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## Using Quali-Quantitative Indicators for Assessing the Quality of Citizen Participation: A Study on Three Citizen Juries

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### Abstract

Over the last 3 decades, citizen involvement has become rather common in policymaking processes. Its rationale, as well as its potential benefits and limitations, are manifold. The literature on the evaluation of public participation is copious and it is crucial both to implement effective processes, and to achieve high-quality outcomes. Inspired by deliberative democracy theory, dialogue/fairness and knowledge/competence have been considered the two main criteria to assess the quality of deliberative processes. Based on the analysis of three citizen juries, the paper focuses on the process through which citizen deliberation occurs. Specifically, three properties related to dialogue, i.e., equity, cooperation, and cognitive openness, were treated as quality indicators of the deliberative process. Both quantitative and qualitative methods were used, and three sources of data utilized: (a) semi-structured interviews to jurors; (b) post-jury questionnaires; and (c) jurors' conversational turns. Altogether, the analyses showed that despite the imbalance in participation, the deliberation process was perceived as fair. However, findings also suggested that the participatory setting did not promote the ability of participants to generate new collective knowledge.

### Introduction

Community participation, public participation (also referred to as public involvement), and deliberative democracy are central to the modern concept of citizenship. Over the last 30 years, citizen involvement has gained momentum in decision-making and policy planning in local development. In mature and transitioning democracies, citizen participation in the policy-making process is part of the so-called “third wave” of democratization (Huntington 1991) that resulted from two concurrent social processes. One derived from citizens' desire to access decision-making processes and thus gain a voice and control over the public sphere. The other was the effort to expand decision-making processes by political institutions to mitigate the deterioration of citizen-government relationships and stem the tendency of institutions to adopt inward-looking strategies. Citizen involvement is justified by more than one rationale (Korfmacher 2001) and based on reasoning of different nature (e.g. political, democratic, ethical, pragmatic, and social). The increasing awareness of the potential benefits deriving from community participation led many local governments to put into practice diverse forms of participatory governance through cooperation between institutions and civil society (meant both as single individuals and as organized groups) in the management of public affairs. This has led to greater direct involvement of citizens to inform policy planning in a variety of sectors, e.g., environment, public health, social services, and urban renewal. At

a theoretical, albeit often implicit level, public involvement practices rely on the notion of deliberative democracy (Habermas 1989, 1996), a communicative democracy model that emphasizes dialogue, equality, fairness, and a focus on the public good (Cohen 1996, 1997). Specifically, deliberation requires careful and respectful consideration of all participant viewpoints, along with sharing and review of information that are supposed to result in the formulation of informed opinions (Chambers 2003; Delli Carpini et al. 2004). Deliberation is both an analytic and social process, where participants have an equal opportunity to speak and mutual obligations to respect for other participants (Gastil and Black 2008).

## **Assessing the Quality of Citizen Participation**

The need to establish indicators aimed to assess the quality of citizen participation stems from the problems that the literature on public participation and inclusive decision processes has hitherto highlighted. While there is consensus on the benefits that are associated with citizen participation at the community level (Chavis and Wandersman 1990; de Castro-Silva and Cavichioli 2013; Ledwith and Springett 2010; Montero 2004; Prestby et al. 1990; Zimmerman and Rappaport 1988), and its relationship with better quality of life (Nussbaum 1999; Radcliff and Shufeldt 2016), more robust social capital (Putnam 2000; Wollabæk and Selle 2003), and increased social wellbeing (Keyes 1998; Rondinella et al. 2017; Wandersman and Florin 2000), a certain level of vagueness occurs when participation is put into practice (Buchy and Hoverman 2000; Mannarini 2014).

It has been argued that citizen involvement is often merely tokenistic and that citizens are powerless to affect strategic decision-making (Burton 2003), or that participatory processes, though not completely useless, are not crucial for community decision-making (Font and Blanco 2007; Klijn and Koppenjan 2000). Overall, it seems that citizens' recommendations will actually inform the "policy-making process" only hardly. Consequently, citizens will rarely be formally empowered as part of a decision-making process, as in participatory budgeting experiences (Goodin and Dryzek 2006). Further critical issues pertain to the degree of accessibility for inclusion in the participatory process, which is often restricted to selective participation of community members (Botes and van Rensburg 2000) or impeded by other factors that limit equal representation (Papadopulos and Warin 2007).

More relevant to the subject of this paper, participation settings can be undermined by internal group dynamics (see Mannarini 2011, for a review), which may transform such settings into unfair participatory processes and hamper the capacity of participants to generate new collective knowledge and new problem frames. Small group research has much to offer to the study of deliberative groups (see Mendelberg 2002, for a contextualization). Such a research has highlighted how under certain circumstances, either internal or external, the physiological functioning can lead groups to take poor decisions (Janis 1982; Abelson et al. 2003), bring to the extreme pre-extant attitudes and preferences (Stoner 1968; Moscovici and Zavalloni 1969; Karpowitz and Mansbridge 2005), or silence minority and divergent opinions (Asch 1956; King et al. 2010). Focused research on deliberative groups has drawn specific attention to the process of polarization, highlighting that such a risk increases when individuals perceive similarity with the group members, cohesion, and sense of the in-group (Sunstein 2000, 2002, 2005). Such characteristics are likely to reduce the probabilities of dissent and discourage minority standpoints (Mendelberg 2006). As suggested by Moscovici and Doise (1991), polarization can also become stronger as communication becomes intense and involvement increases. Others failures emerging from deliberative group processes have also been

highlighted, such the tendency to privilege shared information over unshared information—a tendency that does not improve pre-deliberation judgments (Sunstein and Hastie 2008)—and inequity in interactions resulting from intra-group differences, especially those related to social, ethnic, and cultural background (Abdel-Monem et al. 2010).

Given such problematic issues, the evaluation of how citizens are involved, how the participatory process develops, and how the process shapes outcomes is crucial for both citizens and institutions. There is abundant literature on the evaluation of public participation processes and the definition of criteria and measurable indicators to assess the mechanisms involved (Beierle and Cayford 2002; Beste 2013; Carnes et al. 1998; Charnley and Engelbert 2005; Chess and Purcell 1999; Edwards et al. 2008; Rowe and Frewer 2000, 2004; Rowe et al. 2004; Stephens and Berner 2011; Webler and Tuler 2001). In a recent systematic overview, Stephens and Berner (2011) suggested grouping the evaluation indicators of public participation into three general categories: process (i.e., decision-making, representation, participation, opportunity to integrate views, information, transparency, and balance of process, early involvement, and structure); outcome (i.e., education, values incorporated, decision quality or acceptability, learning/understanding/trust, respect/reduction of conflict/legitimacy and efficiency); and costs (direct costs, such as staff labor reimbursement, time, facilities, facilitation services, materials, travel, specialists/experts, and indirect costs, such as time investments and the frustration of having divergent viewpoints).

This paper, based on the analysis of three case studies—specifically, three citizen juries—is embedded in the debate on the quality of citizen participatory processes and the evaluation of such a quality, with specific reference to the process through which citizen deliberation occurs. In our investigation, which is part of a broader national research project on the quality of deliberation and whose complete report is available for Italian readers (Bobbio 2013), we focused on the evaluation of process. Based on the works of Steiner et al. (2003), Stromer-Galley (2007), and Edwards et al. (2008), process criteria can be grouped into two categories: (a) dialogue refers to how participants interact and behave in the participatory setting, and more generally to the attitudes they display towards others and diversity; as such, it captures the socio-relational side of discursive interaction; and (b) knowledge/understanding refers to what participants discuss, create, build upon, and innovate; it captures the cognitive processes triggered by collective discussion. These categories can be traced back to the work of Webler (1995), which, in turn, was significantly influenced by Habermas' (1984) theory of deliberative democracy based on ideal speech and communicative competence. Within the deliberative democracy framework two main criteria can be used to judge participatory processes: (a) fairness entails the equal distribution of opportunities to act meaningfully in all aspects of the participation process; and (b) competence refers to process content, meaning that a competent process will ensure that appropriate knowledge/understanding of an issue is achieved through access to information and the interpretation of the information.

## **Rationale and Aim**

Based on the framework sketched above, the aim of our investigation was to determine whether the three deliberative processes under scrutiny ensured equity, cooperation, and cognitive openness. All three properties pertain to the dialogue/fairness dimension, though—as we will argue—they also have an impact on the knowledge/competence dimension. The analysis sought to respond to the following research questions: Did some participants dominate over others or was there equity among participants? Did participants cooperate in conversation or did they undertake uncooperative behaviors? Did they reject divergent or

minority views by freezing their own opinions and closing their mind to new and diverse information?

The scientific literature defines dominance as the ability to influence other's behavior, to take control of the communicative situation, and to express one's own opinions vigorously (Jackson 1984). Within group interactions, dominance can manifest itself at the quantitative, semantic or interactional level (Linnell and Luckman 1991). Quantitative dominance is about the amount of speech produced, while semantic dominance refers to the control over the agenda and its contents, and interactional dominance is the power to direct and control the other party's communicative interactions (Linnell et al. 1988). The theoretical framework for conversational cooperation is Paul Grice's (1975) model, according to which the cooperation principle operates through four maxims, namely: quantity (make your contribution as informative as is required); quality (do not say what you believe is false or that for which you lack adequate evidence); manner (be perspicuous); and relevance (be relevant). Additionally, cooperation also manifests itself through positive interpersonal attitudes, which contribute to define the quality of the group social climate. Finally, cognitive openness (conceptualized as the contrary of cognitive closure, Kruglanski and Webster 1996) refers to the ability to tolerate ambiguous and uncertain cognitive situations, to actively expose oneself to diverse points of view, and to resist the pressure exerted by the group majority opinion to conform.

## Method

The case studies involved three citizen juries. Citizen juries, a trademark of the Jefferson Center (2004), are described as a "comprehensive engagement process that allows decision makers and the public to hear thoughtful input from an informed microcosm of the public" (<http://jefferson-center.org/citizen-juries/>). They have been used in a variety of policy sectors, such as health (Street et al. 2013), technology (Dunkerley and Glasner 1998), and environment (Crosby 1995). In Italy their use is still in its infancy.

Participants involved in three juries were randomly selected among the resident population of the city/town in which the jury was held, by LAPS-University of Siena. The Random Digit Dialing (RDD) system was used to ensure a non-proportional stratified sample by sex, age, education, and sub-urban area of residence.

Two out of three juries were set up for research purposes within the fourth edition of the "Biennial Democracy" festival, a major cultural event sponsored by Turin City Council and run by a distinguished group of scholars. These two juries examined devolution, a divisive issue of national interest that has been debated in public opinion and the Italian Parliament. Devolution has been partly codified in national legislative acts, however—due to the political disagreement between political parties on how to implement the devolution principle at the local level and on its consequences—devolution is still an issue under discussion. Juries 1 (n = 22, M = 11, F = 11) and 2 (n = 42, M = 14, F = 28) met for 2 days each in Turin respectively in December 2010 and March 2011, alternating small assisted group discussions (60–90 min) and plenary meetings (90 min) in which they interacted with experts who provided technical, legislative, political and social perspectives on devolution. At the end of the 2-day deliberative process, the jurors made their recommendations. Jury 1 recommendations focused on the possible consequences of devolution for the education and healthcare systems, and asked politicians to provide citizens with a more objective and balanced information frame and to refrain from ideological views. Jury 2 recommendations highlighted four subthemes, without however reaching any conclusive position: citizens' rights, responsibility of the local

administrations, economic development and the North–South gap, and regions-state relationships.

Before entering the deliberative process, the majority of both jury 1 and jury 2 participants were in favor of an increased political autonomy of their region (i.e., political devolution), but against its financial independence from the State (i.e., financial devolution) (Table 1). At the end of the deliberative process, the number of jurors who were against the political autonomy increased, while those who were in favor decreased. A reversed trend occurred as for the financial aspect of devolution: those who were initially against the financial independence increased, while those who favored it decreased.

**Table 1** Attitudes towards the issue, pre- and post-group discussions (%)

	Political devolution				Financial devolution				Gasification plant	
	J1		J2		J1		J2		J3	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Against	8.0	25.0	29.6	34.6	64.0	31.2	62.9	46.2	46.0	97.4
In favor	68.0	56.3	62.9	50.0	24.0	43.8	25.9	46.1	14.0	0.0
Undecided	24.0	18.7	7.5	15.4	12.0	25.0	11.2	7.7	40.0	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The third citizen jury (n = 50, M = 28, F = 22) met for 6 days (February–April 2011) to discuss the planned construction of a biomass gasification plant in a small town in Tuscany (Castelfranco). Again, jurors were engaged both in small assisted group discussions (60–90 min) and in plenary meetings (90–120 min) with experts, and finalized the deliberative process with their recommendations. At the time in which the deliberative process took place, the issue was highly debated in the local community of Castelfranco both at the political, the media, and at the community level, with environmentalist associations and activists loudly voicing their disagreement. Before entering the deliberative process, less than half of the jurors were against the plant, and many of them (38%) did not have a definite opinion. At the end, almost all of them took a stand against the construction of the plant, and they provided arguments for their position in the recommendations they made to the local authorities (Table 1).

### Case Study Analysis Drew on Three Data Sources

(a) Semi-structured interviews with the jurors who agreed to be contacted by the research team for a follow up interview (9 members from jury 1, 8 from jury 2, and 10 from jury 3) were conducted a few days after the juries had completed their task. The aim of the interview was to capture the jurors' subjective experience with regard to: (1) satisfaction with the relationships with the other jurors, facilitators, and experts; (2) perceived quality of group discussion; (3) personal contribution to the discussion and perception of outcomes; (4) appraisal of their experience as jurors. The interviews were recorded, transcribed, and analyzed according to the principles of the qualitative thematic analysis (Braun and Clarke 2006).Footnote1 Eight main themes were identified according to a bottom-up approach by the research team, and the 3 jurors accounts analyzed and compared across all themes: (1) Dominance (referred to 1.1 group, 1.2 single group member, 1.3 group facilitator); (2)

Democracy; (3) Satisfaction; (4) Cooperation; (5) Conflict; (6) Opinions' change (6.1 expert related, 6.2 group related); (7) Learning; (8) Contributing.

(b) Pre- and post-jury questionnaires were administered to all participants in each of three juries. The questionnaire included a range of ad hoc items and scales that investigated the jurors' political orientation, political interest, political efficacy, motives for participation, attitudes on the issue, attitudes toward democracy and citizen involvement, knowledge gained through jury participation, perceived influence of the facilitator, perceived dominance by other jurors, and perceived group pressure to conformity. Only the last two variables were used in the current analysis to compare juries. To measure perceived dominance within the group of jurors, three items adapted from Canary and Spitzberg (1987) were used (Cronbach's  $\alpha = .66$ ): "Some jurors were more active than I was"; "Some jurors dominated the discussion"; "Some jurors played a marginal role". Participants rated their agreement on a 5-point scale (1 = totally disagree; 5 = totally agree). The group pressure to conformity was assessed by an adapted version of the 10-item Conformity Pressure Questionnaire of Kroon et al. (1992) (Cronbach's  $\alpha = .88$ ). Example items are "Even when I totally disagreed with the other jurors, I often did not stand up to defend my views"; "In order to reach a conclusion, the jury was reluctant to accept new ideas"; "Divergent ideas have been discouraged by the jury". Participants rated their agreement on a 5-point scale (1 = totally disagree; 5 = totally agree).

(c) Jurors' conversational turns: a total of 20 jury sessions (6 sessions in jury 1; 9 in jury 3; 5 in jury 3) were videotaped and the conversational turns transcribed (2133 turns in total). Each turn was coded by the research team for: relevance of the argument provided to the issue (1 = relevant, 0 = non relevant); completeness of the argument (0 = no argument, 1 = incomplete argument, 2 = complete argument); universality of the argument (0 = no argument, 1 = personal or group argument, 2 = universal argument); modality of the argument (1 = narrative, 0 = non narrative); innovation (1 = new proposal/frame/interpretation offered, 0 = no innovation); length of the turn (number of characters); being asked for information by other jurors (1 = yes, 0 = no); asking other jurors for information (information seeking) (1 = yes, 0 = no); use of technical terms (0 = no, 1 = yes, but the use is not qualified, 2 = yes, and the use is qualified); reference to expert opinion (0 = no reference, 1 = sustains the experts' opinion, -1 = rejects the experts' opinion); and attitude toward the issue (2 = very favorable, 1 = favorable, -1 = unfavorable, -2 = very unfavorable). The transcribed sessions were distributed among the research team members, who had either observed the live sessions or transcribed the videotaped group conversations. Each research team member coded independently the assigned sessions. Then the coded sessions were exchanged among the team members and checked for the use of codes. Controversial cases were collectively examined and discussed and an agreement was reached for the final coding. Of all the codes used to analyze the jurors' conversational turns, only relevance, innovation, length, and information seeking were used in the current analysis.

Table 2 shows the set of quali-quantitative indicators used to assess the quality of participation in the three juries.

**Table 2** Indicators used to assess the quality of participation in the three citizen juries

Theoretical dimension	Source	Indicators
Dominance	Conversational turns	Number of conversational turns Length of the turns
	Post-jury questionnaire	Three items on perceived dominance within the group
	Post-jury interview	Participants accounts for observed or experienced dominant behaviors within the group
Cooperation	Conversational turns	Number of relevant conversational turns
	Post-jury interview	Participants accounts for the group climate discussion, satisfaction with the group interactions, feelings experienced during the group discussion
Cognitive openness	Conversational turns	Number of turns requesting information from the group Number of innovative conversational turns
	Post-jury questionnaire	Conformity Pressure Questionnaire
	Post-jury interview	Participants accounts for their own information-seeking and reframing processes

## Results

### Dominance

The indicators we used to capture quantitative dominance were the number of conversational turns each participant took during a transcribed session, the length of the turns (as measured by the number of characters) (Table 3), and the perceived dominance by other jurors (assessed both via the items of the post-jury questionnaire and the qualitative interviews). Nearly one-third of the total turns (32.9%) was taken by the facilitators; the number of facilitator turns recorded during the plenary sessions was even higher. On average, the turns taken by the jurors in jury 1 and 2 were longer than the facilitator's turns during the respective sessions and longer than those taken by jury 3. The average number of jurors' turns in each session was 5.9, with marked differences between the sessions and the juries and some jurors taking only one turn per session (Table 3). The individual dominance index was low (.09).

**Table 3** Turn taking by jurors and facilitators

Jury	Session	Active participants	Turns (total)	Turns (facilitators)	% Turns (facilitators)	Average length (facilitators)	Turns (jurors)	% Turns (jurors)	Average length (jurors)
J1	1	10	64	19	29.7	86.6	45	70.3	201.3
	2	13	57	23	40.4	88.6	34	59.6	364.9
	3 (Plenary)	12	58	23	39.7	116.0	35	60.3	244.2
	4	10	193	53	27.5	169.2	140	72.5	234.5
	5 (Plenary)	22	90	36	40.0	331.4	54	60.0	363.1
	6 (Plenary)	4	45	30	66.7	205.6	15	33.3	90.0
Total J1			507	184	36.3	166.3	323	63.7	249.7
J2	1	10	132	43	32.6	203.1	89	67.4	156.1
	2	9	91	25	27.5	129.5	66	72.5	139.0
	3	11	99	35	35.4	216.4	64	64.6	240.5
	4	12	58	15	25.9	367.4	43	74.1	219.0
	5	11	95	25	26.3	134.2	70	73.7	167.6
	6	12	211	69	32.7	123.9	142	67.3	144.7
	7	12	57	22	38.6	137.1	35	61.4	135.5
	8	10	109	31	28.4	235.6	78	71.6	156.2
	9	10	330	120	36.4	147.0	210	63.6	185.3
Total J2			1182	385	32.6	188.2	797	67.4	171.5
J3	1	12	157	49	31.2	92.9	108	68.8	153.9
	2 (Plenary)	12	29	15	51.7	637.7	14	48.3	144.3
	3	10	101	29	28.7	86.8	72	71.3	129.7
	4	12	80	20	25.0	215.2	60	75.0	141.3
	5	15	77	30	39.0	122.2	47	61.0	164.6
Total J3			444	143	32.2	168.9	301	67.8	98.1
Total (J1 + J2 + J3)			2133		32.9	173.1		67.1	154.3



To compare the three juries on the perceived dominance by other jurors, a one-way between subjects ANOVA was conducted. There was a significant effect of jury membership on perceived dominance at the  $p < .05$  level for the three conditions [ $F(2, 68) = 8.92, p = .000$ ]. Post-hoc comparisons using the Bonferroni test indicated that the perceived dominance mean scores in jury 3 ( $M = 10.94, SD = 1.87$ ) were significantly higher than the mean scores in both jury 1 ( $M = 8.42, SD = 2.13$ ) and 2 ( $M = 9.34, SD = 2.20$ ). These results suggest that in the jury engaged in discussing the construction of the biomass gasification plant there were more jurors who acknowledged that the other members were more active than they were, and that some dominated the discussion, while some others contributed very little.

The explanations the participants gave for dominance were generally based on the personality of single jurors, while the influence of the situation was neglected. Examples from interview excerpts are given below:

Some people clearly dominated the discussion. That student [...] and I think he talked more than the others (J1-1, F) [1.2].Footnote2

Some people talked more and expressed their opinions more strongly and more precisely than the others. Obviously, not everybody in the same way, maybe because of differences in character and ability to stand up and talk in front of others (J2-4, F) [1.2].

Two or three jury members contributed more, especially those who were more engaged... or also better informed; those who were more knowledgeable about the subject and experienced contributed the most (J1-2, M) [1.2].

However, even if the jurors acknowledged others' dominance and noticed different degrees of participation and of influence in the discussion, they still perceived the deliberative process as being democratic and open, so that they could freely express their own opinions:

I enjoyed myself, I felt ok because when people let you talk and they listen to what you are saying... it's gratifying, that's true at work and at home. When specialists talk but also listen to what one has to say... well, that makes really a difference. I really think that in these past 2 days we have been listening and paying attention. This has been very important (J1-8, F) [2] [3] [7].

I appreciated it that the people were asked directly about these issues, not taken on rumors (J3-3, F) [2] [3] [8].

This was a very nice experience for me, there are so few occasions for giving your opinion. Even if it wasn't a council meeting, it was still very interesting. I would call it a successful experiment (J2-4, F) [3] [8].

### Cooperation

We applied two indicators to assess conversational cooperation among jurors: the relevance of the conversational turns and the jurors' appraisal of the group social climate, the latter assessed via the qualitative interviews. Relevant turns accounted for 73.6% of the total turns on average, but ranged between about 50% in some sessions and nearly 100% in others (Table 4). The members of jury 1 and 2 were satisfied with the social climate in the jury discussion, often referring to "collaboration [...] and pleasant atmosphere" (J1-2, M) [4], and to the interaction as "fair [...] and respectful" (J1-7, F) [2] [4]. Communication in jury 1 and 2 was

generally characterized as being cold, whereas the social climate in jury 3 was characterized by warm communications and conflict episodes. The difference in climate can be linked to two factors: the peculiarity of the issue examined and the extremism of the jurors' positions. The issue discussed by jury 3—i.e., the planned construction of a biomass gasification plant in their community—was more likely to affect their everyday life and elicit radical views. In addition, the jurors may have found it difficult to understand the concrete effects of devolution; this was reflected in the wider, more nuanced range of opinions. Nonetheless, they abided by the rules of cooperation and mutual respect, and accepted dialogue. They minimized the magnitude of conflict (“normal group dynamics”, J3-8, M [5]; “non significant events”, J3-6, F [5]), or justified it as the result of the “heterogeneity of jurors” (J3-4, M [5]; J3-6, F [5]; J3-8, M [5]) or the “complexity” of the issue under discussion (J3-10, F) [5]. In contrast, two jury members accused others of showing “childish behavior” (J3-7, F) [5], and “lack of respect towards the facilitator and the experts” (J3-3, F) [5].

**Table 4** Turn taking by individual jurors and dominance index

Jury	Session	Average no. of turns for each juror	Min	Max	Average dominance index <sup>a</sup>
J1	1	4.1	1	8	.09
	2	2.5	1	5	.08
	3 (Plenary)	3.1	1	5	.09
	4	14.0	3	37	.1
	5 (Plenary)	2.5	1	7	.05
	6 (Plenary)	3.8	1	8	.25
Total J1		5.0	1	37	.11
J2	1	8.7	1	14	.1
	2	7.3	3	14	.1
	3	5.8	1	15	.09
	4	3.6	1	9	.08
	5	6.4	1	16	.09
	6	10.9	1	31	.08
	7	2.9	1	10	.08
	8	7.8	1	19	.1
	9	21.0	8	37	.08
Total J2		8.3	1	37	.09
J3	1	9	1	23	.08
	2 (Plenary)	1.2	1	2	.08
	3	7	1	16	.1
	4	5	1	20	.08
	5	3.1	1	13	.07
Total J3		5.1			.08
Total (J1 + J2 + J3)		5.9			.09

<sup>a</sup> The dominance index is the ratio between the number of individual turns per session and the total number of turns per session. Value range from 0 to 1

## Cognitive Openness

Two indicators were used to determine whether participants showed signs of cognitive openness during jury discussion: (1) the number of turns requesting information from the group, which signaled the jurors' need for cognition, i.e., the need for more details and information before forming an opinion or taking a decision; (2) the number of conversational turns that innovated knowledge on the issue (e.g., introducing a new frame or a new perspective) or the arguments in favor or against it. The ability to offer the group new knowledge and arguments was a signal that individuals did not just seize on and freeze the information already available, but that they were still open to changing their views and to process more information. We also relied on the jurors' interviews to detect the processes underlying such behaviors, and used the group pressure to conform items included in the post-jury questionnaire.

As shown in Table 5, the number of turns introducing innovative knowledge or arguments was close to zero, and the information-seeking turns were unevenly distributed across the sessions, albeit more numerous in the jury sessions devoted to preparing questions for the experts before meeting them in the plenary sessions. The analysis of the post-jury interviews offered insight into the processes through which the jurors formed their preferences and highlighted that the major source of information and influence that contributed to consolidate or modify their opinions was "the experts' opinions, not the jurors' discussion" (J1-1, F) [6.2].

**Table 5** Relevance, innovation, and information seeking

Jury	Session	Relevant turns	% Relevant turns	Innovative turns	% Innovative turns	Information seeking turns	% Information seeking turns
J1	1	30	66.7	1	2.2	2	4.4
	2	27	79.4	1	2.9	5	14.7
	3 (Plenary)	19	54.3	0	0.0	16	45.7
	4	93	66.4	2	1.4	14	10.0
	5 (Plenary)	42	77.8	0	0	1	1.9
	6 (Plenary)	15	100.0	0	0	0	0
Total J1		226	70.0	4	1.2	38	11.8
J2	1	81	91.0	0	0.0	17	19.1
	2	62	93.9	0	0.0	0	0.0
	3	53	82.8	0	0.0	3	4.7
	4	22	51.2	0	0.0	1	2.3
	5	37	52.9	0	0.0	15	21.4
	6	92	64.8	0	0.0	25	17.6
	7	27	77.1	0	0.0	4	11.4
	8	76	97.4	0	0.0	7	9.0
	9	139	66.2	0	0.0	4	1.9
Total J2		589	73.9	0	0.0	76	9.5
J3	1	97	89.8	0	0.0	21	19.4
	2 (Plenary)	11	78.6	0	0.0	2	14.3
	1	51	70.8	0	0.0	0	0.0
	2	31	51.7	0	0.0	0	0.0
	3	34	72.3	0	0.0	1	2.1
Total J3		224	74.4	0	0.0	47	15.6
Total (J1 + J2 + J3)			73.6		0.2		12.9

At the beginning, we thought that we could, by our own judgment... we could change something, at the start, the 1 days. But no, we just listened to the explanation by the experts, I believe that [...] actually, we didn't know how things go exactly, the issue. Then the experts explained, and now we have clearer ideas (J1-9, M) [6.2] [7].

In the interaction with jury 1 and 2, the experts acted as epistemic authorities (Kruglanski et al. 2005), that is, reliable sources to which the jurors resorted in order to ground their knowledge and also to finalize the information-seeking process. The juror-expert interaction in the sessions with jury 3 generally reinforced the opinion of the jurors who were already against the biomass gasification plant, and helped persuade those who were initially undecided to take a negative stance on the issue.

The turning point was when the experts explained the details about the plant (J3-8, M) [6.2] [7].

Personally, I didn't know anything about the project until I was informed by listening the experts [...]. I moved from having no opinion to a convinced "no!" (J3-9, F) [6.2] [7].

Initially, I had no opinion because I was completely uninformed [...]. I couldn't see any advantage of having the plant for the community, in this specific case, and that was what convinced me (J3-7, F) [7].

[...] then asking [the experts] questions, insisting that they clarify what was unclear to us or counter arguing some things they said, we began to understand and strengthen our opinion (J3-2, F) [6.2] [7].

Finally, we compared the three juries on the jurors' perception of group pressure to conform to the majority opinion through a between subjects ANOVA. Although there was no significant difference between the mean scores of the three juries at the  $p < .05$  level [ $F(2, 68) = 2.70, p = .069$ ], jury 3 mean scores ( $M = 19.83, SD = 6.63$ ) were higher than both jury 1 ( $M = 16.14, SD = 4.94$ ) and jury 2 scores ( $M = 16.52; SD = 5.73$ ), who showed very close mean scores. These findings suggest that the Castelfranco jury was characterized by group pressure to conformity more than the Turin juries on devolution.

## Discussion

Issues related to both the conceptualization and measurement of the quality of deliberation are still under debate in deliberative democracy theory and research (De Vries et al. 2010; Ryfe 2005; Thomson and Perry 2006). Our study, by operationalizing the quality of the deliberative group process in terms of non-dominant functioning, cooperation, and cognitive openness, intended to respond to the following questions: Can deliberative processes ensure fair and competent citizen participation? To what extent was the participatory process equal, cooperative, and cognitively open in the cases under scrutiny?

The set of quali-quantitative indicators used enabled us to answer to these questions, though not completely. Indeed, the evaluation of intra-group processes was not sufficient per se to reach a complete and thorough assessment of the quality of the deliberative experiences under

scrutiny. In different terms, the quality of process is not the only indicator of the quality of deliberation. As illustrated in the introductory section, and supported by additional empirical research on deliberation (e.g., Beauvais and Baechtiger 2016; Kadlec and Friedman 2007), there are many other contextual aspects that concur to determine the quality of a deliberative experience, such as the role and aims of the institutions promoting citizen participation, the influence on public decisions, the legitimacy of the decisions taken. Nonetheless, group process is still a key component of deliberation: a “bad” process (i.e., unfair, or not democratic) threatens the possibility of high-quality, legitimate, and influential deliberation.

From our analysis it was apparent that the citizens involved in the three juries did not contribute to the discussion to the same degree. Some were more active than others and played a more influential role. Despite these differences between participants, which were acknowledged by part of them, the general appraisal of being involved in jury work was overall positive and fair. The atmosphere in which the deliberation took place was cooperative, even when clashes of views occurred, and the individual contributions were mostly relevant to the issue under discussion. As far as the knowledge domain is concerned, information on the topic was increased more through juror–expert interaction than through peer-to-peer interaction among the jurors. The elaboration of contents was basically driven by the authority of experts, who either met the need for cognition of the jurors or were used as anchorage for previous knowledge. In addition, no important reframing processes or innovative creative knowledge-building processes occurred. One possible reason for this was because the jurors were asked to accomplish structured tasks (i.e., formulating questions for the experts, clarifying their position on the issue, outlining recommendations) within a short time period (60–90 min); therefore, the collective mind set was oriented more towards convergent than divergent thinking (Nemeth 1986). That is to say, the participatory setting did not encourage jurors to consider alternatives and to explore the issue in a creative manner.

Our findings offered evidence that the citizen involvement process was shaped by influence processes that, if brought to the extremes, may transform differences into inequalities, turn democratic participation into an uneven process, and limit the ability of participants to generate new collective knowledge.

Our case study analysis also suggested several indications that may help community workers and professionals in planning and managing high-quality community participatory processes.

The first is about the recruitment of participants, and the need not only to ensure the widest possible range of opinions within the group of citizens involved, but also the need to keep a quantitative balance between the different opinions in the initial composition of the deliberative groups. Though a quantitative balance may not be sufficient per se, it can help prevent the establishment of predefined majorities and minorities, and therefore the chance that minorities are drawn into a “spiral of silence” (Noelle-Neuman 1984) and that polarization and conformity process occurs, especially when participants are highly involved and motivated. Moreover, taking carefully into account who and how participants are recruited can prevent the risk of reproducing in the deliberative setting the inequalities of the larger society, which can undermine the possibility of achieving democratic deliberative processes and legitimate outcomes (see Kadlec and Friedman 2007; Moscrop and Warren 2016; Young 2000).

The second indication is about the design of the participatory setting (task, time, roles, rules, facilitating style). Unintended consequences of apparently innocuous and “democratic” choices concerning the design of the deliberative setting have already been highlighted (see

among others Kadlec and Friedman 2007). Specifically, our findings suggest that the way the setting is designed affected both process and outcome, and that a structured setting well served the purpose of accomplishment but not the purpose of learning. Hence, the call is for a balance between the need to ensure that participants accomplish their task and the need that they enter in a collective learning process. Such a goal may be reached by alternating high-structured sessions with low-structured sessions, so that participants have the chance to explore and create, as well as to systematize and crystallize.

A third indication is about the acknowledgment that participatory processes are embedded within the enlarged community context, and that citizens involved in deliberation may be influenced by the climate of public opinion, especially when they address highly divisive issue that create conflicts within the community, and when there is a public debate going on in the community while groups of citizens are involved in the deliberation process. Influence processes as well as power imbalances may result from both the internal and external dynamics of the group. This internal–external dialectic calls for the need to include in the analysis political factors that are behind and beyond the deliberation setting itself (e.g., the range of the alliances, wider patterns of mobilization, political opportunities that may open up) (Coelho and Waisbich 2016) in order to understand the overall dynamics of participation and its outcomes.

Finally, and connected both to the political culture and institutional functioning, the last indication addresses the broader and controversial theme of the possibility that deliberative participatory processes do affect political decisions. Although this was not the focus of our study, the analysis of the Castelfranco case—where local authorities promoted the citizen jury only after a set of decisions had already been taken and the public opinion was polarized, and mainly used it as an instrument to give voice to different opinions—provided arguments that align with the critics of deliberative democracy (Sanders 1997; Young 2000).

In general, our study corroborated the idea that a systematic use of qualitative and quantitative indicators to assess the quality of citizen participation is valuable and can advance our knowledge both on the process and on the outcomes of participatory decision-making process. However, we acknowledge that our investigation had several limitations. The first is that we applied few indicators to assess dominance, cooperation, and cognitive openness, definitely fewer than would be required for a more sophisticated and thorough analysis. For instance, we were unable to formally capture different forms of dominance, such as semantic and interactional dominance, or to create additional indicators for assessing cooperation and cognitive openness. The second limitation is that even the most well-designed formalization of group dynamics cannot convey the fluidity, the richness, and the subtleties of the dynamics itself. We partially overcame this limitation by the direct observation of the group sessions, without which we could not have made sense of the formal indicators we used.

## Notes

1. The analysis went through the following steps: First the research group familiarized with the gathered data, reading and re-reading the transcribed interviews and noting down initial ideas. Then initial codes were generated aimed at capturing interesting features across the entire data set. Successively, themes were searched, and codes collated into potential themes; themes were then reviewed to check if they worked in relation to the entire data set, and finally they were defined and named through an ongoing analysis.

2. J1 = Jury 1, J2 = Jury 2, J3 = Jury 3; the following number = Interview number; M = Male, F = Female; code(s) in square brackets.

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