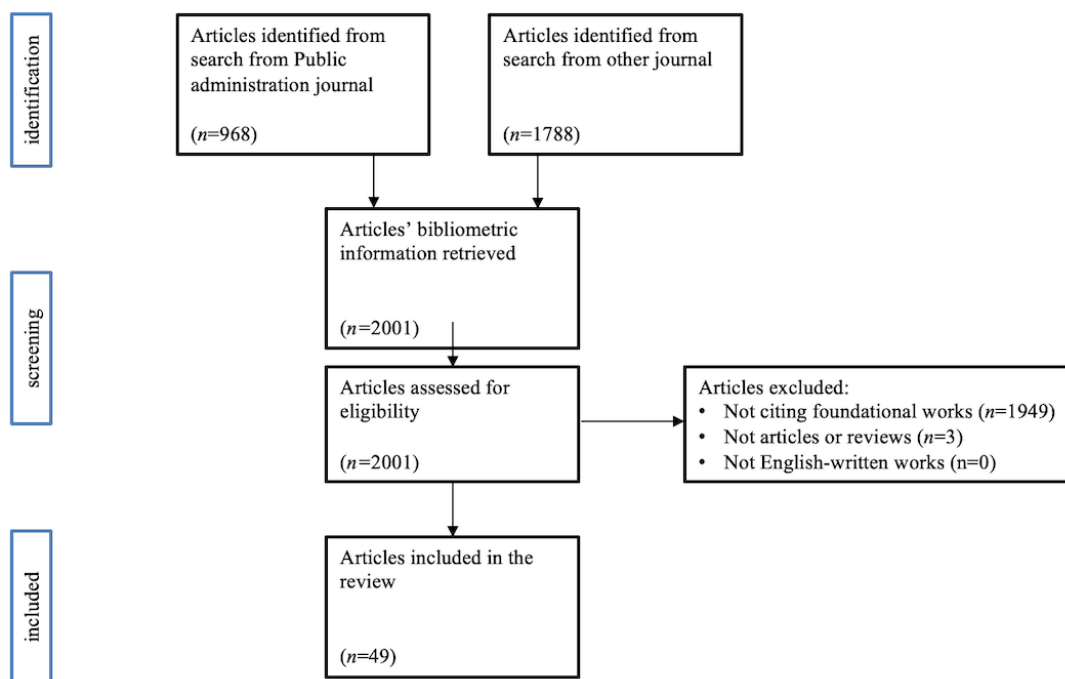


Figure 3 - Number of articles per year

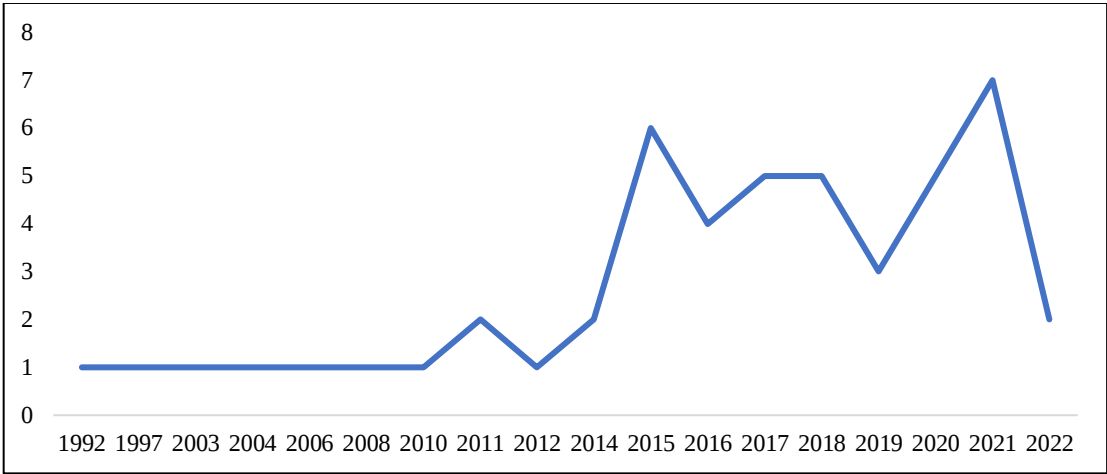
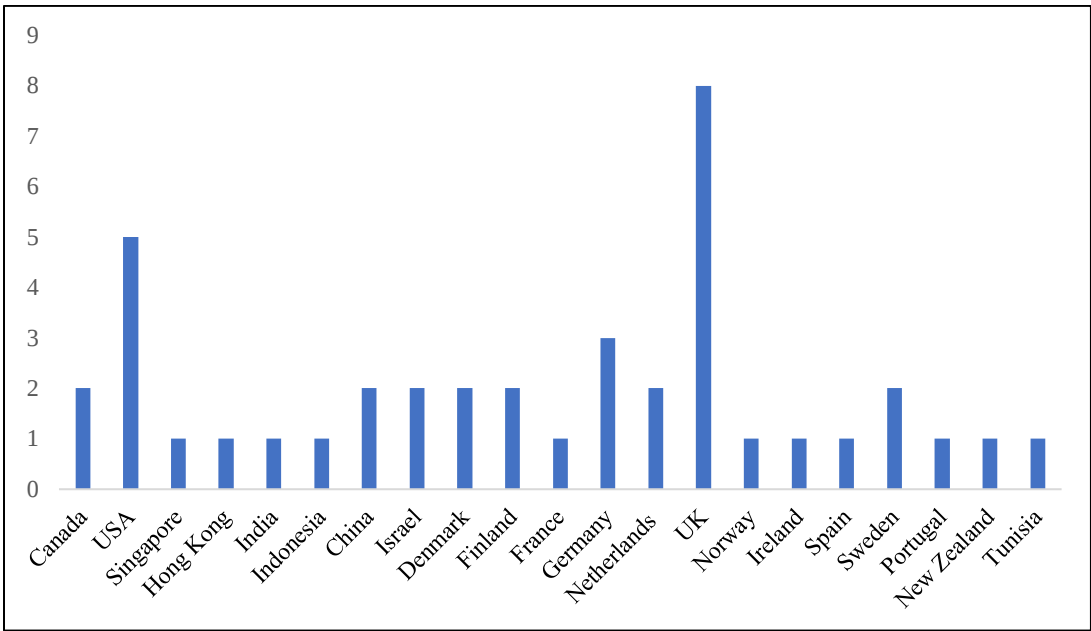


Figure 4 - countries analyzed



TABLES

Table 1 - foundational works of paradox theory

Author/s	Title	Year	Journal
Smith & Berg	Paradoxes of group life: Understanding conflict, paralysis, and movement in group dynamics.	1987	[book]
Quinn & Cameron	Paradox and transformation: Toward a theory of change in organization and management	1988	[book]
Poole & van de Ven	Using Paradox to Build Management and Organization Theories	1989	Academy of Management Review
Lewis	Exploring paradox: Toward a more comprehensive guide	2000	Academy of Management Review
Smith & Lewis	Toward a Theory of Paradox: A Dynamic equilibrium Model of Organizing	2011	Academy of Management Review
Putnam, Fairhurst, Banghart	Contradictions, Dialectics, and Paradoxes in Organizations: A Constitutive Approach	2016	Academy of management annals
Schad, Lewis, Raisch, Smith	Paradox Research in Management Science: Looking Back to Move Forward	2016	Academy of management annals
Miron-Spektor, Ingram, Keller, Smith, Lewis	Microfoundations of Organizational Paradox: The Problem Is How We Think about the Problem	2018	Academy of management journal

Table 2 – coding scheme

Domain	Variable	Description
<i>Disciplinary field and research setting</i>	Subject area of the journal	Scimago codes to tag each journal in one subject areas
	Nature of academic research	Article classified into 1 of 2 categories: conceptual or empirical
	Type of methodology	Article classified into 1 of 3 categories: qualitative, quantitative, mixed methods
	Country	Country(-ies) in which data were collected
	Level of administration	Article classified into 1 of 4 categories: local, regional, national or multiple
	Type of administration	Administration where data were collected
<i>Key elements of paradox theory</i>	Unit of observation of paradox	Categorization of paradox into 1 of 6 categories: individuals, team, leadership, organization, PA system, PA ecosystem
	Paradox poles	Aggregation of paradox poles by looking at common terms and meanings
	Topic of paradox	Use paradox poles to generate a short phrase that articulates the processes or the dynamics they refer to
	Type of factors that render tensions salient	Based on the categorization shown by Smith and Lewis (2011, p. 389), we classified the factors into two groups: the “actors’ paradoxical cognition” and the “environmental factors”. These last have been also subdivided into “plurality”, “change” and “scarcity”.
	Actors that perceive tensions	Open coding of actors that perceive tensions (captured using language in the articles)
	Type of coping strategies adopted	Based on the categorization of Schad et al. (2016), we divided the outcome into “positive” or “negative”
	Actors that implement coping strategies	Open coding of actors that implement strategies (captured using language in the articles)
	Type of outcomes	Based on the categorization of Putnam et al. (2016), we classified the coping strategies in three categories: “either-or”, “both-and”, “more-than”

Table 3 – Number of articles per journal

Journal	No. of articles	Academic Discipline (Scimago)
Public Administration Review	4	Public Administration

Public Management Review	4	Public Administration
Journal of Public Administration Research and Theory	3	Public Administration
Accounting Auditing & Accountability Journal	2	Accounting
Administration & Society	2	Public Administration
International Journal of Public Administration	2	Public Administration
International Journal of Public Sector Management	2	Public Administration
International Review of Administrative Sciences	2	Public Administration
Administration and Public Management journal	1	Public Administration
American Behavioral Scientist	1	Sociology and Political Science
Asian Journal of Political Science	1	Sociology and Political Science
Australian Journal of Public Administration	1	Public Administration
Cogent Education	1	Education
Corporate Reputation Review	1	Strategy and Management
Industry and Innovation	1	Business, Management and Accounting
International Journal of Electronic Government Research	1	Social Science
International Journal of Innovation and Technology Management	1	Management of Technology and Innovation
International Public Management Journal	1	Public Administration
International Small Business Journal	1	Business and International Management
Journal of Asian Public Policy	1	Public Administration
Journal of Brand Management	1	Strategy and Management
Journal of Information Technology	1	Strategy and Management
Journal of Management and Organization	1	Organizational Behavior and HRM
Journal of Management in Engineering	1	Strategy and Management
Journal Of Management Inquiry	1	Strategy and Management
Journal of Organizational Ethnography	1	Organizational Behavior and HRM
Long Range Planning	1	Strategy and Management
Management Accounting Research	1	Accounting
Nispacee Journal of Public Administration and Policy	1	Public Administration
Policy and Politics	1	Public Administration
Public Money & Management	1	Public Administration
Public Organization Review	1	Business, Management and Accounting
Public Personnel Management	1	Public Administration
Sustainable Development	1	Development
Teaching Public Administration	1	Public Administration
German Journal of Research in Human Resource Management	1	Organizational Behavior and HRM

Table 4 - level and type of administration studied

Level PA considered and type of PA organizations	Number (percentage)
Level of PA	
Local	21, 43%
Multiple	14, 29%
National	6, 12%
Regional	2, 4%
Not Classifiable (conceptual papers not clarifying specific administrative level)	6, 12%
Type of PA organisation	
Municipality	15, 28%
Government department	11, 20%
PA as a whole	7, 13%
PAs related to education	5, 9%
PAs related to health	5, 9%
Inter-organizational networks with both PA and not-PA subjects	5, 9%
Not Classifiable (conceptual papers not clarifying a specific type of administration)	4, 7%
Public companies	2, 4%

Table 5 - paradox poles identified in review by level where the paradox occurs

	Individual	Team	Leadership	Organization	PA system	PA ecosystem	Total
SELF VS PUBLIC VS PROCEDURAL INTERESTS	<i>professional identity (7, 7%)</i>						7, 7%
AUTONOMY VS DEPENDENCE	<i>nature of the contributions (6, 6%)</i>						6, 6%
COMPETITION VS COLLABORATION	<i>horizontal coordination among individuals (2, 2%)</i>			<i>horizontal coordination among organizational units (2, 2%)</i>		<i>horizontal coordination among partners of the ecosystem (2, 2%)</i>	6, 6%
UNITY VS DIVERSITY		<i>team composition (6, 6%)</i>					6, 6%
CONTROL VS COMMITMENT			<i>leader-follower vertical coordination (9, 9%)</i>	<i>organization-employees vertical coordination (10, 10%)</i>		<i>PA - partners vertical coordination (3, 3%)</i>	22, 21%
ACCOUNTABILITY VS EFFECTIVENESS				<i>objectives (14, 13%)</i>			14, 13%
CONTINUITY VS CHANGE				<i>organizational change and stability (18, 17%)</i>		<i>ecosystem change and stability (3, 3%)</i>	21, 20%
DIFFERENTIATION VS MULTIPLICITY					<i>level of specialization (horizontal) (4, 4%)</i>		4, 4%
LOCAL VS CENTRAL					<i>level of specialization (vertical) (4, 4%)</i>		4, 4%
EFFECTIVENESS VS EFFICIENCY VS CONSENSUS				<i>Organizational governance (7, 7%)</i>		<i>PA ecosystem governance (7, 7%)</i>	14, 13%
Total	15, 14%	6, 6%	9, 9%	51, 49%	8, 8%	15, 14%	

Table 6 - type of factors which render paradoxical tensions salient

Type of factors (Smith and Lewis, 2011)	Factors	Descriptions of the factors	Number and percentage of articles	Number and percentage of articles
Actors' paradoxical cognition	Actors' paradoxical cognition	Paradoxical unreceptiveness	1, 1%	1, 1%
Environmental factors	Plurality	Differentiated and potentially conflicting demands to PA	3, 4%	20, 32%
		Differentiated and potentially conflicting objectives for PA	2, 3%	
		Differentiated and potentially conflicting PA organizational units	1, 1%	

	Change	Differentiated and potentially conflicting (PA and non-PA) actors in delivering public services	14, 22%	29, 46%
		From within PA	21, 34%	
		From outside PA	8, 13%	
	Scarcity	Economic resources	5, 8%	12, 19%
		Internal managerial resources	5, 8%	
		Political/strategic resources	2, 3%	

Table 7 - categories of coping strategies

Categories of coping strategies (Putnam et al., 2016)		Number and percentage of articles	Number and percentage of articles
either-or	Denying: only one pole exists	3, 5%	13, 23%
	Selecting: choosing only one pole	5, 9%	
	Splitting: confining poles in separate settings	5, 9%	
both-and	Recognizing: ability to recognize poles and live with their contradictions	6, 11%	19, 34%
	Compromising: developing a middle ground between poles	13, 23%	
more than	Reframing: reformulating the contradictions between poles as a learning opportunity	7, 12%	24, 43%
	Dialoguing: third spaces where poles dynamically interplay	9, 16%	
	Reflecting on current practices: the contradictions between poles as opportunity for new ones	8, 14%	

Table 8 - type of outcomes

Type of outcome (Schad et al., 2016)	Outcome	Number and percentage of articles	Number and percentage of articles
POSITIVE	Creativity/innovation	1, 5%	14, 66%
	Increased effectiveness	7, 33%	
	Learning	4, 19%	
	Positive attitudes from PA employees	2, 9%	
NEGATIVE	Negative attitudes from PA employees	4, 19%	7, 33%
	Reduced effectiveness	3, 14%	

Table 9 – actors that perceived paradoxical tensions and that implement coping strategies

Actors	Actors that perceive tensions (number and percentage of articles)	Actors that implement strategies (number and percentage of articles)
PA and external partners within collaborations	5, 13%	0%
PA employees	14, 37%	10, 37%
PA managers	11, 29%	13, 48%
PA professional consultants	2, 5%	1, 4%
Users	3, 8%	0%
Stakeholders	3, 8%	2, 7%
Politicians	0%	1, 4%

Table 10 – coverage of paradox poles per each of the element of the paradox theory framework (factors, actors, coping strategic and outcomes)

LEVEL WHERE PARADOX OCCUR	PARADOX	Factors that render tensions salient	Actors that perceive salient tensions	Coping strategies	Actors that implement strategies	Outcome
INDIVIDUAL	SELF, PUBLIC, PROCEDURAL INTERESTS	x	x	x	x	x
	AUTONOMY VS DEPENDENCE	x	x	x	x	x
	COMPETITION VS COLLABORATION	x	x	x	x	x
TEAM	UNITY VS DIVERSITY	x	x	x	x	x
LEADERSHIP	CONTROL VS COMMITMENT	x	x	x	x	x
ORGANIZATION	ACCOUNTABILITY VS EFFECTIVENESS	x	x	x	x	x
	COMPETITION VS COLLABORATION	x	x	x		x
	CONTROL VS COMMITMENT	x	x	x	x	
	CONTINUITY VS CHANGE	x	x	x	x	x
	CONSENSUS, EFFECTIVENESS, EFFICIENCY	x	x	x		
PA SYSTEM (different public organizations and levels)	DIFFERENTIATION VS MULTIPLICITY	x	x	x	x	
	LOCAL VS CENTRAL	x	x	x	x	
PA ECOSYSTEM (public, profit and non-profit partners)	CONTINUITY VS CHANGE	x	x	x	x	
	COMMITMENT VS CONTROL	x	x	x		
	COMPETITION VS COOPERATION	x	x	x		
	CONSENSUS, EFFECTIVENESS, EFFICIENCY	x	x	x	x	x