The ‘wickedness’ of participation in climate change adaptation governance

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Introduction

The ‘wicked dimensions’ of climate change require rethinking how to best govern efforts towards adaptation. Wicked problems, as defined by Rittel and Webber (1973), cannot be solved by breaking them down into their component parts to be addressed by experts. Instead, wicked problems are ‘ill-formulated, involve uncertainty and confusing information, have many decision-makers and affected parties with different and conflicting values, and promise ramifications for the whole system’ (Ferkany and Powys Whyte 2011, p. 3). Climate change is widely considered a wicked problem (Ludwig, 2001) due to the interaction between ecological, social, and economic factors across scales, and the fact that addressing climate change is an issue of governmental planning more than purely a scientific problem to be solved. Since no single technical solution will resolve the problem, wicked dimensions forefront the importance of on-going governance that is able to make incremental decisions to address the problem, recognizing that future conditions will likely require different strategies. In addition, there is the recognition that what is seen as a solution by one, might actually generate problems for another (Rittel and Webber 1973). Solutions cannot therefore be handed down from experts and so participatory approaches to governance are seen as central to negotiating conflicting values and contributing local knowledge necessary to managing certain aspects of climate change. The presumption is, therefore, that some sort of multi-level governance involving many participants will be required. The surge of research on adaptive management (for critical review see Stringer et al., 2006) is one indication of the focus on developing new philosophies and practices of adaptive management capable of governing wicked problems.

We see climate change as a wicked problem and agree that governing climate change adaptation requires multi-level approaches. Climate change governance calls for participatory approaches, including local perspectives, diverse stakeholders, and members of the public. Nonetheless, we argue that participation in climate governance is itself a wicked problem. Determining who participates and how is wicked, tricky, and even
aggressive. The wickedness of participation is partly the result of the very problem that prompted Rittel and White (1973) to write about wicked problems: an increasingly plural, diverse society. In turn, power and hierarchy compound the challenges of diversity, making a stable consensus not only improbable but potentially discriminatory towards those living at the margins of society. Finally, we argue that the wicked dimensions of climate change as a political problem—the difficulties of problem definition and no stopping rule, in particular—make theorizing an appropriate role for participation in climate change difficult. Yet because we believe that meaningful participation is essential for just governance of climate change adaptation, we draw on the existing work on participation, multi-level governance, and climate change adaptation to identify wicked dimensions of participation.

We begin by defining what we mean by participation and governance, thus establishing the presumption that climate change adaptation will require a multi-level approach. We then consider how the nature of climate change adaptation poses particular governance challenges at different scales. To begin to theorize the wicked dimensions of participation, we turn to critiques of participation from development and post-political scholars. These critiques suggest challenges to participation that must be directly acknowledged and managed to ensure productive participation. Following the logic of wicked problems requiring attention to paradoxes, we identify several wicked dimensions of participation in climate change governance.

**Participation in environmental governance**

In the past decade, there has been a move from focusing on government institutions as the central means of making political decisions to a focus on governance that includes a wider set of actors and institutions in making decisions over shared problems. Schmitter (2002) defines governance as “a method/mechanism for dealing with a broad range of problems/conflicts in which actors regularly arrive at mutually satisfactory and binding decisions by negotiating with each other and co-operating in the implementation of these decisions” (Schmitter 2002, p. 52). By focusing on governance as a method, Schmitter draws our attention away from the actors making decisions (e.g. government) to the
processes whereby mutually satisfactory decisions are made. Gualini (2010) further argues that governance is a useful analytic framework for looking at change in policy processes within emergent, non-conventional, extended policy arenas, across hierarchy, market, and self-governance mechanisms, including forms of co-decision and co-management. Despite concerns that governance can become aligned with the normative goal of shrinking the state (see Gualini, 2010), governance fits climate change adaptation because it draws our attention to the processes of making decisions and a broader range of actors and mechanisms for enacting decisions than government alone.

Paavola (2007) defines *environmental governance* as “the establishment, reaffirmation or change of institutions to resolve conflicts over environmental resources” (Paavola 2007, p. 94). The suggestion that environmental governance requires participatory approaches is not new (Paavola and Adger 2006). In fact, several national and international agreements commit to participatory forms of governance (e.g. Principle 10 of the Rio Declaration, article 6 of the 1992 UNFCCC; UNFCCC Cancun, and UNFCCC Bonn National Adaptation Plans). However, participation within climate change adaptation has not been fully theorised. Although attempts at participatory governance now have a long history, the implementation of such approaches is not straightforward.

Given our focus on participation, it is necessary to define this key term. Participation can refer to various forms of non-state involvement in governance, planning, and project implementation. Few et al. (2007) define participation as “securing the active involvement of a broad range of stakeholders in decision-making and action” (p. 46). This definition comes down to determining what counts as “active involvement” and “action” and who are defined as “stakeholders”. Arnstein’s article ‘A ladder of citizen participation’ (1969) is often quoted as a defining text in the participation literature (Fung 2006; Reed 2008; Collins and Ison 2009). Critical of the rhetoric and euphemisms surrounding participation in Community Action Programmes in the States, she created a typology hierarchically arranged from ‘manipulation’ on the bottom rung of a ladder leading through ‘therapy’, ‘informing’, ‘consultation’, ‘placation’, ‘partnership’, ‘delegated power’, and finally ‘citizen control’ on the top. This typology focuses on the issue of power, with the assumption being that the higher up the ladder, the greater the power given to citizens in the process, and the better it is. The participation ladder demonstrated that the term participation can and is
applied to approaches with very different emancipatory outcomes. Although she recognised the simplicity of her analysis, and the typology has since been questioned by others (for example Fung 2006; Collins and Ison 2009), Arnstein’s observation that ‘participation’ can cover many different interactions that should not be conflated and her critique of the processes in terms of power have been echoed in many subsequent works (for example Michener 1998; Agarwal 2001; Green and Hunton-Clarke 2003). More recently Reed (2008) identified a plethora of typologies of participation developed by numerous scholars based on: the nature of the engagement (the flows of information, for example top-down or bottom-up), whether pragmatic or normative, or based upon the objectives of use (for example whether outcome or process oriented).

Building on these distinctions, Rowe and Frewer (2005) note the differences between public communication (information from sponsor to public), public consultation (information back and forth initiated by the sponsor), and public participation (information exchange that includes some degree of dialogue that transforms opinions). Our paper draws on this final notion of public participation as having some information exchanges between parties on the range of options and/or opinions related to problem definition, project development, implementation, and/or monitoring. This conceptual definition includes participation that differs on a range of dimensions: structured to unstructured, informal to formal, passive to active, individual to collective, one-off to on-going, unpaid to paid, reactive to proactive, self-interested to altruistic, and resisting social change to driving social change (Brodie et al., 2009). In the context of climate change adaptation, this can mean that people participate in the exploration of a management problem, goal setting, planning, and/or monitoring (Stringer et al., 2006).

Within literatures on participation, some scholars focus on the general public while others focus on stakeholders or including particular organizations and communities. The difference between stakeholders and the public can be traced to thinking about participation in terms of representing relevant interests (stakeholders) or thinking about democratic participation as a more fundamental right (general public). Schmitter (2002) has built on the notion of “stake” to suggest a range of different “holders” based on rights, spatial location, knowledge, share, stake, interest, and status. His discussion attempts to
expand the ways in which theorists and practitioners determine who gets to participate. Rather than focusing exclusively on stakeholder or public participation, this paper considers participation of both stakeholders and publics as central to working through the wicked dimensions of participation.

In terms of political philosophy, participation is a central component to environmental democracy. Foti et al. (2008) argue that access to information, public participation, and access to justice are keys to more transparent, inclusive, and accountable decision-making in matters affecting the environment. As a normative concept, participation as part of democratic rights (Stringer, Dougill et al. 2006; Reed 2008) reduces marginalization, increases public trust, increases empowerment, and capacity building. Pragmatically, participation can help ensure that solutions are better adapted to the local context, transform adversarial relationships, lead to ownership of decisions, reduce implementation costs, introduce better information, and include diverse perspectives and ways of knowing (Reed 2008), thereby enhancing the quality of assessments or decisions (Ferkany and Powys Whyte 2011). In other words, participation legitimizes decisions (Bauer, Feichtinger et al. 2011). In terms of adaptation, in particular, including a wide range of voices in the development of local, national, and international strategies can help to identify the most appropriate (and desirable) forms of adaptation and their viability; mobilize tacit knowledge and experiences of alternative knowledge communities on local vulnerabilities and impacts; analyse their capacity to cope with the impacts of climate change; build shared understanding of the impacts, vulnerabilities, and options of adaptation; and enhance the ability to identify priority areas (Biesbroek, Swart et al. 2010). Studies show that ‘stakeholder’ participation improves the quality of environmental decisions (Reed 2008), but the level of improvement is dependent on the process and how stakeholders are involved (although the question of who these stakeholders were also needs to be asked).

These rationales for participation in climate change adaptation governance provide a philosophical and practical basis for the importance of participation in climate governance. Despite our belief in the importance of participation, our paper reveals fundamental challenges to the theory and practice of participation due to the nature of wicked problems. To identify these wicked dimensions of participation, we review the
literature on climate change adaptation and multi-level governance and then focus specifically on critiques of participation.

**Climate change adaptation and multi-level governance**

Whereas until recently the international community emphasized mitigation more heavily, adaptation has gained importance in recent years. Although originally considered defeatist, this growing focus recognises that no matter how successful mitigation attempts may be, societies and communities are going to have to respond to changes in the climate and the various impacts this will have. *Adaptation* as defined by the IPCC is the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects; adaptation can moderate, harm or exploit beneficial opportunities. Adger et al. (2009) have a similar albeit wider definition where “adaptation describes adjustments made to changed environmental circumstances that take place naturally within biological systems and with some deliberation or intent in social systems” (p. 337). Creating adaptive responses and measures to a changing climate requires decisions and actions cross-cutting local, national and international levels (Paavola and Adger 2006; Biesbroek, Swart et al. 2010). It is argued that this necessitates “environmental governance” that encompasses not only government but also non-state actors such as local communities, NGOs and businesses (Lemos and Agrawal 2006).

At a conceptual level, Gualini (2010) refers to the multi-actor and multi-level nature of governance with interconnected rather than hierarchical relations. Tackling climate change requires multi-level governance with coordination across multiple scales, a need which is implicit in the very nature of climate change and its impacts. Paavola and Adger (2006) point out “there is no one, right level of decision making for undertaking adaptive actions” (p. 597), particularly because adaptation can be required at multiple scales, ranging from the community to the international level. Faced with community-level impacts of climate change, Lemos and Agrawal (2006) argue that nation states are no longer taken as the only actors that can effectively deal with climate change. Instead, Biesbroek et al. (2010) stress the importance of taking action at the appropriate level of scale and argue that bottom-up approaches fit adaptation better due to the existence of
multiple variables, context dependencies, and cultural settings. Hobson and Niemeyer (2011) underline the fact that adaptation is a long and continuous process requiring close coordination with stakeholders. This coordination is needed at multiple levels, but it necessarily requires local engagement rather than just national policy. In sum, climate change adaptation requires multi-level governance poised to address the impacts of climate change at the same scale at which they are experienced to determine appropriate adaptations. In turn, it requires coordinated collective action across these levels.

Despite a clear focus in many studies on the necessity of multi-level governance in relation to climate change adaptation, it is not clearly laid out how multi-level governance should be operationalized. Particularly, what actors are to be “included” at which levels? The previous paragraph suggests that at the local level the public and stakeholders can be engaged in direct participation in deliberation and decision making. This is in line with a move toward decentralization. Lemos and Agrawal (2006) argue that given the complex and multi-scalar nature of most environmental problems, “pure modes of governance” in which states or market actors lead the process are likely to fail. The authors argue that the “latest fashion” of decentralization of government functions is usually justified on three grounds: greater efficiency, bringing decision making closer to those affected by governance, and provision of more precise knowledge for decision-makers. New hybrid modes of governance crosscutting state, market, and community spheres are emerging. Three broad categories for these new innovative hybrid governance instruments are identified by the authors: co-management (between state and community), public-private partnerships (between market and state), and social-private partnerships (between market and community). Although these new forms come about with the promise of increased efficiency and greater funding opportunities from the private sector, they are widely contested. In particular, increased reliance on market actors and processes might undermine social goals of stronger democratic participation, equal access to resources, and accountability. New forms of global environmental governance may simply reflect existing power relations rather than democratizing the negotiation processes (Ford, 2003, cited in Lemos and Agrawal 2006). The nature of participation in these hybrid governance instruments is fundamental to assessing equity, accountability, and legitimacy.
At the local level, participation often means direct participation by stakeholders or members of the public in dialogue and deliberation that influence decision-making. Yet even at the local level, power is not always transferred to local authorities and local publics. Larson and Soto (2008) point out the gaps between the theory and practice of decentralization, especially when incentives for central authorities to transfer powers and resources to lower levels are absent, and local authorities do not see any incentive to take on power in a responsible manner. Their analysis demonstrates that intended outcomes of decentralization – such as greater participation and social justice for marginalized groups – do not necessarily come true in practice.

Ostrom (2010) suggests adopting a polycentric approach to the climate change problem. She underlines the importance of experimental efforts at multiple scales with potential multiple benefits and argues that reliance on only one scale is naive. However, this approach does not account for the optimum conditions of how the polycentric system should be set up. Larson and Soto (2008) argue that polycentric governance systems do not have clear answers to two key questions: 1) “how and by whom local rules would be monitored to promote social inclusion as well as sustainability” and 2) “if and how local enforcement failures and the movement of products across jurisdictions would be monitored and controlled” (2008, p. 226). Their first question points to the difficulties of maintaining democratic values (social inclusion) that should be related to participation. The second concern highlights the complications of scale, including questions of who is involved in multi-scalar rule making and enforcement. In addition, there is no theory for what participation in governance should entail at the national and international levels. Yet there is an assumption that polycentric systems must maintain a role for the state. While delegation of power to the lower levels constitutes an important part of multi-level governance, this does not need to undermine the role and potential of the state as coordinator between different levels – local and sub-national. Therefore, the state has to be a significant part of the hierarchy (Paavola, 2007; Vatn, 2009). Further, in order to deal with issues in which redistribution is one of the major concerns – as is the case with climate change adaptation - the state has to assume a large role since neither markets nor hybrid forms of governance can become successful instruments on their own (Lowi, 2002, cited in Lemos and Agrawal 2006).
The increasing popularity of market- and incentives-based policy instruments such as eco-taxes, voluntary agreements, and eco-labelling in developed world continue to expand the possible mechanisms of environmental governance. Nonetheless, Lemos and Agrawal (2006) underline that this does not imply that governance is replacing governments. Governments remain to be an important source of credible threat and monitoring authority. Yet there are fewer discussions about the nature of participation in state decisions and actions. The unspoken assumption seems to be that state decisions will be made by elected representatives and experts, without needs for participation by others unless forms of direct democracy like referenda are already in place (e.g. Stadelmann-Steffen, 2011).

The recognition that governance at the state level is not adequate for tackling global challenges, particularly concerning the environment, has led to a focus on and development of international institutions. In climate change in particular there is the popular perception that it is at this international level which is most vital in order to galvanise action, fairly spread the costs, and to meaningfully face the challenge of global environmental change within the context of unequal development and unequal responsibility (cf. Hulme 2009). The annual summits of the UNFCCC receive global attention and critique concerning not only the decisions reached (or not) but the negotiation process itself. At this level the idea of participation moves beyond that of political representation, towards – in rhetoric at least – a more inclusive interpretation that attempts to bring in other actors including underrepresented groups. Civil society groups, international NGOs, and business consortiums are increasingly playing a role at this level. This can be witnessed by such examples as the inclusion, if only as observers, of indigenous representatives and NGOs in the on-going UNFCCC negotiations (Tebtebba 2009), in the lobbying activities as well as the implementation role of NGOs of schemes such as those concerning forest mitigation, or the emergence of global industry level multi-stakeholder associations such as the Roundtable on Sustainable Palm Oil (Nikoloyuk, Burns et al. 2010). The role of such ‘stakeholders’, how and who they are supposed to represent, and whether they strengthen or undermine democratic decision-making at this level are questions that still remain unanswered.

Across all scales of multi-level governance, there are concerns about justice, particularly in terms of ensuring fair participation. Participation has to be “fair” in two
forms; governing climate change adaptation requires both distributive justice (distribution of costs and benefits) and procedural justice (encompassing recognition, participation and distribution of power). Adaptation also entails knowledge building as an on-going and iterative process between knowledge producers and users (Dilling and Lemos, 2011). Again, this means that the links between different levels and actors (i.e. between scientists, local community, organizations and decision makers) have to be established to create useful knowledge for adaptation.

Social learning is a particular way that scholars have started to theorize about the goals of participation in adaptive management. Social learning is the learning that occurs through social interaction, as participation cultivates individual and group reflection, trust, and relationships (Stringer et al., 2006). This approach is critical of Arnstein’s initial work on participation, arguing that adaptation requires new forms of social learning for concerted action that require theorizing “meaningful” and “active” participation in new ways (Collins and Ison, 2009). Stringer et al. (2006) argue that maintaining a flexible view of participation is paramount: “diverse stakeholders have changing needs and priorities, and different objectives may require different approaches to participation within the same project. Also different voices may need to come through at different stages of the adaptive cycle for shared understandings to develop. Maintaining a flexible view of participation is, therefore, paramount in creating the conditions for this to take place” (p. 17). In turn, social learning focuses on the process of the co-creation of knowledge, the convergence of goals, and the change of behaviour that comes from understanding something, which together suggest how process can transform a situation. To ensure that these conditions are met, we turn to critiques of participation in the development literature and post-political perspective.

**Critiques of participation**

In the development literature the most important critique of participation comes from the oft-quoted book *Participation: the new tyranny* edited by Cooke and Kothari (2001). This book came as a reaction against the ‘participatory turn’ in development, which was initially embodied in such approaches as Farmer First and Participatory Rural
Appraisal, and has now been mainstreamed. This collection of essays questions “how the discourse itself, and not just the practices, embodies the potential for an unjustified exercise of power” (Cooke and Kothari 2001, p. 4). They see three tyrannies: the tyranny of decision-making and control (outsiders overriding local forms), the tyranny of the group (for example elite capture and/or participatory exclusions), and the tyranny of the method (raising the concern that its dominancy was driving out alternatives).

In her contribution, Cleaver claimed that “participation has [...] become an act of faith in development” (2001, p. 36) based on three tenets:

1. it is intrinsically a ‘good thing’
2. a focus on getting techniques right – a way of ensuring success
3. power and politics should be avoided as divisive and obstructive

Although many of the contributors had been enthusiastic supporters of participation as an empowering approach in the development arena, many saw that mainstreaming led to the co-optation and de-legitimization of marginal people and their dignity as the larger inequitable structures were left untouched, and dissent or conflict was stifled. Instead of offering a forum for transformation, it subjugated the poor and vulnerable into participatory frameworks which were imposed from the outside, had pre-defined ideas about the problems to be tackled, did not take into consideration the local social context, and led to an increased burden - both freeing up the state from its social responsibility and stifling political dissent through the illusion of decentralising power. McGee (2002) claims that the ideal of ‘participatory development’ was replaced by the mainstreamed ‘participation in projects’. The differences in methodologies between these two is not only a difference in toolkit but how development was conceived and by whom, and what sort of development was promoted and how. Participatory development can be seen as a threat to the status quo as its implementation would require a shift in power from the ‘experts’ to the grassroots.

Reed (2008) contrasts this more site specific ‘participation in projects’ seen in developing world contexts with the trend of consultation in the developed world. He points out that in terms of environmental governance this is one area where the developed world is ‘learning from the south’. At the same time, development practitioners who are
disenchanted with the emancipatory potential of ‘participation in projects’ are now reframing participation as the active involvement of citizens in governance decisions, a topic that Hickey and Mohan take up in their follow up book Participation: From Tyranny to Transformation (Hickey and Mohan 2004; Hickey and Mohan 2004). As they distinguish between immanent and imminent development (the first the process of social change, the latter a specific intervention), they place their focus in the former, making it intrinsically political – leading to a radicalised notion of citizenship as an alternative to ‘development in projects’. Gaventa (2004) notes that participation is increasingly being used in relation to rights of citizenship and democratic governance as witnessed in programmes for decentralised governance. To his view there needs to be a “reconceptualization of the meanings of participation and citizenship in relationship to democratic governance” (2004, p. 28), rethinking participation as a right of citizenship “and with the extension of the rights to participation beyond traditional voting and political rights, comes the search for more participatory approaches to ensuring citizen voices in processes of democratic governance” (2004, p. 30). His final challenge concerns the issue of power relations in participatory spaces, where he points out that although they offer the opportunity for transformative engagement, they may well be used as “instruments for reinforcing domination and control” (2004, p. 34). This brings us back to the issue of power once more.

In addition to the development literature, participation has also been criticized within democratic theory, most prominently by post-political theorists. The post-political condition is built on the perceived inevitability of capitalism and the market economy as the basic organizational structure of the social and economic order, which as a consequence has evacuated dispute and disagreement from the public sphere and replaced them with a consensually established frame (Swyngedouw, 2010). Post-political politics applies a managerial logic to all aspects of social life, reducing the political to administration (policy-making) as decision-making is increasingly considered to be a question of expert knowledge and not of political position (Swyngedouw, 2010; Rancière, 2004). In this context, theorists criticize an increasing reliance on consensus that silences conflict and critique that challenges ways in which liberal economic policy now organizes moral values.
Swyngedouw (2010) argues the use of apocalyptic imaginaries and the management of fear in global climate change discourse, in particular, help disavow and displace social conflict. The concerted attempt to use the ‘market imperative' to legitimize institutional reform results in a ‘hollowing out' of the national state with more authoritarian and often repressive political regimes (Swyngedouw, 2000). In this process, ‘unauthorized actors’ appear (Beck, 1999): their status, inclusion or exclusion, legitimacy, structure of representation, scale of operation and accountability often take place in non-transparent, ad hoc and context-dependent ways, and differ greatly from those associated with pluralist democratic rules and codes (Swyngedouw, 2005). At a fundamental level, the post-political critique introduces questions concerning how actors participate, and who is defined as a stakeholder, by whom, and for what. For post-political theorists, participation is not a neutral, a-political process. Instead, participation influences who gets to define the problem and what solutions are under consideration. “To the extent that ‘participation' is invariably mediated by ‘power' (whether political, economic, gender or cultural) among participation ‘holders,’ between levels of governance/government and between governing institutions, civil society and encroaching market power, the analysis and understanding of shifting relations of power are a central concern, particularly in light of the link between participation, social innovation and development” (Swyngedouw, 2005, p. 1998-9). Too often, certain voices and perspectives are excluded from participation, particularly those likely to disagree or critique a project. Collaborative planning illustrates the problems with participation becoming synonymous with only engaging those who already agree. “As collaborative planning has been deployed within the UK, and elsewhere, with a promise to focus on ensuring local community inclusion; this has, at best, resulted in an ‘inclusion' that largely depoliticized conflict, neutralised dissent, and legitimized the values of both government and private sector pro-development interests” (Gunder, 2010, p. 302). As the post-political critique makes clear: only including those who already agree and silencing dissent is anti-democratic.

A related critique comes from work on post-ecologism, an era marked by a politics of unsustainability because the historically radical and transformative elements of environmental movements and eco-political thought are blunted through mainstreaming into the ecological modernization paradigm (Bluhdorn and Welsh, 2007). According to
Laessøe (2007), the post-ecologist transformation implies a narrowing of participation in four different meanings: 1) from a strategy focused on attacking and questioning the socio-cultural dynamics of environmental risk production – to a technical–functionalistic approach restricted only to an optimization of resources 2) from social mobilisation that highlights the value-based and structural conflicts which any serious sustainability policy needs to address – to a consensus orientation negating the sites of conflicts; 3) from an understanding of action that implies political engagement and collective empowerment – to an approach that avoids politicisation and promotes small technical fixes; 4) from an emphasis on issue-based learning about society at large – to a local perspective that eclipses any awareness that the problems to be addressed may require more encompassing strategies.

The post-ecological critique seems to resonate with the criticisms made by the post-political framework. The reduction of sustainability to a ready-made product with a predefined shape is tantamount to a narrowing of participation. At the same time, we are led to think that through participatory processes we are truly intervening into the political realm. But, as Bobbio (2006) reminds, it is utopic to think that we can change the current (post-ecologist and neo-liberal) system by means of an increase of popular participation, especially given its current, “narrowed” mechanisms.

**Wicked dimensions of participation**

The critiques that we reviewed make several fundamental challenges for participation in terms of the telos of democratic governance (consensus vs. agonism) and the praxis of enacting meaningful participation that moves beyond empty rhetoric. Responding to these criticisms requires developing more nuanced theories of participation that are then matched by mechanisms and strategies designed to ensure that these conditions are met in practice. Cataloguing mechanisms and strategies is beyond the scope of this paper. As a move toward more robust theories of participation, we identify wicked dimensions of participation in climate change adaptation. Unlike the instinct to narrow the field of inquiry to avoid paradox, wicked problems demand taking paradoxes seriously and finding ways to understand and work through contradictory tenants. By identifying these wicked dimensions, we argue that these dimensions demand attention rather than erasure.
if we seek better answers to the fundamental questions of who gets to participate in climate change adaptation and how.

**Wicked dimensions of how people participate**

*Problem formulation is a crucial stage that requires participation, but problem formulation of adaptation is often seen as a necessary precursor to public engagement.*

In wicked problems, determining the scope of the problem is a contested issue. An international coalition, for example, might choose to focus on the dynamics between global environmental change and economic globalization, what O’Brien and Leichenko (2000) call double exposure, rather than just environmental changes alone. In turn, defining a problem narrowly in terms of developing sea defences or developing crop resistance to possible new pests, for example, may make questions of economic opportunity and equity outside of the focus of concern. Thus defining the central problem that a group is attempting to address is a crucial stage in governing climate change adaptation. Due to the consequences of problem definition, diverse participants should be involved in this stage to ensure broad understanding of and support for attempting to address a particular problem. The paradox is that problem definition is often seen as a precursor to public engagement. Management, scientific, or government experts often define a problem before wide participation is even considered. The framing of climate change adaptation challenges as technical issues exacerbates this tendency. Yet how are participants to be engaged or stakeholders identified if the problem has yet to be defined?

In the case of climate change adaptation, there is a specific paradox that stems from this wicked dimension: *If communities are allowed to frame the problem, they may not focus on climate change adaptation as the central problem, which could result in inaction on climate change.* Democratic participation necessarily does not predispose individuals to a particular set of beliefs beyond basic rights; approaches like deliberation govern interaction through standards for conflict resolution, but they do not guide participants to a particular outcome (Lo, 2011). If problem definition is opened to public participation, the public could decide that other problems are more important than climate change adaptation. The paradox is that if climate change adaptation is not seen as a problem with public recognition and support then participatory processes lose legitimacy.
if they are seen as being guided by predetermined outcomes. As Few et al. (2007) ask, “If pursuit of adaptation to climate change is a predetermined goal, and if stakeholders cannot be ‘trusted’ to decide collectively on an adaptive path because of competing priorities and short-term interests, what would be the result of a participation process? If an agency is seeking public inclusion as a means to design an anticipatory adaptation strategy, how will countering voices be accommodated?” (p. 53). This concern about legitimacy rests on a broader wicked dimension of climate change adaptation: how will dissent be managed?

**Maintaining democratic legitimacy requires ample space for and encouragement of agonistic dissent; involving those who disagree about the nature of the problem may keep a group from being able to make decisions together.** As the post-political critique reminds us, vibrant democracy requires agonistic conflict where dissenting voices are encouraged and engaged, not just shut down. Yet the focus on making decisions together sometimes leads groups to adopt consensus-based approaches critiqued by post-political scholars. We reject the notion that a move to include participation in multi-level governance necessarily implies consensus-based approaches, particularly when consensus is a stand-in for supporting the status quo and hegemonic practices. In fact the existing examples of National Adaptation Plans mandating participation do not rely on consensus. Instead, we suggest that deliberative democracy has concepts that can help manage this paradox: confluence, workable agreement, and meta-consensus.

Confluence is a gathering or flowing together at a juncture (Kadlec and Friedman, 2007). For our purposes, this juncture represents the common problems of climate change that require local, national, and international adaptation. Conceptually, confluence encourages participants to reach across boundaries and explore multiple perspectives to address a common problem. But this process necessarily requires clarifying serious differences as well as identifying points of common ground. Confluence suggests ways forward that are provisional, practical, and dynamic. Confluence acknowledges the dynamism of agonistic politics and the importance of critique and deep disagreement to maintain democratic legitimacy and good decisions. Rather than only inviting participation by those who already agree, robust participation requires engaging people with deep disagreements. Similarly, Dryzek’s (2000) notion of a workable agreement or the extension, “meta-consensus” (Dryzek and Neimeyer, 2006), suggests that consensus is not
about agreement about positions as much as it is about understanding diverse perspectives. Normative meta-consensus, for example, suggests that different sides end up agreeing that others have legitimate values even if they disagree about which values should be privileged in this particular case. Like confluence, this type of consensus necessarily requires dissent and diverse perspectives, but it attempts to find a way to work through these differences so that decisions can be made. Political theorists have developed democratic theory to work through how to best honour difference while still being able to make decisions.

Yet the move towards governance rather than democratic government prompts additional paradoxes about how people participate that require new theory. Governance opens up a wider variety of actors and strategies that can make decisions about how to address shared problems. Yet governance lacks codified rules and regulations that define norms of participation, which can result in neo-liberal and corporate co-optation. Fundamentally this is the post-political concern that in the absence of robust theory or norms governance can be co-opted by corporate interests, making governance anti-democratic and environmentalism only a sales pitch. Following Dryzek and Bereikian (1993), we argue that the cure for this ailment is more democratic theory not less. Rather than treating governance as an open-concept devoid of norms or expectations, we suggest that environmental governance scholars would benefit from drawing heavily from democratic theory—even when theorizing about non-governmental actors like businesses or corporations. Building on Gaventa (2004), we argue that participation should be thought of in terms of the rights of citizenship rather than stakeholders who are involved to represent their interests. The public has a fundamental right to engage on governance of climate change adaptation, a right that does not depend on one’s stake in the issue or one’s opinion about a particular policy. We understand that this means of theorizing participation may constrain the governance process, but it is a better way to ensure that democratic values are upheld, which ultimately protects against co-optation. Moreover, this focus on citizenship sensitizes us to the ways in which governance should not become the domain of experts but instead must maintain democratic vitality through an active polis. Viewing participation as a right of citizenship suggests that a project planner is not responsible for selecting who can participate and how; instead, participation in climate
governance is a democratic right. In the international context, participation can be seen as a fundamental human right—not just a right of citizenship under a particular government.

**Wicked dimensions of who gets to participate**

Even if we determine that participation is a right, we haven't resolved the fundamental challenges of who gets to participate: *All “holders” should be enabled to participate, but the scale of climate change makes direct participation impractical if not impossible.* The nature of climate change adaptation requires that not every individual will be able to participate in all governing all of the decisions that impact them; some types of representation are necessary. In this way, fundamental questions of who gets to participate are not resolved by turning to democratic theory. But there are rich traditions for theorizing about representation, including Schmitter's (2002) encouragement to think of a range of different "holders" based on rights, spatial location, knowledge, share, stake, interest, and status.

*Climate change adaptation has no stopping rule as it requires on-going governance; in practice, sustaining participation with no stopping point is difficult and can result in politicization of participation over time.* Unlike problems that have a clear end-point, wicked problems require on-going governance since any “solution” will necessarily need to be revisited as system-dynamics impact the effects of any single solution. In practice, this means that participation has no temporal limit either: publics and stakeholders must be continually engaged in governance. This presents practical problems of how to motivate people to maintain participation in on-going governance, even if suitable participation mechanisms can be established. Over time, on-going participation can also lead to politicization as certain participants develop “expertise” through their on-going work with a project. Eventually these stakeholders might not represent the voices of the public or specific stakeholder groups as much as managers. At this point, the democratic and practical justifications of including local perspectives and diverse voices are undermined if participation only includes a small, established group inclined to support existing practices.

Finally, *participants tend to see problems on a level below their own. But if a problem is attacked on too low a level the success of resolution of higher problems may*
go down due to negative feedback loops caused by addressing lower level problems.

Moves toward decentralizing climate change governance increase participation in governance, but decentralization may also include people at the wrong scale. Paradoxically, the system might actually be made worse if people cause negative feedback loops when they focus on lower-level problems. Addressing this paradox requires analysis of the level of the problem, acknowledging that climate change adaptation likely requires participation at multiple levels.

Conclusion

The rich debate on governance and participation originates from the very fact that participatory democracy is not yet a form of democracy, while environmental governance is still currently evolving and taking shape. As Dryzek (2000) suggests, experimenting with what environmental democracy is, is an essential part of democracy itself. As we experiment with climate change governance, we are reminded of Rittel and Webber’s (1973) conclusion that they lacked a theory capable of handling wicked dimensions: “We have neither a theory that can locate societal goodness, nor one that might dispel wickedness, nor one that might resolve the problems of equity that rising pluralism is provoking. We are inclined to think that these theoretic dilemmas may be the most wicked conditions that confront us” (p.169). The nature of participation makes it a wicked dimension: on one side participation must be a necessary component of any climate change adaptation governance, on the other side it faces the risk of turning itself into a narrowed, truncated participation, or better an ostensible ‘neutral’ process which is instead reproducing the dominant (ideological and power) paradigm, thus depriving itself of its very debating and questioning capacity.

We argue that the movement to narrow participation in climate change adaptation to a technical-functionalistic approach, focused on consensus, promoting small technical fixes alone has to be resisted. Rather than being brushed over, the many ambivalences, dilemmas, unpleasant choices, and social conflicts, which are inherent in the notion of sustainable development, should become the subject matter for participatory processes. To ensure robust discussions and legitimate governance, the wicked dimensions of
participation in climate change adaptation that we identified must be taken seriously not erased.


