Analysis

Pluralising climate change solutions? Views held and voiced by participants at the international climate change negotiations

Naghmeh Nasiritousi a,⁎, Mattias Hjerpe a, Katarina Buhr a,b

⁎ Corresponding author at: Department of Thematic Studies: Water and Environmental Studies, Centre for Climate Science and Policy Research, Linköping University, Campus Norrköping, SE-601 74 Norrköping, Sweden. Tel.: +46 11 36 34 97.
E-mail addresses: naghmeh.nasiritousi@liu.se (N. Nasiritousi), mattias.hjerpe@liu.se (M. Hjerpe), katarina.buhr@IVL.se (K. Buhr).

a Department of Thematic Studies: Water and Environmental Studies, Centre for Climate Science and Policy Research, Linköping University, Sweden
b IVL Swedish Environmental Research Institute, P.O. Box 210 60, SE-100 31 Stockholm, Sweden

1. Introduction

Climate change is an area that is fraught with normative contestation on the appropriate modes of solutions. One fault line has been between proponents of market solutions and those favouring government regulations. Other discussions include the role of technological innovations, lifestyle changes and new economic models (Dryzek and Stevenson, 2011). A major challenge for climate change governance is therefore how to integrate diverse interests and perspectives in a legitimate and accountable manner in global norm-setting (Biermann and Gupta, 2011; Spagnulo, 2011; Steffek and Hahn, 2010). As the intergovernmental negotiations on climate change have stalled in recent years, there has been a growing realisation that a range of solutions and the involvement of multiple actors are necessary to tackle climate change (e.g. Blok et al., 2012). In this context, the involvement of non-state actors in offering and implementing solutions has been recognised (Nasiritousi et al., 2014).

Non-state actors are a diverse set of actors that are transforming the international system by participating in governance functions at different levels. Despite often lacking an official role in the international political system, non-state actors can through processes of cooperation and contestation shape how issues are framed and acted upon (Nye, 1990; Sikkink, 2002). In particular, the participation of non-state actors in multilateral cooperation has been suggested as a way of reducing the democratic deficit that international rule-making is perceived to suffer from (Biermann and Gupta, 2011). Some scholars even view their participation as a basis for global deliberative democracy as they can contribute to voicing plural discourses and offer alternative perspectives to states (Dryzek and Stevenson, 2011; Nanz and Steffek, 2005; Sikkink, 2002).

However, concerns have been raised that non-state actors participating in global politics act as elitist interest groups that lobby at the international level (Holmes, 2011; Swyngedouw, 2005). A related concern is whether the active non-state actors represent already strong and established interests or if they also bring forth marginalised voices, i.e. whether they reinforce mainstream views or contribute with progressive ideas (Hjerpe and Buhr, 2014; Dryzek and Stevenson, 2011; Nordang Uhre, 2013). The pertinent question of what views non-state actors represent has important implications for the thesis that non-state actors in fact contribute to democratising global governance, and thus requires empirical investigation.

To examine whether non-state actors represent and voice plural perspectives in international affairs, we focus on the multilateral climate change negotiations under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC...
constitutes an important meeting point of non-state actors from different geographical locations interested in a wide range of issues related to climate change (Hjørne and Linnér, 2010; Depledge, 2005; Nasiritoussi and Linnér, 2014; Schroeder and Lovell, 2012). This makes it a rewarding empirical setting for exploring the democratic potential of non-state actors, e.g. environmental NGOs, business groups, research organisations, intergovernmental organisations, and indigenous peoples organisations. With non-state actors at times outnumbering state party participants, scholars have sought to understand their roles in the climate change conferences (Betsill, 2008; Lovell, 2007; Nasiritoussi and Linnér, 2014; Newell, 2000). As some aim to influence the negotiations, it is of interest to understand what opinions they represent. Nevertheless, few have sought to systematically analyse what views non-state actors hold and voice. While official participant lists reveal that they come from diverse geographical and epistemic origins, participants’ views with respect to general discourses and preferred solutions to the climate change problem have not received adequate scholarly attention. We suggest that an empirical investigation of participants’ views further our understanding of the extent to which non-state actors contribute to pluralising global governance by offering alternative perspectives to states.

This paper aims to empirically explore views held and voiced by state and a range of non-state actors on how climate change should be addressed at two recent Conference of Parties (COP) to the UNFCCC. After reviewing the literature on the democratic potential of non-state actors in global governance, we analyse results from a questionnaire handed out to participants at COP-17 in Durban (2011) and COP-18 in Doha (2012). We also perform a content analysis of abstracts of side-events arranged at the COPs in 2009–2012. The paper thereby empirically assesses differences of opinion between states and groups of non-state actors on effective climate change solutions, and examines to what extent these solutions are voiced by conference participants hosting side-events.

2. Democratic Implications of Non-State Actor Participation

Globalisation processes have given rise to several governance challenges for states, not least the need to coordinate actions that have significant impacts beyond sovereign jurisdictions (Cerny, 2010). One way in which states have sought to tackle global problems, such as climate change, is to delegate responsibility to intergovernmental organisations (IGOs). These have, however, been criticised on the grounds of deficient accountability and democratic legitimacy (Haas, 2004). While more states are democratising, the growing importance of IGOs for international rule-making means that many decisions are taken with a weak chain of electoral accountability. Thus, the traditional liberal models of democracy may not provide adequate democratic appeal in an age of globalisation (Scholte, 2002).

The increasing participation of non-state actors in the work of IGOs, it has been argued, could provide a remedy to the democratic deficit (Dingwerth, 2007; Scholte, 2004; Steffek and Nanz, 2008; Tallberg and Uhlin, 2011). This argument does not remain uncontested, however. Critics argue that non-state actors may subvert existing democratic processes and may themselves be undemocratic (Anderson and Rieff 2005; Brühl, 2010; Steffek and Hahn, 2010). Nevertheless, amongst scholars who believe that global democracy is possible, two ideal-types to democratic governance perceive a role for non-state actors in contributing to democratising global governance: global stakeholder democracy and transnational deliberative democracy (Bäckstrand, 2011). While agreeing on the importance of accountability, participation, and transparency, they differ in their descriptions of how global democracy can be achieved. Global stakeholder democracy focuses on institutionalising the participation of relevant stakeholders in decision-making (Macdonald, 2008). Transnational deliberative democracy, on the other hand, stresses the importance of public spheres of deliberation that allow multiple perspectives to be considered before decisions are made (Dryzek, 2009; Dryzek and Stevenson, 2011; Nanz and Steffek, 2005; Smith and Brassett, 2008).

In other words, while global stakeholder democracy emphasises the importance of including relevant stakeholders in order to give voice to those affected by decisions, the transnational deliberative democracy models that promote discursive democracy instead speak of open and inclusive discursive space (Stevenson and Dryzek, 2012). One reason for why the emphasis is not placed on the inclusion of stakeholders in the latter view is because many global issues affect a vast number of stakeholders, since global decisions can have significant impacts on people’s lives. Climate change is an illuminating example of an issue where almost anyone could be considered a stakeholder. Discursive democracy therefore suggests that the physical presence of all stakeholders is not key, but instead requires the inclusion of a plurality of perspectives so that many views can be considered (Dryzek and Stevenson, 2011).

This conception of discursive democracy is not unproblematic however. While it has been argued that plural perspectives should be represented and channelled into decision-making for enhancing democratic legitimacy (Dryzek and Stevenson, 2011), the relative weight given to the perspectives may vary. Questions have been raised regarding whether mainstream perspectives should be given equal weight as marginalised perspectives, or whether relative weights should be given to perspectives that reflect their underlying support amongst the public (ibid). A related question is whether it is possible to decouple the agents participating in global forums from the perspectives voiced. According to Holmes (2011: 3), “Struggles in environmental politics are battles to assert discursive hegemony: to ensure that one’s own storyline is taken to be the authoritative, accepted version, forming the basis for policy.” This implies that particular discourses or perspectives may be tied to particular actors.

A pertinent question in establishing the democratic effects of greater non-state actor participation is thus whether these actors are best described through a De Tocquevillian or a Gramscian approach. The former views civil society actors as a democratising force assuming them to facilitate discourse and interest articulation and thereby improve representation. The latter views civil society actors as reproducing existing patterns of power and political contestation, thereby simply adding to struggles that already occur in the political sphere (Clarke, 1998). The proliferation of non-state actors has often been described according to the De Tocquevillian perspective. However, several studies have questioned the rosy picture of non-state actors and call for more empirical research into their nature and activities (Bexell et al., 2010; Steffek and Hahn, 2010). Issues that have not received adequate scrutiny are whether non-state actors contribute to pluralising views and the relative weight of the perspectives that they voice, which we explore below in the context of climate change.

3. Non-State Actor Participation in the UNFCCC

The international climate change negotiations under the UNFCCC have in recent years turned into ‘mega-conferences’ that annually attract thousands of participants. Because these negotiations draw the largest non-state actor interest amongst all international environmental agreements and because such a broad range of issues are discussed, it represents a good case for studying non-state actor views. The relative openness of the climate change regime to non-state actor participation (Nasiritoussi and Linnér, 2014) provides space to non-state actors to play a number of roles, such as information-sharing, capacity building and implementation, and rule-setting (Andonova et al., 2009; Nasiritoussi et al., 2014). Therefore, if non-state actors contribute to democratising global governance, the international climate change conferences would be the place to study its effects.

According to Dryzek and Stevenson (2011), the international climate change conferences contribute to a model for global democracy. Their study of deliberative practices at the UNFCCC concludes that
the elements of a deliberative system can be discerned, even if only in putative or compromised form" (Dryzek and Stevenson, 2011, pp. 1873). Their study provides a first assessment of climate discourses voiced at climate change side-events. They conclude that the range of perspectives, some of which are critical to mainstream orientations, "is one indication of vibrant public space" (Dryzek and Stevenson, 2011, pp.1869). Their conclusions however do not offer a quantification of how pronounced the different perspectives are and their analysis is built on data from one year (2009).

According to the Gramscian view we should not only be concerned about whether all perspectives are heard but also pay attention to their relative weight. How do we know that some perspectives do not receive disproportionate space compared to others so as to undermine democratic legitimacy? Recent studies have documented that radical environmental ideas (Dryzek and Stevenson, 2011) and topics such as fossil fuels and heavily CO₂-emitting industries (Hjerpe and Buhr, 2014) were largely absent from the debate in official UNFCCC side-events. Moreover, Nordang Uhre (2013) concluded a strong numerical dominance of UNFCCC observer organisations from Europe and North America. This literature suggests that some perspectives may remain marginalised despite the participation of a significant number of non-state actors in intergovernmental proceedings, perhaps as a result of marginalised groups being less organised, which is more in line with the Gramscian than the De Tocquevillian approach.

In this paper, we argue that an empirical investigation of views found in the negotiations furthers our understanding of the extent to which non-state actors contribute to democratising global governance. Specifically, we suggest that it is important to study the relative weight of views to establish not only to what extent discursive heterogeneity exists but also whether the perspectives voiced match the level of preference held for those perspectives.

We do this by studying views on broad policy measures to tackle climate change effectively amongst participants involved in climate change governance. Recurrent discussions in the climate change negotiations concern the role of government action (such as regulations and subsidies), market mechanisms (such as carbon markets), technological innovation (such as renewable energy), new economic models (such as low-emission development pathways), and lifestyle changes (such as education and sustainable consumption and production) (e.g. ISD, 2013). In this paper we ask: to what extent are these solutions favoured by different actors and (how) do non-state actors contribute to the voicing of plural perspectives on effective solutions to climate change?

Specifically, we first consider the degree of diversity of views held amongst different actors at the international climate change conferences on the issue of most effective solutions to climate change. Second, we consider the degree of diversity of views voiced by examining the modes of solutions propagated by a range of actors. This allows us to assess both to what extent views amongst different participants diverge depending on their primary role at the conference and whether the views voiced reflect the diversity of views held. In other words, we examine whether the supply of perspectives on climate change solutions voiced corresponds to the demand for these solutions by participants at the UNFCCC side-events.

The focus on views held and voiced in this study is based on consideration for the impact on democratic quality that non-state actors can make without being dependent on the actions of states. Nanz and Steffek (2005) have developed four criteria for evaluating the democratic quality of deliberative practices: “access to information and to deliberative settings, the transparency of the policy process, responsiveness to concerns voiced by non-state actors and the inclusion of all relevant concerns into deliberation.” While the first three largely depend on the institutional context and often cannot be determined by non-state actor agency, the latter can be affected by non-state actors through fuelling debates and considering relevant perspectives on different issues. Accordingly, non-state actors’ submissions of alternative arguments can contribute to democratic practices. Diversity of views is therefore an important criterion for democratic quality.

This article suggests that while the variety of perspectives represented by both governments and non-state actors at the intergovernmental negotiations contributes to the pluralisation of climate change governance, it does not necessarily contribute to its democratisation. According to Cerný (2010: 20) “pluralisation is not a proxy for true democratisation in the way it has traditionally been depicted, and it can morph into nondemocratic or only pseudodemocratic forms too.” In particular, issues of representativeness of actors and the views voiced, and the extent to which particular perspectives dominate the formal decision-making arena, can hamper non-state actors’ democratic potential. While we do not explicitly address the representativeness of actors or look for solution modes in the official texts of the UNFCCC, our focus on both the views held and voiced allows us to compare congruence between preferences for solutions and the level of discussion of those solutions in an international setting. Moreover, we examine whether the views of non-state actors significantly differ from that of state actors to counterbalance dominant perspectives as in the De Tocquevillian approach or whether they reinforce existing perspectives as in the Gramscian approach.

The public space that will be the focus of the study is the official side-events of the UNFCCC. Side-events attract a diverse set of actors that have an interest in the climate change issue and are a forum for non-state actors to voice their proposals and concerns (Hjerpe and Linnér, 2010; Lovell, 2007; Schroeder and Lovell, 2012). Applications for organising side-events have risen to the point that demand for timeslots outstrips supply and in recent years the UNFCCC Secretariat have allocated side-events based on a set of selection criteria (UNFCCC, 2013). The participation of non-state actors at side-events has contributed to raising issues that have later found their way onto the agenda of the negotiations. For example, ideas vented at side-events on issues like adaptation to climate change and Reducing Emissions from Deforestation and Forest Degradation (REDD) have contributed to raising their status in the negotiations.

This paper therefore conducts a quantitative study to explore the diversity of views held and voiced at recent side-events of the UNFCCC COPs. The quantification of views amongst state and non-state actors allows us to analyse whether the pluralisation of actors has led to pluralisation of perspectives in the public space, and whether there is discursive diversity or discursive hegemony on solutions to climate change. In order to examine the spectrum of views held and voiced by participants at side-events, we employ a two-pronged approach, as described in the next section.

4. Data and Measures

In order to provide an empirical account of discursive diversity and to make the material manageable, we have delimited the study to one specific topic, namely solutions to climate change. The views held and voiced at the side-events of the UNFCCC are gauged by a) a survey measuring the preferences of different categories of non-state and state representatives in the intergovernmental negotiations on climate change on the solutions they deem necessary for effectively tackling the climate change issue and b) a quantitative content analysis of the extent to which these solutions are mentioned in the abstracts of official side-events.

To capture the degree of diversity of views held amongst different actors involved in climate change governance, we retrieve the preferences on five primary types of solutions from responses to a questionnaire. The questionnaire surveyed participants in 28 official side-events during COP-17 and COP-18. The questionnaires produced a total of 834 responses. The side-events targeted for this study were chosen based on criteria to ensure balance in the types of organisers and the topics of the side-events. The self-administered surveys were distributed to participants as they entered the side-event room and
were collected when they left the room. The questionnaire has been collected at more than 100 side-events since COP-13 in Bali (Hjerpe and Linnér, 2010).

The broad policy measures used to gauge the views of participants on the most effective solutions to climate change were chosen based on a categorisation of solutions proposed at the UNFCCC (e.g. ISID, 2013) and in the Intergovernmental Panel on Climate Change (IPCC) reports (e.g. Metz et al., 2007). The question reads: “To what extent do you agree with each of these statements? Indicate on a scale of 1–7 how each statement corresponds with your view: (1) means disagree strongly and (7) agree strongly. Climate change is most effectively tackled through: a) Technological innovations, b) Market mechanisms, c) Government regulation, d) New economic models valuing sustainability, e) Lifestyle changes.” This question is therefore designed to capture participants’ views on the most common types of solutions proposed to fight climate change. We conducted two-sample Student’s t-tests assuming equal variances to examine whether there were significant differences between the answers for the two years of the questionnaire, but found no such significant differences except for the question of lifestyle changes (p = 0.047). This difference is likely to stem from the change in the question wording (see footnote 2), producing a slightly higher mean for the lifestyle changes option at COP-18 (5.55) compared to COP-17 (5.31). With the differences being small, we decided to pool the data from the two years.

To explore whether the answers are dependent on the type of respondent, Pearson’s chi-squared test was used. Using this test we examine whether types of actors differ in the frequency with which they report that they agree with a particular solution to climate change. Because the data is skewed towards agreement, the data needs to be transformed before the test is undertaken. Therefore the responses are collapsed into two categories: Agreement (responses 5–7 on the Likert scale) and Disagreement or Neither agree/disagree (responses 1–4 on the Likert scale). For the same reason, categories of primary roles with few respondents (media, indigenous peoples, and trade unions) are placed in the ‘Other’ category.

To capture the degree of diversity of views voiced amongst different actors involved in climate change governance, we analyse material from a database that has qualitatively coded all abstracts for side-events arranged at COPs 15–18. We measure to what extent these solutions are explicitly referred to in the abstracts as an indication of them being discussed at the official side-events. This data enables us to explore what solutions to climate change are most frequently discussed by state and non-state actors in close proximity to the intergovernmental negotiations. The analysis was first carried out for COP-17 and 18 to provide comparability with the questionnaire data, and then repeated for the previous two COPs (COP-15 in Copenhagen 2009 and COP-16 in Cancun 2010) to expand the timeline and reduce the impact of potential differences over time. These may result from the negotiations focusing on certain topics at different times or the COPs being held at different locations, thereby attracting particular groups of participants.

On average the 959 side-event abstracts contain about 45 words each. While the limited number of words obviously delimits the possibilities of a more elaborate content analysis, the abstracts are often very informative as they are the primary means through which the side-event-host advertises the event to prospective attendees. For each mode of solutions category we iteratively generated a set of keywords, which was then used in a quantitative search. We selected and constructed new categories that corresponded to the five solution modes by using sets of search terms outlined in the Appendix A. We first selected similar search terms as in the wording of the survey question and then, after having read the side-event abstracts containing these terms, added other terms that were found in the abstracts. For the category “New economic models” we decided to include two sub-categories: one that explicitly related to greener or less fossil-intensive economies or societies and one that focused on a more fundamentally transformative approach captured by reference to rights and justice. This is intended to capture values and ideas that emphasise alternative ways to organise society. This distinction is made based on the current discussions on green growth, where one model is more rooted in current economic models and another emphasises that transformational change is needed to achieve sustainability, including issues of rights and equity (Dryzek and Stevenson, 2011; Hoffman, 2011). The coding itself does not reveal in what way the different solution modes were discussed, i.e. whether the solutions were discussed in a favourable or a critical light. Rather, the data only presents what issues were discussed and by whom. The entire abstracts were read in order to assess in what way the solutions were addressed.

Unlike Dryzek and Stevenson (2011) we also include the views voiced by state actors at side-events to offer a reference point against which we can compare the views of non-state actors. The side-event organisers were thus categorised into the following categories: government, public organisation (agencies, initiatives), hybrid (organisations with state and non-state members), intergovernmental organisations, business and industry organisations, environmental NGOs, research organisations (e.g. universities, institutes, think tanks), and other NGOs (e.g. development NGOs and faith organisations). Both datasets thus contain information on actor types, categorised in a broad sense, allowing us to analyse similarities and differences across actor groups. Thereby we can assess whether non-state actors in fact hold different preferences to government representatives and whether observers contribute to broadening perspectives on solutions.

5. Results and Discussion

5.1. Views Held on Modes of Solutions

The results from the questionnaires show that participants generally agree that all modes of solutions – Technological innovations, Market mechanisms, Government regulation, New economic models valuing sustainability, and Lifestyle changes – are important for tackling climate change. Fig. 1 shows the overall distribution of responses for each mode of solution for the COP-17 and 18 pooled data.

From Fig. 1, we can see that while all of the proposed solutions receive a relatively high level of recognition, there are differences in perceptions of their overall degree of effectiveness. Lifestyle changes, New economic models and Technological innovations all have a mode of 7, indicating perceptions of high effectiveness. In contrast, Market mechanisms has the lowest mean and mode, implying relatively little trust in its effectiveness compared with the other four modes of solutions. Government regulation has the highest mean and lowest standard deviations, with the mode being 6, and very few respondents indicating disagreement, implying perceptions of relatively high effectiveness as a tool to tackle climate change. It also indicates that governments are expected to take the lead on climate change through regulation while there is greater disagreement about the role of market mechanisms. This finding makes sense given the high share of COP-participants that are actively involved in regulatory processes at intergovernmental, national or subnational levels.

Yet more interesting is whether opinions diverge between different groups of actors and between different regions. Table 1 shows a cross-tabulation of solutions favoured by different actor types.

Before turning to the results of the chi-squared test, we note that negotiators expressed that climate change is most effectively tackled through New economic models valuing sustainability (agreement 73.6%), national governments, local governments, and intergovernmental organisations recognised Technological innovations (79.6%, 83.5% and

---

2 At COP-17, the last option read “Lifestyle changes amongst everyone but the poorest”, but was changed to simply “Lifestyle changes” for the COP-18 questionnaire because of the possibility of misinterpreting the wording.

3 We verified the results by grouping the answers in alternative categories and obtained corresponding results in the chi-squared tests.
43.1% agree/disagree 47.9% disagree

**Fig. 1.** Frequency distribution of responses to survey question on most effective climate change solutions. Legend: for each mode of solution the importance is measured on a scale from 1 (respondents disagree strongly) to 7 (respondents agree strongly). The share of ‘1’ responses is displayed in deep red to the right in the bar while the share of ‘7’ responses is displayed in deep green to the left. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.).

Table 1
Cross-tabulation of responses to survey question on most effective climate change solutions by actor type.

<table>
<thead>
<tr>
<th>Actor type</th>
<th>Technological innovations</th>
<th>Market mechanisms</th>
<th>Government regulation</th>
<th>New economic model</th>
<th>Lifestyle changes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagreement or neither</td>
<td>Agreement</td>
<td>Disagreement or neither</td>
<td>Agreement</td>
<td>Disagreement or neither</td>
</tr>
<tr>
<td>Negotiator</td>
<td>27.0%</td>
<td>73.0%</td>
<td>52.1%</td>
<td>47.9%</td>
<td>31.9%</td>
</tr>
<tr>
<td>National government</td>
<td>20.4%</td>
<td>79.6%</td>
<td>37.9%</td>
<td>62.1%</td>
<td>20.6%</td>
</tr>
<tr>
<td>Local government</td>
<td>16.1%</td>
<td>83.9%</td>
<td>51.6%</td>
<td>48.4%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Intergovernmental organisation</td>
<td>15.3%</td>
<td>84.7%</td>
<td>43.1%</td>
<td>56.9%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Business and industry</td>
<td>19.5%</td>
<td>80.5%</td>
<td>17.3%</td>
<td>82.7%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Researcher</td>
<td>19.6%</td>
<td>80.4%</td>
<td>42.2%</td>
<td>57.8%</td>
<td>15.3%</td>
</tr>
<tr>
<td>Environmental NGO</td>
<td>33.7%</td>
<td>66.3%</td>
<td>46.2%</td>
<td>53.8%</td>
<td>18.9%</td>
</tr>
<tr>
<td>Other</td>
<td>33.7%</td>
<td>66.3%</td>
<td>51.6%</td>
<td>48.4%</td>
<td>20.8%</td>
</tr>
<tr>
<td>Pearson’s chi-squared test</td>
<td>p = .005**</td>
<td>p = .000**</td>
<td>p = .279</td>
<td>p = .816</td>
<td>p = .068*</td>
</tr>
</tbody>
</table>

Legend: figures in bold indicate highest percentage response for each category of answers on mode of solution. P-numbers at the bottom show whether the chi-squared test was significant (marked with * when p < 0.1 and ** when p < 0.01).

While the results show an overall high level of agreement on modes of solutions between participants of side-events, the results should be interpreted cautiously because some actor type categories consist of few respondents (e.g. local governments, 32 respondents). Further, the chi-squared test tells us that there is an association between actor type and agreement with government regulation.³

Further analysis is therefore needed to better understand the views of participants at international climate change conferences and to minimise the influence of factors such as location of the COP and timing in the negotiations.

³ Additional tests indicate that agreement on these modes of solutions is independent of being a national of a developed or developing country, except for Market mechanisms, where developed (Annex I) countries are more likely to agree to the effectiveness of Market mechanisms than respondents from developing (non-Annex I) countries (p = .001).
Nevertheless, the results point to the interesting finding that there is an overall high level of agreement on broad policy-measures to tackle climate change and that some of the main divergences in views lie not between government representatives and non-state actors—but within the non-state actor community. Typically the literature has pointed out strong differences in views on climate change between environmental groups and business and industry groups. Our results however show that on the issue of technology solution, the difference is between intergovernmental organisations and local governments (strong agreement), on the one hand, and, environmental NGOs and the Other actor category (strong disagreement) on the other; on market mechanisms the difference is between business and industry groups (strong agreement), and negotiators, local governments and the Other actor category (strong disagreement); and on lifestyle changes the difference is between research groups and local governments (strong agreement), and business and industry groups (strong disagreement). On the whole, therefore, the results indicate that the diversity of views on broad measures for effectively tackling climate change is less pronounced than expected from the De Toquevillian approach. In order to examine whether the perspectives expressed at side-events reflect these views, we turn to the results of the content analysis of side-event abstracts.

5.2. Views Voiced on Modes of Solutions

Table 2 reports the shares of the 959 COP-15 to COP-18 side-event abstracts that referred to any or several of the five modes of solutions according to actor types hosting the event. New economic models is here presented as two categories as explained in the methods section. Overall, the share of the abstracts referring to the Technological innovation mode was the highest (19%). In descending order followed the modes New economic models (low-carbon economy) (16%), Market mechanisms (13%), Government regulation (12%), New economic models (rights and equity) (10%), and, finally least referred to was Lifestyle changes (5%). If both categories of New economic models are added together, the joint category is mentioned in 25% of the abstracts. It then becomes the most commonly referred to solution mode in the examined period. The quantification demonstrates that while the different modes of solutions are represented in the side-event arena, the degree to which they are referred to varies significantly.

Next, we explore whether the overall pattern was evenly distributed across different side-event-hosts (Table 2). Our data suggest quite large differences in the share of abstracts referring to the five modes of solutions depending on the type of organisation hosting the event. First, we report the major patterns for each of the five modes of solutions across actor types (vertically in Table 2) and then we compare across modes of solutions by actor type (horizontally in Table 2).

The share of abstracts referring to Government regulation has small variations across side-event-hosts, except for the two smaller categories public and hybrid organisations. Our examination suggests that intergovernmental organisations mentioned government regulation less frequently than the other actor types. This suggests that many actors take part in the discussion on government regulation, which may be a sign of general agreement of its importance as a solution to climate change and most likely a reflection of the intergovernmental negotiations context.

In contrast, the shares of the four other modes varied much more significantly across side-event-hosts. For instance, Technological innovation issues were referred to about seven times more often in business and industry hosted side-event abstracts than in abstracts of Other NGO-organised events. This suggests that the technological innovation perspective is less diverse in terms of participating actors. Likewise, the ratio between business and industry and Other NGOs was four times for Market mechanisms. The findings indicate an important role of business and industry in voicing technological- and market issues.

Interestingly, the share of environmental NGO abstracts referring to Technological innovation and Market mechanisms are equal to the overall average. The technological innovations category included abstracts that referred to specific forms of renewable energy sources. Environmental NGO hosts frequently refer to renewables, both in a critical evaluator sense and as a solution needed to tackle climate change, which contributes to the largest part of these abstracts (11% out of 14%). Environmental NGOs also voice a critical perspective on technologies like carbon capture and storage and emphasise the limits of carbon markets and flexible mechanisms. This indicates an important role for environmental NGOs in broadening the discussion on these solution modes (which other types of NGOs seem not to have joined at all).

In contrast to the business-dominated discussions on technology and markets, Lifestyle changes were referred to four times more often in the abstracts of Other NGO-hosted events than those organised by business and industry. This implies that the discussion on lifestyle-related issues is dominated by Other NGOs whereas business and industry and environmental NGOs as well as the smaller actor types of public and hybrid organisations are largely absent from this relatively limited perspective. The data indicates that governments, research organisations and intergovernmental organisations refer to lifestyle issues as often as the overall average, indicating participation in the lifestyles discussion.

It follows from these variations that the most and least referred to modes of solutions differ across actor types. The most commonly referred to modes of solutions were:

- technological innovation amongst business and industry organisations.
- the two version of new economic models amongst Other NGOs.
- new economic models (low carbon economy) and technological innovation amongst governments and research organisations;
- new economic models (rights and equity), technological innovation and government regulation amongst environmental NGOs; and
- technological innovation, market mechanisms and new economic models (low carbon economy) amongst intergovernmental organisations.
- government regulation, technological innovation and market mechanisms amongst hybrid organisations.
- government regulation and new economic models (low carbon economy) amongst public organisations.

### Table 2

<table>
<thead>
<tr>
<th>Actor type</th>
<th>Technological innovations</th>
<th>Market mechanisms</th>
<th>Government regulation</th>
<th>New economic models: low carbon economy</th>
<th>New economic models: rights and equity</th>
<th>Lifestyle changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government (n = 177)</td>
<td>16%</td>
<td>11%</td>
<td>12%</td>
<td>18%</td>
<td>5.1%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Public organisation (n = 23)a</td>
<td>4.3%</td>
<td>4.3%</td>
<td>26%</td>
<td>22%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Hybrid organisation (n = 36)a</td>
<td>31%</td>
<td>25%</td>
<td>13%</td>
<td>11%</td>
<td>0.0%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Intergovernmental organisation (n = 226)</td>
<td>16%</td>
<td>14%</td>
<td>7.1%</td>
<td>13%</td>
<td>0.9%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Business and industry (n = 120)</td>
<td>42%</td>
<td>24%</td>
<td>12%</td>
<td>16%</td>
<td>3.3%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Research (n = 204)</td>
<td>23%</td>
<td>15%</td>
<td>11%</td>
<td>26%</td>
<td>16%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Environmental NGO (n = 144)</td>
<td>14%</td>
<td>10%</td>
<td>13%</td>
<td>11%</td>
<td>15%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Other NGO (n = 139)</td>
<td>5.7%</td>
<td>6.5%</td>
<td>10%</td>
<td>19%</td>
<td>26%</td>
<td>10%</td>
</tr>
<tr>
<td>All (n = 959)</td>
<td>19%</td>
<td>13%</td>
<td>12%</td>
<td>16%</td>
<td>10%</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

*a* There were relatively few side-event-hosts in these actor type categories; thus the results should be interpreted cautiously.
One striking observation is that *lifestyle changes* are not amongst the most frequent solution types for any actor type. This is in sharp contrast to the participants’ recognition of lifestyle change as an effective solution to tackle climate change as reported in the previous section. It is also surprising that lifestyle changes is the least discussed mode of solution, since issues that fall under lifestyle changes – such as education and awareness – fall directly under the mandate of the UNFCCC, and because changing individuals’ behaviour has been identified by the IPCC as an important solution to tackle climate change.

The fact that *market mechanisms* only appear amongst the second most frequent modes of solutions for intergovernmental organisations and business and industry organisations, is unexpected, since market mechanisms have been considered an important cornerstone of the current international climate change regime. The use of new market solutions is currently on the agenda of negotiators for inclusion in a future climate change agreement. Nevertheless, market mechanisms are not discussed to the extent that could be expected judging by the actual negotiation text. The results do, however, reflect the general feeling expressed in the questionnaire responses that market mechanisms are viewed as the least effective solution to tackle climate change.

While *new economic models* (low carbon economy) are amongst the most frequent modes of solutions discussed by governments, research organisations and intergovernmental organisations, the more transformative notion of *New economic models* (rights and equity) is expressed mostly by non-state actors like Other NGOs (29%), the research community (16%) and environmental NGOs (15%). The results therefore suggest that certain perspectives are more closely associated with certain actor types and that the presence of observer organisations of different kinds pluralises the public space.

### 6. Conclusions

The complexity of climate change and the scope of its implications on livelihoods mean that a broad range of non-state actors can, and do, consider themselves as stakeholders. This participation of non-state actors has been said to contribute to the democratisation of climate change governance through the articulation of diverse views (Dryzek and Stevenson, 2011). This paper has sought to assess this claim by exploring the views held and voiced by different actors participating at UNFCCC COPs on one pertinent topic, namely solutions to climate change.

Results from both the participant survey and the abstract database have shown that *Government regulation* is characterised by relatively homogeneous views as an effective solution to tackling the climate change problem, indicated by agreement independent of actor type or region of origin, and relatively high diversity of voices as all actor types examined participated in the discussion on government regulation. *Market mechanisms*, however, is subject to more divisive opinions. The business group clearly views market mechanisms as relatively more effective compared to other groups and is also the organiser type that most frequently voices issues on markets. The largest discrepancy between views on effective types of solutions and discussions at side-events lies in the *lifestyle changes* category. No side-event organiser had this solution mode as the most favoured topic for discussion.

This indicates a gap in the topics voiced and highlights a potential problem of the marginalisation of certain perspectives in the public space. On the issue of *lifestyle changes*, non-state actors have not adopted the role of advocating an issue that has been identified as being important and where there are opportunities to link directly to the discussions taking place in the negotiation arena. Whether this is due to structural obstacles in terms of access – either because organisations promoting lifestyle changes are kept out from the public space or do not themselves seek to participate in discussions – the fact remains that there is a gap in the perceived importance of lifestyle changes as an effective mode of solution and discussions on lifestyle changes propagated at side-events. One possible explanation is that side-event organisers seek to voice messages that they perceive have resonance with the official negotiations, which could imply that discussions are steered by the official arena. In contrast, however, non-state actors have been effective in raising discussions in the area of rights and equity. Without non-state actor participation, our data suggest, this perspective would be marginalised.

What are the implications for theories on the democratisation of global governance? While our data suggest that non-state actors do contribute to pluralising the views voiced in the public space, the participating non-state actors analysed here have not expressed as diverse views from state parties as the literature on non-state actors has implied (Biermann and Gupta, 2011; Scholte, 2004). One possible explanation may be that many non-state actors are funded by or depend on state actors for their operations, which would support a Gramscian interpretation of civil society as not very distinct from the state sphere.

Instead, we find that the main divisions lie within different groups of non-state actors, with certain views seen to more closely be associated with certain groups of non-state actors. This indicates that the composition of the group of participating non-state actors is important for the overall balance of ideas voiced. This implies that there may be structural obstacles to the democratic potential of non-state actors in terms of who can attend and who can effectively promote certain perspectives. Whether the De Tocquevillian or the Gramscian approach applies therefore appears to be linked to options for accessing the public space, with the current relatively open UNFCCC practices appearing to facilitate interest articulation, but not necessarily to the extent of ensuring improved representation of all relevant views (Hjarpe and Buhr, 2014; Dryzek and Stevenson, 2011; Nordang Uhre, 2013).

How well these perspectives mirror the views of the wider society and whether all views are adequately taken into account in the final decision-making are further questions that lie outside the scope of this paper. In a next step a comparison of the results in this paper with actual negotiating text will provide an indication of the extent to which certain views are included in the negotiation dynamics. The emphasis on market mechanisms in the actual negotiations gives an indication that views favoured by non-state actors are not weighted equally in the political bargaining that results in an agreement. The political dynamics of international negotiations can therefore be another obstacle to the democratic potential of non-state actors.

Although our data is limited and more systematical studies are desirable, we tentatively conclude that while non-state actors contribute to pluralising views at the international level, their participation is on its own not a solution to the democratic deficit of intergovernmental organisations as it does not appear to promote the type of independent, homogeneous interest articulation as in the De Tocquevillian approach. While we do not find evidence that non-state actors overwhelmingly promote mainstream ideas, their participation does not appear to promote all types of perspectives either. This means that some perspectives, such as lifestyle changes, remain marginalised in the public space, despite the inclusion of a broad range of actors. Other approaches for widening the marginalised voice may be needed but are likely to face difficulties of their own (cf. Dryzek et al., 2011). How to integrate diverse interests and perspectives in a legitimate and accountable manner in global norm-setting will therefore remain an important topic for future research.

### Acknowledgements

This research was made possible through generous grants from the Swedish Research Council (Project No. 421-2011-1862) and Formas (Project No. 2011-779) for the research project non-state actors in the new landscape of international climate cooperation, as well as Handelsbanken’s Research Foundation (Grant No. W-2009-0194:1). We would like to thank two anonymous reviewers, participants in the 2012 Lund Conference on Earth System Governance, as well as Björn-Ola Linnér and Mathias Friman for valuable comments. Many thanks also to colleagues in the International Negotiations Survey team who assisted in handing out surveys during COP17/CMP7 and COP18/CMP8.
### Appendix A. Search Terms Used in the Content Analysis

<table>
<thead>
<tr>
<th>Category</th>
<th>Search terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technological innovation</td>
<td>Technology, technical, innovation, CCS, smart-grid, electric car/vehicle, geo-engineering, Renewable (bio*, hydro, water, wave, dam, wind, photovoltaic, solar)</td>
</tr>
<tr>
<td>Market mechanisms</td>
<td>Market (carbon, offset, environmental, ecological, green, energy or voluntary market), Market-based driven, market actors/infrastructure/perspectives, Economic instruments, market-based instruments, flexible mechanism, carbon market, permit trading, emissions trading, cap-and-trade, ETS, CDM, JJ</td>
</tr>
<tr>
<td>Government regulation</td>
<td>Fiscal, tax, subsidy, charge, regulation, command, government, institution*, public</td>
</tr>
<tr>
<td>New NEG mechanisms</td>
<td>Economic, economic (new/green/low-carbon/fossil free, climate compatible), Sustainable* (connected to economy/society, etc.).</td>
</tr>
<tr>
<td>New government actors</td>
<td>Justice, equit*, fairness, moral, ethic*</td>
</tr>
<tr>
<td>Lifestyle changes</td>
<td>Lifestyle, behavio*, consum*, education, product, attitude, individual, awareness</td>
</tr>
</tbody>
</table>

The wildcard (*) character means a search for the root word plus all the terms made by adding letters to the end of it.

### References


