



Toward a Typology of Public Innovation. *Eccentric, Discrete, Flat and Transformative Innovation*

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2.1 INTRODUCTION: A WORLD OF PUBLIC INNOVATIONS

Today, “innovation” is one of the most recurring terms in discussions on Public Administration. In all the corners of the world, the governments seek to reinvent themselves. They have created offices dealing with the promotion of public innovation in far-reaching contexts such as those in Argentina, Australia, Brazil, Indonesia and South Korea (OECD, 2019b) and of course, in Colombia (DNP, 2019a).

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The work of Mariana Mazzucato (2011, 2015) has pointed to the often overlooked role of the State in innovation and to the possibility of taking on new tasks to meet the new large global challenges through what is called mission-oriented innovation (Foray, 2012). Before the rise of this powerful trend of academic reflection, nevertheless, the movement of innovation in the public sector, and its broader version of public innovation that also includes the new responses from society on public problems, had been gaining strength since the start of the twenty-first century.

Policies on public innovation are written and put into practice. Numerous conferences on Public Innovation are carried out and today dozens of Public Innovation labs are functioning around the world (Tõnurist et al., 2017).

The Organisation for Economic Cooperation and Development (OECD) created an Observatory on Innovation in the Public Sector in 2013 which, as of September, 2019, already registered 341 case studies on innovation in the Public Sector in America, Asia, Africa, Europe and Oceania (OECD, 2019c).

Public innovation initiatives are diverse in nature: in Argentina, the Government Laboratory, affiliated with the Deputy Secretary of Public Innovation and Open Governance, describes itself as “a team that offers consulting services and co-creates public policy solutions.” It studies the “behavior, emotions and experiences” of the citizens as a starting point to accompany government teams to (re) formulate their strategies of intervention in terms of public problems, promoting the use of prototypes of their proposals—simple versions of the products, services, tasks that allow for observing how the potential users react—before taking them to the level of new programs (LabGobar, 2019).

In Colombia, the National Department of Planning defines its Public Innovation Team as “intra-entrepreneurial” with three main lines of actions: strengthen the capabilities of the public sector for innovation, accompany pilot projects for public innovation, and provide input on public policy regarding public innovation. Mandated by the National Development Plan for the period of 2018–2022, this team is in charge of strengthening the national ecosystem of public innovation—including the creation of a digital platform for joint cooperation of the actors involved. It also leads the creation of institutional conditions that favor public innovation including the creation of a Colombian Index of Public

Innovation that offers input to national, regional and local entities to promote their strengthening, as well as the overcoming of legal barriers—including those resulting from the excessively restrictive interpretation of laws—the promotion of the creation of public innovation units in the central, departmental and local governments and the creation of a culture of innovation (DNP, 2019b).

In Chile, the *Laboratorio de Gobierno* (Governmental Laboratory) has focused on accompanying processes of innovation in the public entities—as in Argentina—as well as creating a network of public innovators—as in Colombia. In accordance with the same laboratory, their work is guided by five principles: a focus on persons (understanding their needs and capabilities), co-creation (co-discovery, co-defining, co-designing and co-implementing in conjunction with multiple actors), systemic focusing (a holistic look at the problems and solutions), experimentation (using prototypes for “learning while doing”) and focus on the experience (understand and communicate based on stories and visual thought) (Chile, 2019).

Not all the effort on public innovation has been centered on the creation of capabilities or the promotion of networks of innovation at the national level. Some are more one-off initiatives, for example regarding *open government*, *smart cities* or *digitalization*.

In Indonesia, for example, one of the most recognized initiatives of public innovation is MAGMA Indonesia, which on the one hand digitalizes and gathers the information from different databases facilitating the monitoring of geological changes by authorities almost in real time and, on the other hand, as an application, places that information at the service of the citizens so that they can make their own decisions. Other initiatives include a digital platform for the management of information of intellectual property—in the logic of *open data*—and a system of decision support, based on the Internet, for authorities in the management of disasters which allows the access to multiple sources of information (OECD, 2019b).

In South Korea, a number of the initiatives of Seoul’s Bureau of Innovation have been created around the strategy of “a sharing city”, where citizens are encouraged to share resources that range from books and clothing to parking spaces and lodging (Basu, 2016). However, there are initiatives in areas as far-reaching as the *innovative public purchasing* -Venture Nara, a virtual shopping center developed by the Korean Public Purchasing

Service especially for *start-ups* to promote and sell their products while they develop the *muscle* to compete in the large markets- or the *citizen participation* of those over fifty years of age in policies to aid in the ageing process of the population of the city (OECD, 2019b).

In Estonia, which has made a concerted effort in recent years to become a digital nation, one of the outstanding initiatives combines co-innovation in public policy (Osborne et al., 2016) with *digitalization* as a support for transparency: A platform of open software, *Rahvaalgatus.ee*, allows citizens “to first discuss a relevant issue, later to co-create a proposal, collect digital signatures and subsequently send the proposal to the Parliament and receive, digitally, updates on the process there. Estonia has also looked to establish *data embassies* which are servers located outside the physical space of the country that are legally under its jurisdiction” (OECD, 2019b).

In Kenya, in a different context, *citizen participation* and *open government* have also been priorities in an “idea management system” called *Angaza ZONE* which seeks to utilize crowdsourcing of the proposals of officials and citizens to generate innovative ideas. Another important advance is geo-localization—as in Indonesia—but this time not for monitoring geological activity, but rather to connect the citizens to emergency services such as ambulances and the police in an efficient manner (OECD, 2019b).

This short review of such a diversity of experiences in different places around the world illustrates that the field of public innovation is broad-ranging and, in many ways, quite diverse. Public innovation is not only citizen participation but also efficient public purchasing and digitalization. What do these different types of actions have in common? How do we compare them? And lastly, how do we explain the fact that some are broadly recognized and even imitated while others are neither? The rest of the chapter will be devoted to answering the following research question: What is public innovation, essentially? By better understanding its nature we hope to facilitate a more systematic exploration of the mechanisms that explain the varying results of the different initiatives on public innovation.

In **Sect. 2**, we address the question regarding what public innovation is by exploring the multiple definitions it has. The section finishes with a definition of public innovation that involves two dimensions: novelty and

innovation adoption. Based on this, in **Sect. 3** a typology of public innovation is presented that identifies four types of innovation with respect to the two dimensions of novelty and the adoption of innovation. The contribution of this typology will be discussed in the conclusion, together with the new research questions that may be addressed based on its employment.

2.2 WHAT IS PUBLIC INNOVATION?

Both in academia and among those who foster it in the world, there are different approximations regarding what public innovation *is*.

In gray literature, perhaps the most influential approximations are those of the Organisation for Economic Cooperation and Development (OECD) and the World Bank, organizations that have fostered numerous efforts in this field.

Upon analyzing public innovation, the OECD has concentrated on the creation of public value and defines success as achieving the desired result:

Innovation in the public sector deals with new ideas that work to create public value. Each public innovation is directed at facing a challenge in public policy and a successful public innovation is that which achieves the public result desired. (Daglio, 2014, p. 4)

In the most recent Declaration on Innovation in the Public Sector, the OECD defines innovation as “implementing something that is innovative within a context and which aims at achieving an impact” (OECD, 2019a).

This way of approaching the concept is the same, generally speaking, that the OECD adopted in the third edition of the Oslo Manual when defining *innovation* broadly as “the implementation of a product (goods or services), process, method of marketing or new or significantly improved organizational method in business practices, work places or external relations” (OECD/Eurostat, 2005).

The World Bank (BM, 2010), for its part, understands public innovation as “technology or practices” that must be *widely used* to be considered innovations.

Innovation is understood as technologies or practices that are new for a determined segment of society. Nevertheless, they are not necessarily new in absolute terms. These technologies or practices are being widely used in

that economy or society. This point is important because that which is not disseminated and used is not an innovation. Circulation is very important and requires special attention in countries with low and medium incomes

Some authors in the area of Public Management agree with the approximation of the OECD and have conceptualized public innovation as, essentially, the generation of *public value*, just as the concept was developed by Moore and Stewart more than a generation ago: that which results from the assignment of resources by the State in accordance to the real preferences (not assumed) of the citizens from whom that same State extracts its resources (Moore & Stewart, 1997).

In this dimension, the literature on Public Innovation touches on—and at times intermingles—with the literature on co-creation and coproduction of policies. Some examples can be found in the work of Roth (2016) and Zurbriggen and Lago (2014).

The literature on *design thinking* (Brown & Wyatt, 2010; Howlett, 2014) is very influential among a good part of those who study and practice Public Innovation.

TORFING and ANSELL (2014) highlight how, to contribute to public innovation, *design is fueled by collaboration*, by employing user surveys, workshops and other media to go more in-depth and transform the way in which problems are understood. They also identify three mechanisms through which collaboration generates public innovation: (a) Synergy: The different counterparts provide complementary resources or capabilities in such a way that it allows for providing a more diverse and combined set of services; (b) Learning: Since intense interaction with others that have differing perspectives generates new points of view, and in fact conflict which is endemic to collaborative processes can on occasion lead to *re-framing* the problems resulting in new programs or strategies; (c) Commitment: The counterparts must be committed to, and be authors of, the collaborative process so that this may be sustainable.

Torfing (2018) emphasizes the distinctive contribution that collaboration can make to public innovation, especially since *collaborative innovation* allows for achieving less incremental changes and is the only innovation strategy in which the institutional and organizational barriers do not determine who takes part, but rather that is left to the relevant resources for innovation such as experience, creativity, financial resources and the capacity for implementation.

Not all public innovations, nevertheless, are to the same degree the result of collaborative efforts between state and non-state counterparts. The monitoring of volcanic activity that is achieved through MAGMA Indonesia is placed at the service of the citizens, but it is *not co-created* with them. Estonia's data embassies are another example in this vein as, and so is the bot specialized in identifying tax-evading e-commerce in social media in Medellin, Colombia (OECD, 2019b).

If not the creation of *public value* through the active participation of the citizen-users, then what do the different forms of public innovation have in common? And how do they vary?

The answer *is not* in the field of application: Even though the term has been defined in a way that fundamentally includes the different levels of Government (De Vries, 2016) and those linked to the Government through contracts (Osborne & Brown, 2011) as well as those regulated by it, the 2019 call for papers for the case bank of the Observatory of Innovation in the Public Sector of the OECD invites government organizations, those of civil society and the private sector, without greater differentiation (OECD, 2019b).

Having carried out a review of 181 academic articles and books on innovation in the public sector, De Vries et al. (2016) find that 76 percent of these articles *do not define* innovation. Among those that do define it, the great majority cite Rogers (Rogers, 2003, p. 12) to define innovation as *an adopted novelty*: This may be “an idea, practice or object that is perceived as new by an individual or another unit of adoption.”

These two dimensions, novelty and adoption, are the most frequently used in the conceptualization of innovation, including public innovation. And through these we can approach a response to the question regarding how to differentiate the results of different initiatives of public innovation. Likewise, public innovation is not identified by the way in which it is constructed, nor by its contribution to any objective in particular, but rather by the presence of two dimensions that are common in the most general literature on innovation, coming from business, which have been identified as: the levels of novelty and adoption of initiatives of innovation.

The first dimension of public innovation is novelty. To even speak of Innovation, the *perception* of novelty and a differentiation from the past must be notable. (Bekkers, 2011; Rogers, 2003).

For some authors, this novelty must break with conventional wisdom and habitual practices, and this is called *disruptive innovation* (Hartley,

2013; Osborne & Brown, 2011; Torfing, 2018) even though the disruption referred to here is a different concept to that of Clayton Christensen (Christensen et al., 2015) in the literature on business innovation which refers to the *process* of disruption of a market by a competitor with a business model different from the dominant one.

Disruptive, for these authors from the field of Public Administration, refers to something that changes the practices or the mentality of an organization or a sector when addressing public problems. It is innovation that transforms the status quo in a way that closely matches what the Oslo Manual of the OECD (2018) classifies as *radical innovation*.

Nevertheless, beyond the conception of these extreme forms of novelty, the same authors recognize that from the beginning with Schumpeter, the literature on innovation includes the option of *incremental innovation* (Damanpour, 1991; Fagerberg, 2004; Schumpeter, 1934). Incremental innovation implies small distancing with respect to existing practices (Damanpour, 1991, p. 561). Various authors accept the possibility and the relevance of Public Innovation of an incremental nature (e.g., Hartley et al., 2013; SULLIVAN & GRIGGS, 2014).

The fact that innovation can be incremental does not eliminate the requirement of having some type of novelty involved. There should always be some degree of change involved, which in these cases does not mean a complete break with the past. In terms of impact, some authors sustain that the accumulative impact of incremental innovations can be equal to—and even go beyond—that of disruptive innovations (e.g., Fagerberg, 2004, p. 5).

Another precision to the element of novelty in innovation is the spatial dimension. In the literature it is common to accept that novelty in innovation should not necessarily be global, but rather the innovation must be so *for the context in which it is applied* (Hartley, 2005; TORFING & ANSELL, 2014). If a practice—for example, websites that report in a transparent form on government contracting and procurement—is already a deep-rooted custom in a country, but it arrives for the first time to another, this is still innovation in the second country.

The second dimension of the concept of innovation is *adoption*, the stage in which the practical impact of the innovation is determined. According to the literature, innovation only occurs when it is adopted (Fagerberg, 2004) and this applies to public innovation as well (Hartley, 2005). Adoption itself is one of the central themes of the literature on

innovation (Damanpour & Schneider, 2008) and also on public innovation (Hartley, 2005; Torfing, 2018; Torfing & Ansell, 2014) but it did not play a role in the conceptualization of public innovation.

When the OECD (OECD, 2019a) defines innovation as *the implementation of* something novel and the World Bank (2010) specifies that public innovation must be *widespread* they are highlighting the same point: only when there is adoption can there be a practical impact of the innovation.

This type of adoption itself can be conceptualized in a way that divides it into different stages. Rogers (2003) conceived of it as a process with five stages starting with the initial awareness of the innovation (knowledge), through the forming of a perspective toward it (persuasion), through later realizing activities that imply adopting or rejecting the innovation (decision), and finally putting it into practice (implementation) and seeking out positive reinforcement on the decision made, with the possibility of reversing course if the response is negative (confirmation). Of course, the process can stop not only in this last stage of confirmation, but also in any of the previous stages: If the idea proposed for innovation is not known by the potential users, it will not become innovation. If it is not persuasive to those users, it will not become innovation. If the idea is attractive, but for some reason it is decided not to be used, or for whatever reason the decision to use it is never made, then it is not innovation. And without a doubt, if after having been in use, the innovation is not *confirmed* through the continuation of its use, then there is no innovation.

This model of innovation, which seems to assume that the users who must be *persuaded* to implement innovations are highly autonomous, could be interpreted as more closely related to the market situations and perhaps less closely to the public sector, in which at least the state functionaries can simply receive the order to implement an innovative idea, or even to contractual relations of the market between organizations or between these and individuals, in which there asymmetry is possible. However, the reality is that even in hierarchical contexts, it is possible that the expected users of an innovation simply do not use it.

In general, nevertheless, the literature on innovation has dedicated more attention to the dimension of novelty than to the dimension of adoption. Even though in the literature on innovation in business the concept of disruptive innovation of Christensen refers to a great degree to a process of *adoption*, we cannot find an equivalent to that concept in the literature regarding public innovation.

If we focus on the two dimensions of novelty and adoption, and not just one of them, we can define *public innovation* as the generation and adoption of novelties in the form of acting on public problems by public, private and social sector actors. Those novelties can be incremental, implying small variations in practice or disruptive novelties that imply completely new ways of doing things.

Of course, without a doubt we can ask ourselves what type of practices can change with public innovation. De Vries et al. (2016), building on the work of other authors (e.g., Bekkers et al., 2011; Damanpour & Schneider, 2008; Moore & Hartley, 2008), find four major types of innovation: (1) process innovations that seek to improve the quality and/or efficiency of those processes, and that are subdivided into innovations of administrative processes—for example new forms of organization and new management methods- and administrative-technological innovations—introduction of new technologies, (2) innovation in products or services—creation of new products or services, (3) innovations in governance which are new ways of approaching specific social problems, as for example regulations on the Internet or self-regulations in certain markets and (4) conceptual innovations, new concepts, reference frameworks or paradigms that help transform the definition of problems and their solutions.

Recognizing the utility of this typology, in this chapter our interest is to focus on exploring the magnitude of change that the different public innovations generate, only understanding that change in a more complete form than uniquely through the lens of novelty. For this specifically, we shall present a new typology regarding those two dimensions of innovation: novelty and adoption, specifically for the study of public innovation.

2.3 A TYPOLOGY OF PUBLIC INNOVATION IN ACCORDANCE TO ITS NOVELTY AND ADOPTION

In this section, we will address the aforementioned typology of public innovation in accordance to its levels of novelty and adoption. Afterward, we will propose some more specific research questions and a method to study the form in which different innovations fit into this typology.

The underlying conceptualization of the typology is that the level of public innovation will be greater or lesser according to the degree that the new forms of interaction with the public present greater or lesser

Table 2.1 Types of Public Innovation in Accordance with Novelty and Adoption

<i>Eccentric Innovation</i> (low novelty, low adoption)	<i>Transformative Innovation</i> (high novelty, high adoption)
Discrete Innovation (low novelty, low adoption)	Flat Innovation (low novelty, high adoption)

discontinuity with the past and they achieve greater or lesser levels of adoption. A highly novel innovation adopted by very few, which reaches only a niche, will not greatly modify the status quo in terms of the way a public problem is tackled. However, the result is also not very distinct if the innovation is widely adopted but does not bring with it anything novel: The status quo of the response to the public problem does not change much.

The typology identifies four types of innovations in accordance to the form in which they combine the dimensions of novelty and adoption. Each of these types can be located on a quadrant on Table 2.1 below. Upon continuation, we shall provide some general examples of each of these types, as well as others extracted from the observation of public innovation in the response to the crisis unleashed on a great part of the world by COVID-19, in accordance with the status of those responses near the end of March of 2020.

The type of innovation in quadrant I that combines high levels of novelty with high levels of adoption—the highest values in each one of these dimensions—is the *transformative public innovation*. These innovations imply important novelties in the practices, as would be a radical level of digitalization of the government or the leap from a low level of citizen consultation to high levels of co-creation of a public policy, while achieving high levels of adoption. An example of this type could be the governmental platforms of open data in Latin America in the last decade. Another is the generalized confinement of the populations of dozens of countries around the world as an attempt at diminishing the advance of the COVID-19 virus at the end of the first quarter of 2020. Not only is the generalized confinement of large populations a highly novel innovation, at least in twenty-first century Western societies, but also its adoption has been generalized, from India to Ecuador and from Germany to South Africa.

The combination of high novelty and high adoption of a transformative innovation breaks the *status quo* in terms of the way of facing a public problem. This is precisely the case of massive confinement of populations carried out to tackle the expansion of a virus as in the case of COVID-19. The authority exercised by the State, not only in authoritative environments such as China but also in democracies in which these practices would have been unthinkable up to now, open a new type of possibility toward the future.

The innovations required for the high decarbonization of transport in the coming years will have to be transformative. To obtain relevant levels of impact on the CO₂ emissions in the atmosphere, the new technologies will imply *highly novel* forms to power or even to replace engines with other technologies producing motion. But they will also require being *massively adopted*.

Quadrant II illustrates the intersection between high levels of novelty in innovation—which in the literature on innovation in business and public innovation is frequently referred to as radical innovation—and low levels of adoption of that innovation. This is what we call *eccentric innovation*. An example of this type could be the aforementioned “data embassies” of Estonia or the digitalization of the process of construction and presentation of citizen initiatives to be brought to the Parliament in that same country (OECD, 2019b).

In the response to COVID-19, a highly innovative—but very rarely replicated reaction that was in fact abandoned where it originated—was the early gamble of the government of the UK in favor of non-reaction, allowing life to continue in relative “normalcy” while their European neighbors imposed strict quarantines and hoping to achieve a large number of infected which would lead to a result of “herd immunity”—among the survivors—through the development of antibodies that could keep the virus at bay.

While the bet for “herd immunity” produced very adverse reactions and was rapidly abandoned, another case of eccentric innovation could be the so-called telephone booths in South Korea. These were installed around one of the hospitals of Seoul and allowed medical workers to examine the citizens—isolated within the booth—thusly protecting the medical personnel that could take samples of sweat through the use of large-sized gloves attached to the structure of the booth, analyze these

samples and within minutes generate a diagnosis. This method of examination was very novel and well-received in its moment but not widely adopted.

Quadrant III presents the possibility of *discrete innovations*, where novelty levels are low—what the literature has called incremental innovation—and meet with low levels of adoption. An example could be a small innovation in the way of realizing a process before the State—for example, the request of a driver’s license or the registration of a child in a public school—that is also not widely spread, or not spread at all outside the jurisdiction where the new practice was started.

In the response to COVID-19, an example of discrete innovation could be that of some states of the United States that adopted very lax policies of social distancing compared with those seen in other parts of the world: In Oregon, even after giving in to weeks of pressures applied by the Mayor’s Office of Portland, the Governor’s Office of the state ordered the closure of bars, gyms and cultural centers, among other spaces, but allowed the citizens to continue doing exercise in their neighborhoods. In the critical days of alert near the end of March of 2020, the measures taken by Oregon were far behind those adopted in various other states of the United States—such as California or New York—and also behind those adopted by the majority of governments in Latin America.

Lastly, in quadrant IV, is what we call *flat innovation*, which is the result of the intersection of a relatively low level of novelty—that coincides with what the literature identifies as incremental innovation—and a high level of adoption. The flatlands, with which we associate this type of innovation, are extensive spaces of relative plainness.

In the response to COVID-2020, the flat innovations included the additional controls in airports and the calls to increase the personal hygiene practices of citizens in the majority of the western countries in the first weeks of the expansion of the virus. The increased controls for passengers coming from places with high exposure to the virus had already been used during the alert for SARS in 2002–2003. Nevertheless, when faced with COVID-19, these were multiplied in airports around the world, as was also done in dozens of countries with the campaigns to frequently wash one’s hands and, in many places, the use of surgical masks.

Another flat innovation at the end of March of 2020 was the use of Government programs of direct monetary transfers—a frequent tool of social policy—this time to support companies in the payment of salaries

(such as in Denmark) or to aid informal workers and persons without income, in general (such as in Colombia). These programs were put into practice to make it feasible to implement the quarantine.

2.4 CONCLUSIONS

So far, the research carried out allows for advancing the understanding of public innovation by concentrating not only on one but instead on the two dimensions that together define its impact: novelty and adoption. The research question is responded by understanding public innovation as a novelty adopted in response to public problems.

Even though the gray literature highlights the role of adoption in public innovation (BM, 2010; OECD/Eurostat, 2005) the academic literature on public innovation has identified the changes in *status quo* that are generally looked for mostly through the dimension of novelty in innovation (Hartley et al., 2013; Martinez Navarro, 2017; Torfing, 2018) and rarely does it incorporate the analysis of adoption—the exceptions including De Vries et al. (2016) and Moore and Hartley (2008).

The contribution of this typology to the literature on public innovation is to consider explicitly *adoption* as a dimension of public innovation, leaving behind the exclusive focus on the radical nature (novelty) of the change, thus facilitating, as we move forward, a more systematic exploration of the different experiences that takes into consideration, among other things, the contextual conditions that facilitate the diverse levels of novelty and/or adoption in the initiatives of innovation.

Public innovation, therefore, is not defined as only that which proposes radical changes in the public sector (Hartley et al., 2013) nor as that which is built in a collaborative manner (Torfing, 2018; Torfing & Ansell, 2014). It is defined as *adopted novelty*—in the approach to public problems. This definition invites research not only on what conditions are associated with innovations with greater levels of novelty, but also on the conditions associated with innovations that are more frequently adopted, and on different combinations of both dimensions such as those that are present in the typology and in the examples presented in this chapter.

The typology itself is not meant to be part of a more complete theoretical construction, a theory of Public Innovation that explains its origin, processes or the reasons why some innovation initiatives reach high levels of novelty, adoption or of both dimensions. This will be an effort made in future research.

The typology allows, nevertheless, for the exploration of those causalities that it does not explain. Continuing efforts to research this would allow, for example, to explore the patterns in the distribution of innovations of process, product and governance (De Vries et al., 2016; Moore & Hartley, 2008) in the categories of transformative, eccentric, discrete or flat innovation. Based on that, it will be possible to explore if, and how, the dimensions of novelty and adoption are related to each other, as well as the possible influences of other conditions.

There is now a relatively broad cross-section of literature on the conditions for innovation that apply to a great extent to public innovation. There is research on the relevance of institutional design for innovation (Bland, 2010) and also on the importance of the specific managerial level where it begins (Glor, 1998). Another recurring theme has been the role of regulation, even though with diverging conclusions from different studies: Johns, O'Reilly and Inwood (2006) and also Ongkittikul (2006) for example, support the position that regulation harms innovation, while the work of Rogers-Dillon (1999) on the program of Family Transition of Florida shows a direct, positive effect of requirements imposed by the Federal Government of the United States.

In their literature review mentioned previously, De Vries et al. (2016) identify four types of conditions: one group in reference to the characteristics of innovations and three more on different levels in which other conditions are relevant: environmental, organizational and individual levels. In each of these levels, we find a set of relevant conditions for innovation. But those identified conditions seem to center more on the ideation than on the adoption of innovation, and until now they do not have a clear link—that could be construed—with the levels of novelty and adoption of the innovations.

The form in which the levels of novelty and adoption vary in innovations of a distinct nature—of process, product, governance, conceptual—is proposed as a promising theme for future research.

Certainly, it is adequate to place the possible findings in perspective. As was addressed above, for example, it is possible that a set of incremental innovations end up producing greater impacts in the evolution of a product or the provision of a service than one or a few disruptive innovations with high levels of novelty (Fagerberg, 2004). This, additionally, does not downplay the fact that, compared one by one, it is always relevant to know which of two innovations implies greater novelty, which achieved greater adoption and, above all, how the behavior in one of

these dimensions is explained, or not, by the behavior in the other, or by other factors.

Despite the fact that this is not the aim of this research, a more *procedural* approach to Public Innovation could also explore the conditions for “disruptive” innovation, in the intention of Christensen (Christensen et al., 2015), not that of Hartley (Hartley et al., 2013) in the public sector: Under what conditions can innovation aimed at addressing the unaddressed needs of the marginalized segments of society, for example, take a disruptive path? Or could it be the case of innovation aimed at public officials themselves—for example in local administrations with low access to technology and lower capabilities, in general?

This last reflection allows us to connect to the relation between public innovation and *inclusive development*, which is to say, that which includes the “persons, sectors and countries marginalized in social, political and economic processes for the increase of welfare, social and environmental sustainability and empowerment” (e.g., Gupta, 2015; Gupta & Vegelin, 2016). Public innovation has great potential to be inclusive, since it is often fostered by the initiative of non-state actors.

Upon analyzing the dimensions of innovation, novelty and adoption, we can explore the relation between the origin of the innovations and their levels of novelty and adoption. Does the level of novelty and/or adoption of innovation vary when it is originated in marginalized sectors? How many of the transformative or eccentric innovations come out of these sectors and why? Or, on the other hand, how much does the adoption of public innovation in those marginalized sectors vary? How transformative, eccentric, discrete or flat do they become and why?

In any case, this research has the potential to improve our understanding of the bi-dimensionality of public innovation, perhaps reminding those encouraging it in Government, civil society and even the private sector that progress is needed in its two dimensions of novelty and adoption to achieve the desired results.

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