The Role of Redundancy and Diversification In Multi-Channel Democratic Innovations

Paolo Spada (Ash Centre, Kennedy School, Cambridge, USA)

Giovanni Allegretti (Center for Social Studies, University of Coimbra, Portugal)

Introduction

Once in the realm of pioneer and isolated pilot projects, "democratic innovations," — institutions that have been specifically designed to increase and deepen citizen participation in the political decision-making process (Smith 2009) — are slowly becoming a more common feature of policy making and governance building. Most democratic innovations have been implemented at the local level, but some experiments have also been conducted at the state, national and international level.[1]

For example, if we focus on municipal participatory budgeting (PB) alone, the process went from being an experiment implemented in thirteen Brazilian cities at the end of the 80s, to a family of processes adopted in more than 2500 cities around the world. (Sintomer *et al.* 2013). In Iceland, the city of Reykjavík initiated in 2011 a digital participatory budgeting process (e-PB) that allocates around 4.5 million dollars to citizens' projects. The online process – spread across the 10 districts - involves more than 10000 participants every year and it is now in its third cycle.

Most democratic innovations, by design, generate some duplication of existing public forums and decision-making processes. After all, democracies already have decision-making mechanisms that involve citizens more or less indirectly, thus a new participatory decision-making process within a representative democracy is partially redundant.[2] Continuing with the previous example, participatory budgeting complements the yearly city budget formulation. PB creates a decision-making mechanism open to the public that overlaps the existing budgetary process; traditionally a prerogative of the city government, the city bureaucracy, and in some settings, the city council. Typically, participatory budgeting generates repeated negotiations between the city institutions and the participants, combining elements of deliberative, participatory, and in larger cities, representative democracy. Face

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[1] See participedia for a variety of examples (http://participedia.net/).

[2] In engineering, redundancy is the duplication of critical components or functions of a system with the intention of increasing reliability of the system, usually in the case of a backup or fail-safe. In user interface design, an application software or operating system is sometimes described as redundant if the same task can be executed by several different methods. For example, a user is often able to open or save a project by navigating a menu with the mouse or keyboard, by clicking a single button with the mouse, or by entering a key stroke. In rhetoric, the term redundancy tends to have a negative connotation and may be perceived as improper because of its use of duplicative or unnecessary wording. As we will see the first two meanings are the ones mostly used in the field of democratic innovations design.

to face participatory budgeting employs a sequence of district level meetings coupled with multiple referendums. Digital participatory budgeting, like the one in Reykjavík, centers on online platforms that combine a space to propose projects, an asynchronous forum to discuss the projects merits and shortcoming, and finally a mechanism to select the projects that will enter the budget. In both types of processes, the city technical staff intervenes as a filtering mechanism that eliminates projects that are not feasible.

Additionally, democratic innovations are often based on multiple integrated processes that ideally allow a variety of different agents, with different interests and different skills, to work together at overlapping pieces of the same problem and/or solution exerting different levels of effort. For example, in its most rudimentary incarnations PB has three participatory stages: an initial brainstorming phase, where participants propose potential public projects; a project selection phase, where participants select projects that will enter the budget; a monitoring phase, where participants gather information on the implementation of projects. When we consider medium sized cities, PB becomes more complex, with multiple district level assemblies, and an overarching city level assembly open to representatives that are voted by the district assemblies.[3] Thus, in typical participatory budgeting, participants can engage the process in multiple ways, from simply attending a meeting to voting, from proposing a project to mobilizing other participants or being elected as representatives of their district (Baiocchi 2005; Allegretti 2005; Avritzer and Navarro 2002; Abers 2000; Fedozzi 2000).

Similarly, most recent e-democracy processes allow interested citizens to engage in the process in a variety of ways that involve different levels of effort, from simply reading and rating a post, to effectively contributing to the discussion, from completing some more complex tasks, to enjoying social interactions (Andersson, Burall, Fennel 2010; Bitter, Halle, Kadlek 2009; Goupta, Gouvier, Gordon 2012).

While some case studies of municipal participatory budgeting have shown the conflict this democratic innovation can generate with the city council[4] or the city government,[5] the majority of scholars view as positive the presence of multiple engagement processes within a democratic innovation (Smith 2009; Best *et al.* 2010; Peruzzotti *et al.* 2011). Many consider the integration of multiple participatory processes within a democratic innovation a method to *diversify* the risk that one single process could be ineffective, and as a way to *differentiate* the venues of participation to better accommodate the interests and goals of different types of people (Andersson, Burall, Fennel 2010; Sampaio *et al.* 2011; Bittler, Halle, Kadlec 2009).

There is no doubt that the most successful democratic innovations offer a multiplicity of venues of participation, multiple public spaces, and multiple participatory decision-making mechanisms; however, there are also many examples in which the introduction of additional venues of citizen

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[3] This second forum is open to the public, but only representatives have the privilege to speak and vote.

[4] In Porto Alegre and Belo Horizonte, the conflicts between the City Council and participatory budgeting are widely documented (Goldfrank 2006; Wampler 2007). Marcia Ribeiro Dias (2002) analyzes how City Council members react to the curtailing of their ability of influencing the city budget increasing the number of budget amendments they were proposing every year and generating conflict with PB.

[5] Conflicts with the city government are rarer and are usually generated by changes in the political coalition controlling the city (Baierle 2005; Spada 2010; Spada 2012), by unexpected level of contestation, as in the famous case of Blumeanau in Brazil (Wampler 2007), or by split coalitions within the city government (Spada 2012). In Lisbon, 2009 PB generated a conflict with municipality, because funding for bike lanes was given through PB, but their location was not discussed, so during the implementation many citizens disagreed with technically-driven proposals and blocked the building-sites for some months.

participation within a democratic innovation has backfired. In this paper, we aim to provide a more nuanced view of the role of redundancy and diversification in democratic innovations. First, we want to highlight the dangers of assuming an almost automatic positive correlation between a higher number of venues for participation and engagement, the multiplication of spaces for decision-making and the success of a democratic innovation.[6] Second, we will begin to investigate the key research question that naturally emerges when considering the ambiguous effect of redundancy and diversification. How can we design multiple parallel venues of participation to strengthen and broaden the applicability and impact of democratic innovations?

In what follows, we use the example of participatory budgeting to investigate the complexities of introducing parallel venues of participation within a democratic innovation. We use the term venues of participation somewhat loosely, without distinguishing between the introduction of public forums and participatory decision-making processes because our argument applies to both, as many examples of different designs of participatory budgeting show.

The PB family of democratic innovations is the perfect example for our investigations, not only for its diffusion and its variety of forms and outcomes (Wampler 2007; Spada 2010; Spada 2012), but also because, until recent years, PB had an ambiguous and conflicted relationship with several other democratic innovations which were taking shape in the same territorial contexts. Probably, the most enlightening example of such a tense relation is the difficult encounter between participatory budgeting and certain kinds of e-democracy practices aimed at involving citizens in an on-line dialogue with their local administrative institutions on policymaking. Many of these conflicts were due to the local conditions and the evolution of the two "technologies of participation" (Nunes, 2006), but many others are examples of the risks inherent in introducing new participatory venues, new public spaces and new channels of engagement in a democratic innovation. The rest of the paper is divided into three sections. In the first section, we review the history of the conflictive relationship between PB and e-democracy highlighting the role of local conditions, path-dependency and historical trends. In the subsequent section, we focus on five critical challenges that have plagued the difficult marriage of e-democracy and PB that go beyond path-dependency. Finally, we conclude by drawing some lessons from examples of successful management of these challenges.

What is participatory budgeting?

Regarded by some scholars as a sort "ideoscape" (Appadurai, 1991), signifying a political model which travels globally, but only exists through local appropriation (Allegretti, 2012), participatory budgeting is having a large success in different places of the planet.

Due to the large variety of PB examples existing around the world the literature offers a number of different normative and procedural definitions of this family of democratic innovations. The English think-tank called "PB UNIT" describes participatory budgeting as a process "which entrusts citizens

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[6] Measuring successes and failures of these complex democratic innovations, beyond mere survival and number of participants, is a difficult task that is beyond the scope of this paper and is generating a growing methodological debate (e.g.; Magennis 2010, Mansuri and Rao 2012). Here we use the term success loosely, to signify a combination of successes in term of survival of the process, in terms of policy outcomes as well as in terms of positive impacts on participants' attitudes and capabilities (Sen 1999).

the decision-making of a municipal budget or another budget of their interest"[7]. Such a description, not only clearly focuses on PB as an arena whose main feature is the reconstruction of mutual trust between administrative institutions and inhabitants, but also covers those experiments which involve citizens in the discussion of budget related to public services, but managed by outsourced agents and (semi)privatized agencies. A more restrictive definition is provided by Sintomer *et al.* (2008, 2012), which defines participatory budgeting as a device allowing "the participation of non-elected citizens in the conception and/or allocation of public finances", that satisfies five further criteria:

(1) The existence of an explicit discussion of financial/budgetary resources;

(2) The need to establish a dialogue with an elected body that has specific responsibilities and some concrete power over administration and resources in the interested area;

(3) The existence of repeated cycles of events over years, getting rid of processes already planned as an isolated event (one meeting or a referendum on financial issues, for example);

(4) The inclusion of some forms of public deliberation within the framework of specific meetings/forums configuring a new public sphere (so avoiding to define as "PB" a simple survey on budgeting issues in which citizens would have no contacts with one other);

(5) The existence of a certain level of accountability which could grant to participants to get feedbacks about whether or not their proposals have been accepted by the institutions, and provide to the citizens information about the following implementation of the proposed projects.

The majority of more long-lasting experiments, today, is co-decisional; which means that participants have "voice and vote", so the privilege to propose, but also vote, a list of actions and projects to be included in the budgetary documents.

The above mentioned common features of participatory budgeting help to better understand how participatory budgeting have been able to interact with a number of other experiments aimed at presenting and (in more isolated cases) discussing economic and financial issues related to local institutions.

In this essay we center our analysis on the interaction between PB and e-democracy paractices. The field of e-democracy is fast growing and still lacks universally accepted definitions (Medaglia 2007; Yildiz 2007). Following Trechsel (Trechsel *et al.* 2003) we define e-Democracy as "all electronic means of communication that enable/empower citizens in their efforts to hold rulers/politicians accountable for their actions in the public realm. Depending on the aspect of democracy being promoted, e-democracy can employ different techniques: (1) for increasing the transparency of the political process; (2) for enhancing the direct involvement and participation of citizens; (3) improving the quality of opinion formation by opening new spaces of information and deliberation."

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[7] Cfr. opening page of www.participatorybudgeting.org.uk

Participatory budgeting and e-democracy practices:
rivalry and collaboration within a common setting?

Participatory budgeting and e-democracy practices in public institutions have several similarities. At the most basic level both approaches aim to increase the number of actors involved in policy-making; enriching and complementing existing representative institutions. Both innovations promote a creative multiplication of participatory spaces and arenas where different actors can achieve different goals. In most cases both innovations are open to the public and prioritize the number of participants instead of representativeness. Both innovations share a number of more specific goals:

(a) Deepening democracy by involving citizens directly in decision-making, not merely offering space for raising their voice.

(b) Increasing transparency of public choices, and accountability of elected and non-elected public officials through forms of community-based monitoring.

(c) Promoting horizontal discussion among citizens, especially in spaces designed for dialogue with political authorities.

(d) Enlarging outreach in order to involve an ever-broader range of social, cultural, economic and territorial diversities (with special attention to inclusion of vulnerable social groups and territories).

(e) Increasing the capacity of public policies and projects to better discover (and respond to) the growing complexity and fragmented variety of needs and dreams described by citizens.

(f) Promoting empowerment of civil society through expanding knowledge and intensifying the debate about possible alternatives to mainstream policies and projects.

However, for almost 15 years (1989-2004), PB and e-democracy innovations have been conducted separately (Peixoto 2009; Sampaio *et al.* 2010), and not until 2005 did practitioners of PB and e-democracy begin to move from "skepticism to mutual support" (Allegretti 2012) — recognizing that they could cooperate to reach some of their shared goals.

The initial mismatching was partially path-dependent, being that PB practitioners regarded PB mainly as a pedagogic tool designed to foster community building via face-to-face public spaces promoting horizontal interactions among citizens. This tool used the desire to gain concrete public resources to motivate citizens to participate, to acquire the habit and skills to listen to each other, to learn to discuss alternatives, to understand the difficulties of policy-making, and to abandon destructive protest in favor of more cooperative attitudes. The initial designers of PB, influenced by socialism, liberation theology and years of organizing under the dictatorship, view face to face participation as a unique tool to liberate people from false-consciousness, apathy, ignorance, miss-conception of the way the government operates and most importantly as a tool to promote other regarding preferences and interest in politics. Thus before the Web 2.0 paradigm shift for practitioners and observers it was very difficult to imagine that PB and non-social ICT tools could complement each other. Beside this primary factor, the collaboration between PB and e-democracy was delayed for five key reasons:

(a) ICT participation tools had a low degree of interactivity, requiring high investments in terms of moderation and filtering of citizens' contributions;

(b) Internet access was limited and increased slowly especially in Latin America where PB was first developed;

(c) The average age of municipal employees involved in PB was high and technical culture low. They were rarely digital natives and most often were only used to a traditional paper-culture;

(d) The dominant political culture among the agents involved in the construction of PB projects was centered on traditional face-to-face organizing (Fedozzi 2000);

(e) Most internet tools generated a one-to-one relationship between the city and the users, similar to an instant poll. Practitioners were unfamiliar with using the web to expand the horizontal relationship among citizens.

The last item in the list was possibly the strongest factor in the failed meeting between PB and the use of e-democracy tools. In fact, PBs were imagined mainly as collective arenas, while the first attempts to collect citizens' contributions through the internet (or by free phone numbers) were mainly tailored to aggregate individual preferences and did not facilitate deliberation and network building among participants.

For such reasons, only a few cities in the late 90s dared to invest in ICT technologies for presenting proposals or voting within participatory budgeting processes. Porto Alegre, the world pioneer of PB, did experiment with tele-voting in 1998-2000. Tele-centers were opened in some deprived neighborhoods, to allow people without internet home access to use ICTs to take part in the PB process (Allegretti 2005). These costly tele-centers were underutilized, discouraging further experimentation by other municipalities. No until the so-called Web 2.0 phase of internet, development was there any further progress in this regard. With Web 2.0, costs of reaching people through social networks became much lower and internet access more widespread. Furthermore, the integration of the internet with mobile-phone systems, together with an explosion in geo-based technologies, allowed the creation of an easier collaborative environment with citizens. Ipatinga, Belo Horizonte and Recife (all in Brazil) acted as pioneer municipalities in this direction. They all tried to face the digital divide by providing buses equipped with online computers in the most underprivileged zones (later done in Lisbon and Cascais in Portugal), or creating mixed systems for proposing and voting on investments in order not to discount inhabitants lacking computer and web-connection at home, or those still ICT-illiterate.

Another important explanation of the difficulties in integrating PB and ICTs is that web 1.0 e-tools could not help practitioners to defend themselves from the main arguments of those that criticized the process. The introduction of ICT could not mitigate the fears of those that saw in PB a way for city governments to bypass existing checks and balances, nor the fears of those who viewed common citizens as lacking the technical expertise to manage complex policy decisions. Similarly the e-democracy tools of the time were not able to alleviate the concerns of those that criticized PB for lacking deliberative qualities, nor the concerns of those who thought the process was not truly representative and that it could easily be hijacked by elites or serve to channel the preferential choices of well-organized groups as mainstream opinion. At the time, the most common view was that

introducing e-democracy in a PB process could only concentrate decisional power in the hands of a minority of like-minded and well-connected citizens, raising new doubts about the minimal contribution that the internet could offer to increase the quality of deliberation and civic dialogue during a participatory budgeting process. There was also a widespread fear that internet was not sufficiently secure, and that trolls and hackers might jeopardize the legitimacy of online discussions and referendums.

A third important factor that helps explaining the delayed collaboration between PB and e-democracy is linked with the evolution of participatory budgeting. A new narrative of participatory budgeting that was less radical and more governance-driven emerged at the end of the 90s. This shift implied a stronger focus on the epistemic values of participatory budgeting, and a weaker focus on its educational value and its capacity to redistribute public resources toward the poor. The Brazilian Workers Party promoted this change as an element of a larger strategy to reposition itself toward the center in order to win the presidential elections (Hunter 2009). This new governance-driven PB narrative was extremely successful also because it was complementary with the new participatory driven development focus of international organizations (Mansuri and Rao 2013).

This new framework was also supported by the renewed interest in the epistemic and instrumental qualities of deliberative democracy[8] that provided a new overarching framework disjointed by the radicalism of the early conception of PB rooted in socialism and liberation theology. This new narrative contributed to the diffusion of PB around the world (Goldfrank 2012), and at the same time was significantly strengthened by such diffusion.

European political forces interested in PB (notably in the UK, Portugal, Germany, Eastern and Northern Europe) were particularly receptive to the new governance-driven approach to PB and began introducing the process at the municipal level around 2002. This new narrative, more favorable to e-democracy, coupled with the multiplication of top-down funding opportunities for the informatization of administrative institutions and the experimentation of new models of institutional communication with citizens was a major factor in the diffusion of new hybrid PBs in Europe. In some cases, ICT tools became the primary media of the process, giving birth to the so-called e-PBs (as in Lisbon, Portugal; Cologne, Germany; and more recently Reykjavík, Iceland) where ICTs facilitated the presentation of proposals and the voting of priorities. Such a transformation took place from 2006 onward, after the quality of the web-based panorama had completely changed, as the wiki ideology and the explosion of social networks had introduced several new types of horizontal relations among internet users, and the level of interactivity had shaped new tools for e-democracy practices and new opportunities to overcome cognitive injustices.

Despite all these changes, and the different sensitivity introduced by a new generation of digital native employees and consultants that began cooperating with public institutions on the implementation of new examples of participatory budgeting, the collaboration between PBs and ICTs is still very rudimentary (Nitzsche *et al.* 2012).

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[8] For an introduction to the vast debate on the various conceptions of Deliberative Democracy see Besson, Marti and Seiler 2006, chapter 2.

Beyond path-dependency: the intrinsic risks of a *kitchen-sink* approach

While, as we have seen in the previous section, the conflictive relationship between PB and e-democracy is due in part to historical contingencies, the example of these democratic innovations also provides important insights into the risks of the multiplication of parallel venues of participation. In this section, using the example of both face-to-face and ICT-based democratic innovations we identify five critical challenges that might emerge from a non-careful duplication of public spaces, venues of engagement, and decision-making processes.

First, it is important to underline that venues of participation are not separable entities, but that they interact constantly. Introducing a new venue of participation might alter the balance of a democratic innovation and divert users' attention and interests in unexpected ways. For instance, if one venue is particularly successful in attracting participants, others might suffer due to a loss of participants. Similarly, if a venue is particularly unsuccessful, other venues might suffer because they are still part of the same system and problems might spill over across venues. This feature of democratic innovations is particularly important when considering the fact that such innovations are often introduced in the midst of fierce opposition, and that opponents, to delegitimize the entire process, will certainly exploit the activation of new venues of participation.

Here, some examples coming from the world panorama of participatory budgeting can again be useful and instructive, because PBs are often supported by a minority of officials within the city government, and because we now have enough empirical cases in which a new government inherited PB from a previous (and in many cases ideologically different) one.

In Hortolandia, a city in the metropolitan region of São Paulo in Brazil, PB was introduced in 2004 due to the pressures of a minority within the city government. After the first year of implementation the mayor entered in direct conflict with participatory budgeting (Spada 2012), so he activated a new venue of participation by organizing in each district of the city a consultative meeting with representatives of the city council. These meetings effectively undermined participatory budgeting and led to the abandonment of the process in 2007. Similarly, some scholars interpret the introduction of the so-called Governança Solidária Local in Porto Alegre in 2005, a process parallel to PB, but that was initiated to generate partnership with local community social organizations, as an attempt by the new government, to disempower a PB that could not be eliminated due to great popular support (Baierle, 2007).

Obviously, the above mentioned cases are extreme examples, in which new venues of participation were explicitly created to undermine pre-existing ones. However, several other cases demonstrate how adding new spaces within a democratic innovation arena (or introducing substantial modifications in a participatory channel; configuring it as something completely new) can prove risky even in the absence of opposition to the main original process. One such example comes from some German e-PBs (as in Cologne) where the introduction of the possibility of voting not only for the most preferred project, but also for the least preferred one, generated such a distortion to the system that the legitimacy of the voting process was severely affected. In 2013, the municipality of Cologne decided to get rid of the negative voting because such a possibility (intended as a new opportunity within the existing voting channel) diverted the PB from a collaborative path of constructive shared

planning of public investments, towards a cutthroat competitive environment devoted to capture public funding through delegitimizing proposals presented by others. Under this perspective, the negative voting channel acted as a new participatory venue with a logic at odds with the pre-existing one; it led most people to strategically use their added veto-power to strike down all the proposals that were the closest (and so more competitive) to their preferred outcome.[9]

The introduction of thematic assemblies in some PBs provides another example of the difficulty of managing parallel venues of participation. Returning to the case of Porto Alegre, during the early 90s, the city government had decided to introduce a new set of citywide assemblies in an attempt to overcome the fact that projects proposed in district assemblies were limited in scope and mostly concentrated on filling basic infrastructural deficits in informal neighborhoods. These assemblies, called thematic assemblies, attempted to tackle citywide problems, such as transportation, education, employment or environmental pollution. These assemblies created a pure parallel process to the pre-existing one, and the result was that people rarely used the thematic assemblies as intended by the designer. Instead, the assemblies were mostly used to propose projects that had not been selected in the district assemblies, attempting to get the funding through this other channel.

Second, it must be remarked that when people are offered multiple parallel processes of participation they might chose the path that generates the most rewards for the least cost. This form of soft *free-riding* tends to affect significantly the legitimacy of a democratic innovation, and often limits capacity building, concentrating the efforts of individuals and organized stakeholders into an array of behaviors aimed at reaching maximum added-value for themselves, rather than feeding the consolidation of collaborative space. Usually, there is a fundamental trade-off between the amount of redundancy in a democratic innovation like participatory budgeting and the possibility of free-riding behaviors. The more parallel venues of participation are active, the more a participant can select the one that requires the least effort while retaining the benefits of being a participant.

The latter was a particular problem in some experiments where the presence of a parallel face-to-face and online voting mechanism created a sort of legitimacy crisis in which the online space was considered a way to affect the process without actually expending the effort to participate. This loss of legitimacy became particularly problematic when intersected with problems of digital divide. The introduction of electronic voting in the existing face-to-face participatory budgeting process of Recife in 2007 is an example of such risks. In Recife, both scholars and practitioners noted that e-participants, often coming from the middle class, had the ability to overturn the results of the face-to-face participatory process with minimal effort, without having to deliberate and confront the reasons of participants that could be considered more socially vulnerable (Ferreira 2010).

Another interesting case is that of Vignola, in Italy, which in 2004 gave the same opportunity of voting on-line and off-line for the preferred PB projects. The online vote was a success in terms of numbers, but it skewed the ranking of projects selected through the face-to face process. Most elderly people, unfamiliar with e-participation, were discouraged from participating again, which led to the fast suspension of participatory budgeting in 2005.

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[9] See the presentation "The Participatory Budget of Cologne. Experiences and Challenges" presented by the Municipality of Cologne in Warsaw, at the seminar *Warsztat nt. Budżetu partycypacyjnego dla przedstawicieli polskich władz samorządowych i liderów społecznych* (5-6 November 2012).

These two examples explain why in other instances — as Belo Horizonte, Brazil, or Pieve Emanuele, Italy — municipalities dealt with on-line venues of participation in a more cautious way. They created channels that could not be deemed as competitive with the main mechanism, whose aim was mostly pedagogic: to build an arena of mutual collective exchange where citizens' awareness of governing complexity could grow, fostering deliberation and solidarity by reducing the excessive unbalance of competition-for-funding the projects.

The above-mentioned phenomena tend to be widespread not only in hybrid democratic innovations that mix face-to-face with peer-to-peer venues, but in any sort of complex democratic innovation that employs different venues of participation which require different levels of effort by its participants. Field studies show that also in traditional, mainly offline, participatory budgeting the majority of people simply vote for projects, while only a minority is involved in detailing proposals, with an even smaller minority involved in monitoring their implementation. Similarly, in e-democracy applications, most participants act as lurkers, and only a minority is more active and contributes to e-deliberation (Klein, Spada and Calabretta, 2012). Thus, any democratic innovation implementing multiple channels of engagement, if not correctly designed, balancing the rights and duties of each participatory venue, carries the risk of creating channels of participation with different level of legitimacy weakening the architecture of the overall process.

Third, the more parallel venues of participation are active, the more duplication is generated within the democratic innovation and the more pressing the need for shaping filtering mechanisms becomes. Such hetero-directed filtering processes often generate tension in the city's relationship with participants, undermining the trust in PB and the legitimacy of the participatory device. This is particularly relevant when it concerns the duplications of brainstorming venues aimed to collect participants' proposals and when it is coupled with internet tools that simplify the proposal process. There are countless examples of unmanageable e-brainstorming processes that required a higher investment in filtering proposals than in the brainstorming process itself. One of the most famous is probably Google's project10tothe100.com that created 150,000 ideas and required the recruitment of 3,000 new employees to filter them and a nine-month effort (Klein, Spada, Calabretta 2012). What has happened in Lisbon's PB since 2009 is a similar example of this risk: to face the almost 1,000 proposals of investments uploaded by citizens every year, the municipality had to organize an Interdisciplinary Working Group of Civil Servants to merge and pre-select the proposals. The pared down list of 200 projects sparked numerous complaints by citizens who saw their ideas disappearing or being distorted (Sintomer and Allegretti 2013).

The increased simplicity of presenting proposals and entering the debate on policy making generated by multiple venues of participation can also broaden the expectations of participants, and thus generate frustration when such expectations are not met. This problem is rooted in an intrinsic fragility of participatory budgeting processes, which pairs an idea-generating phase with an   idea-selection phase. These two steps have divergent (and intrinsically conflictive) goals. In fact, the first one aims to reach out to the largest possible number of people to convince them to share ideas to fulfill their needs and dreams[10], almost inevitably generating expectations that might not be fulfilled. While the second step filters the projects to be implemented, aiming at producing some good outcomes out of

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[10] One of the organizers of PB in Cruz-Alta, Brazil, defined this phase of the process the "a machine to create dreams".

scarce resources and other feasibility barriers, possibly answering to the most urgent collective anxieties.

The more successful the first step is, the more projects have to be discarded[11], thus the conclusion of the decisional process is one of the most critical moment for participatory budgeting. The risk that expectations might not match reality, creating frustration in participants is further exacerbated by the fact that many public projects require multiple years to be implemented and that projects might be halted for reasons not foreseen when they were approved by participants (Allegretti 2013). For example, an increase in the cost of a project (materials and/or workforce, but also building permits or construction obligations and compensations) might affect its feasibility, as the implementation of a different project from a supra-local unit of government or a change in regulations. The case of the E-PB of Belo Horizonte in 2008 is highly representative of these risks (Sampaio *et al.* 2010). The first of the winning projects was not immediately funded, because a possibility of securing state-transfers funding emerged. When the latter were not concretized, rumors that the local government had preferred to implement the second priority, ignoring the hierarchy provided by citizens, began to circulate. That concatenation of events delegitimized the process generating widespread skepticism toward the subsequent cycle of e-PB.

Unfortunately, carefully explaining the limits of a participatory budgeting process to participants is contrary to the intent of the organizers to portray the process as a *panacea* for all local problems to achieve higher level of participation. A diversification in the venues of participation implies a multiplication of different advertising messages to reach out to different types of participants and carries a higher risk of creating unmanageable expectations.

Twenty-five years of experiences of participatory budgeting suggests that careful management of the participants' expectation is a key aspect to guaranteeing the success and survival of these processes (Allegretti 2013). Some degree of mismatch between expectations and reality is inevitable in any face-to-face or peer-to-peer participatory process; more so for those who participate for the first time and in environments where there is a strong demand for change and increased social justice. Participants might have unrealistic expectations even when the city or organization implementing the process has been extremely clear in outlining the scope and constraints that characterize the overall project.

Finally, a fifth crucial problem emerges from the interaction between the multiplication of venues of participation and the risk of the emergence of an oligarchy of participants over time. In fact, the more a democratic innovation is complex, the more difficult it is to manage its evolution. But incremental evolution is one indispensable component of democratic innovations (Allegretti 2013) because it represents a sort of guarantee of its capacity to progressively solve problems and respond to inhabitants' anxieties, thus being a pivotal element of the legitimization of the participatory process as a flexible, citizens-friendly institution of territorial governance.

The most advanced democratic innovations, like participatory budgeting, often contain provisions that allow participants to be a central actor in the change of the process' design in order to adapt it to changing conditions and increase the feeling of ownership and belonging of inhabitants in relation to

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[11] Discarding a project could have multiple reasons: many projects are redundant, many are not feasible, others are too expensive, and many other do not get enough votes. For example in the first year of the e-PB process in Reykjavík 300 projects out of 600 were discarded.

the participatory device and the ruling coalition itself. Allowing participants to modify the rules of the process (as happens in most Brazilian, Spanish and North American PBs) is an important tenet of maintaining the flexibility and adaptability of the process, and is a central feature in activating a virtuous circle that benefits progressively the ruling administration as well as the citizens (Ganuza and Frances 2012). However, this design feature when combined with different venues of participation, requiring different levels of knowledge and effort, might generate the creation of an oligarchy of participants that slowly disempowers one or more participatory channels in favor of the one that is most congenial to them. The case of Porto Alegre (Fedozzi 2007, Langelier 2011) is exemplary in this regard and it shows this ambiguity related to the self-ruling opportunity. Over a period, through changes to the rules and practices of PB, participants have contributed to diminishing the role of public district assemblies (Fórum Regional de Orçamento Participativo, or FROP) while empowering the smaller citywide assembly of district representatives (Conselho do Orçamento Participativo, or COP). These procedures have *de-facto* gradually encouraged the creation of an oligarchy of highly skilled participants that control most of PB decisions. The following graph shows how the renewal rate of members of the COP decreased over time.

% of new people in the COP of Porto Alegre
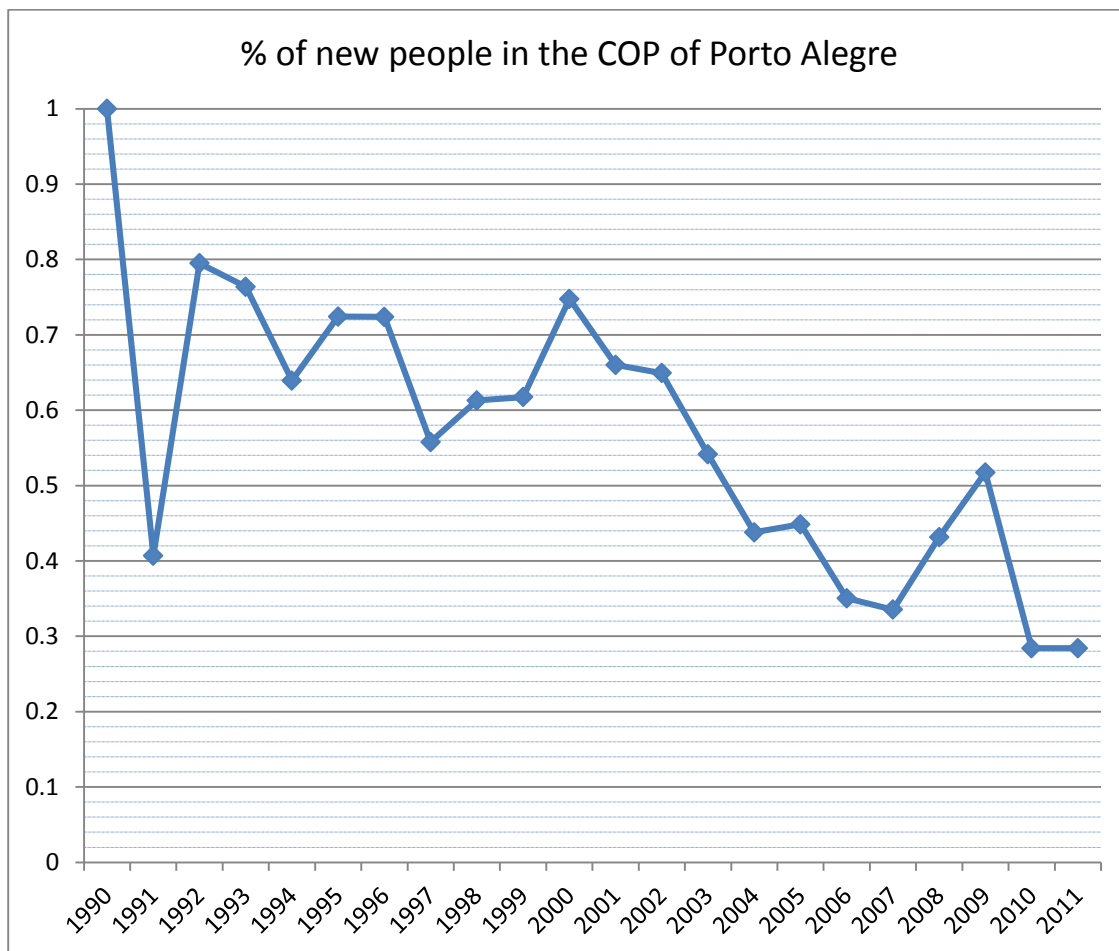
Source: Data collected by the ONG Cidade in Porto Alegre for the years 1990-2008; for the years 2008-2012 authors' calculations based on the public list of members of COP.

As we can see from the graph, over time the percentage of new participants in this key assembly decreased to reach a situation in which 60% of participants can be viewed as long-term professionalized participants with several years of experience. Unfortunately, the incentives of the general public in each city district, in the short run, seem to go in the same direction as the incentive of members of the COP council, that want to the keep their privileged position. In fact, multiple parallel participatory venues at the district level imply competition across venues to access public resources. In such an environment more professional district representatives are able to obtain more resources for their districts, while first-time elected representatives have a hard time navigating the procedures of PB and risk being quite ineffective. However, in the long run these professionalized participants are more easily co-opted by the city government. Most importantly, they tend to lose their ability to effectively challenge the city government, because their organizing ability has been reshaped by PB that requires a specialized skill set more tailored to compromise than protest.

Such a situation was possible in Porto Alegre because existing turnover rules, that compelled members of COP to step down for a year every two, were easily bypassed due to a loophole in the self-ruling documents (Regimento Interno).[12] The situation is now even worse because the existing interdiction to the indefinite annual reelection of members of COP has been eliminated, further crystallizing this semi-representative channel of participation dedicated to more active citizens that agree to engage in a more involved and time-consuming participatory tasks within PB. It is worth adding that, during the years of 2007 and 2008, the participants in the COP modified the rule of the process introducing an amount of money, called "emenda" (or "amendment", similar to those existing in the Brazilian national Parliament), that they could directly spend without the approval of their territorial assembly of reference. It was only the intervention of monitoring NGOs and some groups participating in regional assemblies (acting as a controlling watchdog for guaranteeing the fairness of PB rules and the fulfillment of educative goals of this learning environment) that prevented the solidification of this praxis, which seemed geared to disempowering district assemblies in favor of few stakeholders. The illuminating example of Porto Alegre shows the risks of not considering the evolution of the incentives[13] of all stakeholders when dealing with multiple venues of participation.

The presence of partially redundant venues of participation is an important byproduct of any democratic innovation, but — as we have seen from some of the quoted examples of this section — the multiplication of participatory and engagement venues can generate significant risks. This is because different venues of participation within a same participatory device or model are not separable objects, and are not nodes of a program that adhere to strict programming rules, they are public spaces composed of people that will often surprise the designer by using the space in unexpected ways. The idea that the more venues of participation the better a democratic innovation will perform is an assumption that does not hold true. Every wound inflicted on the legitimacy of a participatory device can become the start of a vicious circle, as politicians could become less confident of their experimentation and gradually invest less in it, further delegitimizing it in the view of their citizens.

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[12] The loophole allowed members of COP that had to step down from the position of main representative of a district, to get elected as a substitute representative.

[13] We are using the word incentive in the broadest sense of behavioral science. An incentive is something that motivates an individual to perform an action.

An open conclusion

We began this essay by noticing that the most successful democratic innovations, like participatory budgeting (that we used as a benchmark for a wider category of devices), are a coherent system of overlapping channels of engagement and participation. Thus, we want to open this concluding section of the paper by reinforcing the fact that we are not suggesting that redundancy and diversification of participatory channels is, *per se,* a problem. What we hope to have conveyed is a more nuanced view of the role of redundancy and diversification in democratic innovations, and a critique of the assumptions that more venues of participation automatically generate positive outcomes.

But, the *pars destruens* always comes easier than the *pars construens*, that is why we would like to finish this paper by asking what could help to guide the design of multi-channel democratic innovations to avoid some of the risks we have highlighted.

No simple answer exists; no *plug-and-play* design can magically solve the problems generated by local conditions and historical path-dependence as described in the third section of this paper. Nor do we think that the evolution of technology could defend us from some of the distortions that emerge when the duplication of venues of participation interact with political competition or free riding or the iron law of oligarchy. As we have seen in the previous section, such forces have managed to affect even what has been considered for many years the most successful democratic innovation of all: the participatory budgeting in Porto Alegre, Brazil.

However, we believe that carefully considering the design of democratic innovations to take into account not only the current incentives of all stakeholders, but also changes in the incentive structure that might emerge due to the evolution of the environment (e.g., changes in the political coalition governing the city implementing the democratic innovation) and the evolution of the process itself (e.g., an empowered democratic innovation might promote the creation of an oligarchy of participants), is a first critical step to mitigate the problems we described in the previous sections.

By using some examples of successful democratic innovations we can offer something more than this simple cautionary tale that is, frankly, nothing new for the ears of any careful practitioner and scholar of democratic innovations. Successful participatory budgetings, and more recently successful e-democracy processes, have integrated different venues of participation that require different duties and level of effort by carefully maintaining a balance between privileges and duties. The most successful examples of this approach create a friendly and transparent path through which citizens can earn the privilege to affect the process more significantly through a variety of different actions and capacity-building exercises. On one hand, this procedure allows the creation of more legitimate spaces of engagement that require less effort without reducing the legitimacy of the overall process. On the other, this approach can be used to create a variety of participatory filtering mechanisms that are more transparent and less frustrating. The latter processes, by introducing mandatory capacity building steps before the proposal submission phase[14], and by introducing more structure in the

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[14] see Sintomer *et al.* 2013 for some applications in South Korean participatory budgetings.

deliberation during the proposal submission phase[15] can significantly reduce one of the biggest problems of the scaling-up of democratic innovations: how to deal with the exponential multiplication of proposals.

Proto examples of these approaches can be found in participatory budgeting processes that established incentivizing measures such as:

(1) linking the amount of funding to greater participation or to better performance of a neighborhood in terms of fighting tax-evasion, as happened in Villa el Salvador, Peru (Cabannes 2004);

(2) linking the ability to propose more projects to sustained participation, like in the southern district of Porto Alegre[16] or in La Plata in Argentina[17];

(3) linking the privilege to vote in participatory budgeting to commitment in the voluntary sector. This is – for example – the case of Hichikawa's PB and other similar experiences in Japan, where initially only taxpayers could take part in the distribution of 1% of public budget for projects of social interest. Gradually non-taxpayers were also admitted to vote, provided they could gain their privilege through a score-card registering their commitment in voluntary social activities (see Sintomer *et al.* 2013; Matsubara 2013).

Similar e-democracy experiences include the creation of games which let participants earn virtual coins or credits through capacity-building exercises[18] or through reaching out activities, and allowing them to later spend these credits to vote for different options, or fund different proposals (Gupta, Bouvier, Gordon 2012). The Repurpose project introduced by the AFL-CIO during the 2012 Obama campaign is a recent successful application of such procedures for e-engagement that could be easily applied to participatory budgeting processes and other democratic innovations. In the Repurpose project campaign volunteers earned points by canvassing and making phone calls that could be spent to target the campaign itself,[19] from buying certain ads in certain locations, to sending more organizers to some electoral districts, to support political actions beyond the election.

Many cities have also employed online budget simulations and budget games to raise awareness and improve the capacity of citizens to understand the budgeting process. For examples, the small Swedish city of Orsa (in the far North of the country) adopted a variation of the online budget simulator provided by the National Association of Municipality and Regions (SKL) to allow citizens to propose

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[15] as happens in many modern face-to-face deliberative processes like America Speaks that employ a variety of mechanisms to consolidate ideas, or in modern group-ware such as the Deliberatorium that forces participants to cooperate in the construction of an argument map that automatically prevents duplication of ideas.

[16] One of the southern districts of Porto Alegre (Região Sul) developed over the years a set of rules that complements the ones of participatory budgeting. These rules were originally designed to deal with the backlog of projects proposed by the participatory process that were not yet implemented by the city. The rules established that newly elected representatives in the regional district assembly (Forum Regional do Orçamento Participativo - FROP) who were not familiar with the backlog of projects and the functioning of PB should spend a period of training and capacity building. They could not propose new projects, that have a higher chance of being redundant, but they could still participate to the deliberation of projects proposed by more experienced participants. An additional requirement imposed a minimum amount of participation on all members of the FROP in order to maintain the possibility of proposing projects.

[17] In la Plata only those residents who have attended half or more of the public forums held in their neighborhood are allowed to vote during the final round (Peruzzotti, Magnelli, Peixoto 2011).

[18] Typical examples include simulations for better learning to manage a budget (budget games), or quizzes to better understand the territorial, political or cultural context of a city.

[19] http://repurpose.workersvoice.org/how_it_works

different scenarios of budget management. Although the mechanism remains merely consultative, it provides an initial structure of accountability and feedback that can guide the behavior of elected officials.

An interesting innovation, that embeds a budgeting game in the voting mechanism of a participatory budgeting process, is being experimented in Reykjavík. The e-PB in Reykjavík began in 2011 through collaboration between the new city government and a non-profit organization specialized in online democratic innovations (Citizens Foundation).[20] The yearly process begins in the autumn and ends in the spring. The city overall allocates around 4.5 million dollars to PB, divided across 10 districts according to each district's population. Participants start by proposing, discussing and ranking capital projects to improve the city's districts in an online platform that is open and allows anonymity. In this step, a careful online structure has been set up in order to allow the quality of debate, and the readability of arguments that motivate citizens who support and oppose each presented proposal of investment[21]. Then the city staff analyzes the projects, merging similar projects and eliminating those that are not feasible for economic or administrative reasons. The city identifies a final set of 30 feasible projects per district taking into consideration the ranking of participants. Finally, participants select one district and play the aforementioned budget game in which they assign the available city funds to a combination of the 30 projects. This unique e-voting platform allows participants to play the game only in one district and employs industrial level security that takes advantage of the national electronic identity card. The city uses the results of the simulation to allocate funds to the projects. This innovation substitutes the traditional method of voting implemented in the majority of PBs[22]. This procedure not only promotes a better understanding of the trade-offs involved in formulating the budget, but also contributes to manage the expectation of participants increasing the legitimacy of the overall process. This first application of budgeting games to voting show the potential for embedding automatic capacity building mechanisms within democratic innovations.

Finally, a proto example of participatory filtering in ITC application can be found in recent experiments that integrated the use of argument mapping software, specifically designed to reduce redundancy, and capacity building exercises guided by moderators. In a recent experiment conducted within the Italian Democratic party 600 participants discussed online a project of electoral reform for a period of one month. The experiment assigned half of the participants to discuss freely in a forum-like environment, and the other half to discuss in a structured environment, that eliminated multiple identical ideas, but that required significantly more effort to add ideas. Quite surprisingly, the retention of participants in the two treatments, requiring largely different levels of effort, was not

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[20] http://citizens.is/

[21] In the case of Reykjavík, the opposition to a project is declared during the debate, and requires expressing clear motivations. This solution seems superior to other approaches that introduce the possibility of assigning a negative score to projects without providing a justification. For example in Cologne, the introduction of negative voting without justification led to widespread strategic behavior that undermined the cooperative spirit of the e-PB process.

[22] Most cities create a ballot with a small number of projects and ask participants to select one or two of them (e.g., Villa Franca de Xira, Portugal). Some cities use a Borda count method that assigns participants a fixed amount of points that they can allocate to projects to signal the intensity of their preferences (e.g., Chicago, USA). The system employed by Reykjavík is equivalent to a Borda count, but has the increased advantage to simulate the budgeting process.

significantly different, showing how a clear and meaningful path to earning the privilege to add ideas does not necessarily reduce participation (Klein, Spada, Calabretta 2012).

However, the above suggested paths which mitigate the effect of free-riding and promote capacity building are not exempt from carrying critical dangers: for example, that the more difficult it is to earn the privilege to participate meaningfully in a participatory process, the higher the probability that an oligarchy of participants will emerge through a sort of Darwinian selection process. Participants might abandon the process because their expectations were not satisfied immediately, or might not even try to achieve their goals if discouraged by the cost of participation. Thus, it is not only fundamental to preserve meaningful participation in all different venues of engagement, but also to create mechanisms that reduce the negative impact of unachieved expectations of participants. Decreasing the negative effect of not obtaining the approval to implement a project desired by a participant is something that successful participatory budgetings manage through the establishment of a dynamic tournament perspective. The unsuccessful participant whose proposal cannot be implemented has lost this time around, but by increasing his/her capacity, and by participating next time, his/her chances of success will increase. This fundamental element, by increasing the probability of achieving the objectives of participants and by reducing the cost of losing in the participatory process, allows many participatory budgeting processes to sustain high levels of participation over time and promotes a friendly agonism that avoid destructive forms of competition.

Often successful participatory budgeting processes manage expectations through framing messages that foster solidarity and other-regarding preferences. While advertising is a fundamental ingredient of any democratic innovation, this approach is extremely sensitive to changes in the objectives of the managers of the democratic innovations.

What we described so far can be summarized in a move toward the design of democratic innovations that centers on the differential empowerment of all participants and has, therefore, important pedagogic goals beyond the ambition of simply expanding the number of participants.

Note that we are not proposing to go back to an interpretation of democratic innovations based on a paternalistic process, where a system of incentive is created to lure participants in the hope that "the magic" of the deliberative/participatory process will transform them in better citizens. We are proposing a renewed attention to the key role of capacity building and empowerment. Our view recognizes a multiplicity of reasons behind the choice of participating in different ways to the process (e.g, a single working parent can only participate online late at night), and values all forms of input, even those that require little or no effort. But, it also provides a clear and transparent integration mechanism that rewards greater level of effort with greater ability to affect the process, valorizing those that invest the most in the participatory process and protecting the internal justice, and the legitimacy of the process.

Parallel multiple venues of participation and engagement need to be designed to construct multiple paths of capacity building and empowerment. Each new venue of participation that is added to the democratic innovation needs to promote empowerment not only to the subset of participants that will use it, but also to the overall system of venues of participation. In addition, the introduction of such elements must always carefully balance privileges with duties, with vigilant attention to the perceptions and incentives that citizens have of new features that modify the design.

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