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Forging Just Climate Policies: Reconciling Justice Perceptions in Deliberative Mini-Publics

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ABSTRACT

Demands for ambitious climate measures have been accompanied by calls for a just transition, implying policies that take into account aspects of social justice in climate change mitigation. In many countries, deliberative mini-publics, such as Citizens' Assemblies and Citizens' Juries, have been convened to develop recommendations for socially just climate policies. While experimental studies have established individuals' propensity for outcome favorability in fairness assessments, proponents of deliberative mini-publics maintain that deliberation helps launder self-interested views and produces so-called meta-consensus regarding values, beliefs, and preferences. However, deliberative mini-publics' capability to advance shared interpretations of justice in the context of climate policies has been scarcely examined. To complement this gap, this paper researches two Citizens' Juries, organized in Finland, which discussed fairness of climate policies in the fields of transport and forest use. The study applies Q methodology to map jurors' subjective justice perceptions at the beginning and at the end of the juries. Changes in the perceptions are then examined to assess whether deliberation induces the acknowledgment of the divergent notions of justice. The findings indicate, firstly, that deliberative mini-publics can enhance consensus on vulnerabilities that should be considered in policy-making. Secondly, deliberative mini-publics can help to clarify the key conflicts in perceptions of justice, even when meta-consensus on the different perceptions would not be attained.

1 | Introduction

The urgency of climate change mitigation has been followed by calls for a just transition to a more sustainable society. Broadly defined, just transition implies that the burdens of climate change mitigation should not fall disproportionately on those most vulnerable to the changes (e.g., Kaljonen et al. 2021). Deliberative mini-publics (DMPs), such as Citizens' Juries and Citizens' Assemblies, have been regarded as a potential means to advance the legitimacy and justice of sustainability transitions through the inclusion of citizens' diverse viewpoints (e.g., Willis et al. 2022; Ross et al. 2021). In recent years, Europe has seen an

upsurge in national-level Climate Citizens' Assemblies, a number of which have been specifically charged with considering socially just ways to mitigate climate change (KNOCA 2022).

Scholars of DMPs argue that DMPs are well suited for dealing with complex environmental problems like climate change, since they foster reflection and deep cognitive processing, incorporate a wide array of views and grass-root level knowledge, and increase mutual understanding of the problem definition and its relevant aspects (Niemeyer 2013; Baber and Bartlett 2018; see also Niemeyer et al. 2023). However, defining what social justice in climate policy should mean can be considered a demanding

Using Q methodology, the article examines deliberative mini-publics' ability to produce meta-consensus on just climate policies.

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task. Normative accounts have pointed to, for example, the original position of equality, historical entitlements, impartiality, and capabilities as foundations of justice (Rawls 1972; Nozick 1974; Barry 1995; Nussbaum 2011). Empirical research, on the other hand, has demonstrated how an individual's assessment of a decision's fairness depends on the outcome's favorability for said individual (e.g., Esaiasson et al. 2019; Müller and Kals 2007; Werner and Marien 2022). Designing policies that are considered socially just by the public would thus require reconciling citizens' plural and possibly contradictory views of fairness.

Dryzek and Tanasoca (2021) argue that democratic deliberation is best suited for the moral work that is required to implement abstract justice principles in policy-making, since deliberation curbs self-interest and fosters epistemic competence. Climate Assemblies and Climate Juries provide one setting where citizens can exercise such moral weighing in the context of climate policies. In addition, there is evidence that DMPs help to structure and align individuals' positions on the discussed issue (Niemeyer and Dryzek 2007; List et al. 2013; Rad and Roy 2021; Niemeyer et al. 2023). Only a few studies to date, however, have observed how the plural subjective values, beliefs, and preferences related to justice develop in the course of deliberation.

The current study contributes to the literature by exploring DMP participants' perceptions about fairness in the context of climate policies. It starts by discussing individual-level justice perceptions and the possibilities to reconcile plural notions of justice through the concept of meta-consensus (Dryzek and Niemeyer 2006). The paper then proceeds to examine DMPs' capability to induce consensus or meta-consensus with data from two Climate Juries, organized in Finland: Uusimaa Traffic Jury and Lapland Forest Jury. In the analysis phase, the study utilizes Q methodology to explore the subjective justice perceptions held by participants prior to and after deliberation, after which it assesses changes in these perceptions from the perspective of meta-consensus. The results provide new empirical insights into DMPs' claimed benefits in climate policy-making and just transition.

2 | Theory: Reconciling Perceptions of Fairness in a Pluralist Society

Empirical studies have shown that the perceived fairness of a policy hinges on many factors and can vary depending on the policy context. In general, an outcome's favorability to oneself is an important predictor of a positive fairness assessment and decision acceptance (Müller and Kals 2007; Werner and Marien 2022; Esaiasson et al. 2019). Individuals also assess the fairness of an outcome in relation to what they expect to receive. When the reward a person gets meets their expectations, justice evaluations are higher (e.g., Park and Melamed 2016). However, being under-rewarded is considered more unjust than being over-rewarded (Park and Melamed 2016), indicating that inequality is seen as less problematic if one benefits from it.

Lab experiments have shown that individuals' support for climate change mitigation is affected by mitigation policies' expected distributional consequences (Cai et al. 2010; Svenningsen 2019). Further, differences in responsibility (i.e., historical emissions)

and capacity (i.e., ability to pay) have been shown to influence participants' decisions on fair burden sharing (Gampfer 2014; Klinsky et al. 2012; Anderson et al. 2017; Del Ponte et al. 2023), whereas vulnerability has been a less influential criterion (Gampfer 2014). In burden sharing, however, responsibility and capacity criteria are applied selectively, depending on whether the participant is proposing a cost allocation scheme or responding to one (Anderson et al. 2017). Moreover, Kriss et al. (2011) observed a strong self-serving bias (i.e., associating fairness with outcomes beneficial to oneself) in mitigation cost allocation.

Given individuals' propensity for self-serving selectivity in their fairness assessments, the idea that meaningful shared definitions of socially just policies could be found at the intersubjective level warrants skepticism. Scholars of deliberative democracy postulate, however, that this end can be achieved, and should be pursued, through democratic deliberation (Dryzek and Tanasoca 2021; Niemeyer 2013; Mercier and Landemore 2012). Dryzek and Tanasoca (2021, 48–49) note that when deliberators engage with issues of fairness discursively together, they need to appeal to reasons beyond mere self-interest in order to convince others of their stance. In the course of the process, self-interested preferences are “laundered,” or even transformed, becoming less partial (Dryzek and Tanasoca 2021, 48). Ideally, deliberating individuals would set aside their private interests, and align their discussion around “common good” instead (Mansbridge et al. 2010, 66–67).

Additionally, Dryzek and Tanasoca note that a diverse group of deliberators pools information and knowledge, which can help to understand how to attain the agreed policy goals in practice. Chambers (2018), too, asserts that the full potential of human reasoning is only realized in interaction with others, and notes that group deliberation can alleviate many known distortions of individual thought processes (see also Mercier and Landemore 2012; Himmelroos and Rapeli 2020; Himmelroos and Christensen 2020). In Chamber's words: “[H]umans are poor monadic reasoners but not poor group reasoners” (Chambers 2018, 37).

Early theories of deliberative democracy have advocated rationally motivated consensus and mutual understanding as ideal aims of deliberative discourse (Bächtiger et al. 2018). In this vein, the legitimacy of collective agreements is founded on a process of unconstrained and rational exchange of claims and justifications, whose final product is one that can be accepted by all those involved (Dryzek and Niemeyer 2006). Yet in deliberations about justice, the diverse values, beliefs, identities, and moral principles held by the subjects of a political community may be in tension with each other in such fundamental ways that seeking argument-based consensus becomes dubious. Mouffe (1999), for example, has argued that the pursuit of consensus falsely conceals the fundamentally conflictual nature of society. This, according to Mouffe, is detrimental for the constructive processing of differences between various social groups. Young (2002, 44), too, has stressed the importance of acknowledging differences on the basis that striving to find a “common good” might lead to uneasy issues being avoided in the discussion altogether. Young remarks that deliberating issues of fundamental conflict of interest should be expected to accentuate differences, not foster consensus.

As Dryzek and Niemeyer (2006, 637) note, though, even critics of the consensus approach indicate that some form of democratic communication is required to navigate societal pluralism. Elaborating on the role of self-interest in deliberation, Mansbridge et al. (2010) have posited that clarifying the nature of dissent and structuring disagreement may as well be worthwhile results of deliberation in situations where conflict of interest endures. Further, Landemore and Page (2015) have argued that consensual agreement may be preferred when the goal of deliberation is problem-solving, whereas in other situations a “positive dissensus” may better serve the ends of deliberation.

To specify how deliberation might facilitate the reconciliation of pluralism and consensus, Dryzek and Niemeyer (2006) have introduced the concept of meta-consensus. According to them, simple consensus can be divided into three constituents: normative consensus (consensus on predominant values), epistemic consensus (consensus on beliefs of policy impacts), and preference consensus (consensus on expressed policy preference). What discerns meta-consensus from simple consensus is that meta-consensus does not presuppose full agreement on the normative, epistemic, and preferential foundations of consensus. Instead, it implies merely the acknowledgement of the *legitimacy of different values* and *credibility of disputed beliefs*, and agreement on the *nature of contested choices*. Thus, consensus at the meta-level still allows plural values, beliefs, and interests to flourish at the simple level (Dryzek and Niemeyer 2006).

Niemeyer and Dryzek (2007) assert that meta-consensus, prompted by deliberation, assists decision-making by structuring preferences: Either the number of relevant decision options is reduced, or preferences become more single-peaked, reducing the possibility of cyclical majorities in voting (Niemeyer and Dryzek 2007, 505; List et al. 2013). Meta-consensus on norms, in turn, entails that deliberators acknowledge the legitimacy of the values others hold, even if they may not agree on the relative importance of those values. Finally, epistemic meta-consensus means that different epistemic claims, that is, beliefs of cause and effect, can be deemed credible.

According to Dryzek and Niemeyer (2006, 645), epistemic meta-consensus allows the parties of a dispute to steer their focus to joint problem-solving instead of discrediting each other's knowledge claims. Seeking meta-consensus, then, seems to align better with Young's views on the appropriate functions of deliberation in a pluralist society. Young writes:

If, on the other hand, [the participants] mutually acknowledge their differences, and thereby mutually acknowledge that cooperation between them requires aiming to make each understand the others across those differences, then they are more likely to maintain co-operation and occasionally arrive at rough-and-ready provisional agreement (Young 2002, 44).

Ideally, the normative, epistemic, and preferential perspectives comprising meta-consensus would be integrated into

deliberators' reasoning, to the benefit of a collective outcome that accurately reflects these perspectives as well as deliberators' positions regarding them (Niemeyer and Dryzek 2007). Research conducted in conjunction with DMPs has illustrated deliberation's merits in such collective will-formation. Observing a number of Deliberative Polls¹, List et al. (2013) find that participants' preferences' proximity to single-peakedness—allegedly a product of meta-consensus—is higher after deliberation than before it. Niemeyer et al. (2023) demonstrate how deliberation in mini-publics prompts participants to produce a shared framework of reference, which in turn enables a meaningful discussion of the best policy alternative. Johansson et al. (2022) show that when conditions for constructive communication are met, meta-consensus can even be achieved in intractable natural resource management conflicts.

Niemeyer's (2002) study of the Bloomfield Track Citizens' Jury shows that following deliberation, the effective number of choices regarding the future of the track was reduced from five to two—a change representing increased preference meta-consensus. Additionally, based on participant survey data, Niemeyer argues that deliberation enabled participants to base their outspoken policy preferences on other-regarding values more than before the Jury. This observation aligns with the idea of deliberation's “laundering” effect on self-interest (Dryzek and Tanasoca 2021).

Despite the growing number of DMPs commissioned to discuss the social justice of climate policies, few studies have documented the evolution of participants' fairness perceptions during these events. Schlosberg et al. (2017, 428–431) observe that deliberation reduced discriminatory perspectives and enforced concern for basic capabilities, when residents of Sydney deliberated the city's climate change adaptation plans. Analyzing a series of participatory planning events on local food systems, Pelletier et al. (1999) find, however, that deliberation reduced emphasis on social justice. The contradictory findings urge further inspection of justice perceptions.

Attaining shared ideas of justice implies that deliberators should develop some form of mutual understanding regarding norms and values. Therefore, the primary interest of this study is in the normative component of (meta-) consensus. However, the fairness valuations of individuals are also intertwined with personal preferences and beliefs about policy consequences (e.g., Cai et al. 2010). Thus, interpreting the developments in justice perceptions requires a holistic approach comprising all three elements of meta-consensus.

The first aim of the study is to explore the quality of participants' subjective positions before and after deliberation, for example, what kind of distributive principles are valued, or which policy features are regarded as most important for fairness. The second aim is to assess, based on the observed developments in justice perceptions, whether deliberation encourages a sense of consensus or meta-consensus on fairness. Understanding the points of agreement and disagreement in fairness valuations is vital for designing socially desirable climate policies (Albizua and Zografos 2014). Moreover, the literature suggests that deliberation enables individuals to construct a coherent, intersubjective

understanding of what constitutes fair climate policy. Even when agreement would not be found on the simple level, consensus at the meta-level (Dryzek and Niemeyer 2006) could be expected to emerge.

3 | Cases: Uusimaa Traffic Jury and Lapland Forest Jury

The data of the study comes from two Citizens' Juries, organized in Finland as part of a research project in 2022. At the time when the juries took place, Finland had recently adopted a new Climate Law, which set an ambitious target for carbon neutrality by 2035. Achieving this target required new emission reduction measures, as especially emission cuts in transport and agriculture had progressed slowly (Ministry of the Environment 2022). Moreover, there were signs that the carbon sink of forests, an important part of the government's carbon neutrality plan, was in decline (Statistics Finland 2022). Against this backdrop, the juries discussed the social justice of climate measures in two areas: transport and forest use.

The first of the two juries, Uusimaa Traffic Jury, took place in the densely populated Helsinki–Uusimaa region in April 2022. The second jury was organized in November 2022 and dealt with forest use in Lapland, the least populous and northernmost region in Finland. The two cases were selected on the basis that they represented demographically and geographically different regions in Finland. Both juries discussed mitigation policies that were topical and debated in the region, but also carried great significance for national climate policy. The cases thus provided two distinct contexts to observe the development of fairness perspectives within the broader frame of nationally relevant climate policies.

Uusimaa Traffic Jury was convened by the regional authority, Helsinki–Uusimaa Regional Council, in collaboration with the research team. The Regional Council had set a goal to reach carbon neutrality in the region by 2030 (i.e., even more ambitious than the national goal), but especially emissions from traffic had proven hard to cut. Suggestions to reduce private motoring, like the introduction of congestion charges, regularly sparked public debate. From the Traffic Jury, the Council hoped to get an informed citizen opinion on how to best advance and implement measures aiming at emission reductions in road traffic.

Traffic Jury's discussion revolved around 14 emission reduction measures drawn from the Regional Council's Climate Roadmap. The measures concerned developing local public transport, supporting the transition to electric cars, reducing vehicle mileage, and encouraging commutes by bike and foot. The Jury's task was to discuss the measures and to form a statement, responding to the following questions: What are the most important measures, from citizens' perspective, to curb emissions from road traffic, and how can they be implemented in a fair and acceptable way?

Traffic Jury met for four days over three consecutive weekends. The Jury consisted of 32 participants, selected through stratified random sampling from Uusimaa adult residents. The Jury

process was run by the research team and an independent lead facilitator, with other researchers and traffic specialists providing information to the Jurors throughout the process. For a detailed description of the Jury, see Saarikoski et al. (2023).

Similar to Traffic Jury, Lapland Forest Jury was convened by the regional authority, the Regional Council of Lapland. Forest Jury's topic was derived from the Council's Green Deal roadmap, and it linked to the Council's efforts to advance green transition in the region. The task of the jury was to formulate a common statement on the following question: How could Lapland's forests be used in a just and climate-smart way? The statement was to include the key facts, problems, and recommendations regarding just and climate-smart forest use in Lapland, as determined by the jurors. Unlike Traffic Jury, Forest Jury did not receive any predefined policy measures as a basis for their discussion. The topic could be considered challenging, since conflicts between different land use interests—for example, forest industry, reindeer herding, mining, and conservation—were recurrent in the region.

Forest Jury involved 33 participants, drawn from the region's adult population through stratified random sampling. The Jury convened on two weekends to question experts, learn, and deliberate over forest use, and to write a joint statement. Research team members guided the process and facilitated the discussions. The author acted as a small group facilitator in the Traffic Jury and as the lead facilitator in the Forest Jury.

4 | Data and Methods: Inspecting Justice Perceptions With Q Methodology

Instead of surveying participants about predefined definitions of justice, the aim was to discover jurors' own interpretations of the subject in a holistic manner. To achieve this end, the study utilized Q methodology, which is well suited for studying subjective interpretations of complex and contested topics such as fairness, and for identifying their underlying similarities and differences (Watts and Stenner 2012; see also Howard et al. 2016; Albuzia and Zografos 2014).

In a Q survey, individuals rank a set of statements or other items concerning an issue of interest (e.g., fairness of emission reduction measures) on a given scale, such as “agree most with - disagree most with.” Respondents place the statements on a predetermined distribution, shaped like an upended pyramid, where each end represents the extreme of the scale. The set of statements, called *concourse* in Q terminology, seeks to represent the diversity of perspectives present in the public discourse related to the issue. The concourse normally consists of 30–60 statements compiled from interviews, written statements, newspaper articles, or other appropriate sources. The compilation process can be either unstructured or guided by theory-based categories; however, the resulting set of statements should be representative in terms of the opinion domain (Watts and Stenner 2012; McKeown and Thomas 2013). The strength of Q methodology is that it allows the respondents to express their subjective understanding of the issue by sorting the various statements in relation to each other. Thus, each Q sort (i.e., a Q survey response) carries much more information than a set of

statements in a regular survey, where each statement is evaluated in isolation (Barry and Proops 1999, 344).

The aim of a multi-participant Q study is to identify latent trends in respondents' subjective viewpoints. In the data analysis phase, statements in each sort first receive numeric values based on their location on the distribution. The numeric Q sorts are then correlated, and centroid factor analysis (CFA) or principal component analysis (PCA) is performed to group respondents and to identify similarities in their Q sorts (Watts and Stenner 2012; McKeown and Thomas 2013).² Factors resulting from this analysis are "codifications of discourses" (Niemeyer 2002, 162), which are translated into interpretable results by compiling estimate Q sorts based on the factors. An estimate Q sort contains the same statements as participants' Q sorts, and it is constructed based on the weighed factor loadings of those participant Q sorts that are statistically significantly associated with the factor (Watts and Stenner 2012, 129–141). The estimate Q sorts represent "archetypes" of the data's latent viewpoints (Brown 1980, 262), rendered visible through the statement ordering. The number of viewpoints to extract from the data is defined by the analyst, based on statistical and, more importantly, theoretical considerations and the researcher's judgment (McKeown and Thomas 2013). The process involves extracting several factor solutions, comparing them with each other, and reviewing and interpreting them in the light of theory and previous knowledge (Brown 1980, 40–43).

The main interest of the analysis is the changes in the latent viewpoints before and after the Juries. While the study design does not allow for observing changes in policy preference rankings (like in List et al. 2013), it enables systematically exploring alterations in subjective interpretations of justice and identifying the viewpoints' distinguishing features.

The process of data collection started with compiling the Q sets, that is, the statements participants would be ranking. In Uusimaa Traffic Jury, the jurors were tasked to assess 14 predetermined policy measures, which were projected to have varying distributive impacts on the regions' residents. As the jurors' deliberations would focus on the outcomes of the measures, the Q survey aimed at capturing jurors' perceptions of distributive justice. Distributive justice concerns the principles according to which various goods or harms are distributed (e.g., Dietz and Atkinson 2010).

All statements were related to the emission reduction policies that the Jury would consider: reducing vehicle mileage, shifting away from fossil fuel cars, and increasing mobility by public transport, by bike, and by foot. Statements were collected primarily from the preparatory material of the Medium-Term Climate Change Policy Plan (Motiva Oy 2022), and were complemented with perspectives from the news media and a study by Kortetmäki and Järvelä (2021). The coverage of viewpoints was ensured by checking the collected statements against a list of distributional principles, identified from empirical climate justice studies. These included the polluter pays principle/causal responsibility, need/vulnerability, ability to pay, equal shares, respect of private property rights, and maximum utility/efficiency (Klinsky and Dowlatabadi 2009; Klinsky et al. 2012;

Dietz and Atkinson 2010; Rulleau et al. 2017; Gampfer 2014; Schleich et al. 2016).

The final list consisted of 36 statements, such as "*Subsidies for the purchase of electric cars should be targeted in particular at the poor*" or "*Reducing air pollution is a good reason to restrict private car use in cities.*" The full list of statements and a detailed description of the Q set design are outlined in Supporting Information S1. In the Q survey phase, participants were instructed to sort the statements according to how much they agreed or disagreed with them, on a scale of −4 (disagree most with) to 4 (agree most with). The jurors were not explicitly asked to review the statements in relation to fairness, but their justice perceptions would be implicit in their ordering of the different distributional principles. For sorting instructions and the sorting distribution, see Supporting Information S2.

In Lapland Forest Jury, aside from the topic, the agenda of deliberation was open. The Q set therefore aimed to incorporate a broad set of justice considerations. The point of departure was the three established tenets of environmental justice: distribution, procedures, and recognition (e.g., Schlosberg 2004). Procedural justice refers to the qualities of decision-making processes; their inclusive and exclusive features and power asymmetries. Justice as recognition entails that different social positions, cultural values, and forms of knowledge are acknowledged in the processes of distributing goods and harms (Schlosberg 2004). The Q set items were collected from a research report by the Nature Resources Institute of Finland (Aro et al. 2022), which discussed the tensions and trade-offs of sustainable forest use in Northern Finland. Additional perspectives were drawn from the news media and a research report mapping the conflicts of forest use in the Sámi home region (Peltonen et al. 2020). The items were classified according to the three aspects of justice to ensure thematic coverage.

Instead of normative statements, the Q set items in the Forest Jury described different qualities of forest use, such as "*Forests generate economic benefits for forest owners,*" "*Future generations can enjoy diverse forest nature,*" and "*Decisions regarding the use of forests are made quickly and smoothly.*" The final list of items contained 31 different qualities (Supporting Information S1). Participants were tasked to sort the items according to how significant they considered each quality to be for the fair use of forests. The scale ranged from Most meaningless (−4) to Most significant (4) (Supporting Information S2). Thus in Lapland Forest Jury, the Q sorts would explicitly represent jurors' subjective viewpoints of the most important features of just forest use.

In both juries, participants filled the Q survey at the beginning of the process, before any guided deliberation took place. The same Q survey was repeated at the end of the jury, after all other activities had finished. Participants who failed to fill either of the Q surveys according to the instructions were excluded from the analysis. In the case of Traffic Jury, 29 Q sorts were analyzed, and in Lapland Forest Jury, 28 sorts were included. Written informed consent to take part in the study was obtained from all participants before data gathering commenced.

Statistical analysis was carried out in R using the "qmethod" package by Zabala (2014). The analysis began by inspecting the

pre-deliberation Q sorts and interpreting the positions emerging from them. PCA with varimax rotation was used in factor extraction³. In Traffic Jury's case, four distinct viewpoints could be identified. In Forest Jury, the emerging positions were not as clear-cut, but four viewpoints could still be recognized (for details of factor extraction and factor solutions, see Supporting Information S3). After the number of factors was established based on the pre-deliberation Q sorts, a similar solution was extracted from the post-deliberation Q sorts, to map any shifts from the initial positions. If a similar solution did not provide statistically and qualitatively justifiable results, other factor solutions were probed. A corresponding approach has been used by Pelletier et al. (1999).

Factor interpretation utilized a sorting process advocated by Watts and Stenner (2012). In the process, items most characteristic of a viewpoint are identified according to the values they receive in the estimate Q sorts (i.e., factors). For each factor, first, those statements that received either a value of 4 or -4 were picked up. Second, the statements that a factor had ranked either higher or lower than all the other factors were identified. This sorting process resulted in a matrix that included the most defining statements for each factor. The viewpoints that the factors represented were then interpreted and named based on the defining statements. The initial positions and their shifts after the juries are described next.

5 | Results: Justice Perceptions and Their Evolution in the Two Juries

5.1 | Uusimaa Traffic Jury

While the question of distributive justice was not explicit in the Traffic Jury's sorting task, the statement orders of the four "archetype" positions reflected clearly distinguishable valuations of distributional justice. The positions were named as follows: (1) Pro Public Transport, (2) Status Quo, (3) Low Income and Rural, and (4) Urban. Statement rankings within each position are shown in Supporting Information S4.

The Pro Public Transport position was characterized by views according to which public transport should be prioritized over private car driving, and car drivers should bear the costs of the emissions they produce. The latter was illustrated by stark disagreement with the statement "*An increase in taxes on fossil fuels would be unfair*" (-4; disagree most with). Restrictions on driving were viewed positively (*Private car use may be restricted where good public transport connections are available*, 3), while it was also acknowledged that not all people have the possibility to choose whether they live along well-functioning public transport routes (-4). The position also signaled concern over the long-term impacts of emissions by strong agreement with the statement "*Emissions from transport need to be reduced so that future generations have a chance to live a good life*" (4; agree most with). In terms of distributional principles, the position laid emphasis on the polluter pays principle regardless of the level of income (*The rise in the price of fossil fuels should be compensated to low-income earners*, -2), but it also promoted creating conditions that encourage more sustainable transport choices (*In densely populated areas, the cost of parking may be high*, 2).

The Status Quo position represented the opposite of the Pro Public Transport position. It emphasized the right to private car driving (*A lifestyle that depends on private cars must also be possible in the future*, 4) and rejected any restrictions to it (e.g., *Private car use may be restricted where good public transport connections are available*, -2). Support for the statement "*In Finland, traffic cannot be required to achieve the same emission reductions as in other countries*" (4) distinguished the position from the other three viewpoints, as did disagreement with the statement "*Compared to many other countries, Finland can well afford to make reforms to reduce traffic emissions*" (-4). The position represented a mindset that is critical towards any reform and is not supportive of Finland's ambitious climate policies. The rejection of emission reductions implied alignment with the so-called grandfathering principle, where past high emissions justify higher emission entitlements in the future (Knight 2013).

Like the first position, the Low Income and Rural position agreed that emissions from traffic need to be reduced for the sake of future generations (4), and that private car driving can be restricted in areas with sufficient public transport (4), and disagreed that "*[t]hose living in the city center must have the same opportunities for private car use as those living in more sparsely populated municipalities*" (-4). However, the position also disagreed strongly with the statements "*For most people, reducing private car use would not cause undue inconvenience*" (-4). The viewpoint was distinguished from the others by a stronger concern for persons with low income (*The rise in the price of fossil fuels should be compensated to low-income earners*, 3). Thus, while being sympathetic to emission reductions, the viewpoint departed from the strong "polluter pays" preference of the first position. Instead, the position stressed the differences in mobility needs between densely and scarcely populated areas. Needs and ability to pay were highlighted as central criteria in resource distribution. The position could represent the viewpoint of a person in the countryside who is worried about carbon emissions but also about their own daily mobility amid rising fuel prices and lack of public transport services.

Finally, the Urban position can be said to represent the viewpoint of an affluent and climate conscious person living in the city. Together with the third position, it renders visible a tension in the spatial allocation of burdens. Compared to the other positions, the urban viewpoint was characterized by a less supportive stance towards low-income groups (*Congestion charges would be unfair to low-income motorists*, -2) and people living in sparsely populated areas (*The availability of electric car charging points is more important in sparsely populated areas than in cities*, -4). Also distinct from the other three, the Urban perspective strongly agreed that "*[t]he harms caused by reducing traffic emissions in Finland are small compared to the global harms of climate change*" (4). Correspondingly, it disagreed with Finland not reducing emissions as much as other countries. The position thus highlighted the importance of global justice over distributional concerns within Finland.

All the four positions had some common denominators, too: All of the views tended to agree that developing public transport is essential to ensure mobility to non-car owners, but none of the positions were willing to prioritize the mobility needs of youth and the elderly over the needs of the working-age people.

TABLE 1 | Description of positions before and after the Traffic Jury. Number in parentheses refers to the number of jurors whose Q sorts have a significant loading with the factor.

Positions before Traffic Jury	Positions after Traffic Jury
<i>Pro Public Transport</i> (7) Strong support for emission reductions, development of public transport, and polluter pays principle	<i>Pro Public Transport</i> (16)/ <i>Status Quo</i> (1) (bipolar position) Same as before the Jury
<i>Status Quo</i> (4 + 1 negative loading) Opposition to restrictions of private car driving, disputes the need for ambitious emission reductions in Finland	
<i>Low Income and Rural</i> (7) Concern not only over emissions but also over the needs of people with low income and those living in rural areas.	<i>Pro Private Cars</i> (12) Support for reducing emissions in a way that enables private car driving even in the future, concern over ability to pay
<i>Urban</i> (5) Emission reductions and global justice important, less concern over domestic distributional effects	

Furthermore, no single position was dominant at the start of the jury, if judged by the number of jurors who were closest to each position (i.e., their Q sorts loaded significantly to the factor; see Table 1). It should also be noted that five jurors were not distinctively close to any position (their Q sorts had no significant loading to any of the factors).

Now, did the four positions evolve towards the end of the Jury? Based on a corresponding four-factor solution elicited from the post-deliberation Q sorts, some changes occurred (Supporting Information S4). The Pro Public Transport position emerged largely unchanged also from the post-deliberation Q sorts, with nine jurors being closest to this position. This time, the positions' dislike of private motoring was even more pronounced (*A lifestyle that depends on private cars must also be possible in the future*, -4). The position also disagreed strongly with the statement "In Finland, traffic cannot be required to achieve the same emission reductions as in other countries" (-4), highlighting global responsibility.

The Status Quo viewpoint, too, was distinct in the post-deliberation perspectives, though with only three jurors loading significantly to this factor. Additionally, in the factor solution, the factor explained much less of the opinion variance (9.1%) than before the Jury (15.5%), which signaled diminishing significance of the viewpoint. The clearest change in the post-deliberation views was the absence of a distinct

Urban perspective, as none of the post-deliberation positions were consistently unsupportive of policies favoring rural areas' mobility needs. Rather, the two remaining positions were both mixtures of the "rural" and "urban" pre-deliberation positions, but based on their "archetype" Q sorts (Supporting Information S3) it was hard to give a meaningful interpretation to these factors. The two positions were also highly correlated (0.47), making it questionable whether they actually represented discrete viewpoints. Given this ambiguity, factor solutions with two, three and five factors were also analyzed. Out of these solutions, the two-factor solution produced most justifiable results both statistically and substantively. All jurors' Q sorts had a statistically significant loading on one or the other factor, and the solution explained a satisfactory amount of variance (46.8%).

The first of the two positions again reflected the Pro Public Transport view, with significant loadings of 16 jurors' Q sorts. In addition, one juror's Q sort loaded negatively to this factor, implying that their opinion was still closest to the status quo position.⁴ The second view, with 12 significantly loading Q sorts, could be termed as the Pro Private Cars position. However, rather than championing for unrestricted car driving like the pre-deliberation Status Quo viewpoint, the position emphasized adjusting car-dependent lifestyles so that they align with emission reductions. The position agreed with statements like "*Subsidies for the purchase of electric cars should be targeted in particular for people with low income*" (4) and "*In addition to electric cars, it is important to invest in biogas cars*" (4), and opposed the statement "*All the side effects caused by car driving can only be prevented by reducing private driving*" (-4)." It also supported compensating price increases in fossil fuels to those with low income (3), further highlighting the importance of ability to pay as a criterion for distribution. Table 1 summarizes the positions and their defining features before and after deliberation. Individual participants' movements between positions are tabled in Supporting Information S4.

Despite different emphasis on ability to pay and polluter pays principles, the key differences of the final two positions hardly revolved around any specific distribution rule. Rather, the ultimate question seemed to be what kind of mobility choices, and consequently lifestyles, the society should promote in sustainability transition. More than the stance toward emission reductions as such, the positions were distinguished by what the implications of emission reductions to mobility alternatives should be. The results imply that deliberation may have sharpened participants' positions regarding future modes of transport, with a clearer division for proponents of either public transport or private motoring. Cycling and walking, though, were themes with little division of opinions.

At the same time, changes in the positions demonstrate a heightened sensitivity to the plurality of distributive consequences that transport policies have. The reduced presence of the Status Quo perspective, for instance, suggests increased acknowledgment of the global harms of climate change. Some overlaps in the two remaining positions could be witnessed, too: Both positions agreed that public transport should be subsidized in areas where it is not profitable, and disagreed that biofuels would be a poor alternative to fossil fuels.

5.2 | Lapland Forest Jury

As mentioned in Section 4, the Forest Jury sorting task asked participants to sort the different items according to how significant they felt each to be for fair forest use. The Q sorts thus explicitly described jurors' subjective viewpoints of just forest use. The positions identified at the start of the Jury were called: (1) Environment First, (2) Local Economy, (3) Local Nature, and (4) Forest Owner's Rights. Full statement rankings of the positions can be found in Supporting Information S5.

The Environment First position laid emphasis on biodiversity, conservation, and climate change mitigation as foundations of fairness. The position ranked the sentences "Future generations can enjoy diverse forest nature" (4) and "The biodiversity of forest nature does not deteriorate" (4) as the most significant items. Economic impacts, in turn, were less meaningful, with, for example, the sentence "The livelihood of people dependent on the use of the forest is taken care of" receiving the second least significant rank -3. What the position found least significant for fairness, however, was quick decision-making (*Decisions regarding the use of forests are made quickly and smoothly*, -4) and preserving the status quo in forest use (*It is possible to use the forests in the same way as before*, -4). The item "Past mistakes in the use of forests are corrected" (2) was also ranked higher than in other positions, which further indicated a willingness to change the current *modus operandi* of forest use.

In contrast to the first position, the Local Economy View ranked financial benefit from the forests—both locally and nationally—as the most significant matter for justice (*Forests provide financial benefits to the people and businesses of the Lapland region*, 4; *Forests provide financial benefits to Finnish society*, 4). Employment (*The use of forests upholds employment*, 3) and financial benefit for forest owners (3) were also considered important. Distinct from the other positions, the Local Economy view ranked state and international steering among the least significant matters (*State action promotes the sustainable use of forests*, -3; *International agreements and commitments are followed in the use of forests*, -4). Biodiversity and nature's value as such were ranked lower than in other positions, too, but wood use to curb climate change received a high rank (*Wood obtained from forests is used to replace raw materials harmful to the climate*, 3).

The third position, the Local Nature view, was distinct from the first two positions in that it stressed forest landscape (*The forest landscape remains intact*, 4) and local people's rights as the most significant aspects of fair forest use (*Everyone who is affected by the use of forests in one way or another can influence the decisions*, 4; *The use of forests does not violate the indigenous rights of the Sámi people*, 3; *Residents can influence the use of forests in their neighborhood areas*, 2). The position could represent the viewpoint of a person who was concerned about the degradation of their nearby forests. In the factor solution, the factor containing the Local Nature view was defined by both positively and negatively loading Q sorts, that is, it was bipolar (Watts and Stenner 2012, 165). This meant that some of the five Q sorts, based on which the "archetypal" Q sort (Supporting Information S3) was built, had a strong negative correlation

with the factor. Correspondingly, the items that were ranked low in the Local Nature view ranked high in the negatively loading Q sorts.

Inspecting these low-ranking items revealed the fourth position, which was named as the Forest Owner's RLight position. In this position, statements highlighting forest owner's financial benefits and rights were deemed most significant for fairness (*The forest owner is compensated economically, if they cannot benefit from their forest financially*, -4; *Forests generate economic benefits for forest owners*, -4), as was the forest owner's decision-making power (*The forest owner can decide what to do with their forest* -3). The significance of financial gains in general was distinct in the position, too, but less than in the local economy position. Because of this overlap, a two-factor solution was also inspected as a possible best fit for the pre-deliberation data. However, results from the three-factor solution proved to be more meaningful, as they conveyed a more distinct set of positions.

The four positions differed slightly in terms of how they accentuated the different dimensions of justice—distribution, procedures, recognition—which framed the Q set. The Local Nature view highlighted procedural qualities as an important determinant of just forest use and was distinct in its recognition of the Sámi rights. The Forest Owner's Rights position, in turn, emphasized both procedures and specific distributional outcomes. The Local Economy and Environment First views also raised distributional outcomes as the most important measuring sticks of fairness, but the substance of distribution differed: In the former's case, it was economic gains; in the latter's, biodiversity and emission cuts.

Turning to the positions at the end of the Jury, some alterations could be witnessed (Supporting Information S5). The Environment First position exhibited only minor changes. As before deliberation, the position underlined the importance of securing biodiversity and mitigating climate change, and signaled a need to reform practices of forest use. Again, it gave high significance to correcting past mistakes in forest use (3) and state guidance for sustainable forest use (3). Economic gains were found even less significant than before the jury, but swift decision-making and preserving current forestry practices were still viewed as the least significant qualities.

As for the second position, the emphasis shifted from local economy to forest owner's rights. While forest owner's rights were a distinct viewpoint even before the jury, its significance had clearly risen after deliberation, with the number of jurors closest to the position increasing from three to seven. Forest owner's sovereign decision-making power (4), financial benefits (4) and financial compensation (3) were still among the most significant issues of fair forest use, whereas national economy's significance was somewhat reduced (*Forests provide financial benefits to Finnish society*, 0). The lowest rankings were given to tourism's preconditions (-4) and following international treaties (-4). In addition, biodiversity (-3), an intact forest landscape (-3), and the all-affected principle (*Everyone who is affected by the use of forests in one way or another can influence the decisions*, -3) also fell within the less significant aspects. Notably, the lowest ranking items were

TABLE 2 | Description of positions before and after the Lapland Forest Jury. Number in parentheses refers to the number of jurors whose Q sorts have a significant loading with the factor.

Positions before Forest Jury	Positions after Forest Jury
<p><i>Environment First</i> (12) Climate change mitigation and preserving biodiversity most important. Preserving current forestry practices, swift decision-making, and economic impacts less meaningful.</p> <p><i>Local Economy</i> (9) Forests' value for local and national economy most important. International treaties, state guidance, and equality in decision-making less meaningful.</p> <p><i>Local Nature</i> (2)/<i>Forest Owner's Rights</i> (3) (bipolar position, partial overlap with Local Economy position) Emphasis either on intact forest landscape, local democracy, and indigenous rights or forest owners' interests and economic value of forests.</p>	<p><i>Environment First</i> (14/17 in a two-factor solution) Same as before the Jury</p> <p><i>Forest Owner's Rights</i> (7/8 in two-factor solution) Most important to fairness are forest owner's economic rights and right to manage the forest as they see fit. International treaties, preconditions of tourism, and local nature less important.</p> <p><i>Local Economy</i> (3)/<i>Climate Gains</i> (2) (bipolar position; partial overlap with the Environment First) Emphasis either on forests' significance to national and local economy or to climate change mitigation and biodiversity.</p>

partly the same as those considered important in the Local Nature position before the jury. However, a position highlighting local nature and local democracy was no longer observable as such.

A viewpoint highlighting local economy was still present at the end of the jury in the third factor. Similar to the one before the Jury, it was distinguished by the high significance it gave to economic benefits at the societal and local level. The factor was also bipolar. Its other "end," which was named as the Climate Gains position, found as most significant the items that underlined forests' role in climate change mitigation (*Growing and protecting forests curbs climate change and its global harms*, -4; *Wood obtained from forests is used to replace raw materials harmful to the climate*, -4). The position also found biodiversity (-3) and forest nature's intrinsic value (-3) important. Within the third factor as a whole, then, the economic value of forests stood in contrast with their environmental value.

The Climate Gains position also had a considerable overlap with the Environment First view. Due to the observed overlap, a two-factor solution was also extracted from the data. Unsurprisingly, the bipolar factor was the one to dissolve in this solution, whereas the Environment First and Forest Owner's Rights positions persisted. These shifts indicate that during the deliberation, forest owner's private property rights became the definitive measuring stick to fairness, alongside environmental impacts. In addition, after deliberation, the item "*Growing and protecting forests curbs climate change and its global harms*" appeared as the one that distinguished the different positions the most, whereas before the Jury it did not appear in the top-10 of most distinguishing items. It is plausible that deliberating forests' role in climate change mitigation actually polarized the jurors on the topic. Perhaps deliberation made jurors more aware of the trade-offs in climate-smart forest use: Regulating forest use to protect carbon sinks necessarily entails restricting forest owners' power to decide over their forests. Awareness of this contradiction might explain why some jurors reassessed their priorities, when views of fair forest use were re-surveyed. Polarization, then, could also represent a clarification of the problem's nature, at least at the individual level.

The two final positions also had things in common, namely a concern over future generations' ability to enjoy forests. Further, the two-factor solution only explained 38.5% of the total variance in the post-deliberation Q sorts, and three of the jurors were not distinctively close to either of the two views. Positions before and after the Forest Jury are summarized in Table 2, and individual participants' closest positions before and after deliberation are presented in Supporting Information S5.

5.3 | Complementary Observations

To verify the interpretation of the Q methodological analysis, the results should be checked against other observations from the two Juries. While in-depth analysis of jury transcripts is outside of the current study's scope, some things can be noted based on the author's observations from the juries and their common statements. In the Traffic Jury, comments from the participants at the end of the jury corroborated findings of the subjective viewpoints' development. Several jurors living in urban areas noted that the Jury had disillusioned them when it came to public transport possibilities and mobility in the sparsely populated areas. The observation supported the notion of increased epistemic consensus resulting from deliberation. Participants may not have agreed on the most suitable path for road transport development in the future, but they did acknowledge the adverse effects that rapid shifts might have on some people.

In the case of Forest Jury, contrasting the Q results with the Jury's discussions and its statement (Supporting Information S6) provided an interesting vantage point to meta-consensus. In their discussions and the final statement, jurors emphasized the need to reconcile different forest use interests and highlighted the importance of involving all stakeholders in decision-making. This implies that jurors considered the different goals of forest use as legitimate, signaling normative meta-consensus. On the other hand, the position highlighting forest owner's sovereignty could also be seen to stand in contrast with an emphasis on equal participation opportunities. It leaves open the question of whether all participants genuinely shared the sentiment of participation rights' primacy and thus different forest uses' legitimacy. The

Jury's statement also addressed rather scarcely the forest owner's position in relation to the different forest uses and goals, suggesting that the perspective was not truly integrated in discussions during the statement's drafting⁵.

6 | Discussion and Conclusions: Results in the Light of Meta-Consensus

Results from the two juries give a twofold view of justice perceptions' evolution with regard to meta-consensus. In Traffic Jury, some shared notions developed. Most notably, the juxtaposition of rural and urban lifestyles waned in the course of the deliberations. Shifts in the post-deliberation positions suggest an epistemic consensus over the risk that drastic limitations compromise rural dwellers' mobility needs. In other words, rural populations' greater vulnerability to changes targeting private car use was acknowledged. This is notable, since at the individual level vulnerability has been observed to affect burden-sharing decisions less than other distribution principles (Gampfer 2014). The finding also aligns with the results of Schlosberg et al. (2017) who witnessed a focus on vulnerability in city residents' deliberations on climate change adaptation.

Further, as opposed to the pre-deliberation Status Quo viewpoint, the need to reduce emissions was reflected in both of the main positions post-deliberation. This suggests a sense of agreement over the importance of climate change mitigation. The overarching notions of differentiated mobility needs and the importance of emission reductions seem to have facilitated a meta-consensus over two competing ideas of the future mode of transport: one based on public transport and one aimed at low-emission private motoring. Correspondingly, the two positions diverged in their emphasis on either the polluter pays principle or ability to pay and need as the primary basis of distributive justice.

While the viewpoints reflect different normative ideas of fair traffic policy in the age of climate change, they may simultaneously pertain to personal preferences and transport habits. Of those jurors whose Q sorts defined the Pro Public Transport view, only one third reported private car driving as their primary mode of transport. For the Pro Private Cars view, the numbers were reversed. Based on the Q sorts only, however, it is not possible to establish what kind of things were factored into jurors' reasoning during the Q survey.

In Forest Jury, in turn, the results suggest a more pronounced differentiation of what emerged as the two key concerns of just forest use: environmental goals and forest owners' private property rights. Contrasting the analysis results with the Forest Jury's final statement challenges the presumption that a normative meta-consensus would have formed on the two perceptions' equal legitimacy (cf. Dryzek and Niemeyer 2006). The changes in Q sorts' correlations in the two juries reinforce the observation of distinct developments: In Traffic Jury, the mean of jurors' Q sorts' pairwise correlations increased, whereas in Forest Jury it decreased.⁶ The divergent developments could be explained by the nature of the conflict inherent in each topic. In traffic policy, alternative policy trajectories can, and often do, coexist, whereas steering forest use towards specific environmental

goals inevitably limits forest owners' power over their forests. Forest Jury's case, then, meets Young's (2002) expectation of deliberation accentuating differences in fundamental conflicts of interest, rather than promoting consensus.

Still, the positions at the end of Forest Jury also represent a clarification of the ultimate trade-offs in forest use: It was forest owner's rights and gains, instead of economic gains in general, which emerged as the defining feature of the second position (although local economy was still perceived significant within the third position). Again, looking at the background information of individual jurors one may speculate whether there is a link between outcome favorability and fairness perceptions. While a juror's forest ownership as such was not strongly associated with closeness to the forest owner's rights position, receiving financial gains from forests was⁷. On the other hand, it is easier to support major reforms in forest use (cf. Environment First position), when one's own income is not at stake.

Reflecting back on the "laundering effect of deliberation," suggested by Dryzek and Tanasoca (2021), discussions in the Traffic Jury seem to have prompted more other-regarding assessments of traffic policies at the subjective level. As for the Forest Jury, the statement text suggests that deliberation moderated most vocal arguments in favor of forest owners' private interests at the intersubjective level. At the individual level, however, a notion of private property rights' primacy persisted. These Forest Jury observations highlight a fundamental conflict between private and public interests in forest policy. The results suggest that in such deeply divisive questions, four days of deliberation is hardly enough to reconcile individual perceptions of fairness.

An additional observation of both juries was that the most persistent positions were those which pointed to the biggest transformation in current policies. The Pro Public Transport and Environment First positions persevered, when alterations happened in other positions. This indicates that many jurors had established climate change mitigation in itself as an important component of fairness, and deliberation did not alter this sentiment. Yet, while the overall changes may seem modest at the outset, it should be noted that they reflect shifts in jurors' subjective interpretations of the issues as a whole, not of isolated statements. The results thus demonstrate how deliberation can transform individual perspectives even in themes as complex as fairness.

Some limitations of the study should be noted. A deficit in the Uusimaa Traffic Jury's case was that participants were not explicitly asked to review the statements in relation to justice. Therefore, jurors' Q sorts can be interpreted as expressions of fairness perceptions only with reservations. In addition, usually Q surveys are accompanied by interviews with the survey participants to gain a more sophisticated view of their interpretation of the subject. Within the timeframe of the juries, however, interviewing was not possible. As the interpretations of the factors could not be compared with interview data, the results inevitably mask some of the nuances related to the different viewpoints.

The observed changes in subjective justice perceptions lead to two conclusions regarding DMPs' benefits in just transition.

Firstly, while DMPs may not eradicate individuals' self-serving views of fairness, they can foster epistemic consensus on policy consequences, leading to more aligned views on vulnerabilities that should be considered in climate policy-making. Secondly, DMPs can clarify the key conflicts of justice considerations. Even when this clarification would not result in meta-consensus among participants, it could steer focus to devising climate policies that take into account citizens' most acute concerns of fairness.

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Conflicts of Interest

The author declares no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Endnotes

¹ See Fishkin (2018).

² Both factoring techniques are used by Q methodologists, and debate persists over the preferred method. Proponents of CFA point to the greater freedom it allows for the researcher in terms of exploring theoretically justifiable factor solutions, whereas PCA is preferred because it provides a sound mathematical criterion for component extraction (Ramlo 2017; Dean 2016, 65–66).

³ I will refer to the extracted components and the resulting estimate Q sorts as factors to follow the common language of Q methodological studies (e.g., Howard et al. 2016), although principal components are not factors in the conceptual sense (Watts and Stenner 2012).

⁴ Factors with both positively and negatively loading Q sorts are called bipolar factors (Watts and Stenner 2012, 165).

⁵ The recommendations of the statement, however, were unanimously adopted by the jurors.

⁶ In Traffic Jury, the mean correlation increased from 0.217 to 0.244; in Forest Jury, the mean correlation decreased from 0.161 to 0.124 (Pearson correlation coefficient, scale: –1 to 1). Correlations increased in Traffic Jury and decreased in Forest Jury even in absolute terms, that is, when negative correlations were factored in.

⁷ Four out of five forest-owning jurors, who reported that forests had financial relevance for them, loaded significantly to the forest owner's rights position.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.