



Top-down proposals for sharing the global climate policy effort fairly: lost in translation in a bottom-up world?

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A range of scholars and policy advocates have proposed formulaic (or ‘top-down’) approaches for calculating countries’ fair shares of the global effort to mitigate climate change. The practical relevance of top-down proposals has become increasingly uncertain as climate change negotiations since the 2009 Copenhagen Accord have adopted a ‘bottom-up’ or ‘pledge-and-review’ approach that allows states considerable latitude in how they frame their pledges. With many commentators expecting that the post-2020 climate change agreement currently under negotiation will adopt a largely bottom-up approach, a major concern is whether and how an approach of this kind is compatible with securing equity and integrity in the climate regime.

In this chapter I argue that a more nuanced perspective on the top-down/bottom-up debate is required. I proceed by endorsing the commonly held view that top-down proposals typically prioritise distributive equity over institutional feasibility, whereas the converse holds for bottom-up proposals. However, I argue that a more comprehensive evaluation of proposals for sharing national efforts also needs to take account of their procedural equity. Top-down proposals frequently provide less clarity than bottom-up proposals on how procedural equity could be assured. Accordingly, a hybrid approach combining elements of top-down and bottom-up proposals may be better suited to advancing both substantive and procedural values simultaneously.

In the latter part of the paper I argue that, even if top-down proposals are not formally adopted in a multilateral climate agreement, they may nevertheless exert an important positive influence on the equity and integrity of the climate regime. I distinguish three ways in which top-down proposals could boost accountability and deliberative quality: as input into multilateral assessment of national pledges; as an anchor point for civil society campaigns; and as guidance for national policy-makers.

Introduction¹

Achieving a global agreement to address climate change that is effective, equitable and politically feasible is often viewed as the holy grail of climate policy.² Agreement on how countries will share the collective effort of reducing global greenhouse gas (GHG) emissions is vital to ensuring the climate regime's consistency–integrity; that is, the extent to which the actions of parties to the United Nations Framework Convention on Climate Change (UNFCCC; or 'the Convention') are consistent with its stated public institutional justification (PIJ) of avoiding dangerous climate change.³

Many scholars, governments and civil society advocates have devised proposals for distributing national responsibilities for tackling climate change. Some of the best-known of these are 'top-down' proposals that use a common formula or set of rules to calculate national responsibilities for all countries. Yet no single proposal has secured widespread acceptance to date. Instead, recent UN negotiations have moved towards a more 'bottom-up' approach whereby countries have greater latitude to frame their emissions reduction ('mitigation') contributions according to their national circumstances.⁴ Thus the question

¹ I would like to thank Erik Haites, Eliza Murray and the editors for helpful comments on a draft of this chapter. I also appreciated feedback on a presentation based on this chapter from participants at the workshop on the values informing the Integrity System of the Global Climate Regime (Brisbane, November 2014). Many of the ideas outlined here were formed while tutoring a course on international climate policy and economics at the Australian National University between 2011 and 2014. I am grateful to my students and the course lecturer, Stephen Howes, for many stimulating discussions about the merits of top-down and bottom-up approaches. This research was supported under Australian Research Council's *Laureate Fellowship* funding scheme (project number FL140100154).

² Massimo Tavoni, Shoibal Chakravarty, and Robert Socolow, 'Safe Vs. Fair: A Formidable Trade-Off in Tackling Climate Change', *Sustainability* 4, no. 2 (2012). See also Jonathan Pickering, Steve Vanderheiden, and Seumas Miller, "If Equity's in, We're Out": Scope for Fairness in the Next Global Climate Agreement', *Ethics & International Affairs* 26, no. 4 (2012).

³ UNFCCC, 'United Nations Framework Convention on Climate Change', (1992), Article 2. I take an institution's PIJ to be its stated purpose or justification for its existence or activities. An institution has consistency–integrity if its actions are consistent with its PIJ. For further discussion of these terms, see the introduction to this volume.

⁴ David G Victor, 'Copenhagen II or Something New', *Nature Climate Change* 4, no. 10 (2014). In accordance with prevailing UNFCCC terminology (which reflects the reluctance of many developing countries to adopt binding

arises as to whether there is a fundamental mismatch between top-down proposals and the bottom-up reality of the climate regime.

While there is a growing literature on top-down and bottom-up proposals (as I outline below), significant analytical gaps remain. First, discussions about the relative merits of top-down and bottom-up proposals often work with a limited set of evaluative criteria that gives inadequate weight to considerations of procedural equity. Second, while researchers are increasingly exploring ‘hybrid’ options for climate policy that combine elements of bottom-up and top-down proposals, there has been little systematic analysis of other ways that top-down proposals could influence climate policy. As a result, our understanding remains limited about the variety of channels through which principles of distributive equity – which are foregrounded in top-down proposals – may influence climate policy.

In this chapter I aim to help address these gaps by arguing for a more nuanced perspective on the top-down/bottom-up debate. I begin by defining what I mean by ‘top-down’ and ‘bottom-up’ and by identifying a provisional set of criteria for evaluation. I then articulate in greater detail the feasibility constraints that render it very difficult, if not impossible, to translate top-down proposals directly into practice in a bottom-up negotiating environment.

I then argue that there are good theoretical reasons for appealing to a broader range of values in thinking about how national efforts should be distributed. In particular, in addition to effectiveness, feasibility and distributive equity, considerations of procedural equity are important. Top-down proposals frequently provide less clarity than bottom-up proposals on how procedural equity could be assured. This suggests that a hybrid approach may be better suited to advancing both distributive and procedural values simultaneously.

The latter part of the chapter focuses on the more specific and less explored question of whether standalone top-down proposals might still exert some practical influence under a hybrid or bottom-up regime. Drawing on theories of the influence of advocacy networks in

‘pledges’ or ‘commitments’ on the same footing as developed countries), I refer to national mitigation efforts inscribed in international climate agreements generically as ‘contributions’ or ‘efforts’.

international relations, I argue that top-down proposals can help to advance consistency-integrity as well as context-integrity (which relates to the role of external actors in helping the climate regime to fulfil its PIJ) by functioning as a source of equity benchmarks for official deliberation and civil society advocacy.

Analytical framework

Defining 'top-down' and 'bottom-up'

The distinction between top-down and bottom-up approaches to climate policy may apply to several dimensions of the climate regime, including its legal stringency and universality of participation.⁵ For present purposes I will focus on the distinction between proposals that apply a common formula or distributive rule⁶ for all countries' contributions (top-down) and those that give greater latitude to countries to frame their contributions unilaterally in the absence of a common formula (bottom-up). Typically top-down proposals imply greater multilateral centralization of authority, while bottom-up proposals vest a greater degree of authority in national governments.⁷ The top-down/bottom-up debate in climate policy finds some parallels in debates about how best to structure arrangements for ensuring institutional integrity: whether through a central oversight institution or through a web or

⁵ William Hare et al., 'The Architecture of the Global Climate Regime: A Top-Down Perspective', *Climate Policy* 10, no. 6 (2010).

⁶ In addition to proposals that combine multiple distributive principles into a single formula, a top-down approach could also involve what Edward A. Page calls a 'conjunctive' account that applies several distributive principles sequentially. See Edward Page, 'Climatic Justice and the Fair Distribution of Atmospheric Burdens: A Conjunctive Account', *The Monist* 94, no. 3 (2011).

⁷ Robert Stavins et al., 'International Cooperation: Agreements and Instruments', in *Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)* (Cambridge, UK; New York, NY: Cambridge University Press, 2014), 13.

‘bird’s nest’ of institutions whose interactions serve to promote ‘horizontal’ rather than top-down accountability.⁸

While the evaluation that follows does not assess individual proposals in detail, the comparisons I draw between top-down and bottom-up proposals are intended to be broadly reflective of a range of well-known proposals in each category. Top-down approaches widely cited in academic literature and policy analysis include: those based on the idea of equal per capita emissions allowances, such as the Contraction and Convergence proposal;⁹ and the Greenhouse Development Rights framework, which calculates countries’ responsibilities based on indicators of national emissions and income, adjusted for intra-country inequalities.¹⁰ Importantly, many proposals in the scholarly literature on climate ethics are best characterized as top-down as they envisage formulaic or rule-based approaches to effort-sharing.¹¹ Thus debates about the advantages and shortcomings of top-down proposals also speak to broader questions of whether and how scholarly accounts of equity or justice in climate change could be translated into public policy. Among the better-known bottom-up proposals are: those by William Pizer and David Victor; Sustainable Development Policies and Measures (SD-PAMS), which involves a bottom-up approach for developing countries; the ‘Nationally Appropriate Mitigation Actions’ approach initiated

⁸ Jeremy Pope, *Confronting Corruption: The Elements of a National Integrity System* (Berlin: Transparency International, 2000), 34; Charles Sampford, Rodney Smith, and Alexander Jonathan Brown, ‘From Greek Temple to Bird’s Nest: Towards a Theory of Coherence and Mutual Accountability for National Integrity Systems’, *Australian Journal of Public Administration* 64, no. 2 (2005).

⁹ Aubrey Meyer, ‘The Kyoto Protocol and the Emergence of “Contraction and Convergence” as a Framework for an International Political Solution to Greenhouse Gas Emissions Abatement’, in *Man-Made Climate Change*, ed. Olav Hohmeyer and Klaus Rennings, *Zew Economic Studies* (Heidelberg: Physica, 1999).

¹⁰ Paul Baer et al., ‘Greenhouse Development Rights: Towards an Equitable Framework for Global Climate Policy’, *Cambridge Review of International Affairs* 21, no. 4 (2008); and Brazil’s Historical Responsibility proposal (UNFCCC, ‘Implementation of the Berlin Mandate, Additional Proposal by Parties’, (1997).

¹¹ See for example, Steve Vanderheiden, *Atmospheric Justice: A Political Theory of Climate Change* (New York: Oxford University Press, 2008); Simon Caney, ‘Just Emissions’, *Philosophy & Public Affairs* 40, no. 4 (2012).

under the UNFCCC's 2009 Copenhagen Accord, which builds on the SD-PAMs approach in a number of respects; and Australia's 'schedules' proposal.¹²

Criteria for evaluation

The two most recent assessment reports of the Intergovernmental Panel on Climate Change (IPCC) illustrate a common approach to assessing the merits of top-down and bottom-up proposals. The IPCC's Fifth Assessment Report uses four criteria to evaluate forms of international cooperation: environmental effectiveness, aggregate economic performance, distributional and social impacts, and institutional feasibility.¹³ The four criteria may be understood together as necessary if not sufficient conditions for the consistency-integrity of a mitigation policy, assessed against the objectives of the Convention.

I begin by focusing on two criteria where the contrast between the two types of proposal is most evident – distributional and social impacts, and institutional feasibility – before supplementing this account with an evaluation of procedural equity. Distributional and social impacts include considerations of distributional or distributive equity (and for present purposes I refer to this criterion as 'distributive equity'), which the IPCC defines as relating to 'burden- and benefit-sharing across countries and across time'.¹⁴ Policies have a high degree of institutional feasibility if they are 'well adapted to existing institutional

¹² William A Pizer, 'Practical Global Climate Policy', in *Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World*, ed. Joseph E. Aldy and Robert N. Stavins (Cambridge, UK: Cambridge University Press, 2007); David G. Victor, 'Fragmented Carbon Markets and Reluctant Nations: Implications for Design of Effective Mechanisms', in *Architectures for Agreement: Addressing Climate Change in the Post-Kyoto World*, ed. Joseph E. Aldy and Robert N. Stavins (Cambridge, UK: Cambridge University Press, 2007); Rob Bradley, Kevin A Baumert, and Navroz K Dubash, *Growing in the Greenhouse: Protecting the Climate by Putting Development First* (Washington, DC: World Resources Institute, 2005); Copenhagen Accord, Paragraph 5; Australia, 'Schedules in a Post 2012 Treaty', (Bonn: UNFCCC, 2009).

¹³ Stavins et al., 'International Cooperation: Agreements and Instruments', 1006. These criteria are modelled on those in S Gupta et al., 'Policies, Instruments and Co-Operative Arrangements', in *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)* (Cambridge, UK; New York, NY: Cambridge University Press, 2007), 751-52.

¹⁴ Stavins et al., 'International Cooperation: Agreements and Instruments', 1009.

constraints' and 'take political realities into account'.¹⁵ The Fifth Assessment Report outlines several sub-criteria for institutional feasibility: the extent to which the policy can secure the objectives of (i) participation, (ii) compliance and (iii) legitimacy; and (iv) the policy's flexibility.¹⁶

Distributive equity v. institutional feasibility

The translation problem

Proponents of top-down approaches generally consider them to be both effective and equitable as the approaches derive national contributions from widely accepted moral and legal principles, and because national contributions add up to a level of collective effort necessary to avoid dangerous climate change.¹⁷ For example, proposals such as Greenhouse Development Rights explicitly seek to translate the Convention's principle of parties' 'common but differentiated responsibilities and respective capabilities' (UNFCCC, Article 3.1) into quantitative indicators based on national emissions and income. Advocates of bottom-up approaches do not always dispute the distributive equity of top-down proposals or their effectiveness under ideal circumstances but frequently argue that the Achilles' heel of top-down approaches is their lack of institutional feasibility.¹⁸

¹⁵ Gupta et al., 'Policies, Instruments and Co-Operative Arrangements', 752. For a more nuanced philosophical analysis of the idea of political feasibility, see Pablo Gilabert and Holly Lawford-Smith, 'Political Feasibility: A Conceptual Exploration', *Political Studies* 60, no. 4 (2012).

¹⁶ Stavins et al., 'International Cooperation: Agreements and Instruments', 1009. Unless otherwise specified I will evaluate proposals against these criteria on the assumption that 'non-ideal' circumstances prevail: that actors face epistemic constraints and have limited motivation to comply with moral requirements, and that institutions are subject to path dependencies, which makes reform challenging but not necessarily impossible. Laura Valentini, 'Ideal Vs. Non-Ideal Theory: A Conceptual Map', *Philosophy Compass* 7, no. 9 (2012).

¹⁷ Baer et al., 'Greenhouse Development Rights: Towards an Equitable Framework for Global Climate Policy', 652.

¹⁸ See for example Steve Rayner, 'How to Eat an Elephant: A Bottom-up Approach to Climate Policy', *Climate Policy* 10, no. 6 (2010): 616.

Judgements about feasibility are inevitably specific to particular time periods. A reform that appears unfeasible at one point in time may become feasible at a later time, and vice versa.¹⁹ Thus Paul Baer argues that top-down approaches may influence policy by ‘asking what is fair in the hopes that it might change what is feasible’.²⁰ But, whatever else we may conclude about the relative merits of top-down and bottom-up proposals, the feasibility criticism has some bite, at least for medium-term horizons for policy-making, as Baer concedes.²¹ The US and numerous other (mostly developed) countries remain reluctant to contemplate the use of formulae for sharing climate change mitigation efforts.

There are several possible reasons why top-down approaches to global climate policy continue to face opposition. First, the overall costs of mitigation are considerably higher than those of other collective efforts where countries have agreed on a common formula.²²

Second, whereas for some collective efforts the most relevant basis for effort-sharing is a country’s capacity to pay, in the climate change context this is complicated by additional factors, including varying degrees of responsibility for past and current emissions. Survey data suggest that there is reasonably strong support among climate change negotiators from both developing and developed countries for principles such as ‘polluter pays’, but levels of support for other principles vary across countries and time horizons.²³ This

¹⁹ Gilibert and Lawford-Smith, ‘Political Feasibility: A Conceptual Exploration’, 821.

²⁰ Paul Baer, ‘The Greenhouse Development Rights Framework for Global Burden Sharing: Reflection on Principles and Prospects’, *Wiley Interdisciplinary Reviews: Climate Change* 4, no. 1 (2013): 67.

²¹ Ibid.

²² See Scott Barrett, *Why Cooperate? The Incentive to Supply Global Public Goods* (Oxford: Oxford University Press, 2007). For a comparison of costs see Jonathan Pickering, Frank Jotzo, and Peter J. Wood, ‘Splitting the Difference: Can Limited Coordination Achieve a Fair Distribution of the Global Climate Financing Effort?’, *Global Environmental Politics* 15, no. 4 (Forthcoming, 2015).

²³ A. Lange, C. Vogt, and A. Ziegler, ‘On the Importance of Equity in International Climate Policy: An Empirical Analysis’, *Energy Economics* 29(2007): 557.

highlights a more general concern that countries hold diverse and often apparently irreconcilable conceptions of what a fair distribution of effort requires.²⁴

A final reason involves the institutional path along which the climate regime has evolved.²⁵ Under the Convention, national responsibilities have been differentiated traditionally according to a binary categorization of developed and developing countries. While developing countries have supported the idea that developed countries should share their efforts according to a common formula, they have resisted the idea that developing countries themselves should be subject to the same formula. Developing countries have supported this claim by invoking the principle in the Convention that developed countries should ‘take the lead’ on protecting the climate system.²⁶

The shift towards a bottom-up approach

In view of the difficulties associated with implementing top-down approaches to effort-sharing, the climate regime has moved increasingly towards a bottom-up or ‘pledge-and-review’ approach that has favoured expanding the participation of developing countries over arriving at a universally agreed formula. The need for securing the involvement of developing countries has become increasingly urgent as developing countries’ emissions now outweigh those of developed countries as a share of global emissions, even though the average per capita emissions of the former group remain below those of the latter.²⁷

The 2009 Copenhagen Accord (whose key elements were subsequently formalized in the 2010 Cancún Agreements) marked a turning point towards a more bottom-up approach. Whereas under the Kyoto Protocol only developed countries submitted targets according to

²⁴ Aaditya Mattoo and Arvind Subramanian, ‘Equity in Climate Change: An Analytical Review’, *World Development* 40, no. 6 (2012).

²⁵ Joanna Depledge, ‘The Opposite of Learning: Ossification in the Climate Change Regime’, *Global Environmental Politics* 6, no. 1 (2006).

²⁶ UNFCCC, Article 3.

²⁷ PBL, ‘Trends in Global CO₂ Emissions: 2013 Report’, (Amsterdam: PBL Netherlands Environmental Assessment Agency, 2013).

a common metric, the Copenhagen/Cancún approach called upon both developed and developing countries to announce national commitments or actions, albeit in somewhat different formats for each group, with countries having considerable latitude over how they framed their efforts. In addition to commitments by 42 developed countries, a further 55 developing countries – including large emerging economies such as China, India, Brazil, Indonesia and South Africa – also announced ‘nationally appropriate mitigation actions’.²⁸

At the time of writing, countries are negotiating a longer-term agreement that is due to be reached at the UN climate conference in Paris in late 2015. With the negotiating text still in flux at the time of writing,²⁹ it remains unclear precisely how bottom-up or top-down the agreement will be, but it seems relatively clear that countries will not agree to a common formula for effort-sharing.³⁰ Recent decisions under the UNFCCC and other analysis suggest that the agreement is likely to involve a modified version of the Copenhagen/Cancún approach, that is, bottom-up pledge-making complemented by some kind of review and transparency mechanisms.³¹ Countries have already agreed to submit ‘intended nationally determined contributions’ (INDCs) in advance of the Paris conference.³² As outlined in the section on procedural equity below, recent UNFCCC decisions have also established some foundations for publicizing and reviewing contributions.

²⁸ Stavins et al., ‘International Cooperation: Agreements and Instruments’, 33.

²⁹ Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP), ‘Implementation of All the Elements of Decision 1/CP.17: Negotiating Text’, (Bonn: UNFCCC, 2015).

³⁰ Victor, ‘Copenhagen II or Something New’.

³¹ Lavanya Rajamani, ‘The Warsaw Climate Negotiations: Emerging Understandings and Battle Lines on the Road to the 2015 Climate Agreement’, *International & Comparative Law Quarterly* 63, no. 03 (2014); Steinar Andresen, ‘International Climate Negotiations: Top-Down, Bottom-up or a Combination of Both?’, *The International Spectator* 50, no. 1 (2015): 28.

³² UNFCCC, ‘Lima Call for Climate Action’, Decision 1/CP.20 (2014), para 9.

Procedural equity

Thus far the bottom-up v. top-down debate appears to pose a tension common in political philosophy between ‘ideal’ visions of what is equitable, fair or just, and ‘non-ideal’ conceptions of how these values might be advanced if not completely fulfilled under real-world political constraints.³³ But importantly, equity may concern not only distributive outcomes (or substantive values) but also decision-making processes. The principle of equity in international environmental law has important procedural as well as distributive dimensions.³⁴ Political philosophers frequently emphasize that procedural justice is not only instrumentally important in advancing outcome-based justice but also intrinsically important, not least because it constitutes a form of respect for the autonomy and dignity of individuals.³⁵ As noted above, consistency-integrity will often require at a minimum fulfilling the substantive values embedded in an institution’s PIJ, as in the Convention’s objective of avoiding dangerous climate change. However, analyses of institutional integrity often foreground procedural values as an essential means for achieving consistency-integrity.³⁶

Despite procedural values having instrumental as well as intrinsic worth, both the IPCC’s typology and some analyses of top-down and bottom-up proposals collapse considerations of procedural equity into evaluations of feasibility. Procedural equity features in the IPCC criteria outlined above only under the heading of ‘procedural legitimacy’. Legitimacy, as the IPCC describes it, ‘depends on the shared understanding both that the substantive rules (outputs) and decision-making procedures (inputs) are fair, equitable, and beneficial, and

³³ See Valentini, *Ideal vs. Non-ideal theory: A Conceptual Map*, 2012; and Dominic Roser and Clare Heyward, *Climate Justice in a Non-Ideal World* (Oxford: Oxford University Press, Forthcoming, 2015).

³⁴ Dinah Shelton, ‘Equity’, in *Oxford Handbook of International Environmental Law*, ed. Daniel Bodansky, Jutta Brunnée, and Ellen Hey (Oxford: Oxford University Press, 2007), 640–41, 60.

³⁵ See Emanuela Ceva, ‘Just Procedures with Controversial Outcomes: On the Grounds for Substantive Disputation within a Procedural Theory of Justice’, *Res Publica* 15, no. 3 (2009): 193.

³⁶ See, for example, Pope, *Confronting Corruption: The Elements of a National Integrity System*, 34; Sampford, Smith, and Brown, ‘From Greek Temple to Bird’s Nest: Towards a Theory of Coherence and Mutual Accountability for National Integrity Systems’.

thus that other regime members will continue to cooperate'.³⁷ In the IPCC typology, legitimacy in turn is only a sub-criterion of institutional feasibility.

The understanding of legitimacy that the IPCC outlines here is 'sociological' in that it refers to whether those subject to a policy consider it justified, as opposed to a 'normative' understanding of legitimacy, which assesses whether there are good independent reasons for supporting a policy, irrespective of how it is perceived by the public.³⁸ By subsuming legitimacy under a broader criterion of institutional feasibility, the IPCC's taxonomy also suggests that legitimacy matters more as a means to achieving a feasible approach rather than for its own sake. By contrast, the IPCC's criterion on distributional and social impacts adopts a normative rather than sociological perspective on distributional equity since it focuses on the actual rather than perceived equity of different policy options. In addition, the IPCC's typology treats distributional equity as having independent value rather than as a means to securing feasibility.

Considering procedural equity in its own right may prompt us to re-evaluate the merits of top-down and bottom-up proposals. Procedural equity encompasses a range of dimensions relevant for sharing mitigation efforts, among them accountability and transparency, participation of affected parties, and quality of deliberation. I briefly review top-down and bottom-up proposals against each of these dimensions.

Participation

In the IPCC's taxonomy, the sub-criterion of participation assesses whether a given policy proposal encourages states to participate in an international agreement.³⁹ However, when understood as a dimension of procedural equity, the idea of participation is considerably broader. In the climate policy context participation or inclusion requires at a minimum the

³⁷ Stavins et al., 'International Cooperation: Agreements and Instruments', 1010. Citations in original text removed.

³⁸ Daniel Bodansky, 'The Legitimacy of International Governance: A Coming Challenge for International Environmental Law?', *The American Journal of International Law* 93, no. 3 (1999): 601.

³⁹ Stavins et al., 'International Cooperation: Agreements and Instruments', 1009.

representation in decision-making of those interests most affected by climate change and by measures to address climate change, including individual citizens and communities.⁴⁰

At first blush, top-down proposals appear to fare better on participation as they generally involve universal participation in an effort-sharing framework. However, top-down proposals often simply take universal participation for granted, largely circumventing questions of how to ensure either the universal participation of all states or the participation of all affected citizens of those states. One partial exception is Benito Müller's 'preference score' approach, which proposes a common formula based on indicators that are weighted according to a process whereby countries vote on their preferred indicator.⁴¹ However, as I argue elsewhere, the concern remains as to how countries could achieve consensus even on this approach, which still requires a relatively high degree of formalization relative to bottom-up approaches.⁴² A further concern is that, even if a country's votes are weighted according to the size of its population (as Müller's proposal envisages), citizens of countries with weak or absent democratic systems may have limited input into the vote that their government casts ostensibly on their behalf.

The flexibility of bottom-up approaches in allowing countries to tailor contributions to their national circumstances and priorities is commonly cited as a reason for encouraging a broader range of countries to participate.⁴³ Flexibility may also provide greater scope for public participation since it enables countries to frame their contributions in ways that are more meaningful to their citizens. However, two caveats apply. First, as with top-down proposals, the ability of individual citizens to participate in formulating national

⁴⁰ Jouni Paavola, W Neil Adger, and Saleemul Huq, 'Multifaceted Justice in Adaptation to Climate Change', in *Fairness in Adaptation to Climate Change*, ed. W Neil Adger, et al. (Cambridge, MA: MIT Press, 2006), 268.

⁴¹ Benito Müller, *Justice in Global Warming Negotiations: How to Obtain a Procedurally Fair Compromise* (Oxford: Oxford Institute for Energy Studies, 1999).

⁴² Pickering, Jotzo, and Wood, 'Splitting the Difference: Can Limited Coordination Achieve a Fair Distribution of the Global Climate Financing Effort?'

⁴³ Pizer, 'Practical Global Climate Policy', 304; Daniel Bodansky and Elliot Diringer, 'Building Flexibility and Ambition into a 2015 Climate Agreement' (Arlington, VA: Centre for Climate and Energy Solutions, 2014), 3.

contributions will depend on the democratic quality of individual countries. Second, even if citizens can participate in formulating their own national contributions, they may have little say in reviewing the contributions of other countries under a bottom-up approach unless (as I elaborate below) such an approach is bolstered by a multilateral process enabling review of mitigation contributions.

Accountability and transparency

Accountability in global climate policy requires at a minimum that citizens are able to hold collective agents (including governments, multilateral organizations and private firms) responsible for their actions against the standards set by the Convention and related decisions under the Convention.⁴⁴ Transparency requires that agents publicly disclose information that enables citizens to hold those agents to account.⁴⁵ Accountability and transparency are central to ensuring consistency-integrity. By enabling internal and external actors to assess whether an institution is fulfilling its PIJ, these attributes can help to lend weight to and provide feedback on stakeholders' demands for good institutional performance. Here I focus on accountability mechanisms internal to the UNFCCC; in the section on alternative modes of influence below I touch on external accountability mechanisms in the form of civil society advocacy.

Accountability and transparency are strengths of top-down approaches, since a common formula specifies and provides a justification for each country's effort. In contrast, the greater flexibility of bottom-up approaches may impede comparability of national efforts unless additional standards for information disclosure are in place. National contributions under the Copenhagen Accord provide evidence for this concern, as the wide range of formats in which countries were permitted to present their targets posed challenges for

⁴⁴ See Ruth W. Grant and Robert O. Keohane, 'Accountability and Abuses of Power in World Politics', *The American Political Science Review* 99, no. 1 (2005): 29; Frank Biermann and Aarti Gupta, 'Accountability and Legitimacy in Earth System Governance: A Research Framework', *Ecological Economics* 70, no. 11 (2011): 1857.

⁴⁵ See Grant and Keohane, 'Accountability and Abuses of Power in World Politics', 39; Aarti Gupta, 'Transparency in Global Environmental Governance: A Coming of Age?', *Global Environmental Politics* 10, no. 3 (2010): 1.

comparing and aggregating contributions.⁴⁶ One improvement on transparency in the lead-up to the Paris agreement is that countries are required to submit for public circulation their intended contributions before the agreement is reached, rather than subsequent to the agreement (as occurred with most contributions associated with the Copenhagen Accord).⁴⁷ The UNFCCC has also agreed on guidelines for information that should accompany national contributions ‘in order to facilitate clarity, transparency and understanding’,⁴⁸ although these are not mandatory requirements.

In addition, most bottom-up proposals also include an element of review (hence the frequent use of the term ‘pledge-and-review’ to describe bottom-up proposals), whereby national pledging is combined with a multilateral mechanism for comparing and assessing contributions. A review process could assess the adequacy of collective and individual efforts, either before or after countries have announced final contributions.⁴⁹ Review processes are generally a less prominent feature of top-down proposals, ostensibly because the adequacy of collective and individual efforts is safeguarded by adherence to the effort-sharing formula. However, if top-down approaches were adopted in practice, they would still require review mechanisms to monitor whether nations are complying with their required efforts, and to assess the adequacy of the collective target and the appropriateness of effort-sharing parameters.

⁴⁶ Michel G.J. den Elzen, Andries F. Hof, and Mark Roelfsema, ‘The Emissions Gap between the Copenhagen Pledges and the 2°C Climate Goal: Options for Closing and Risks That Could Widen the Gap’, *Global Environmental Change* 21, no. 2 (2011): 733.

⁴⁷ UNFCCC, ‘Lima Call for Climate Action’, paras 9, 16.

⁴⁸ *Ibid.*, para 14

⁴⁹ In the lead-up to the Paris agreement, the UNFCCC will produce a synthesis report on parties’ intended contributions to assess their ‘aggregate effect’ (*ibid.*, para 16), but apart from this no official *ex ante* review appears likely to take place.

Quality of deliberation

Quality of deliberation – which could be seen as a means of achieving meaningful participation or in its own right as an aspect of procedural equity – involves communication characterized by (among other things) truthfulness, non-coercion and reciprocity.⁵⁰

Top-down approaches possess some features associated with high-quality deliberation, including reciprocity, in that all countries are treated on an impartial footing and that national efforts are explicitly based on reasoned argument. But while some top-down approaches seek to incorporate only those principles that have attained widespread public acceptance,⁵¹ top-down approaches typically prescribe a single framework to which all countries would need to subscribe. In this way, top-down proposals may constitute a hypothetical outcome of deliberation that countries might agree to under ideal circumstances, but they rarely set out a process that would ensure that high-quality deliberation resulting in a uniform agreement actually takes place.

Alternatively, individual top-down proposals might be seen as inputs into a broader process of deliberation. This appears close to the view expressed by Edward A. Page in relation to the ‘conjunctive’ top-down proposal that he outlines. Page acknowledges that his account

is not designed to replace a fair negotiation process amongst states concerning the future direction of global climate policy. Normative theorists are duty bound to participate in processes of clarification and conceptual development that underpin accounts of climate burden sharing. But the decision to adopt one method of burden sharing over another is ultimately a political decision.⁵²

⁵⁰ Hayley Stevenson and John S. Dryzek, *Democratizing Global Climate Governance* (Cambridge, UK: Cambridge University Press, 2014), 25.

⁵¹ See for example Page, ‘Climatic Justice and the Fair Distribution of Atmospheric Burdens: A Conjunctive Account’, 426–27.

⁵² *Ibid.*, 430.

Page's comment gives due recognition to the fact that top-down proposals inhabit a broader decision-making context. And he points to the important idea that a top-down proposal may arise from and encapsulate a prior process of high-quality deliberation among the originators of the proposal. Nevertheless, the concern remains that a preliminary phase of deliberation would be required even to reach consensus in multilateral negotiations to subject top-down proposals to proper scrutiny and debate, not merely in an open-ended fashion (as the UNFCCC has done from time to time)⁵³ but with a view to reaching an authoritative decision that adopts one proposal or another. Thus, whether viewed as a hypothetical output of deliberation or as an input into a deliberative process, top-down proposals need to be supplemented by a further account of how they could be arrived at by a process of high-quality deliberation rather than being externally imposed. Given that choices about deliberative processes raise vital questions of procedural equity, those choices are not purely a matter for political decision but likewise warrant the attention of normative theorists.

Basic versions of a bottom-up approach (such as the Copenhagen/Cancún arrangements) do not fare particularly well on the test of deliberative quality, since countries may simply issue contributions without a requirement to provide a justification for them. However, as noted above, most bottom-up proposals are accompanied by review mechanisms that may facilitate some degree of deliberation. More specifically, under some recent proposals each country would be required to justify why it considers its contribution to be a fair share of the collective effort.⁵⁴ A recent UNFCCC decision encourages each country to set out how it 'considers that its [INDC] is fair and ambitious, in light of its national circumstances, and

⁵³ See for example UNFCCC, 'Workshop on Equitable Access to Sustainable Development (AWG-LCA 15)', http://unfccc.int/meetings/bonn_may_2012/workshop/6658.php (accessed 19 May 2015).

⁵⁴ Erik Haites, Farhana Yamin, and Niklas Höhne, 'Possible Elements of a 2015 Legal Agreement on Climate Change',

Carbon & Climate Law Review 3, no. 1 (2014): 4.

how it contributes towards achieving the objective of the Convention'.⁵⁵ This is potentially a welcome step towards improving the quality of deliberation in the UNFCCC, although providing this information remains optional and the quality of the information provided is yet to be seen at the time of writing.

Taking stock

So far I have argued that there is merit in the argument that top-down proposals perform better on distributive equity than on institutional feasibility, while the converse holds for bottom-up proposals. Once we take into account the dimension of procedural equity, the nature of the trade-offs between the two types of proposal becomes more complex, as neither proposal appears to be clearly superior on all aspects of procedural equity. While the formulaic aspect of top-down proposals offers greater transparency and accountability in principle, those proposals often lack well-articulated review processes. The diversity of national contributions presents an obstacle for the transparency of bottom-up approaches, although robust review mechanisms could help to compensate for this concern. Bottom-up proposals accompanied by review mechanisms may perform better than top-down proposals on the participation of affected parties, although both types of proposal remain vulnerable to democratic deficits at the national level. Top-down proposals frequently say little about how they could be adopted through high-quality deliberation, while bottom-up proposals appear to offer greater deliberative potential yet face the challenge of how to ensure that governments take this potential seriously.

Even if we are able to reach a provisional evaluation of each type of proposal based on the criteria I have outlined, the concern remains as to whether seeking to compare bottom-up and top-down proposals on the basis of procedural as well as distributive equity is really a matter of comparing apples and oranges. Thus it simply may not be the role of top-down proposals to spell out a fair process for their adoption: perhaps top-down proposals are intentionally designed to be capable of adoption through a range of possible decision-

⁵⁵ UNFCCC, 'Lima Call for Climate Action', para 14.

making processes. Equally, it is difficult to evaluate the distributional equity of bottom-up proposals, since they aim explicitly to map out a process that vests authority for the distribution of efforts in the hands of national governments, rather than pre-empting governments' decisions by means of a formulaic approach.

For these reasons, a more comprehensive comparison of top-down and bottom-up proposals is likely to require modelling how they would operate under a range of plausible scenarios for decision-making (in the case of top-down proposals) or distributive outcomes (in the case of bottom-up proposals). At the same time, the incompleteness and shortcomings of each type of proposal suggests that a hybrid approach combining the strongest elements of each may be the most promising avenue for advancing equity and institutional feasibility simultaneously. Others have already advanced a range of hybrid proposals.⁵⁶ Rather than compare these proposals in detail, in the remainder of the chapter I address a prior and as yet relatively unexplored issue, namely to identify the different ways through which top-down proposals could influence climate policy.

Alternate translations: other modes of influence for top-down proposals

Even if a largely bottom-up or hybrid process appears to be the most feasible approach for setting mitigation efforts, top-down proposals nevertheless merit further scrutiny in their own right as they may exert a positive influence on global cooperation in other ways. Margaret E. Keck and Kathryn Sikkink set out a typology of ways in which civil society advocates may influence transnational politics, including: (i) generating and disseminating information; (ii) invoking symbols that help to make sense of political issues; (iii) calling on powerful actors to influence a situation; and (iv) holding powerful actors accountable for

⁵⁶ See for example Haites, Yamin, and Höhne, 'Possible Elements of a 2015 Legal Agreement on Climate Change'; Xolisa Ngwadla, 'An Operational Framework for Equity in the 2015 Agreement', *Climate Policy* 14, no. 1 (2013); Ottmar Edenhofer, Christian Flachsland, Robert Stavins, and Robert Stowe, 'Identifying Options for a New International Climate Regime Arising from the Durban Platform for Enhanced Action' (Cambridge, MA: Harvard Project on Climate Agreements, 2013); Bodansky and Diringer, 'Building Flexibility and Ambition into a 2015 Climate Agreement'.

principles or policies to which they have subscribed.⁵⁷ I adapt their typology here to explore the influence of top-down proposals as tools for advocacy, where advocacy is construed broadly as action that promotes principled ideas or norms⁵⁸ such as equity. These tools could be employed not only by civil society advocates but also by governments or international organizations. While these forms of influence do not map precisely onto the categories of equity I have outlined above, category (i) is closely aligned with transparency, categories (iii) and (iv) with accountability, and categories (i), (ii) and (iv) with quality of deliberation. Each form of influence may also help to secure distributive equity.

Top-down proposals may achieve these forms of influence at various stages of the policy cycle and at multiple institutional levels. I begin at the level of multilateral review, which is generally the level at which hybrid proposals seek to integrate elements of top-down and bottom-up approaches. I then broaden the scope of analysis to consider other forms of influence: through civil society advocacy and national deliberation. I focus in particular on the informational and accountability roles that top-down proposals may perform.

Multilateral review

The first means of influence involves multilateral review processes outside and within the UNFCCC. Top-down proposals may inform expert review of the science of climate change undertaken by the IPCC. The most recent Fifth Assessment Report of the IPCC modelled the regional distribution of mitigation costs using a number of stylized versions of top-down proposals, including equal per capita emissions and proportional mitigation costs.⁵⁹ Even if governments are at liberty to adopt or reject the findings of the IPCC, its reports have represented an influential – albeit controversial – yardstick for negotiations over recent

⁵⁷ Margaret E. Keck and Kathryn Sikkink, *Activists Beyond Borders: Advocacy Networks in International Politics* (Ithaca, NY: Cornell University Press, 1998), 16.

⁵⁸ Keck and Sikkink, *Activists Beyond Borders: Advocacy Networks in International Politics*, 8.

⁵⁹ Leon Clarke et al., 'Assessing Transformation Pathways', in *Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, UK; New York: Cambridge University Press, 2014), section 6.3.6.6.

decades.⁶⁰ Importantly, expert analysis of top-down proposals – including evaluation of which proposals are more credible than others – may help to dispel the view that top-down proposals are simply activist propaganda lacking sound conceptual foundations.

Even if the findings of the IPCC carry substantial epistemic authority, further action may be required to enable top-down proposals to inform decision-making. Multilateral review or oversight mechanisms may play a crucial role in this regard.

In discussions on possible oversight mechanisms, the idea that the new climate regime should adopt an ‘equity reference framework’ to guide deliberation has become increasingly prominent.⁶¹ Under an equity reference framework, both ex ante or ex post review mechanisms could be guided by top-down proposals to varying degrees. For example, countries could justify their national contributions on the basis of a framework incorporating a selection of credible top-down proposals, while a multilateral review process could assess the adequacy of national contributions against the framework. If adopting even a range of credible proposals as benchmarks for review proves too contentious, the framework could be based on individual indicators commonly used in top-down proposals such as national income and emissions.⁶² While countries would retain discretion whether or not to revise their contributions in the light of the outcomes of reviews, backsliding could be deterred by the stipulation that countries could only revise the stringency of their contributions upward, not downward.⁶³

Employing top-down proposals in this way may help to improve both the deliberative quality and the accountability of the climate regime. While a diplomatically worded multilateral

⁶⁰ Mike Hulme and Martin Mahony, ‘Climate Change: What Do We Know About the IPCC?’, *Progress in Physical Geography* 34, no. 5 (2010): 712–14.

⁶¹ Xolisa Ngwadla and Lavanya Rajamani, ‘Operationalising an Equity Reference Framework in the Climate Change Regime: Legal and Technical Perspectives’, *MAPS Research Paper: Issue 21* (Cape Town: Mitigation Action Plans and Scenarios, 2014).

⁶² *Ibid.*, 18.

⁶³ Haïtes, Yamin, and Höhne, ‘Possible Elements of a 2015 Legal Agreement on Climate Change’, 6.

review may not explicitly ‘name and shame’ laggard countries, the implication by an authoritative body that certain countries need to improve their efforts may carry substantial weight. Governments may not necessarily accept or care about the equity principles underpinning top-down proposals, but some (admittedly by no means all) governments may nevertheless care about how they are perceived relative to other countries.

Civil society advocacy

Some well-known top-down proposals have originated at the interface between research and civil society activism, including the Greenhouse Development Rights framework and the Contraction and Convergence approach.⁶⁴ A recent example of the use of top-down proposal by campaigners that has attracted media attention is the ‘Climate Fairshares’ website launched in 2014. The site, set up by two international non-government organizations (NGOs), draws heavily on the Greenhouse Development Rights framework.⁶⁵

Top-down proposals may support civil society efforts to influence national governments by promoting information transfer and accountability. First, by employing top-down proposals to provide a principled basis for quantified targets that countries should meet, campaigners may lend greater specificity to their demands than a general call to action would do. Second, top-down proposals may provide the basis for a ‘league table’ for comparing countries and showing which are doing either more or less than their fair share.⁶⁶ A ‘naming and shaming’

⁶⁴ Baer et al., ‘Greenhouse Development Rights: Towards an Equitable Framework for Global Climate Policy’; Meyer, ‘The Kyoto Protocol and the Emergence of “Contraction and Convergence” as a Framework for an International Political Solution to Greenhouse Gas Emissions Abatement’.

⁶⁵ Friends of the Earth Jubilee South Asia Pacific Movement on Debt and Development, ‘Climate Fairshares’, <http://www.climatefairshares.org/> (accessed 19 May 2015); John Vidal, ‘Scientists Reveal ‘Fair System’ for Countries to Tackle Climate Change’, *Guardian (UK)*, 21 September 2014 (2014), <http://www.theguardian.com/global-development/2014/sep/21/scientists-calculations-fair-system-climate-change> (accessed 19 May 2015).

⁶⁶ Baer, ‘The Greenhouse Development Rights Framework for Global Burden Sharing: Reflection on Principles and Prospects’, 69.

process could thus help to spur countries into taking action.⁶⁷ This function of top-down proposals could help not only to ensure consistency-integrity but also to promote context-integrity, since top-down proposals may strengthen the ability of civil society actors to encourage the UNFCCC to achieve its PIJ.

National deliberation

Even if multilateral negotiations do not formally adopt a top-down proposal for all countries, individual governments could base their national contributions on the share of effort prescribed by a given top-down proposal. Even if a government does not endorse any single top-down proposal, its deliberations on choice of emissions targets may be informed by a selection of top-down proposals.

There is little evidence to date that national governments have formally adopted a top-down proposal as the basis for their national contributions. However, the UK's Committee on Climate Change provides a notable example of deliberation informed by a range of top-down proposals. The Committee is an independent statutory body that advises the UK Government on its emissions targets and other climate change initiatives. In 2008 the UK Government adopted the Committee's recommendation to set an emissions reduction target of 80 per cent between 1990 and 2050.⁶⁸ In formulating its recommendation, the Committee surveyed a number of top-down proposals, including equal per capita proposals and proposals based on reducing the emissions intensity of national income. While the Committee did not endorse any one top-down proposal, it concluded that 'it is difficult to imagine a global climate deal which is either pragmatically achievable or fair which does not involve the UK and other developed countries reducing their emissions, over the long-term,

⁶⁷ Keck and Sikkink, *Activists Beyond Borders: Advocacy Networks in International Politics*, 24; Thorsten Benner, Wolfgang H. Reinicke, and Jan Martin Witte, 'Multisectoral Networks in Global Governance: Towards a Pluralistic System of Accountability', *Government and Opposition* 39, no. 2 (2004): 200.

⁶⁸ Committee on Climate Change (UK), 'Building a Low-Carbon Economy - the UK's Contribution to Tackling Climate Change', *The First Report of the Committee on Climate Change* (London: UK Government, 2008).

to a per capita level which if applied across the world would be compatible with our climate objectives'.⁶⁹

Australia provides a further example of the potential and limits of top-down proposals to influence policy-making. In 2014, the Australian Climate Change Authority (an independent statutory body modelled on the UK example) issued a review of Australia's emissions targets for 2020 and beyond.⁷⁰ The report reviewed a number of top-down proposals, including Contraction and Convergence and subsequent variations thereof, Greenhouse Development Rights (both of which received support in some public submissions to the review) and equal mitigation costs as a proportion of national income.⁷¹ In more specific terms than its UK counterpart, the report expressed a preference for a modified version of contraction and convergence similar to that previously recommended by the Garnaut Review of Australia's climate change policy.⁷²

As of early 2015, the Australian Government had not accepted the Authority's recommendations to lift its 2020 target. The Government intends to announce post-2020 targets by the middle of 2015. Whether the Government adopts the Authority's recommendations for post-2020 targets remains to be seen. However, the Coalition Government elected in 2013 has been considerably less willing to embrace strong action on climate change than its predecessor. The limited impact of the Authority's recommendations to date underscores the political difficulties in translating ambitious proposals into action, particularly in a political context where fossil fuel interests remain highly influential. However, under a government less ideologically opposed to responding to climate change the top-down proposals informing the Authority's recommendations may have exerted greater influence.

⁶⁹ Ibid., 30.

⁷⁰ Climate Change Authority, 'Reducing Australia's Greenhouse Gas Emissions: Targets and Progress Review: Final Report', (Canberra: Australian Government, 2014).

⁷¹ Ibid., 114.

⁷² Ibid., 117; Ross Garnaut, *The Garnaut Climate Change Review: Final Report* (Melbourne: Cambridge University Press, 2008), 203-05.

Conclusion

Top-down proposals for effort-sharing represent a visionary yet contentious understanding of how to achieve integrity in global climate policy. In this chapter I have argued for the need to rethink the limitations of top-down proposals as well as their potential.

Despite their ability to translate vital principles of distributive equity into specific policy recommendations, top-down proposals for sharing mitigation efforts face a significant uphill battle to overcome concerns of institutional feasibility. In addition, while top-down proposals offer greater transparency than bottom-up approaches in some respects, they generally provide an incomplete answer to the question of how to ensure high-quality deliberation and the participation of those interests most affected by climate change. Despite these concerns, we need not dismiss top-down proposals as fatally flawed or irrelevant to policy-making. Instead, I have shown that there are a number of ways in which top-down proposals may inform decisions about mitigation targets, even if governments or multilateral actors do not formally adopt any single proposal.

There remains a substantial risk that countries will continue to view existing pledge-and-review arrangements as a means of paying lip service to the idea of ambitious action on climate change while escaping scrutiny over the adequacy of their efforts. Nevertheless, the evidence I have presented points to a number of ways in which reference to top-down proposals may help civil society organizations and official advisory bodies to improve the information base and the accountability of the climate regime.

The analysis in this chapter represents a partial evaluation of top-down and bottom-up proposals, particularly as I have focused on a subset of criteria for evaluation as well as on a limited number of proposals and channels for influence. Further research will be necessary to evaluate the ability of top-down or hybrid proposals to secure procedural and distributive equity, as well as to assess in greater depth the influence of top-down proposals on policy-making. The former area of research could yield valuable insights for policy-makers, while the latter could help to build understanding in the scholarly sphere and beyond of the

means through which moral norms may influence climate policy specifically and international relations more generally.⁷³

The analysis has also highlighted a broader concern about the lack of symmetry in the way that the IPCC's recent assessment reports articulate criteria of distributive and procedural equity. This concern points to the need to explore how the IPCC's criteria for evaluating proposals for international cooperation could be adjusted in future assessment reports to give greater weight to procedural equity as a value in its own right rather than merely a means to secure feasibility.

The arguments presented here counter the view that ensuring integrity is a simple linear process of achieving consistency–integrity by translating a PIJ directly into commitments made by individual countries. Achieving integrity in the climate regime will also depend crucially on context–integrity, which involves a more complex and less tightly coordinated process involving external advocacy from civil society, rational persuasion by scientists and others, and peer pressure from other countries. But a degree of complexity may be a reasonable price to pay in a world where governments can rarely be compelled by a supranational authority to fulfil their moral obligations.

⁷³ Martha Finnemore and Kathryn Sikkink, 'International Norm Dynamics and Political Change', *International Organization* 52, no. 4 (1998); Chukwumerije Okereke, 'Equity Norms in Global Environmental Governance', *Global Environmental Politics* 8, no. 3 (2008).