ARTICLES

Deliberation Out of the Laboratory into Democracy

Quasi-Experimental Research on Deliberative Opinions in Antwerp's Participatory Budgeting

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Abstract

The theoretical assumptions of deliberative democracy are increasingly embraced by policymakers investing in local practices, while the empirical verifications are often not on an equal footing. One such assertion concerns the stimulus of social learning among participants of civic democratic deliberation. Through the use of pre-test/post-test panel data, it is tested whether participation in mini-publics stimulates the cognitive and attitudinal indicators of social learning. The main contribution of this work lies in the choice of matching this quasi-experimental set-up with a natural design. This study explores social learning across deliberation through which local policymakers invite their citizens to participate in actual policymaking. This analysis on the District of Antwerp's participatory budgeting demonstrates stronger social learning in real-world policymaking. These results inform a richer theory on the impacts of deliberation, as well as better use of limited resources for local (participatory) policymaking.

Keywords: Deliberative democracy, mini-publics, participatory budget, social learning, deliberative opinions.

1 Introduction

The central question explored in this study is whether participation in civic democratic deliberation stimulates social learning.

* Part of a PhD research project funded by the University of Ghent in the context of a teaching assistant mandate. I certify that no party having a direct interest in the results of the research supporting this article has or will confer a benefit on me or on any organization with which I am associated.Thibaut Renson is, inspired by the 2008 Obama campaign, educated as a Political Scientist (Ma EU Studies, Ghent University) and Political Philosopher (Ma Global Ethics and Human Values, King's College London). Landed back at the Ghentian Centre for Local Politics to do empirical research. Driven by the moral importance of social learning (vs. political consumerism) in democracy, exploring the empirical instrumentality of deliberation.

This research objective is based on the assumption that democratic deliberation strengthens public reason (Chappell, 2012; Christiano, 1997; Fishkin, 1997; Habermas, 1996; Mill, 1948; Pateman, 1975; Valadez, 2001) and particularly stimulates social learning (Barraclough, 2013; Dryzek, 2006; Park, 2000; Welton, 2001). The act of social learning implies that deliberators learn from each other's insights and experiences, which results in a greater understanding and appreciation of opposing views (Barraclough, 2013) and hence in a deliberative opinion (Park, 2000). However, contrary to the theoretical work on this claim, empirical studies on the topic are still quite rare.

Researchers have already revealed some promising insights into the instrumental value of deliberation for social learning. However, scholars who have paved the way for this work have been largely dependent on the assessment of deliberation as the informal, daily conversations people have (Park, 2000) and on the indirect measurement of social learning through participants' self-assessment (Grönlund, Herne, & Setälä, 2017; Hansen, 2004; Luskin, O'Flynn, Fishkin, & Russell, 2014; Michels & De Graaf, 2010; Price & Cappella, 2002) or through the post-deliberation willingness to donate to charity (Grönlund et al., 2017).

Moreover, all of these studies, except the work of Michels and De Graaf (2010), focus on experiments in controlled settings (so-called laboratory experiments), such as Deliberative Polls. Although these studies certainly have their value in obtaining control over the research setting, they do not test deliberation in the natural and consequential environment of actual policymaking.

Therefore, this work is based on three methodological pillars. First, this study measures social learning by covering its conceptual complexity. Here, I am not dependent on respondents' self-assessment of social learning; social learning is directly measured by focusing on both the cognitive and the attitudinal indicator. Secondly, contrary to traditional cross-sectional research, this research is based on panel data collected before and after participation in deliberation. This one group pre-test/post-test design grants me the opportunity to analyse the individual evolutions in social learning. Thirdly, and most importantly, this quasi-experimental set-up is mixed with a natural design. I study social learning across deliberation in which local policymakers invite their citizens to take part in actual policymaking. The main contribution of this work is a quasi-experimental exploration of a deliberative process not set up by academics, but as part of the real world of local policymaking. To my knowledge, this is a unique approach in the field. Hence, the overall relevance of this work lies in the objective of providing empirical data for a theoretical claim. Indeed, despite the theoretical importance of scaling up deliberative democracy, empirical data on the phenomenon of democratic deliberation at the micro level is still quite rare. Furthermore, since local governments are extensively investing in deliberative practices, it is as well of much practical relevance to contribute to insights into the efficiency of those investments, from a public-spirited perspective of citizenship – assumed in this research.

Some scholars are sceptical as to whether deliberative practices in all should be deployed to test the idea of deliberative democracy (Posner, 2003; Przeworski, 2010). However, it is also argued that the problems associated with civic delibera-

tive practices can be mitigated in well-organized deliberative settings (Farrar, Green, Green, Nickerson, & Shewfelt, 2009; Smith, 2010). Mini-publics are considered to be the most likely environment to attain the ideals of deliberative democracy (Gerber, 2014; Smith, 2010). I understand mini-publics as the forums wherein a diverse sample of participants meet face to face in small groups, for moderated deliberation on a particular issue (Brown, 2006; Fung, 2003; Goodin & Dryzek, 2006; Himmelroos, 2017; Setälä & Herne, 2014). For the concrete operationalization of the concept, I selected the mini-publics in the process of the participatory budgeting (PB) of Antwerp District. Through the PB of the largest and most central district of the municipality of Antwerp (Belgium's most populous city), citizens autonomously deliberate on 10% of the district council spending.

In the first part of this article, I explain how I approach social learning – the central dependent variable in this work – and present the hypothesis following the state of the art on empirical research on democratic deliberation. In the second part, I introduce the natural and quasi-experimental set-up of this research. In the penultimate part, I reveal the results as an answer to the hypothesis. In the concluding part, I refer to the most important empirical insights and reflect on the implications for the academic and societal field – two terrains wherein democratic deliberation increasingly emerges.

2 Literature Overview and Hypothesis

2.1 Via Empathy to Social Learning

Policymakers have three incentives to engage citizens, in between elections, in decision-making (participation in the invited space): 'because they have to' (juridical argument), 'because it ought to be' (moral argument) and 'because it is worth it' (instrumental argument) (Fung, 2003). The latest refers to the quality of decisions ('better decisions'), the legitimacy of the decisions ('better support') and social learning ('better citizens'). It is that final benefit that civic deliberation, in particular, assumes to stimulate (Barraclough, 2013; Dryzek, 2006; Park, 2000; Welton, 2001). In this work I endorse Barraclough's (2013) definition of social learning as civic deliberators who learn from each other's insights and experiences, which results in a greater understanding and appreciation of opposing views.[1] What makes an opinion deliberative is that it has grasped and taken into consideration the opposing view of others (Chambers, 1996; Park, 2000; Weithman, 2005).

Underlying this interpretation of social learning is the publicity principle.[2] If democracy is about the debate on the decisions that mostly benefit society, then it is our duty as citizens (whose interests are assumed to be served by our representatives) to think about what we personally think is good for the society as a whole and to act upon it (read: to cast our vote accordingly). If policy has to serve society in the end, then the representation of the simple sum of individual interest is not only morally counter-intuitive, but also materially inefficient. Seen from this perspective, social learning is of crucial importance. To be able to deliberately opt for a policy whereby society as a whole is benefited, it is essential to

understand and appreciate the perspectives of those who do not share our background, environment or experiences. In light of this argument, the roots of this work can be found in an epistemic or substantive approach to democratic legitimacy (Min & Wong, 2018). I engage with the view that democratic legitimacy should not merely be derived from the procedural fairness of the democratic instruments, but should also be judged on the acceptability of the policy output in terms of public reason (Estlund, 2008). This Kantian and Rawlsian approach to democracy centralizes the question "if one could still get away with his or her actions and reason for doing it, if they were publicly known" (Luban, 1996, p. 156). Hence, the empirical exploration of democratic deliberation in this work has to be seen as an assessment of an instrument to increase the level of democratic legitimacy.

For the concrete conceptualization of the notion of social learning, I adapt Park's (2000) classification of what he labels as 'civility': one's understanding of why others think the way they do. Even though this definition consists of a pure cognitive approach (in contrast to our broader interpretation of social learning that also refers to the appreciation of opposing views), he conceptualizes his notion along different axes, of which I reconcile the cognitive and the attitudinal in this work.[3] Based on his cognitive dimension, I refer to social learning as learning to understand others' views, as well as learning to make one's own views understandable for others. The attitudinal dimension implies the appreciation (besides the mere identification) of other views and refers to learning to transcend the perspective of the personal environment.

Understanding others' views as an indicator of social learning (cognitive) does not merely imply that people are conscious of what other people think. The 'understanding' factor indicates reference to learning why other people think the way they do (Siu, 2008). Hence, that deliberators are able to make themselves understandable for others (cognitive) is a necessary precondition for deliberators to be able to learn about the reasoned arguments of others. Reciprocity as a deliberative virtue is thus also to be seen as a – softer – indicator of social learning. Indeed, being able to explain why you hold a particular position implies an (implicit) understanding that opinions need arguments and are not self-explanatory, because others do not necessarily share your background or are otherwise different. Learning to transcend the perspective of the personal environment (attitudinal), subsequently, is about taking the recognition of these differences (in meaning, social position, needs) into account (Janssens & Steyaert, 2001).

In this way, social learning relates to the notion of empathy. Our cognitive dimension of social learning can be seen as a sharper, more methodologically robust conceptualization of empathy as an evolution in deliberative opinion (i.e. argumentation). The attitudinal component of social learning goes with its appreciation of other views beyond empathy as the understanding of others. However, social learning relates, for instance, to Davis' (1983) and Morrell's (2010) multidimensional approach to empathy in which the notion is not restricted to the cognitive knowledge gain about others' positions. These widely cited scholars also include an emotional aspect in which empathy refers to the affectionate consideration of others' positions. Cognitive empathy can thus be seen as a basis for social

learning but does not constitute it as such. In contrast to multidimensional notions of empathy, social learning focuses – by definition – on a transformative character and is restricted in this work to an individual evolution in argumentation.

2.2 Empirical Fuzziness about the Deliberative Effect

The assumption of the deliberative effect on social learning is based on general social psychological insights into the effect of attitudinal diversity in social environments. Whereas like-minded environments would reinforce and radicalize pre-existing views (Sunstein, 2009; Vinokur & Burnstein, 1978), being exposed to different views would stimulate openness to opinion change and the appreciation of opinion diversity (Levitan & Visser, 2008; Meffert, Guge, & Lodge, 2004). Hence, democratic deliberation complements the idea of exposure to different views with the idea of structured and moderated group discussions, designed to incentivize deliberative reasoning and counter detrimental group effects (which occur in the broader world of informal, everyday talking) (Himmelroos & Christensen, 2018). Formal democratic deliberation is not immune to motivated reasoning biases through which people are inclined to perceive arguments in favour of their pre-existing view as more compelling than others (Barabas, 2004; Wojcieszak & Price, 2010), or to empathize with the like-minded (Bruneau, PLuta, & Saxe, 2012; Cikara, Bruneau, Van Bavel, & Saxe, 2014; Glynn & Sen, 2014). Yet democratic deliberation is understood precisely as a remedy for those biases since it is to be seen as an intersubjective process targeted at the introduction of different viewpoints and the achievement of balanced consideration (Grönlund et al., 2017; Himmelroos & Christensen, 2018; Strandberg, Himmelroos, & Grönlund, 2017). Moreover, as argued for above in the development of the softer indicator of social learning, I argue that there is legitimacy to learning to argue for one's own position, which could be (but not necessarily is) the result of – what others would call malign – motivated reasoning bias.

Empirically, previous research concluded that democratic deliberation creates more single-peaked preferences (Farrar et al., 2010), that it acts as a buffer against more negative feelings towards the out-group (Caluwaerts & Reuchamps, 2014) and that it makes people more thoughtful (Grönlund, Bachtiger, & Setälä, 2014; Smets & Isernia, 2014). Other conclusions have been that democratic deliberation stimulates mutual understanding of conflicting viewpoints (Andersen & Hansen, 2007; Hansen, 2004; Luskin et al., 2014) and that democratic deliberation leads to a greater cosmopolitan and collective orientation of preferences (Gastil, Bacci, & Dollinger, 2010) as well as to preferences that are more environmentally friendly (Fishkin, 1997).

All of these conclusions are in line with the transformative character argued for by deliberative theorists. However, disproportionally less attention has been given to the more profound relationship between social learning and deliberative democracy in empirical research than has been the case in democratic theory.

As mentioned above, social learning – as an evolution in deliberative argumentation – has a sharper interpretation of the empathic outcome of understanding opposing views, since it also implies that one learns to take other visions

into account. The latter is as well not necessarily implied when deliberation appears to greaten the expression of preferences towards 'the common good' (Fishkin, 1997; Gastil et al., 2010). This can just as well be an utterance of a mere personal consideration, which – in the search for self-interest – inadvertently gets a public-spirited outcome.

Empirical research that uses social learning as a dependent variable is scarce. Promising research has largely been dependent on participants' self-assessment of the perception of social learning (Michels & De Graaf, 2010; Price & Cappella, 2002), on the evolution of participants' self-assessment of the willingness to consider other views and the measurement of social learning in digressive behaviour like the post-deliberation willingness to donate to charity (Andersen & Hansen, 2007; Grönlund et al., 2017; Hansen, 2004; Luskin et al., 2014), or on the self-assessment of informal deliberation as "the frequency of political conversations people think they have with those with whom they disagree" (Park, 2000). This means that until today, studies in which the assumed deliberative effect on the cognitive and attitudinal indicators of social learning is directly measured in a formal deliberative setting are uncommon. This makes the empirical validity of the far-reaching claim on social learning in deliberative theory still unclear.

Additionally and most importantly, all of the aforementioned studies on social learning, except the work of Michels and De Graaf (2010), focus on controlled experiments, such as Deliberative Polls. Although these studies certainly have their value in obtaining control over the research setting, they do not test deliberation in the natural and consequential environment of actual policymaking.

In the meantime, the importance of taking into account the perspectives of others with a different background or experience is mounting in societal debate. The moral and material desirability of citizens (read: consumers) who vote – in a democracy – for a party because they assume they will lower their taxes or make their recently bought solar panels economically cost-effective, is increasingly put into question. From this Kantian and Rawlsian approach to legitimacy in democracy (cf. supra), policymakers are progressively inspired by the persuasive theoretical assumption that democratic deliberation stimulates social learning.[4]

Given its reasonable theoretical explanation and some meaningful empirical indications in previous research, I expect that democratic deliberation stimulates social learning.

H: Participation in mini-publics stimulates social learning among deliberators.

3 Methods

3.1 A Case of Deliberative and Participatory PB

The choice for case study research implies the drop of external validity. However, I argue that in the current context in which deliberative democratic experiments take on so many distinct forms (topic, decision-making, length, role of moderator/experts) and the impact of those conditions is still unknown, external validity

is, by definition, unachievable. However, this does not mean that one cannot strive to validate the institutional context.

In contrast to almost any other empirical research on deliberative democracy, this work explores a real-world practice and thus citizens in a natural experiment. As argued above, I focus on mini-publics, since they are considered to be the most likely environment to attain the ideals of deliberative democracy (Gerber, 2014; Smith, 2010). More specifically, I selected the PB case of Antwerp District. The district (a sublevel of the municipality) enjoys a directly elected sub-local council and disposes over those (constrained) powers that concern the citizens' most direct living environment (streets, public squares, green spaces, culture, sports, communication, targeting youth and seniors). Since 2014, Antwerp District has annually set up forums in three different phases in which a diverse group of citizens gather for moderated, face-to-face deliberation in small groups on the spending of €1.1m (10% of district council spending). In this way, the Antwerp PB case represents three mini-publics, in which participation in each of the three phases is open to every district inhabitant. Furthermore, I want to emphasize that the former district alderman of participation, initiator and greatest advocate of the Antwerp PB, argues that the PB is 'a light form of civic education': 'with the PB, I also want to achieve that citizens learn from each other's perspective, from each other's personal environment, that they learn to develop mutual understanding'. Hence, I argue that the mini-public at hand is a most likely case to attain the specific deliberative ideals on social learning.

Instead of many of the other practices of PB worldwide (through which citizens can propose ideas and proposals online, without face-to-face debate), the case of Antwerp is undoubtedly set up as a deliberative practice (i.e. a mini-public). Equally opposed to many of the PB practices in the field (Pateman, 2012) (as well as to many mini-publics on other matters in real-world policymaking), the PB at hand is not merely informative or consultative. The Antwerp District council puts 10% of its annual spending up front at the disposal of their citizens. The citizens autonomously decide on how the budget is to be divided, which concrete projects hereby ought to be realized, and are responsible for the concrete implementation of these projects. The PB case of Antwerp is an example of participation in local policymaking on the highest rung of the participation ladder and is therefore, undoubtedly, no participatory democracy in disguise.

I opted for a deliberative 'participatory PB', because – in contrast to other real-world mini-publics – PBs are neither characterized by specific policy questions nor distorted by ruling political power relations – dependent on the particular case at hand. They are defined by a universal setting in which citizens can independently decide on politically allocated money. Furthermore, with the case of Antwerp, I selected a case whose particular decision-making procedure, role of moderators and length have been copied in foreign cities and municipalities.[5] I thus argue that the Antwerp PB offers the opportunity to maximize not only the internal but also the external validity within deliberative case study research.

However, although participants in the Antwerp PB meet face to face in small groups, the idea of a mini-public also implies that participants constitute a diverse sample. I have mentioned above that participation in each of the three

phases is open to every inhabitant; participation is consequently based on self-selection. In the first edition of the PB, this led to a rather traditional (elitist) participatory public. From then onwards, the district – attaching importance to the attraction of a diverse sample of participants – started focusing on informing and inspiring hard-to-reach citizens (youngsters and people with a migration background). Although the PB participants are not representative for the greater population, the district in the studied fourth edition did succeed in securing a significant presence of under-24-year-olds (on average 8%) and people with a migration background[6] (on average 18%), whereas women and the less educated[7] were nearly equally represented compared with men and the highly educated (cf. appendix I). Hence, it is difficult to argue that this sample is homogeneous.

Practically, the first phase of the PB consisted of eight identical meetings (in eight different neighbourhoods of the districts) of about two and a half hours, which all took place in March. During these deliberative meetings, citizens decided on which twelve topics they wanted to spend the participatory budget. Hence, the central question in the first phase is: on which policy domains should we spend the money? About a month later, there were two identical meetings, which also lasted about two and a half hours, in which citizens deliberated on how to divide the money between the twelve selected topics of the first phase. The central question in this second phase thus becomes: how should we divide the money? The third and final phase took place in October and consisted of an afternoon[8] in which the citizens determined, in several topical rounds, which specific projects they wanted to finance with the money foreseen for each area. The central question in this project phase, therefore, is: which concrete projects do we select?

3.2 Panel Data of Deliberative Opinions

In contrast to traditional cross-sectional research, I developed a design that allows causal relations to be tested accurately. This research is based on panel data of the participants of the Antwerp 2017 PB collected before and after participation in the respective phases of the deliberative process. This one group pre-test/post-test design makes it possible to analyse the evolution in social learning for each individual. Hence, I measured the aforementioned indicators of social learning (cognitive and attitudinal) through a pre-/post-survey with open-ended questions, the answers to which were coded qualitatively (by two coders to test reliability[9]) and analysed quantitatively.

More specifically, I asked the respondents (before and after every phase) on which of the topics[10] they would certainly want to spend money. As such, these answers were not of much relevance to this research, but acted as a cue for the sequential core questions. Hence, I subsequently asked for all of the specific reasons for their choice. This survey design has been successfully introduced by Cappella, Price, and Nir (2002), in research on the impact of informal deliberation (everyday talks) on one's argument for the choice for this or that presidential candidate.

In contrast to the work of Cappella et al. (2002), the number of arguments provided is not relevant to this study. Our data-analysis focuses on the content of

the given arguments. I can thus study whether respondents are able to think of understandable arguments for their own position (cognitive), whether they transcend the personal environment (attitudinal) and the respective pre/post evolution in this. I did ask the respondents to be as specific and complete as possible in their reported argumentation, but whether one's exhaustive argument offers a few or many arguments tells us nothing about the reasoned or public character of those arguments.

For the coding of these arguments, a coding scheme has been developed on the basis of the Discourse Quality Index (DQI) (Steiner, Bächtiger, Spörndli, & Steenbergen, 2004). Since the DQI is not to be seen as a method to measure argumentation, but is used as an index to analyse reported argument, I argue that it is a well-founded instrument to apply on either form of deliberative argumentation – whether it has been reported before, during or after deliberation, as an answer subsequently to explicit questions, or argued for on one's own initiative. Hence, I argue that a well-established instrument to measure the quality of arguments raised during deliberation can even accurately be used to study the quality of arguments pre- or post-deliberation. Since the index has been initially developed for parliamentary deliberation, it is common to adapt the index to use in civic deliberation (Steffensmeier & Schenck-Hamlin, 2008). More specifically, it is desirable to focus not only on 'arguments', but also on narratives and reasons (e.g. personal stories and anecdotes).

In this way, I adapted these elements of the DQI that are relevant to social learning: the level of justification (inferior, qualified, sophisticated) and the content of justification (neutral, group interests, common good). I copied the conditions of the relevant coding categories of the DQI, whereas I argue that the distinction between qualified and sophisticated argumentation is overreaching for civic deliberation and that the distinction between arguing for the common good in utilitarian terms or according to the difference principle is insignificant to social learning. In that way, I made the distinction between unqualified (cf. DQI's no or inferior justification), qualified (cf. DQI's qualified justification) and qualified public arguments (cf. DQI's explicit statement of the common good). Hence, I coded an argument as unqualified if no reasons or only reasons without a clear linkage with the opinion were reported (cf. cognitive dimension of social learning). Consider, for instance, the following arguments in favour of more green spaces: 'because that is good for society' or 'because there is a need for it'. Here it is unclear why this is the case and thus could equally be linked to any other opinion. When at least one reason with a clear linkage with the opinion was given, I coded the argument as qualified (cf. cognitive dimension of social learning). See, for instance, this argument in favour of road safety: 'The city has become extremely busy and noisy. This makes it very unsafe for vulnerable road users.' I gave the qualified public code to arguments with at least one reason with a clear linkage to the opinion whereby an individual or particular group context is being transcended (and thus other specific groups, society as a whole or the environment is included in the argument) (cf. attitudinal dimension of social learning). Consider, for instance, the following argument in favour of more green spaces: 'The city is too dense, which affects the air quality. More green spaces can

Table 1 Summary of individual evolution own argumentation

		Post-argument		
		Public	**Qualified**	**Unqualified**
Pre-argument	Public	Stays public	Becomes private	Becomes unqualified
	Qualified	**Becomes public (++)**	Stays qualified	
	Unqualified		**Becomes qualified (+)**	Stays qualified

improve this.' Or this argument in favour of road safety: 'The city has become extremely busy and noisy. This makes it very unsafe for the vulnerable road users. As a result, car users are also being involved in many accidents.'

In this way I can explore social learning by studying the individual pre-post evolutions of the coded arguments (cf. Table 1). When an argument becomes 'public (qualified)' or 'qualified', social learning has taken place. In the first case, the respondent shows having learnt to transcend the personal environment. This can concern both an evolution of a (non-public) qualified and an unqualified pre-argument. In the second case, the respondent shows having learnt to think of understandable arguments for one's own argument, the softer form of social learning ('+' instead of '+ +'). The latest can only concern an unqualified pre-argument that evolves to a (non-public) qualified post-argument.

Arguably it is more difficult to use public arguments for some (spending) topics than for others. Through an analysis of every (pre- and post-) argument given by the respondents in this study (cf. appendix II), this can be confirmed. Indeed, arguing in favour of more green spaces by stressing general air quality (air that you also breathe yourself) is undoubtedly easier than arguing for the support of youth work without exclusively referring to the benefits for young people. Consequently, one can argue that the former argument possesses a lesser degree of publicity. Nevertheless, this is a nuance that I do not want to introduce in this research: the evolution towards public arguments is already merely a part of social learning. Furthermore, it would be (conceptually) incorrect to neglect arguments in favour of general air quality as public arguments. Crucial, however, is whether the consideration that a public argument for some topics is less demanding than for others makes the internal validity of the coding questionable. What the measuring instrument ought to assess in this study is the deliberative effect of social learning, in casu the evolution towards public arguments. When I compared, as part of a robustness check, the topics of those arguments becoming public, I actually did see a fair distribution among the different spending topics (cf. appendix III). 'Culture' was as well represented as the easier topic 'green spaces'. 'Streets and squares' also had a comparable high proportion. The fact that 'youth work' was represented in the same way as 'social inclusion' (that other obvious topic in terms of publicity) proves that the coding measured actual arguments and not topics as such.

Table 2 Summary of individual evolution argumentation of others

		Post-argument	
		Qualified	**Unqualified**
Pre-argument	Qualified	Stays qualified	Becomes unqualified
	Unqualified	**Becomes qualified (++)**	Stays unqualified

Next to the argument of the own opinion, I also asked for potential opposing opinions, as measurement for the second stronger cognitive indicator of social learning. By analogy with the aforementioned open-ended survey design of Cappella et al. (2002),[11] respondents were asked for specific reasons other people could have to disagree with them (i.e. why others would not want to spend money on the respondent's personal priority).[12] These answers were coded in compliance with the coding of the argumentation of one's own position, as described above: qualified versus unqualified argumentation. An evolution from a pre-unqualified to a post-qualified argument shows that respondents learnt to understand other's views (cf. Table 2).

In this study I focus on the survey results of the first and second phases of the 2017 PB. The third, and final, phase is not incorporated in our analysis since the response rate in that phase was too low to achieve valid results (9%). The fact that this response rate is much lower than in phases 1 and 2 (whereas the same technique and strategy vis-à-vis similar – and often also the same – respondents were used) is remarkable. In this phase, in which the funding of concrete projects is at stake, participants reported on site that they 'have no time to complete the survey' since they wanted 'to use the time before the start of the deliberation to campaign for their own project' and 'to search for allies'. This suggests that the context of this third phase is unfavourable for evolutions in social learning and should be taken into account in the below-mentioned analysis of social learning in phases 1 and 2 of this deliberative PB.

The data is derived from self-administered surveys, the goal of which was unknown to the participants and were completed individually in an isolated setting.[13] Of the 175 civic deliberators of the first phase and the 102 of the second, 77 and 36, respectively have completed both the pre- and the post-survey.[14] Hence, I obtained reliable response rates of 44% and 35%, respectively. Since a lot of the non-response concerns dropped out after the pre-surveys, I have socio-demographic information from considerable proportions of the total population at my disposal (74% of all participants in phase 1, 65% in phase 2[15]). After having compared the subsamples[16] 'pre- and post-response' versus 'pre-response only' on gender, age, education and migration background, I notice no statistical differences.[17] This means that the respondents whose data I have for analysis of their social learning do not differ socio-demographically from these civic deliberators who do not appear in our social learning analysis, and this strengthens the internal validity of our results.

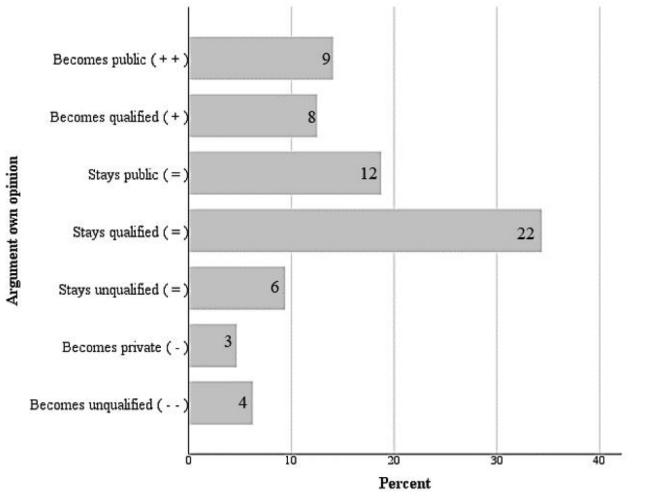

Figure 1 Phase 1: individual evolution own argumentation (N = 64)

4 Results

First, I ascertained that regarding the argument of the own opinion, the vast majority of participants already had a qualified opinion at the beginning of the deliberation: 67% at the start of phase 1, 78% before phase 2. At the beginning of the first phase, more than one-third of these already reported a qualified public argument (25%). At the start of phase 2, this public variant concerned more than half of the qualified arguments (42%).

Figures 1 and 2 show the result of the comparison for each respondent between that pre-argument and the reported argument after the respective first and second phases of the PB. When an argument becomes 'public (qualified)' or 'qualified', social learning has taken place (cf. Table 1).

The first and second phases show a similar, positive effect of social learning. After the first phase, I see an effect of social learning among 27% of the respondents: 13% show a qualified argument, which they did not have at their disposal before the deliberation. Among 14% the post-argument shows an evolution to a (qualified) public character. At the end of the second phase, I found that 36% of the respondents demonstrate – based on the argument for the own opinion – to have learnt socially. Among 7%, there is an evolution to a qualified argument and among 29%, there is an evolution to a (qualified) public argument, the stronger indicator of social learning. Furthermore, I ascertain only a relatively limited negative effect (11% in phase 1, 14% in phase 2); in casu respondents whose public qualified pre-argument evolved to a mere qualified post-argument ('becomes private') or whose (mere) qualified pre-argument became an unqualified post-argument ('becomes unqualified').

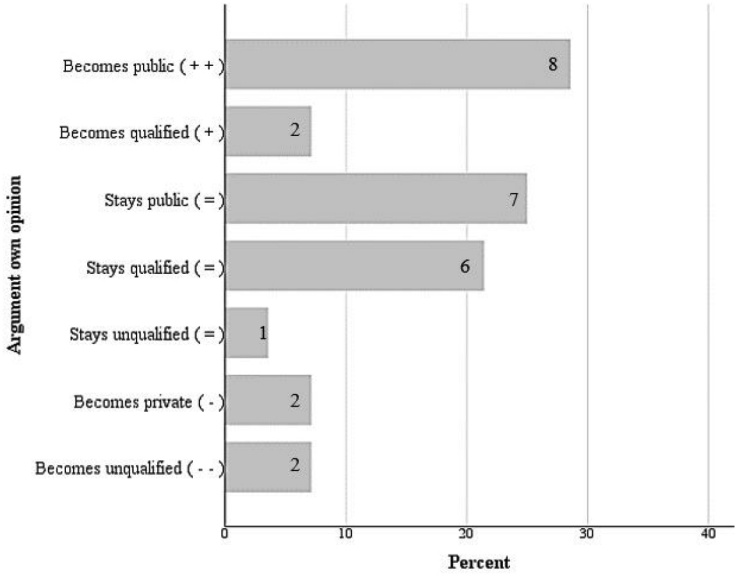

Figure 2 Phase 2: individual evolution own argumentation (N = 28)

I conducted nonparametric Wilcoxon signed-rank tests to explore the statistical significance of the individual evolution of this ordinal data. With a p-value of 0.068 in both deliberative phases, the results of these tests did not confirm the statistical significance of the positive effect at first sight (Z = –1.894 and –1.826, respectively, based on negative ranks). However, this is due to the already high favourable levels of argumentation prior to the deliberation. Indeed, one has to note that the vast majority of the respondents who have not been categorized as having learnt socially already had a qualified argument at the start and were able to maintain this level of argument (53% in phase 1, 46% in phase 2). More than one-third in phase 1 (19%) and more than half among them in phase 2 (25%) even possessed a qualified public argument at the start and succeeded in maintaining this type of argument. Therefore, when those participants who already possessed a public argument at the start, and thus were not able to learn socially, are excluded from the significance tests (as a matter of robustness check) I obtain p-values of 0.001 in phase 1 and 0.005 in phase 2 (Z = –3.279 and –2.803, respectively based on negative ranks). This proves that the initial absence of statistical significance is due to the high levels of deliberative opinion prior to the treatment and hence actually reinforces the positive effect of social learning on the argument of the own opinion described above.

Secondly, corresponding to the reported argument regarding the opinion of others (who would not prioritize the funding of concerned priority), I found that three-quarters of those arguments were unqualified at the beginning of the PB: 74% in phase 1, 77% in phase 2. In other words, contrary to the own opinion,

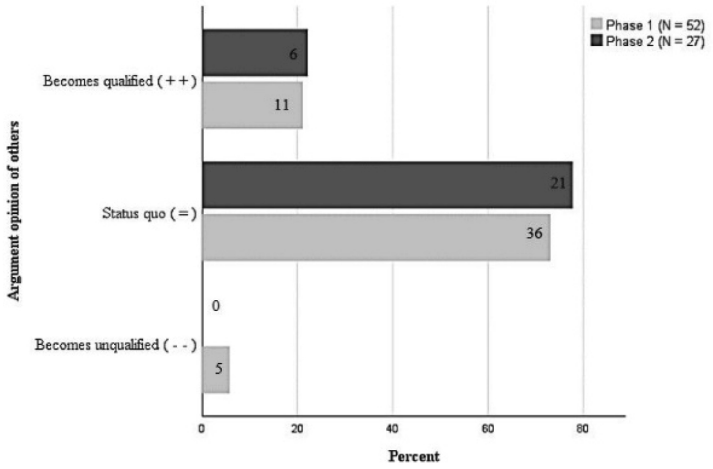

Figure 3 Phases 1 & 2: individual evolution argumentation of others

only a few respondents were able to give concrete reasons why others would not want to finance their proper priority at the start of the deliberation.

Figure 3 shows the results of the comparison for each respondent between these pre-arguments and the reported arguments at the end of the first and second phases of the PB.

Again I discovered a similar, positive evolution in social learning in the first and second phases. After the first phase, I detected an effect on social learning among 21% of the respondents, and after the second phase among 22% of the respondents. This means that more than one out of five respondents were unable to give concrete reasons why other citizens would not support the same priority at the outset but were capable of doing so after the deliberation.

Furthermore, it should be noted that five respondents (9%) after the first phase[18] and no one after the second phase were able to report (concrete) reasons, whereas they had been able to do so at the start of each of the phases. This implies that a part of the status quo group concerns respondents who maintained their qualitative pre-argument. So, hereby it goes as well that (since they did not evolve) they were not labelled social learners and consequently enforced the positive effect on social learning.

After I ran a McNemar test on the cumulated data on the similar evolutions in the first and second phase, the statistical significance of the positive effect of social learning can also be confirmed (N = 79, p = 0.017).

Finally, I discovered that all respondents – but two (in phase 2) – who learnt socially regarding the argument for their own opinion (in phase 1 or 2), differed from those who learnt socially on the argument of the opinion of others. Thereby, I concluded that 48%[19] of the respondents learnt socially in phase 1 and 51%[20] in

phase 2. These learners were in both phases 1 and 2 proportionally spread out over the different meetings in the respective phases.[21]

At first sight, the latter empirical conclusion seems counter-intuitive; how can you learn to know the arguments that oppose your own opinion (social learning on the argument of others) without also having learnt arguments that support the own position (social learning on the own opinion)? Above, however, I mentioned that there has been a 'positive status quo group' regarding the argument of the own opinion. Hence, I found that the social learners regarding the argument of the opinion of others were respondents who already possessed and maintained a qualified (public) argument for the own position (except the two aforementioned respondents who learnt both on the argument of others and on their own).

With the conclusion that about half of the participants learnt socially, the results of this case study suggest the confirmation of the hypothesis. It is not without importance to stress hereby that this number is not the result of mainly soft social learning (cf. own argument becomes qualified). The positive evolution corresponds for 71% in phase 1[22] and for 88% in phase 2[23] with learning to understand the meaning of others (cf. argument of the position of others becomes qualified) and to transcend the personal environment (cf. own argument becomes public) – the stronger indicators of social learning.

5 Conclusion & Discussion

In this article, I answered the causal question regarding whether participation in democratic deliberation stimulates social learning. On the basis of a reiteration of the two central empirical conclusion of this natural, quasi-experimental study of the PB case of Antwerp District, I explain in this concluding part, the scientific and societal relevance of this work.

Through a comparison of pre- and post-survey data, I concluded, in the first place, that approximately one-third of the participants were able to give concrete reasons for their own opinion at the end of the deliberation, whereas they were not capable of doing so beforehand (27% in phase 1, 36% in phase 2). Nonparametric statistical hypothesis tests confirmed the significance of this positive effect on social learning.[24] Moreover, most of the learners transcended the personal environment by reporting public post-reasons, whereas they did not do so at the start of the deliberation.

Secondly, I concluded that later participants were better capable of giving reasons why others would have a contrasting opinion. One out of five respondents were able to report concrete reasons why others would not agree with the concerned respondent's own opinion, whereas they could not do so beforehand (21% in phase 1, 22% in phase 2). This statistically significant positive effect[25] – derived from direct measurements – confirms the formerly assessed evolution of participants' self-assessment of the willingness to consider other views (Andersen & Hansen, 2007; Grönlund et al., 2017; Hansen, 2004; Luskin et al., 2014).

The significance of this positive relationship between deliberation and social learning is confirmed by two additional observations. It follows from our analysis that the two aforementioned groups of social learners (those who learnt on the own argument and those who learnt on the argument of others) consist of two mutually exclusive groups – let alone two participants in phase 2. Concretely, this means that no less than half of the participants of the Antwerp PB learnt socially (48% in phase 1, 51% in phase 2). Furthermore, I ascertained the strongest ways in which social learning took place. Citizens not only learnt to argue for their own opinion (the softer indicator of social learning), but they predominantly transcended their own environment in doing so, and were also able to deliver concrete reasons against their own position. The fact that these evolutions towards deliberative opinions occurred through discussions of de facto an hour and a half, additionally confirms the theoretical assumption of the deliberative effect on social learning.

Mini-publics are more topical than ever in local politics and are not rarely justified by their presumed effect on social learning. In this way, this research suggests that the rising investments of local policymakers in deliberative democratic experiments are desirable – assuming the publicity principle.

Note that this panel effect has not been explicitly controlled for external effects. I argue that it becomes virtually impossible to establish a comparable (and thus meaningful) control group, when deliberators self-select their way into the deliberation. Furthermore, given the fact that non-participating citizens learnt socially to the same extent between a regular Sunday afternoon and a blue Monday morning (an accurate indication of the time between the pre- and post-test[26]), there is no indication that the deliberative event was perceived by the organizing administrators as not at all salient in society at large, social media or the press.

Furthermore, the assumption that the mere pre-surveying of argumentation would have such a strong social learning effect is difficult to explain (definitely vis-à-vis a subsequent debate in which the exchange of arguments is central in the decision-making). Himmelroos and Christensen's (2018) findings of pre-post differences in opinion change and opinion consistency within a control group of non-deliberators were rather weak and do not imply that the same holds for the veiled argumentations (i.e. social learning). However, when the sample size is sufficiently great as to allow for a selection of samples within the sample (e.g. post-test only), I suggest scholars explore the panel conditioning effect of the research design at hand.

Regardless, one has to handle the conclusion of this research carefully. This study concerns one of the first empirical data on the deliberative effect on social learning in which the variables are respectively directly and formally measured. Although I developed an internally valid measuring instrument with the use of a natural, quasi-experimental set-up, the number of participants was relatively limited. In other words, we have to await to what extent further research (to most similar cases) confirms the results of this study. Nevertheless, I selected a case that – because of its common PB setting, its context of a diverse city, its decision-

making model that has been copied and implemented abroad – tells us more than merely something about an evolution among citizens in a Belgian city.

In addition, I wish to stress again that since our response rate in the third phase was too low (9%), this final phase has not been incorporated in our analysis. At the same time, I used the same questioning technique and strategy vis-à-vis similar (and often also the same) participants. In this phase, in which the funding of concrete projects is at stake, participants reported on site that they 'have no time to complete the survey' since they wanted 'to use the time before the start of the deliberation to campaign for their own project' and 'to search for allies'. This suggests that the context of this third phase is less favourable for evolutions in social learning. A qualitative analysis of participants' experiences in the diverse phases can clarify this matter.

Such an analysis should also look at how exactly empathy comes into play and leads to the genesis of social learning. This study tells us what differences took place before and after citizens took the deliberative pill; subsequent studies must explore how exactly the pill works.

One has to remark that I approached phases 1 and 2 as if they were separated independent variables. However, in practice there is overlap between the two phases: more than half of the participants of phase 2 participated in phase 1 as well. Nevertheless, further analysis demonstrated that previous participation (in a previous edition or in the previous phase),[27] or former social learning (in a previous phase) had no (neither positive, nor negative) effect on the evolution in social learning. Since this analysis is based on a small-N (a subsample of a sample of a relative small population), further research is needed to confirm this conclusion. This may teach us more about the temporality and specificity of the effect on social learning. Does the effect on social learning concern only the deliberative issues? Or does this effect also play on other fields and in the longer term?

Additionally, this study leads the way to a comparison with most similar cases. What effect does the mode of recruitment play, through which local authorities invite their citizens to take part in policymaking? What about the effect of not granting citizens the power of implementing projects but merely letting them decide on abstract policy priorities? While this work concludes with a clear affirmation of the practicality of the deliberative idea of social learning in the real world of local policymaking, it raises new, more specific empirical questions.

Notes

1 The interpretation of 'empathy' in Grönlund et al. (2017) largely matches the conceptualization of social learning (cf. infra).

2 Cf. Rawls' (1971) 'duty of civility' and Arendt's (1967) 'representative thinking' or 'enlarged mindedness'.

3 The complete conceptualization also consists of a 'behaviour' indicator: learning to show understanding of other opinions, actually making the own opinion understanda-

ble to others and appreciating other perspectives. However, this indicator is not explored further in this work.

4 In the case selected for this study, the policymakers explicitly stated the goal of stimulating social learning in the set-up of the mini-public (cf. infra).

5 Cf. the city of Maastricht and neighborhoods in Emmen and Venlo (Netherlands).

6 People whose grandmother or grandfather was born outside Belgium.

7 Highest degree at most secondary education.

8 Phase 1: 13-26/03/2017. Phase 2: 22-23/04/2017. Phase 3: 22/10/2017.

9 To achieve the maximum consistency on the (pre- vs. post-) coding, one coder coded all the answers. Later, 30% of the answers were recoded by a second coder. Krippendorff's alpha measured 0.74 both for the own argument and for the argument of others.

10 In the second phase I explicitly asked which of the first phase selected topics one preferred (see Appendix IV for the actual wording of the question).

11 In their research labelled 'argumentative repertoire'.

12 See Appendix IV for the actual wording of the question.

13 Gradually, once participants entered on site or online at home.

14 Of whom 32 participants in the first phase and 23 in the second phase completed the pre-survey online (at the earliest three days before the deliberation). Every other pre-survey was completed physically on site, every post-survey online. The social learners (cf. infra) who completed the pre-survey physically are over-represented in phase 1 (with regard to the social learners who completed the pre-survey online), whereas they are precisely – similarly strongly – under-represented in phase 2. Hence, I conclude that there is no net effect of the way (physically or online) the (pre-) survey was completed. It should be noted that I did not opt to let participants fill in the post-survey on site. Seen the nature of the questions, I argue that answers in such a context would be contaminated by a recency effect (arguments based on mere memory). Seen the quasi-experimental set-up of this study it is, however, important to collect the post-results relatively quickly after the end of the deliberation (because of contamination by other post-processes or -events). Hence, by means of clear communication and fast follow-up, I succeeded in receiving 58% of the post-results within a day after the deliberation. Answers that I received after more than 5 days were no longer registered.

15 Furthermore, a part of the non-response in phase 2 represents participants who also participated in phase 1 and of whom I at that stage gathered socio-demographic data.

16 See Appendix V.

17 Based on a paired samples test.

18 A possible explanation is that respondents did less effort for the post-survey (cf. survey fatigue due to identical questions in a short time frame).

19 27% + 21%.

20 36% + 15% [(4 (new social learners on a total of 6)/N=27) = 15].

21 All of the 8 encounters within the first phase represented at least 7% of the social learners. In phase 2, 57% of the social learners deliberated at the first encounter on Saturday, 43% deliberated at the second encounter on Sunday.

22 11 (qualified evolution regarding the opinion of others) + 9 (public evolution regarding the own opinion)] / 11+ 9 + 8 (qualified evolution regarding the own opinion)].

23 8 (qualified evolution regarding the opinion of others) + 8 (public evolution regarding the own opinion)] / 6 + 8 + 2 (qualified evolution regarding the own opinion)].

24 Wilcoxon signed-rank tests' p-values: 0.068 in both phases 1 and 2 (Z = respectively –1.894 and –1.826 based on negative ranks). However, the vast majority of the respondents who have not been categorized as having learnt socially already had a qualified argument at the start, and more than one third in phase 1 (19%) and more than half of them in phase 2 (25%) even possessed a qualified public argument at the start. When I excluded the latter from the significance tests, I obtained p-values of 0.001 in phase 1 and 0.005 in phase 2 (Z = –3.279 and –2.803, respectively based on negative ranks).

25 McNemar test on the cumulated data on the similar evolutions in the first and second phase: N = 79, p = 0.017).

26 Indication of the time in which the pre- and post-surveys were completed (cf. footnote 14: 58% of the post-results were received within a day after the deliberation).

27 49% of the participants were engaged in one of the former editions of the Antwerp PB. 56% of this year's participants in phase 2 also participated in phase 1 of this edition.

28 Actual questions were asked in Dutch.

References

Andersen, V. N., & Hansen, K. M. (2007). How deliberation makes better citizens: The Danish deliberative poll on the euro. *European Journal of Political Research, 46*, 531-556.

Arendt, H. (February 1967). Truth and politics. *The New Yorker*.

Barabas, J. (2004). How deliberation affects policy opinions. *American Political Science Review, 98*, 687-701.

Barraclough, R. (2013). Social learning and deliberative democracy. In T. Shultz & T. Kajner (Eds.), *Engaged scholarship: The politics of engagement and disengagement* (pp. 107-120). Rotterdam: Sense Publishers.

Brown, M. B. (2006). Survey article: Citizen panels and the concept of representation. *Journal of Political Philosophy, 14*, 203-225.

Bruneau, E., PLuta, A., & Saxe, R. (2012). The role of 'shared pain' and 'theory of mind' networks in processing others' emotional suffering. *Neuropsychologica, 50*, 219-231.

Caluwaerts, D., & Reuchamps, M. (2014). Does inter-group deliberation foster inter-group appreciation? Evidence from two experiments in Belgium. *Politics*. doi: 10.1111/1467-9256.12043.

Cappella, J. N., Price, V., & Nir, L. (2002). Argument repertoire as a reliable and valid measure of opinion quality: Electronic dialogue during campaign 2000. *Political Communication, 19*, 73-93.

Chambers, S. (1996). *Reasonable democracy. Jurgen Habermas and the politics of discourse*. Ithaca, NY: Cornell University Press.

Chappell, Z. (2012). *Deliberative democracy: A critical introduction*. London: Palgrave Macmillan.

Christiano, T. (1997). The significance of public deliberation. In J. Bohman & W. Rehg (Eds.), *Deliberative democracy: Essays on reason and politics*. Cambridge: The MIT Press.

Cikara, M., Bruneau, E., Van Bavel, J. J., & Saxe, R. (2014). Their pain gives us pleasure: How intergroup dynamics shape empathic failures and counter-empathic responses. *Journal of Experimental Social Psychology, 55*, 110-125.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*(1), 113-126.

Dryzek, J. S. (2006). *Deliberative global politics: Discourse and democracy in a divided world*. Cambridge: Polity.

Estlund, D. (2008). *Democratic authority: A philosophical framework.* Princeton, NJ: Princeton University Press.

Farrar, C., Fishkin, J. S., Green, D. P., List, C., Luskin, R. C., & Levy Paluck, E. (2010). Disaggregating deliberation's effects: An experiment within a deliberative poll. *British Journal of Political Science, 40*(02), 333.

Farrar, C., Green, D. P., Green, J. E., Nickerson, D. W., & Shewfelt, S. (2009). Does discussion group composition affect policy preferences? Results from three randomized experiments. *Political Psychology, 30*(4), 615-647.

Fishkin, J. S. (1997). *The voice of the people*. New Haven, CT: Yale University Press.

Fung, A. (2003). Survey article: Recipes for public spheres: Eight institutional design choices and their consequences. *Journal of Political Philosophy, 11*(3), 338-367.

Gastil, J., Bacci, C., & Dollinger, M. (2010). Is deliberation neutral? Patterns of attitude change during "The Deliberative Polls". *Journal of Public Deliberation, 6* (3), 1-33.

Gerber, M. (2014). Equal partners in dialogue? Participation equality in a transnational deliberative poll (europolis). *Political Studies, 63*(1), 110-130.

Glynn, A. N., & Sen, M. (2014). Identifying judicial empathy: Does having daughters cause judges to rule for womens issues? *American Journal of Political Science, 59*, 37-54.

Goodin, R. E., & Dryzek, J. S. (2006). Deliberative impacts: The macro-political uptake of mini-publics. *Politics and Society, 34*, 219-244.

Grönlund, K., Bachtiger, A., & Setälä, M. (2014). *Deliberative mini-publics. Involving citizens in the democratic process.* Colchester: ECPR Press.

Grönlund, K., Herne, K., & Setälä, M. (2017). Empathy in a citizen deliberation experiment. *Scandinavian Political Studies, 40*(4), 457-480.

Habermas, J. (1996). *Between facts and norms*. Cambridge, MA: The MIT Press.

Hansen, K. M. (2004). *Deliberative democracy and opinion formation.* University of Southern Denmark: University Press.

Himmelroos, S. (2017). Discourse quality in deliberative citizen forums - a comparison of four deliberative mini-publics. *Journal of Public Deliberation, 13*(1), Article 3.

Himmelroos, S., & Christensen, H. S. (2018). The potential of deliberative reasoning: Patterns of attitude change and consistency in cross-cutting and like-minded deliberation. *Acta Politica*, 1-21.

Janssens, M., & Steyaert, C. (2001). *Meerstemmigheid: Organiseren met Verschil*. Leuven: University Press.

Levitan, L. C., & Visser, P. S. (2008). The impact of the social context on resistance to persuasion: Effortful versus effortless responses to counter-attitudinal information. *Journal of Experimental Social Psychology, 44*(3), 640-649.

Luban, D. (1996). The publicity principle. In R. E. Goodin (Ed.), *The theory of institutional design*. Cambridge: University Press.

Luskin, R. C., O'Flynn, I., Fishkin, J. S., & Russell, D. (2014). Deliberating across deep divides. *Political Studies, 62*(1), 116-135.

Meffert, M. F., Guge, M., & Lodge, M. (2004). Good, bad and ambivalent: The consequences of multidimensional political attitudes. In Saris W.E. & Sniderman P.M. (Eds.),

Studies in public opinion; attitudes, nonattitudes, measurement error, and change (pp. 63-92). Princeton, NJ: Princeton University Press.
Michels, A., & De Graaf, L. (2010). Examining citizen participation: Local participatory policy making and democracy. *Local Government Studies, 36*(4), 477-491.
Mill, J. (1948). *On liberty and considerations on representative government*. Oxford: Blackwell.
Min, J. B., & Wong, J. K. (2018). Epistemic approaches to deliberative democracy. *Philosophy Compass, 13*(6), e12497.
Morrell, M. E. (2010). *Empathy and democracy. Feeling, thinking, and deliberation*. Philadelphia, PA: University of Pennsylvania Press.
Park, S. G. (2000). The significance of civility in deliberative democracy. *Korean Journal of Journalism and Communication Studies, 45*, 162-194.
Pateman, C. (1975). *Participation and democratic theory*. Cambridge: Cambridge University Press.
Pateman, C. (2012). Participatory democracy revisited. *Perspectives on Politics, 10*(1), 7-19.
Posner, R. A. (2003). *Law, pragmatism, and democracy*. Cambridge, MA: Harvard University Press.
Price, V., & Cappella, J. N. (2002). Online deliberation and its influance: The electronic dialogue project in Campaign 2000. *IT&Society, 1*(1), 303-329.
Przeworski, A. (2010). *Democracy and the limits of self-government*. Cambridge: Cambridge University Press.
Rawls, J. (1971). *A theory of justice*. Cambridge, MA: Harvard University Press.
Setälä, M., & Herne, K. (2014). Normative theory and experimental research in the study of deliberative mini-publics. In K. Grönlund, A. Bächtiger, & M. Setala (Eds.), *Deliberative mini-publics. Involving citizens in the democratic process* (pp. 59-75). Essex: ECPR Press.
Siu, A. (2008). *Look who's talking: Examining social influence, opinion change, and argument quality in deliberation* (Doctor of Philosophy). Stanford: Stanford University.
Smets, K., & Isernia, P. (2014). The role of deliberation in attitude change: An empirical assessment of three theoretical mechanisms. *European Union Politics, 15*(3), 389-409.
Smith, G. (2010). *Democratic innovations. Designing institutions for citizen participation.* Cambridge: Cambridge University Press.
Steffensmeier, T., & Schenck-Hamlin, W. (2008). Argument quality in public deliberations. *Argumentation and Advocacy, 45*(1), 24-36.
Steiner, J., Bächtiger, A., Spörndli, M., & Steenbergen, M. R. (2004). *Deliberative politics in action. Analyzing parliamentary discourse*. Cambridge: Cambridge University Press.
Strandberg, K. S., Himmelroos, S., & Grönlund, K. (2017). Do discussions in like-minded groups necessarily lead to more extreme opinions? Deliberative democracy and group polarization. *International Political Science Review, 40*(1), 41-57.
Sunstein, C. R. (2009). *Going to extremes: How like minds unite and divide*. Oxford: Oxford University Press.
Valadez, J. (2001). *Deliberative democracy, poltical legitimacy and self-determination in multicultural societies.* Boulder, CO: Westview Press.
Vinokur, A., & Burnstein, F. (1978). Depolarization of attitudes in groups. *Journal of Personality and Social Psychology, 36*(8), 872-885.
Weithman, P. (2005). Deliberative character. *Journal of Political Philosophy, 13*(3), 263-283.
Welton, M. (2001). Civil society and the public sphere: Habermas' recent learning theory. *Studies in the Education of Adults, 33*(1), 20-24.

Wojcieszak, M., & Price, V. (2010). Bridging the divide or intensifying the conflict? How disagreement affects strong predilections about sexual minorities. *Political Psychology, 31*(3), 315-339.

Appendix

I. Diversity of participants compared with general population

		District Population*	Participants Phase 1	Participants Phase 2
Gender	Man	52%	54%	52%
	Woman	48%	46%	48%
Age	0-24	31%	11%	5%
	25-64	55%	60%	67%
	64+	14%	29%	28%
Education	High	30%	54%	56%
	Low	70%	46%	44%
Migration Background	Yes	58%	19%	15%
	No	42%	81%	85%

* http://stadincijfers.antwerpen.be. There could be a slight under-representation of people with a migration background, since the numbers of the general population are based on the place where one's parents are born (and not one's grandparents as asked the participants of the PB were asked). The figures are from 2017, the same year of the PB, except for these on education, of which the latest figures date from 2011. The category 'unknown' within this socio-demographic has been divided proportionally between the two categories of low and high education.

II. Every reported argument divided between public and non-public arguments as per topic

Preferential Topic	Public Argument		N
	No	Yes	
Streets and squares	25%	75%	8
Green spaces	40%	60%	38
Social inclusion	45%	55%	40
Culture	60%	40%	5
Sports	75%	25%	8
Cyclists and pedestrians	84%	16%	49
Elder care	85%	15%	27
Youth work	87%	13%	31
Misc.	71%	29%	14

 doi: 10.5553/PLC/258999292020002001002 - Politics of the Low Countries 2020 (2) 1

III. Pre-post argumentative evolution divided between public and non-public evolution as per topic

Preferential Topic Post-Test	Became Public		N
	No	Yes	
Culture	63%	37%	8
Green spaces	63%	37%	19
Streets and squares	67%	33%	3
Youth work	78%	22%	9
Social inclusion	78%	22%	9
Cyclists and pedestrians**	85%	15%	20
Elder care	100%	0%	9
Sports	100%	0%	4
Misc.	80%	20%	7

** This category (also) contains the separated topics concerning cyclists and pedestrians.

IV. Translated[28] question wording argumentation of the own opinion (1) and opinion of others (2).

Phase 1 pre-survey
- At the start you will decide on the spending of the Antwerp Citizens' Budget of this year in consultation with fellow citizens. If it were up to you, what would you definitely spend **money** on? Type the topics for which you would definitely foresee money below. (For instance, better sidewalks, construction skate parks, neighbourhood concerts, etc.) [textbox]
- For which of the chosen topics is it most **important** to you that money is foreseen? Type the topic below for which you, above all, want to foresee money. [textbox]
- **Why** this topic? (Please name as specifically as possible all the reasons that come to mind) [textbox] (1)
- Certain citizens of the district would rather spend the money on other topics. What specific reasons with regard to your preferred topic could other people have **not** to spend money on it? (Please name as specifically as possible all the reasons that come to mind) [textbox] (2)

Phase 1 post-survey
- You decided in consultation with fellow citizens by consensus on which five topics you would spend money. If it were up to **you**, would you choose for these same five topics? [Y/N]
- If it were up to you, for which topic is it most **important** that money would be foreseen? [textbox]
- **Why** this topic? (Please name as specifically as possible all the reasons that come to mind) [textbox] (1)
- Certain citizens of the district would rather spend the money on other topics. What specific reasons with regard to your preferred topic could other people

have **not** to spend money on it? (Please name as specifically as possible all the reasons that come to mind) [textbox] (2)

Phase 2 pre-survey
- At the district forum you will decide on the spending of the Antwerp Citizens' Budget of this year in consultation with other citizens. If it was up to you, for which of the twelve selected topics would you foresee the **greatest** part of the 1.1 million euro? [list of the twelve selected topics at phase 1]
- **Why** do you think that the greatest part of the budget should go to this topic? (Please name as specific as possible all the reasons that come to mind) [textbox] (1)
- Certain citizens of the district would rather spend the greatest part of the budget on other topics. What specific reasons with regard to your preferred topic other people could have to spend **less** money on it? (Please name as specific as possible all the reasons that come to mind) [textbox] (2)

Phase 2 post-survey
- At the district forum you decided in consultation with other citizens by consensus how you would distribute the Citizen's Budget. If it were up to **you**, would you choose for the same distribution? [Y/N]
- If it were up to you, for which of the twelve discussed topics would you foresee the **greatest** part of the money? [textbox]
- **Why** this topic? (Please name as specifically as possible all the reasons that come to mind) [textbox] (1)
- Certain citizens of the district would rather spend the most money on other topics. What specific reasons with regard to your preferred topic could other people have to spend **less** money on it? (Please name as specifically as possible all the reasons that come to mind) [textbox] (2)

Socio-demographics
- What is your **gender**? (M/F/X)
- What is your **age?** (–16/16-24/25-44/45-64/64+)
- If you earned **diplomas** after primary education, which are they? (Secondary education/Bachelor/Master/Doctor/Not applicable)
- Was your grandmother or grandfather born outside **Belgium**? (Y/N)

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V. Subsamples