Deliberative Mini-Publics and Perceived Legitimacy: The Effect of Size and Participant Type

Daan Jacobs
d.j.jacobs@uvt.nl

Tilburg Institute of Governance
Tilburg University

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ABSTRACT

The growing use of deliberative mini-publics has created a wide array of different designs. Yet, it is largely unknown whether specific design characteristics affect the extent to which mini-publics increase the perceived legitimacy of a public decision-making process. In this study, the relationship between two such design characteristics, size and participant type, and the legitimating power of mini-publics is investigated by means of a survey experiment. It finds that the legitimating effect of a mini-public is greatest if it involves more citizens, and if those citizens have direct interest in the outcome of a decision-making process.

Keywords: deliberative mini-public; survey experiment; perceived legitimacy; design

Word count (excluding references and appendices): 6120
INTRODUCTION

Deliberative mini-publics, which can be defined as institutions that foster “deliberation concerning general political issues among small groups of randomly selected citizens” (Lafont 2015, 40), have become an increasingly popular way to organize public participation. Although the exact number of mini-publics is unknown, more and more governments are using this particular means to involve citizens more directly in the public decision-making process (Smith 2009). As a result, many different types of mini-publics now exist. Even within established formats such as the citizen’s jury, the consensus conference, and the deliberative poll, differences in design characteristics like size, scope and mission are becoming increasingly pronounced (see Goodin & Dryzek 2006; Setälä & Smith 2018).

The growing use of deliberative mini-publics can be attributed at least in part to the idea that they are able to significantly improve the perceived legitimacy of public decision-making – particularly among those who are either unwilling or unable to participate themselves (Goodin & Dryzek 2006; Fung 2015). Due to their unique participatory qualities, it is thought that mini-publics are particularly well-suited to repair the loss of legitimacy that many democratic institutions are believed to suffer (see Grönlund et al. 2014; Caluwaerts & Reuchamps 2015). For example, Dryzek & Tucker (2008, 868) note that a mini-public in France took place in a context where “faith in the ability of elites to manage risks had been shaken”. In this case, the role of the mini-public was explicitly to "to assure [...] social acceptance of technological change”.

Given this importance of legitimacy in the rationale for using deliberative mini-publics, it is not surprising that the relationship between these two concepts has been a subject of considerable attention in the literature (c.f. Dryzek et al. 2009; Caluwaerts & Reuchamps 2016). Yet, existing work on this issue has focused predominantly on the effect of deliberative mini-publics in general (c.f. Ron 2010; Smith 2013). On the one hand, there are studies that investigate the effect of a ‘typical’ mini-
public. These studies often focus on stylized versions of popular formats such as the citizens’ assembly, or the citizen initiative review (see Boulianne 2018). On the other hand, there are studies that do focus on particular cases, but limit themselves to studying the effect of that specific mini-public (Gastil et al. 2016; Longstaff & Secko 2016).

A consequence is that an important aspect of the relationship between mini-publics and perceived legitimacy has generally been overlooked. While it has been decisively shown that mini-publics can positively affect the perceived legitimacy of a public decision-making process (Font & Blanco 2007), it is largely unknown if and to what extent the strength of this effect varies with how a mini-public is designed. In spite of the fact that mini-publics can involve anywhere between 30 and 1000 citizens for example (see Goodin & Dryzek 2006), few studies have so far investigated whether the legitimating power of a deliberative mini-public is affected by the number of participating citizens. Similarly, despite significant variation in the type of citizens that mini-publics involve (see Felt & Fochler 2010), it is largely unclear whether the effect of a mini-public is stronger if involved citizens are directly affected by the subject at hand. This prompts the following research question:

*To what extent does the design of a mini-public affect its capacity to increase the perceived legitimacy public decision-making processes?*

In this study, we seek to answer this question by studying how two design characteristics – size and participant type – influence the effect of a deliberative mini-public on the perceived legitimacy of public decision-making. We do so by means of a survey experiment (N = 383). In this experiment, a representative group of Dutch residents was asked to read a brief description of a public decision-making process that featured a deliberative mini-public. Depending on the experimental group to which participants were randomly assigned, the mini-public involved either 30 or 1000 citizens, and involved either citizens in general or only citizens who would be directly
affected by the decision at hand. Having read the brief description, participants were asked to answer a series of questions to establish if and to what extent they considered the decision-making process legitimate.

The structure of this paper is as follows. First, we provide an overview of the diversity of deliberative mini-publics. Next, we briefly review the literature on this issue, and introduce our main hypotheses regarding the effects of size and type of participants of a deliberative mini-public on perceived legitimacy. Following a description of the experimental design and proceedings, we report the main results. We conclude with a discussion of our main findings and contribution, and an outline for future research.

DELIBERATIVE MINI-PUBLICS

As a means to organize public participation, deliberative mini-publics stand out for having two defining characteristics. The first is a commitment to facilitating deliberation. Defined as a process of decision-making in which participants “weigh carefully both the consequences of various options for action and the views of others” (Mathews 1994, 110), deliberation is often seen as an alternative to the partisan debate that typifies traditional decision-making processes (see Elster 1998; Leydet 2015). To achieve this, mini-publics usually provide participants with access to experts or supplementary information, and attempt to create an environment in which a wide range of different views is considered in an open and respectful way (see Burkhler et al, 2002). A second characteristic is the use of sortition. Contrary to most other ways to involve citizens more directly in public decision-making, mini-public use random selection to determine who is eligible to participate. While such selection will often be quasi-random in practice (Dryzek and Tucker 2008, 864), it is believed that this results in a more representative sample of citizens taking part (see Ianiello 2018).

While all mini-publics share these characteristics, different designs can be distinguished. One is the deliberative poll. A brainchild of James Fishkin (1997; 2009), deliberative polls engage a
randomly selected sample of citizens in a deliberative process that aims to retrieve a public opinion “if everyone had the chance to research and reflect carefully on the issues at hand” (King 2003, 27). To determine if this was successful, participants fill out a survey before and after the deliberation. A slightly different design is the citizens’ jury. While citizens’ juries also selected participants randomly, they are modelled on the criminal justice jury system and typically ask participants to deliver a ‘verdict’ on a topic of public interest (Smith & Wales 1999; Crosby & Nethercut 2005). Yet another design is the consensus conference. In this format, a randomly selected group of citizens is also invited to participate in a deliberative process. However, consensus conferences typically provide participants with a large degree of freedom to decide what it is they want to discuss (Smith 2009; Einsiedel & Eastlick 2000).

Yet, even these more or less established designs come in different shapes and sizes. In terms of size for example, there is significant variation in the number of participants that different mini-publics involve. At one end of the scale, there are mini-publics that involve no more than a few dozen citizens at a time (c.f. O’Doherty et al. 2012; Bentley et al. 2018). For example, a 2013 Community Jury on cancer screening for men in the United Kingdom involved only 12 randomly selected citizens (Rychetnik et al. 2014). At the other end, there are mini-publics that involve anywhere between a few hundred and several thousand citizens simultaneously (c.f. Setälä et al. 2010; Christensen et al. 2017). A 2003 event of AmericaSpeaks in the United States had a staggering 2800 participants, for example (see D’Agostino et al. 2006).

Similar differences exist with regard to the type of participant that mini-publics involve. On the one hand, there are mini-publics that aim to involve as general a group of citizens as possible (c.f. Himmelroos & Christensen 2013; Mao & Adria 2013). This is usually achieved by randomly selecting citizens who live in a predefined geographical area. For example, a mini-public on biobanking in Canada selected its participants by randomly calling registered residents of British Columbia (Secko et al. 2009). On the other hand, there are mini-publics that try to involve a more specific group of
citizens (c.f. Meijer et al. 2016; Ritter et al. 2018). In many cases, this is because the organizers feel that a particular decision affects certain member of the public more than others. Consequently, these mini-publics randomly recruit citizens with a direct interest in the decision, be it because they are local residents (c.f. Rocle & Salles 2018), or because they have a particular profession (c.f. von Essen & Allen 2017).

**SIZE, PARTICIPANT TYPE AND PERCEIVED LEGITIMACY**

Although the literature on the relationship between public participation and perceived legitimacy is well-developed (see Delli Carpini et al. 2004; Fung 2006), relatively little attention has so far been paid to the extent that this relationship is influenced by design characteristics like size and the type of participant. The studies that do, suggest that both characteristics may well affect the degree to which public participation increases the perceived legitimacy of a public decision-making process.

For size, there appear to be a tentative consensus that a greater number of participants results in more legitimacy (Michels 2011; Hysing 2015). In his evaluation of various public participation methods for example, Fung and Wright (2003) note that a large-scale participation effort in Brazil has “increased the legitimacy of the municipal state and increased tax compliance”. On the effect of involving different participant types, the literature is less clear. On the one hand, there are studies that stress involving citizens with a direct interest as the best way to increase perceived legitimacy (Mascarenhas & Scarce 2004; Cliquet et al. 2010) On the other, there are studies that suggest that involving as broad a selection of citizens as possible is key to generating strong legitimacy beliefs (Koontz & Moore Johnson 2004; Bryson et al. 2012).

Given the limited attention for design characteristics and the legitimating power of public participation more generally, it is not surprising that few studies have investigated this issue with a specific focus on deliberative mini-publics. Nevertheless, the literature does provide a number of valuable insights. With regard to size, the evidence is mixed. On the one hand, there are signs that
mini-publics with more participants are able to command a greater degree of legitimacy (Goodin & Dryzek 2006). This intersects with recurring concerns about the small size of many mini-publics, and how this limits the extent to which they are perceived as legitimate (Dryzek & Tucker 2008). Yet, it is also clear that bigger is not always better. In their discussion of the Belgian G1000 for example, Caluwaerts & Reuchamps (2015, 164) note that in spite of involving well over 700 citizens, the mini-public “did not succeed in finding strong legitimation of its decisions from the wider public.”

The same is true for insights regarding the effect of involving different participants. On the one hand, studies find that mini-publics can command a greater degree of legitimacy if they involve a sample of citizens that is as descriptively representative of a wider population as possible (see Kahane et al. 2013; von Essen & Allen 2017). In their study of a mini-public on biobanking policy for example, Molster et al. (2011, 221) stress the need to include a diverse group of participants because “a lack of broad inclusiveness of public perspectives can limit claims of procedural legitimacy”. Yet, descriptive representativeness does not guarantee legitimacy (see Olsen & Trenz 2014). By striving for perfect representativeness, mini-publics may well exclude relevant stakeholders and “risk being too detached from the real world to gain sufficient legitimacy” (Bobbio 2019, 50).

However, these insights suffer from two shortcomings. The first is that their subject has rarely been an actual object of study. Observations about the effect of design characteristics like size and participant type, to the extent that they have been made, tend to occur in the margin of studies that focus on the relationship between mini-publics and perceived legitimacy more generally (c.f. Böker 2017; Pogrebinschi & Ryan 2018). As a result, many of these observations lack depth and provide only a limited view of what this relationship might look like. The second shortcoming concerns the fact that these insights can hardly be described as a systematic exploration of the way that size and participant type affect the legitimating power of deliberative mini-publics. This is particularly problematic because it prevents the literature from establishing the extent to which this
relationship is causal; that is, whether the size of a mini-public or the type of participant that it involves is in fact responsible for observed changes in the perceived legitimacy of decision-making processes (see Druckman et al. 2011). This is where the study seeks to make its contribution.

**THEORY AND HYPOTHESES**

In general, it is thought that people consider a public decision-making process to be legitimate if it is fair (Tyler 2003; Levi et al. 2009). Whether this is the case, depends on a range of factors that includes the extent to which they, or people like them, have been able to participate in that process (see Tyler 1994; Moynihan 2001). If participation is found to be genuine (Abelson et al. 2013), and if people feel that their interests have been sufficiently taken into account (Michels & De Graaf 2010), they will generally consider a decision-making process to be legitimate.

There are two ways in which such feelings can be evoked. The most straightforward way is directly. By being actively involved in a public decision-making process, people gain a sense of ownership and trust (Burton 2009; Gellers 2016), which in turn affects the perceived legitimacy of that process. However, most people will rarely participate in public decision-making themselves. Instead, they rely on elected representatives or recognized proxies (see Barnes et al. 2003; Roberts 2004) to do this for them. Yet, this second, more indirect way to organize public participation can also inspire legitimacy beliefs. If people are confident that participating citizens are sufficiently representative (Fung 2006), and any input made by these citizens is taken seriously (Rydin & Pennington 2000), they are more likely to accept the outcome of a decision-making process.

For a means to organize public participation, this means that its source of legitimating power resides squarely with the capacity to facilitate high-quality participation (see King et al. 1998; Halvorsen 2003). In this respect, deliberative mini-publics have a lot to offer. Due to the fact that they select participants (quasi-)randomly, mini-publics should be able to involve a group of citizens that is more or less representative of the population from which they are selected (Fishkin 2013; Lafont
This should in turn make it easier to generate legitimacy beliefs, especially among people who are either unwilling or unable to participate themselves (Curato & Böker 2016; Setälä 2017). While the impact of mini-publics has often been limited (see Felicetti et al. 2015), this is still believed to give them a major advantage over other ways to involve citizens more closely in the public decision-making process (Brown 2006).

Within this framework, it is possible to see how the size of a mini-public, and the type of participant it involves, could affect the degree to which it increases the perceived legitimacy of a public decision-making process. For size, this relationship is relatively straightforward. If the extent to which a mini-public generates legitimacy beliefs depends on whether it enables a representative group of citizens to participate, a greater number of participants would increase representativeness and therefore perceived legitimacy. This is because random selection works particularly well in large quantities. By using chance to determine who can participate, each eligible citizen has an equal probability of being selected. If repeated often enough, this creates a representative sample of the target population (Dowlen 2009; Stone 2009). As long as its selection is sufficiently random, a mini-public with more participants should therefore have a greater degree of representativeness. This prompts the first hypothesis:

*H1: a public decision-making process that includes a mini-public with a large number of participants is perceived to be more legitimate than a public decision-making process that includes a mini-public with a small number of participants.*

A slightly different relationship suggests itself for the type of participant that a mini-public involves. If this design characteristic is conceived as the difference between involving a general subsection of a population, or only those who have a direct interest in the outcome of a decision-making process, it follows that involving a general subsection would increase representativeness,
and therefore perceived legitimacy. This is because limiting participation to citizens with a direct interest will inevitably reduce the extent to which selected citizens resemble the wider population (see Fung 2015). However, it is important to note that this only holds if a decision-making process concerns a community that consists of both directly and indirectly affected citizens, and that this problem is only likely to be salient for citizens who are not directly affected (see Tuler & Webler 1999; Webler et al. 2001). If these conditions are met however, a mini-public that involves a general sample of citizens should be able to command a greater degree of legitimacy. This prompts the second hypothesis:

$$H2: \text{a decision-making process that includes a mini-public involving a general sample of citizens, is perceived to be more legitimate than a public decision-making process that includes a mini-public involving only citizens with a direct interest in the outcome of that process.}$$

**METHODS AND DATA**

These hypotheses were tested by means of a survey experiment. As a research method, survey experiments share characteristics of both surveys and experiments. Like experiments, they manipulate one or more independent variables and divide participants randomly over different experimental groups. Like most surveys, the experiment itself usually consists of a questionnaire in which a brief description of a scenario (a vignette) is embedded (c.f. Naumann et al. 2018; Strebel et al. 2019). By manipulating the text of this description and measuring if this results in a different score on one or more dependent variables, survey experiments can help to determine if certain manipulations are likely to trigger a particular response (see Sniderman 2011). Although the method is subject to a number of limitations (see Barabas & Jerit 2010), it has the advantage of being relatively accessible whilst allowing for a degree of causal inference (Gaines et al. 2006).
Pilot study

A pilot study was conducted to test the experimental design. This pilot study was conducted in a classroom setting at a research university in the Netherlands, as part of two undergraduate courses on social scientific research methods for students of public administration and law. As these courses did not take place simultaneously, the data was collected in two waves. In each of these, the experiment was conducted in the same way. Upon entering the classroom, students were presented with a unique access code. With this code, they could log on to the online survey platform Qualtrics. Having done so, participants were automatically assigned to one of four experimental groups. This was done randomly, using software that is embedded in the platform.

Next, participants were asked to read a brief description of a public decision-making process. According to the quasi-fictional scenario, the local government had received news that that its stock of student housing would not be sufficient to cope with a predicted rise in student numbers. To deal with this impending problem, it was described to have created a panel of citizens that were randomly selected. The panel was reported to have met with various experts over the course of several meetings, and to have discussed several potential solutions in an open and respectful way. Ultimately the panel was described to have reached consensus on a proposal that would see the government build half the required amount of additional housing units. This proposal was subsequently reported to have been presented to the municipal council, which adopted it unanimously.

The manipulations concerned the characteristics of the citizen panel that the local government had allegedly created. The first manipulation centered on its size. In one version of the scenario, the panel was reported to have consisted of 30 citizens. In another, of 1000 citizens. These numbers were chosen to correspond roughly with the size of the smallest and largest mini-publics. The second manipulation centered on the type of participant. In one version of the scenario, participating citizens were described simply as ‘residents’. In the other, as ‘residents that would be
directly affected (e.g. students, business owners, etc.). These categories were chosen to reflect the difference between a general sample of citizens, and citizens with a direct stake in the outcome of the decision-making process. The manipulations were combined in a factorial design that provided each experimental group with a different combination (see figure 1).

**Figure 1. Factorial design for the effect of size and participant type**

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<th>Size</th>
<th>Participant type</th>
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<td></td>
<td>General</td>
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<tr>
<td>Small</td>
<td>Group 1</td>
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<tr>
<td>Large</td>
<td>Group 2</td>
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<tr>
<td></td>
<td>Direct interest</td>
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<td>Group 3</td>
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<td>Group 4</td>
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Having read this scenario, participants were asked to answer a series of questions about the process. To measure our dependent variable, we used an operationalization that is often used as an indicator of perceived legitimacy (c.f. Linde 2012; Doherty and Wolak 2012). Participants were asked to indicate how much they agree with the following statement: “The decision-making process was fair”. Answers were recorded on a five-point Likert-type scale that ranged from “Strongly disagree” to “Strongly agree”. Our choice for this particular measure was motivated by the fact that procedural fairness has been established as a reliable way to measure perceived legitimacy (see Grimes 2006), that it focuses specifically on the legitimacy of processes and procedures (c.f. Carroll and Carroll 1999; Carman 2010), that it does not require participants to have participated in a decision-making process themselves (Esaiasson et al. 2012), and that it has precedent in comparable studies of legitimacy and procedural fairness (c.f. Schminke et al. 1997; Bøggild 2016). To ensure the reliability of the study, the survey also included attention and manipulation checks, and collected a limited amount of demographic information to check if randomization was successful.

In total 154 valid responses were collected. Randomization was successful; an analysis of variance (ANOVA) suggests that there are no statistically significant differences between the
experimental group on any of the demographic variables. The results of the attention check suggest that a large majority of all respondents paid sufficient attention to the experiment; 89.6% answered the corresponding question correctly. The manipulation check yields similar results. When asked to indicate of how many citizens the panel consisted and what type of citizens they were, 77.9% of all participants chose the characteristics that correspond with the treatment they were given. This suggests that the manipulation was successful. The fact that the data was collected in two successive waves does not appear to have had an effect; the experimental effect is stable across both waves. For data quality assurance, the responses of all individuals failing the attention or manipulation checks were removed. This leaves a total of 106 participants.

The results are surprising (see Appendix 1). For size, a two-way factorial ANOVA suggests that there is no statistically significant difference between the groups in which the vignette featured a large mini-public, and the groups in which the vignette featured a small mini-public \(F(1, 102) = .04, p = .85\). Participants who were presented with a description of a decision-making process in which a mini-public involved 30 citizens, award that process the same average legitimacy score \((M = 3.71, SD = .79)\) as participants who were presented with a description in which the mini-public involved 1000 citizens \((M = 3.71, SD = .64)\).

For participant type, that same factorial ANOVA does report a statistically significant difference \(F(1, 102) = 6.01, p < .05\). However, this difference runs counter our second hypothesis, with participants who were presented with a vignette in which the mini-public involved a general sample of citizens awarding the decision-making process a lower average legitimacy score \((M = 3.51, SD = 3.85)\) than participants who were presented with a vignette in which the mini-public involved only citizens with a direct interest in the outcome of the decision-making process \((M = 3.85, SD = .65)\). The effect size is small \(\eta^2_{\text{partial}} = .06\).
Main study

The main study was conducted using the LISS Panel. This is an online panel that consists of approximately 5000 probability-sampled Dutch households. Each of these households fills out a survey every month, and receives a small financial incentive in return. If households do not have an internet connection or a compatible computer, they are provided with one. Although the panel is not a perfect reflection of Dutch society, it is generally considered to be more representative than other web-based survey platforms. The LISS Panel is regularly used for survey-based research.\(^1\)

For the purposes of this study, twelve questions were added to one of the LISS Panel’s monthly surveys. These included a vignette, several questions to measure perceived legitimacy, and a manipulation check. Questions about demographics, and general evaluative questions about the survey were included in the survey by default. The survey, including these twelve additional questions, was sent to a random sample of 968 households from the panel. Upon opening the survey, each household was randomly assigned to one of the four experimental groups. Households were given four weeks to complete the questionnaire. If a household had not completed the questionnaire after two weeks, a reminder was sent.

Although the design of the main study is similar to that of the pilot study, some changes were made. To ensure that the vignettes would be relevant to the households in the LISS Panel, the scenario was adapted. Instead of on a potential lack of student housing, the scenario focused on the development of a brownfield site. According to the vignette, the site had been derelict for several years and had been subject to several complaints. Two options suggested themselves; to turn the site into a commercial zone, or to turn it into a park. Like in the pilot, the local government decided to create a citizen panel to determine which option would best serve the community. The panel was reported to have met with various experts over the course of several meetings, and to have discussed

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\(^1\) Source: [https://www.website.lisspanel.nl/](https://www.website.lisspanel.nl/) (last retrieved on 25 August 2019).
several potential solutions in an open and respectful way. Ultimately the panel was described to have reached consensus on a proposal that would see half the site turned into a commercial zone, and the other half into a park. This proposal was subsequently reported to have been presented to the municipal council, which adopted it unanimously (see Appendix 2).

As a result of this change, the manipulation for participant type was also adapted. Instead of students, local residents were named as an example of citizens who have a direct interest in the outcome of this decision-making process. Finally, since the LiSS Panel survey is exclusively distributed in Dutch, the vignettes and questions were all translated to appropriate equivalents.

Data

Of the 968 households that were approached, 673 returned a questionnaire in time. This amounts to a response rate of 69.5%. On average, these participants are 52.56 years old (SD = 18.89), and more often female (51.7%) than male (48.3%). A comparison with data from the Dutch Central Bureau for Statistics suggests that this makes our sample older and slightly more female than the overall Dutch population\(^2\). Randomization was again successful; a one-way ANOVA suggests that there are no significant differences between the experimental groups on both demographic variables (see Table 1). The results of the attention check do provide a cause for concern. When asked how many citizens the mini-public in the scenario involved, and what type of citizen, only 56.9% of all participants selected the answers that correspond to the scenario that they were presented with. However, it is not clear if this means that the manipulations were not successful; when asked if the questions were difficult to answer, only 26% of all participants answered either ‘Yes’ or ‘Definitely’. For quality assurance, participants who failed the manipulation check were excluded from the analysis. This leaves a sample of 383 participants.

\(^2\) According to the Dutch Central Bureau for Statistics (CBS), the average age of Dutch citizens in 2018 was 41.8 years. 50.3% was male. Source: https://opendata.cbs.nl/statline/#/CBS/nl/ (last retrieved on 25 August 2019).
Table 1. One-way analysis of variance (ANOVA) for age, sex and political orientation

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<td>Age</td>
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<td>Small/General</td>
<td>53.82</td>
<td>162</td>
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<td>Small/Direct interest</td>
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<td>Large/Direct interest</td>
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RESULTS

To determine how the size of a mini-public and the type of participant it involves affect the perceived legitimacy of a public decision-making process, it is instructive to first inspect the average legitimacy scores for each design characteristic (see Table 2). For size, these paint a somewhat different picture than in the pilot study. Rather than having comparable scores, participants who presented with a vignette in which the mini-public involved 30 citizens now award the decision-making process less legitimacy \((M = 3.67, SD = .82)\) than participants that were presented with a vignette in which the mini-public involved 1000 citizens \((M = 3.85, SD = .77)\). This is in line with our first hypothesis.
Table 2. Average legitimacy scores for size and participant type

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<tr>
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<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>202</td>
<td>3.67</td>
<td>.82</td>
</tr>
<tr>
<td>Large</td>
<td>180</td>
<td>3.85</td>
<td>.77</td>
</tr>
<tr>
<td><strong>Participant type</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>177</td>
<td>3.62</td>
<td>.87</td>
</tr>
<tr>
<td>Direct interest</td>
<td>205</td>
<td>3.87</td>
<td>.71</td>
</tr>
</tbody>
</table>

For the type of participant, the results resemble those of the pilot study. Participants who were presented with a vignette in which the mini-public involved a general sample of citizens, consider the decision-making process to be decidedly less legitimate (M = 3.62, SD = .87) than participants who were presented with a vignette in which the mini-public involved only citizens with a direct interest in the outcome of that process (M = 3.87, SD = .71). As before, this goes against our second hypothesis.

A factorial ANOVA confirms these differences (see Table 3). Controlling for the influence of participant type, the size of a mini-public has a significant effect on the extent to which a public decision-making process is considered legitimate \((F(1, 382) = 7.01, p < .01)\), with a larger mini-public generating stronger legitimacy beliefs. The effect size is small \((\eta^2_{partial} = .02)\). The type of participant that a mini-public involves, also has a significant effect on the extent to which a public decision-making process is considered legitimate \((F(1, 382) = 10.96, p < .01)\). Controlling for the influence of size, a mini-public that involves only citizens that have a direct interest in the outcome will generate a greater degree of perceived legitimacy. The effect size is again small \((\eta^2_{partial} = .03)\). An interaction effect between size and participant type is not statistically significant \((F(1, 382) = .35, p = .55)\), which suggests that the effect of size and participant type do not reinforce each other.
Table 3. Factorial ANOVA for the effect of size and participant type on perceived legitimacy

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>F</th>
<th>(\eta^2_{partial})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected model</td>
<td>10.22</td>
<td>3</td>
<td>5.53**</td>
<td>.04</td>
</tr>
<tr>
<td>Intercept</td>
<td>5260.14</td>
<td>1</td>
<td>8546.45***</td>
<td>.96</td>
</tr>
<tr>
<td>Size</td>
<td>4.32</td>
<td>1</td>
<td>7.02**</td>
<td>.02</td>
</tr>
<tr>
<td>Participant type</td>
<td>6.75</td>
<td>1</td>
<td>10.96**</td>
<td>.03</td>
</tr>
<tr>
<td>Size*Participant type</td>
<td>.22</td>
<td>1</td>
<td>.35</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Error</td>
<td>232.65</td>
<td>378</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5626.00</td>
<td>382</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected total</td>
<td>242.87</td>
<td>381</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *** = \(p < .001\), ** = \(p < .01\)

**CONCLUSION**

In this study, an attempt was made to answer the question if and to what extent the design of a deliberative mini-public affects its capacity to increase the legitimacy of a public decision-making process. To do so, we conducted a survey experiment in which participants were asked to reflect on the legitimacy of a fictional decision-making process that included a deliberative mini-public. Depending on the experimental group to which a participant was assigned, that mini-public involved either few or many citizens, and either citizens in general or only citizens who had a direct interest in the outcome of the decision-making process. The results confirm only one of the hypotheses. For size, the results suggest that a large mini-public will increase the legitimacy of that process more than a small mini-public. This is in line with the first hypothesis. For the type of participant, the results suggest that a mini-public involving only citizens with a direct interest in the outcome of a decision-making process will increase the legitimacy of that process more than a mini-public that involves citizens in general. This is exact opposite from what the second hypothesis predicted.
How can this be explained? Firstly, it is possible that these results are a product of the way in which this study is designed. Survey experiments have for example been criticized for being too artificial (see Barabas & Jerit 2010), causing participants to respond in different ways from how they would in real life. Similarly, it is possible that the results are caused by the fact that participants were provided with relatively little information about the decision-making process that was described in the scenario. Although this was done deliberately, to mimic the amount of information that an average citizen would usually receive about such decision-making processes, providing participants with more information may well produce a different result. This is also true for the fact that participants were not provided with information about the presumed advantages of using a mini-public Although this was again deliberate, instructing participants about the reasons for using a mini-public may well change the extent to which they consider different designs to be legitimate.

Yet, it seems unlikely that the results flow completely from the design of this particular study. This is especially true for the results that concern the effect of participant type. The consistency of these results across the pilot study and the main study, in spite of the fact that these studies used different scenarios and were conducted using a set of different participants, increases the likelihood that they are in fact genuine. If this is the case, the fact that they are not in line with the second hypothesis may simply be an indication that the theory underlying this hypothesis requires closer inspection. For example, it may well be that representativeness is not the only criterion by which participants judge the extent to which public participation increases legitimacy of a public decision-making process. Perhaps they consider the perfect representation of their interests to be less important than allowing an appropriate set of citizens to participate (see Jacobs & Kaufmann 2019).

Regardless of what caused these results, they have a number of potentially important implications. In addition to their theoretical implications, a number of practical implications suggest themselves. Concerning the design of mini-publics, the results suggest that using mini-publics with more participants is likely to maximize their legitimating potential. Similarly, involving participants
with a direct interest in the outcome of a public decision-making process will also lead to a greater increase in the perceived legitimacy of that process. This information could aid policy makers who consider using a deliberative mini-public and are faced with design choices regarding size and the type of participant that should be involved. However, these results may well extend to other ways to organize public participation as well. As such, they would suggest that using participation methods that involve more citizens, such as referendums, town hall meetings and public consultations will increase the perceived legitimacy of public decision-making processes more than using participation methods that are either more limited in size, or exclusive in nature.

To explore these implications, additional research is required. This should focus in the first place on trying to replicate the findings of this study. In the literature, there is an increasing awareness of the need to verify the reliability of reported results (see Walker et al. 2017). A replication study could help to establish the robustness of the findings reported here. Next, future studies could expand on these findings by extending the experiment to different scenarios and contexts, or by studying the hypothesized mechanisms using different methods. In doing so, these studies may well be able to determine whether there is such a thing as an ‘optimal’ size, or what does and does not constitute a ‘direct interest’. Alternatively, future studies may want to focus on further exploring the underlying mechanism. The surprising results for the effect of participant type suggest that the source of perceived legitimacy might be multidimensional. If so, investigating which factors are more or less important would go a long way to furthering our understanding of the relationship between deliberative mini-publics and perceived legitimacy.

REFERENCES


APPENDIX 1: RESULTS OF THE PILOT STUDY

Table 4. Average legitimacy scores for size and participant type

<table>
<thead>
<tr>
<th>Size</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>55</td>
<td>3.71</td>
<td>.79</td>
</tr>
<tr>
<td>Large</td>
<td>51</td>
<td>3.71</td>
<td>.64</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant type</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>45</td>
<td>3.51</td>
<td>.76</td>
</tr>
<tr>
<td>Direct interest</td>
<td>61</td>
<td>3.85</td>
<td>.65</td>
</tr>
</tbody>
</table>

Table 5. Factorial ANOVA for the effect of size and participant type on perceived legitimacy

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>F</th>
<th>$\eta^2_{partial}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected model</td>
<td>3.21</td>
<td>3</td>
<td>2.15</td>
<td>.06</td>
</tr>
<tr>
<td>Intercept</td>
<td>1398.37</td>
<td>1</td>
<td>2811.68***</td>
<td>.97</td>
</tr>
</tbody>
</table>

| Size      | .02 | 1  | .04 | < .01 |
| Participant type | 2.99 | 1  | 6.01* | .06 |
| Size*Participant type | .18 | 1  | .37 | < .01 |

| Error     | 50.73| 102 |
| Total     | 1511.00| 106 |
| Corrected total | 53.93| 105 |

Note: *** = p < .001, * = p < .05
APPENDIX 2: TEXT OF THE MAIN EXPERIMENT

Vignette 1: Small/General

Recently, the government of your municipality decided to develop a derelict plot of land in your area. The plot was left unused for years, and had been subject to several complaints from local residents. Two development options suggested themselves. On the one hand, the plot could be turned into a park. With plenty of vegetation and a playground, the park would give local residents a place to relax. On the other hand, the plot could be turned into a commercial zone. With plenty of space for new businesses, this commercial zone would stimulate the local economy.

To determine which of these two options would be most beneficial to the community, the municipal government instructed civil servants to create a panel of 30 residents. Members of this panel were identified using random selection.

Over the course of several meetings, the panel met with experts, policymakers and interest groups and discussed several potential solutions in an open and respectful way. Ultimately, the panel reached consensus about the best possible solution.

The result was a proposal that would see half the plot turned into a park, and the other half into a commercial zone. This proposal was adopted by the municipal government, who sent it to the municipal council. Following a debate, the proposal was put to the vote. It passed unanimously.

Vignette 2: Small/Direct Interest

Recently, the government of your municipality decided to develop a derelict plot of land in your area. The plot was left unused for years, and had been subject to several complaints from local residents. Two development options suggested themselves. On the one hand, the plot could be turned into a park. With plenty of vegetation and a playground, the park would give local residents a place to relax. On the other hand, the plot could be turned into a commercial zone. With plenty of space for new businesses, this commercial zone would stimulate the local economy.

To determine which of these two options would be most beneficial to the community, the municipal government instructed civil servants to create a panel of 30 residents with a direct interest in the decision (local residents, business owners, etc.) Members of this panel were identified using random selection.

Over the course of several meetings, the panel met with experts, policymakers and interest groups and discussed several potential solutions in an open and respectful way. Ultimately, the panel reached consensus about the best possible solution.
The result was a proposal that would see half the plot turned into a park, and the other half into a commercial zone. This proposal was adopted by the municipal government, who sent it to the municipal council. Following a debate, the proposal was put to the vote. It passed unanimously.

Vignette 3: Large/General

Recently, the government of your municipality decided to develop a derelict plot of land in your area. The plot was left unused for years, and had been subject to several complaints from local residents. Two development options suggested themselves. On the one hand, the plot could be turned into a park. With plenty of vegetation and a playground, the park would give local residents a place to relax. On the other hand, the plot could be turned into a commercial zone. With plenty of space for new businesses, this commercial zone would stimulate the local economy.

To determine which of these two options would be most beneficial to the community, the municipal government instructed civil servants to create a panel of 1000 residents. Members of this panel were identified using random selection.

Over the course of several meetings, the panel met with experts, policymakers and interest groups and discussed several potential solutions in an open and respectful way. Ultimately, the panel reached consensus about the best possible solution.

The result was a proposal that would see half the plot turned into a park, and the other half into a commercial zone. This proposal was adopted by the municipal government, who sent it to the municipal council. Following a debate, the proposal was put to the vote. It passed unanimously.

Vignette 2: Large/Direct Interest

Recently, the government of your municipality decided to develop a derelict plot of land in your area. The plot was left unused for years, and had been subject to several complaints from local residents. Two development options suggested themselves. On the one hand, the plot could be turned into a park. With plenty of vegetation and a playground, the park would give local residents a place to relax. On the other hand, the plot could be turned into a commercial zone. With plenty of space for new businesses, this commercial zone would stimulate the local economy.

To determine which of these two options would be most beneficial to the community, the municipal government instructed civil servants to create a panel of 1000 residents with a direct interest in the decision (local residents, business owners, etc.) Members of this panel were identified using random selection.
Over the course of several meetings, the panel met with experts, policymakers and interest groups and discussed several potential solutions in an open and respectful way. Ultimately, the panel reached consensus about the best possible solution.

The result was a proposal that would see half the plot turned into a park, and the other half into a commercial zone. This proposal was adopted by the municipal government, who sent it to the municipal council. Following a debate, the proposal was put to the vote. It passed unanimously.