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Why are policy innovations rare and so often negative? Blame avoidance and problem denial in climate change policy-making

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ABSTRACT

While many studies have put forward prescriptions for action on climate change it is not clear under what conditions policy innovations are likely to be pursued or what form they will take. It is the purpose of this paper to bring some clarity to these subjects. The paper follows Hood in describing policy-makers in democratic polities as highly risk-averse and therefore unlikely to take policy action unless the circumstances and the nature of the problem they face are propitious. It also suggests that when actions are taken these are not always 'positive' – that is oriented towards dealing with the objective manifestations of a problem – but can also be 'negative' – that is, geared towards denial of a problem or its rejection. The paper examines the literature on policy failure and success in order to isolate several dimensions of failure which decision-makers would like to avoid. It then combines these elements to construct a two stage model of decision-making which identifies which types of problems and circumstances are likely to lead to innovative activity and which are not. This model is then applied to the case of activities for climate change mitigation and adaptation.

1. Introduction: policy failures, innovation failures and climate change policy-making

Climate change policy-making is often labelled a failure (see, for example, Harris, 2007; Latin, 2012; Pielke, 2010; Bryner, 2008). But what does it mean to be a failure and why has this happened? And what role does policy innovation (Polsby, 1984) or its lack play in policy success and failure? Does a failure to innovate lead to overall policy failure? Or do failed policy innovations contribute to such outcomes? These and other questions are significant ones in understanding the role policy innovations have played in climate change policy-making. The record of both innovations and failures to innovate in the sector raises a host of questions about which variables have caused many climate change mitigation and adaptation efforts to succeed or fail and why this has happened (Compston and Bailey, 2012; Lockwood, 2013).

Until recently, determining exactly what constitutes policy success and failure has been a subject of some contention in the policy sciences (Grant, 2009) and poor definition of the dependent variable has interfered with the ability of observers to conclude precisely what the relationship is between policy innovation and policy outcomes. The most common way to define the two concepts has been to treat policy failures as the reverse of policy success: in the sense that whatever doesn't succeed is a failure. McConnell (2010a), for example, defined policy success as the condition which obtains when a policy "achieves the goals that proponents set out to achieve and attracts no criticism of any significance and/or support is virtually universal" (p. 351) while defining policy failure as "a policy fails insofar as it does not achieve the goals that proponents set out to achieve and no longer receives support from them" (2010b, p. 62).

Using such a definition, for many analyses of the climate change area such as those cited above, a failure is considered to have occurred simply because a stated policy initiative did not correct or resolve a policy problem, that is, in purely programmatic terms (Howlett, 2012). Many of the articles in this special issue, like others in the literature on mitigation and adaptation (Giest and Howlett, 2012; Hegger et al., 2012) address the development of policy innovations and their dissemination from this standpoint. But as McConnell (2010a,b) also pointed out, policy success and failure are complex sequences of events, with overall outcomes related not only to programme structure, but also to the political and process aspects of policy-making. Both *policy failure*, or the inability of a policy to correct or resolve a problem and the issue of *innovation failure*, that is, the failure for policy innovations to be adopted in the first place, require analysis along all three of these dimensions.

This article addresses these aspects of climate change policy-making by developing a general model of policy (in)action based

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Table 1
Components of public policies involved in policy designs.

		Policy level		
		High level abstraction	*Programme level operationalization*	*Specific on-the-ground measures*
Policy element	*Policy goals*	*General abstract policy aims* The most general macro-level statement of government aims and ambitions in a specific policy area	*Operationalizable policy objectives* The specific meso-level areas that policies are expected to address in order to achieve policy aims	*Specific policy targets* The specific, on-the-ground, micro-requirements necessary to attain policy objectives
	Policy means	*General policy implementation preferences* The long-term preferences of government in terms of the types of organizational devices used in addressing policy aims	*Operationalizable policy tools* The specific types of governing instruments to be used to address programme level objectives	*Specific policy tool calibrations* The specific 'settings' of policy tools required to attain policy targets

Source: Howlett and Cashore (2009).

on the concept of blame-avoidance in government (Weaver, 1989; Hood, 2002, 2010a). It argues that the failure of substantive policy innovations to appear in many jurisdictions is the result of a common political calculus, what Hood (2010a) has called a 'negativity bias', or risk aversion, among decision-makers. It is this bias which leads decision-makers, like many of the subjects investigated by behavioural economics (Tversky et al., 1982) to engage in a specific kind of risk averse behaviour: striving to avoid responsibility for any adverse consequences of their actions. Decision-makers desire to avoid blame for failures, it is argued, leads them first to attempt to avoid any action at all and then only when forced to do so by the threat of blame for inaction to undertake as little action as possible. The climate change case in particular reveals the extent to which this behaviour can extend, when even the little action that is undertaken is less positive 'substantive' action designed to ameliorate a social condition or problem, but rather 'negative' and primarily procedural activity, attacking opponents and even denying a problem exists in order to continue to justify support for the *status quo*.

2. Policy innovations and the elements of policy

As Jordan and Huitema (in this issue) note, a major part of the difficulty involved in understanding the nature of policy innovations in general stems from the fact that, regardless of which sector they involve, innovations can come in many different forms and shapes. Multiple definitions are used in the study of the term and studies often refer to somewhat different meanings of what constitutes an innovation in the policy realm. Sometimes an innovation is treated as involving the development of a novel policy ("invention"), sometimes the adoption of a policy used in another jurisdiction ("diffusion") and sometimes to refer to a significantly new policy impact or outcome. Policy impacts and policy diffusion are the subjects of other articles in this special issue and this article focuses on non-status quo novel policy activity as a benchmark and measure of innovation.

As Howlett and Cashore (2009) argued, policies exist as collections of goals and means combining elements such as abstract policy aims and implementation preferences, programme objectives and tools, and specific policy targets and tool calibrations. In other words, policies have instrumental and ideational components, means and ends, which exist in a complex relationship involving different degrees of abstraction and proximity to on-the-ground policy targets (Kay, 2007), and innovations can occur in some or all of these different elements or components of a policy (see Table 1). Policy innovations can thus be thought of as changes to existing policy practices which introduce non-status quo, if not necessarily entirely novel, policy components or combinations of components which often result in new outcomes (Polsby, 1984).

Innovations can occur in any of the quadrants set out in Table 1 but the policy sciences in general have suggested that some general rules apply with respect to changes from the status quo, such that some of these innovations, *prima facie*, are more likely to occur than others (Howlett et al., 2009; Jordan and Huitema, in this issue; Hall, 1993; Cashore and Howlett, 2007). Tool re-calibrations, for example, occur regularly as a result of policy evaluations and reviews undertaken by a plethora of policy actors (Howlett et al., 2009) but often have little impact on outcomes or the general tenor of policy in a sector.

Such small or minor changes, as pointed out in the Introduction to this issue, are of less interest in the study of policy innovations than those which involve shifts in instruments and goals themselves (Jordan and Huitema, in this issue). Such shifts in general policy aims and tools, however, are expected to occur much less frequently (Hall, 1993). Similarly, some innovations may be relatively short-lived, such as 'policy experiments' or pilot projects which are never 'scaled up' (Vreugdenhil et al., 2012; Martin and Sanderson, 1999; Stoker and John, 2009; Hoffman, 2011), while others can be more long-lasting and quasi-permanent in nature. Innovations are also not limited to substantive actions designed to alter actual conditions on the ground, but can also take a more procedural orientation (Howlett, 2000). And the procedural actions a government can undertake can be 'negative' – i.e. engage in the politics of problem denial and supporter denigration (Saward, 1992; Cobb and Ross, 1997) – as well as 'positive' – i.e. oriented towards supporting a substantive policy initiative intended to address a problem.

Policy tools, in general, as Hood (1986) argued, can be distinguished according to what kind of governing resource they employ: nodality or information, authority, finance or treasure, or organizational resources (Howlett, 2011b). Positive procedural innovations are oriented towards using these resources to support substantive actions intended to deal with or resolve the objective manifestations of a problem such as creating an advisory committee of anti-smoking groups to accompany efforts to limit tobacco consumption through advertising, taxes and regulation. 'Negative' procedural innovations also exist, however, and are geared towards activities such as propaganda or discouragement of interest group formation or the denial of a problem or its rejection in order to limit or eliminate the need for more substantive action (Goodin, 1980; Saward, 1992). Table 2 provides some examples of negative and positive procedural tools based on Hood's classification.

Another part of the complexity involved in describing and assessing policy innovations, in the climate change sector in particular, stems from the fact that the overall goals associated with many policies are several and may not be treated in an equal or integrated fashion (Capano, 2009). Thus policies in a sector like

Table 2
Examples of positive and negative procedural policy tools.

	Nodality	Authority	Treasure	Organization
Positive	Information-provision, reporting requirements	Creation of Advisory Committees	Interest-group and intervener or stakeholder funding	Institutional reform judicial review
Negative	Propaganda or information suppression	Group bans and limits on individual and associational rights	Elimination or reduction in grants and subsidies or transfers to interest groups	Administrative delay and obfuscation

Source: Modified from Howlett (2000).

climate change policy-making, for example, are often distinguished depending on whether they are oriented towards the resolution of climate change problems through their elimination and/or control of their effects ('mitigation') or the adjustment of social and economic practices to match (inevitable and irresistible) shifts in underlying climate conditions ('adaptation') (Igielska, 2008; Jordan et al., 2010; Butzengeiger-Geyer et al., 2011). Different countries face different levels of severity of climate change-related problems and hence possibilities for their amelioration and, as a result, may engage more with one or the other type of policy goal. And, as other articles in this issue attest (e.g. Rayner and Jordan), even where both issues are relevant governments may struggle to accomplish both aims simultaneously.

For the purposes of this discussion of innovation, however, the exact goals of the innovations that occur in terms of their mitigative or adaptive effects is less important than simply observing whether efforts to alter policy elements oriented towards either has occurred (or not), and to what extent, in the development of objectives and instruments used to implement climate change policies. That is, the paper deals with the question of what kinds of policy changes have occurred – substantive or procedural – in this sector and why, and to assess what kind of innovative changes have occurred – positive or negative – or not regardless of whether they address adaptation or mitigation as a primary policy goal.

3. Policy innovations as policy dynamics: the literature in the field

As described above, policy innovations are a type of policy dynamic. And while the issue of policy dynamics and policy change is a relatively new one in climate change studies (Wellstead et al., 2014), it is not in policy studies in general (Capano, 2009). Such studies observed many years ago that truly novel policy inventions are very rare and that most of the time most policy change involves only marginal or "incremental" alterations of the status quo (Lindblom, 1959; Hayes, 2001; Baumgartner and Jones, 2002; Howlett and Migone, 2011).

There is no shortage of explanations for why this phenomenon of limited policy innovations exists in normal policy-making circumstances. Early studies of the subject focused on the cognitive limits of policy-makers and their bounded rationality as a factor which biased decision-making towards consideration of known alternatives (Simon, 1955), or emphasized the related penchant for decision-making to occur through processes of bargaining or 'limited mutual adjustment' among competing interests, both of which tend to produce marginal adjustments rather than wholesale policy changes (Lindblom, 1959; Simon, 1955). Other studies pointed to more structural factors such as routinization or institutionalization acting as a brake on innovation by restricting or constraining consideration of novel alternatives (Clemens and Cook, 1999).

More recent studies have combined these behavioural and structural motivations and factors, for example finding evidence that decision-makers in key organizational locations often simply ignore trends and developments which conflict with their perception of the desirability of the *status quo*. This occurs until the gap between reality and policy becomes too large and 'institutional friction' results in sudden tectonic plate-like readjustments to existing policies (Wellstead et al., 2013; Jones and Baumgartner, 2012). Other studies focus on the role played in urging action or inaction upon policy-makers by different kinds of interests, highlighting different kinds of advisory systems and lobbying behaviour, among others, in these activities (Craft and Howlett, 2013; Dür and Mateo, 2013).

Much attention has been paid in recent years, however, especially to understanding the role which policy-maker beliefs play in restricting innovative policy alternatives (Considine, 2012; Considine and Lewis, 2007). Some work in this view has focused on the content of beliefs ("paradigms") in specific sectors and how actors holding common sets of beliefs can serve as the glue creating stable coalitions or subsystems of actors on any side of a particular policy issue (Sabatier, 1988; Hahn, 1989; Burns and Ueberhorst, 1988). Sabatier (1988), for example, highlighted what he termed the significance of "deep core" beliefs which are by definition expected to be difficult to change and ensure a great deal of stability in policy actor behaviour as well as the content and outcomes of their decisions and activities.

Most of this work has examined ideas in terms of the normative and cognitive or knowledge aspects of policy problems and solutions and there is little question these are a key component of decision-making behaviour, especially as it relates to the content of policy designs (Considine, 2012; Berman, 2013). However there is also the question of what kind of ideas decision-makers hold about the nature of policy targets and participants, the likely outcomes on those actors stemming from their actions, and the impact they expect their policies will have on their own fortunes, electoral and otherwise (Schneider and Ingram, 2005; Schneider, 2006; Capano and Howlett, 2009).

As Hood (2002, 2010a) and others before him noted (for example McGraw, 1990, 1991), due to the often precarious nature of their positions at the apex of power, most politicians and decision-makers, especially but not limited to democratically elected ones, are highly risk averse and seek to avoid failures for which they can be plausibly be held responsible (Skogstad, 2007; Walsh, 2006). Behaviour linked to this kind of 'blame avoidance' activity, in this view, is more important to most governments than 'credit claiming' in the event of policy success (Weaver, 1986; Twight, 1991).

As Hood (2010a) argued (pp. 9–10), such blame avoidance behaviour is a manifestation at the political level of a more general human trait. That is, it:

> (i)s a phenomenon that goes under various names, one of which is 'negativity bias'. Negativity bias denotes a commonly observed cognitive tendency for more attention to be paid to negative than to positive information and for losses to be valued more highly than gains of an equivalent amount.

And many studies support this assessment of decision-maker behaviour linked to the anticipation and avoidance of policy failures as a key aspect of public policy-making (Ingram and Mann, 1980; Wolman, 1981; Peters and Hogwood, 1985; Anheier, 1999; Hood, 2010a; McConnell, 2010a,b; Howlett, 2009, 2012).

This is not to say that risk-averse decision-makers never innovate, or that a desire to claim credit may not sometimes outweigh the desire to avoid or attribute blame. Credit claiming or the ability to declare policy success and paint a leader, minister or party as responsible for that success and worthy of re-election, of course, is often observed in electoral campaigns in established democracies and such activities have received detailed treatment in the literature (Weaver, 1986; Twight, 1991). Rather it is to suggest that such instances are much rarer than often supposed (Weaver, 1988) or, to put it another way, as Hood (2010a) and Balla et al. (2002) and others have argued, that given the consequences of each, risk-averse policymakers will normally more highly value the avoidance of blame than the possible gaining of credit (Twight, 1991).

Innovations are by definition risky business and although some circumstances may suggest to some decision-makers that taking action is less risky than not taking any, these are exceptions which prove the general rule – such as when new participants advocate change in order to distinguish themselves from older decision-makers and are willing to take the risk of failure rather than risk obscurity, as often occurs, for example, when a new government wishes to clearly distinguish itself from the record of its predecessors (Huitema and Meijerink, 2010). The literature on policy dynamics suggests that adopting a 'courageous' policy initiative with a large downside possibility of failure and adverse consequences in terms of electoral fortunes, reputation or legitimacy is not a prospect likely to appeal to many policy-makers who require these status-enhancing characteristics in order to remain, or remain effective, in their present (and future) positions (Mortensen, 2012).

As shall be argued below, a model of policy innovation centred on risk or blame-avoidance activity on the part of decision-makers provides a general explanation for both policy inaction and action as well as for the procedural or substantive orientation and positive or negative construction of any innovations which do occur. Such a model is then applied to the climate change case and by doing so reveals a great deal not only about why major or far-reaching policy innovations and experiments are rare in general and in climate change policy making in particular (Weaver, 1987), but also why, in the climate change case, in many countries the initiatives which have been taken have often been procedural and negative in character (Harrison and Sundstrom, 2010).

4. A two-level risk aversion model of policy innovations

Studies into various kinds of policy failures such as "policy fiascos" (Bovens and t'Hart, 1996); "governance failures" (Wolf, 1987; Vining and Weimer, 1990); "policy accidents" (Kingdon, 1984; Cobb and Primo, 2003); "policy disasters" (Dunleavy, 1995); "policy catastrophes" (Moran, 2001); and policy anomalies (Hall, 1993) have outlined two aspects of the severity of such initiatives which allow them to be linked to propensities towards limited innovations on the part of risk averse decision-makers (Howlett, 2012).

First, as Hood et al. (2000) noted, an important dimension of variation in a failure concerns its *scope* or extent. Sometimes an entire policy regime can fail, while more often specific programmes or events within a policy field may be designated as successful or unsuccessful (Cobb and Primo, 2003). Bovens and t'Hart' in their many works on the subject (1995 and 1996) added a temporal aspect to this dimension in their studies of policy fiascos. These highlighted additional issues related to the scope of a problem such as its duration: with some failures being gradual and long-lasting and others short and sharp in nature such as the 'events' with which they were most concerned in their work (Bovens and t'Hart, 1996). Governments are wary of problems which have a potentially very large scope and long duration while short-term crises are the 'bread-and-butter' of blame attribution and blame management efforts in day-to-day political life (Hood, 2010a).

A second dimension of failure severity concerns the *visibility* of a failure. As Cobb and Primo (2003) and others have noted, the most egregious failures for governments occur when a failure is very public and obvious to voters and the public-at large. Of course, this dimension is subject to manipulation by various policy actors from the media and opposition parties to lobby groups and others who may publicize or fail to publicize the continuing status of a problem or the inadequacy of government action or inaction to date (Parenti, 1986; Edelman, 1988), and by governmental actors who may encourage or discourage this activity (Hisschemoller and Hoppe, 1995). However, *prima facie*, programmes and events which are less visible to the public are much less likely to earn public approbation and result in government action than those which are highly visible by their very nature or which can be developed in such a direction through media and other publicity strategies (Downs, 1972; Goodin, 1980; Schudson, 2006; Hoppe, 2010).

Table 3 shows the different situations which occur when these two aspects of actual and potential impacts of a failure situation are combined. As the table illustrates, most problem situations require some substantive action if blame for this condition or problem is to be avoided, but situations with the potential for highly visible and large scope failures require more and different kinds of action than their lower level counterparts.

It is important to note here that low visibility and low scope problem situations may constitute real or potential failures but do not necessarily require any government ameliorative or corrective action in order for a government to escape blame for them and, if they do, may only require small scale changes to policy instrument settings and targets. Other situations with higher levels of public

Table 3
The contextual dimension of blame avoidance: aspects of the severity of a policy problem and the need for government response.

Visibility	Scope	
	High	*Low*
High	Requires concrete ameliorative action including shifts in overall policy goals and instrument preferences e.g. High levels of automobile accidents requiring safety regulations and changes in manufacturing technologies and attitudes.	Requires short-term or symbolic action including innovations in policy objectives and tools e.g. dangerous dog attacks requiring new bans of specific breeds or new regulation of kennels.
Low	Requires some long-term attention including innovations in some aspects of policy objectives and tools e.g. poverty initiatives such as those involving different efforts to house inner city homeless.	Does not require action or requires continuous low level actions linked to instrument settings and targets e.g. Petty crime prevention requiring additional police to target, for example, an increase in pickpocketing activity.

Table 4
The political dimension of blame avoidance: intentionality and intensity and the propensity for different kinds of policy responses.

Intentionality	Intensity	
	High	*Low*
High	Large scale substantive response - Use of significant substantive tools	Positive procedural response - Use of positive procedural tools to support existing actions
Low	Small scale positive response - Use of smaller scale substantive policy experiments	Negative procedural response - Use of negative procedural tools to deny problem or denigrate opponents

awareness and problem extent require more attention and innovation from government (Stone, 1988). These include most prominently the high visibility-high scope case where changes in high level goals and instrument preferences may be necessary to display a significant government effort to overcome a problem. The two intermediate cases are ones where some changes are required in policy objective and tool choices but these may be largely symbolic or limited in nature.

Assessing the contextual situation with respect to a real or potential problem is thus a first step through which risk averse actors diagnose a problem and determine the general magnitude of the response demanded from them (Weaver, 1988). Modelling this is a significant step towards development of a theory of policy innovation which allows for the possibility of innovation failure – that is, either failing to innovate when some action is required or under or over-reacting to a problem in terms of misdiagnosing its severity and impact (Maor, 2012, 2013). However the focus of this first level of analysis is exclusively on the more or less objective impact characteristics of a policy problem and does not fully take into account the many political dimensions of such problems. Modelling this second level of blame construction help us to better understand not only innovation failures but also why innovations often occur in procedural form and why they are often negative in nature.

Again, Hood's work on the subject is very useful in this context. Hood (2010a) suggested that blame and the attribution of failure, and thus the need for action to avoid such blame, is greater the more it is perceived that a government might been able to avoid a problem but failed to act appropriately. "Avoidability" is in this sense a key political dimension of innovative circumstances which models focussed only upon the objective problem context tend to ignore. Modelling the propensities of government to innovate hence requires a two level analysis: not just an analysis of the severity of a problem but also of its avoidability.

Two critical dimension of avoidability are attributions of intentionality on the part of voters and the public and the intensity with which such views are held. Members of the public, for example, are less likely to blame decision-makers for 'unpredictable' and 'unavoidable' events than those which could have been easily predicted, and especially those which could have been easily predicted and averted (Brandstrom and Kuipers, 2003). Many of these latter kinds of (in)actions can be portrayed by the media and opposition parties, among others, as almost wilful or 'intentional' failures on the part of governments: that is, where a lack of prudence and foresight on the part of decision-makers can be pictured to be a major cause of the failure itself (Merton, 1936; Roots 2004; van Beers and de Moor, 2001).

The significance of attributions of *intentionality* in calculations or perceptions of avoidability also highlight the need for some aggregate level of agreement within an affected community on the assessment of a failure and its causes. Such assessments are not usually unanimous and the level of agreement of various social and political actors about the extent and degree of the avoidability of policy failure will cause decision situations to vary in *intensity*.

Table 4 sets out the possible combinations of intensity and intentionality which characterize the avoidability of a problem situation.

This second level of blame avoidance considerations is critical in understanding government responses to problem situations since it suggest that even when a situation is severe enough to demand some kind of action or an innovative response from government, that response will only be the large-scale substantive one oriented to correct or remediate a problem – which many observers simply assume to be the norm – when the situation is characterized by high perceptions of avoidability; that is, when a large percentage of the population blames a government for either causing or failing to deal prudentially with a widely recognized severe problem. Only such high intensity problems are likely to generate substantive actions, that is, ones which are designed or intended to take steps and change practices in order to eliminate or reduce an action-forcing problem. Lower intensity problems, on the other hand may be addressed through other means, such as purely procedural actions.

Exactly what kind of substantive or procedural tool is used thus depends on the level of intentionality attributed by the public to governments. A wide range of negative procedural activities, for example, exist as one alternative; denying a problem or attacking those who characterize it as when intensity and intentionality are low (Saward, 1992). All such actions may be characterized as 'innovative', although most studies look only at more positive, substantive ones.

5. Application of the model to climate change innovation

Using a blame avoidance lens on policy-making, the combination of problem characteristics found in a sector can be seen to directly affect the politics of policy innovation in that sector. That is, all policy innovations exist in a political world in which their very degree of 'innovativeness' may be challenged in addition to their actual or potential impact on policy outcomes. The "contestability of innovation" is an inherent characteristic of the subject and understanding the micro-behavioural roots of decision-maker behaviour in blame avoidance and the characteristics of a policy problem context allows us to explain what kinds of policy innovations will occur in a sector and why governments innovate (or not) in that area in the way they do.

This logic applies to the climate change issue area just as it does to any other. Like other policy areas, climate change policies exist at multiple levels in a standard regime configuration (Massey and Huitema, 2012) and are highly politicized (Harrison and Sundstrom, 2010). Current climate change activities and innovations can be assessed against the categories of policy elements set out in Table 1 and aspects of the range of policy components found in the climate change field are illustrated in Table 5.

How these elements are likely to change over time can be assessed using the general model developed in Tables 3 and 4 above. Applying the logic of this model requires first describing the scope and visibility of the sector to determine if action is likely to be forthcoming at all, followed by the characterization of the

Table 5
Examples of innovations in climate change policy.

		Policy level		
		High level abstraction	*Programme level operationalization*	*Specific on-the-ground measures*
Policy component	*Policy goals*	*General abstract policy aims* e.g. Adaptation or Mitigation	*Operationalizable policy objectives* e.g. Protection of sea-level habitats or reduction in carbon outputs.	*Specific policy targets* e.g. Raising dikes and other improved sea level water management strategies or reducing emissions from coal-fired power plants.
	Policy means	*General policy implementation preferences* e.g. Using public resources for adaptation or mitigation purposes	*Operationalizable policy tools* e.g. Building critical infrastructure re-development through public expenditures or using carbon taxes to reduce emission levels	*Specific policy tool calibrations* e.g. Using public-private partnerships to construct new dikes or developing carbon-trading systems.

intensity and intentionality of the issue in order to see whether any action which is likely to occur in this sector will be positive or negative in nature.

5.1. How severe is the climate change problem: visibility and scope

Visibility is a dimension which is of critical importance in climate change policy-making. Although the extent of a problem is often thought of as self-evident by experts (e.g. Lidskog and Elander, 2010), it is not among the public (Clayton, 2012). That is, climate change is very visible to the public mainly at the margins of climate zones, for example in the arctic with polar melting or in areas affected by increased desertification or in the event of extreme weather events (Schmidt et al., 2013). *Prima facie* this means that for the majority of people living in non-extreme climate zones its impact remains at the abstract level and thus somewhat muted and subject to existing levels of political participation and attention (Engels et al., 2013) as well as to countervailing interests such as those related to the economy (Hegger et al., 2012; Scruggs and Benegal, 2012; García de Jalón et al., 2013).

Although some policy areas are susceptible to 'focusing events' which can generate moments of heightened visibility (Kingdon, 1984; Birkland, 1997, 1998), in most cases 'visibility' of climate change is second hand and is relegated to secondary status and life priority, even if its importance is clearly recognized over the very short (e.g. unusual weather event) or very long-term (e.g. global warming) (Poortinga et al., 2011; Whitmarsh, 2009; Lorenzoni and Pidgeon, 2006).

In terms of *scope*, however, there are few other issues which have the extent and duration of climate change problems, in terms of both their spatial, global dimension and their temporal effects on every population centre on earth over the foreseeable future (Murray, 2013; Adger et al., 2010). Some countries, however, given their unique geographies and population and industrial configurations may still require little adaptation and may accomplish many of their goals through mitigation efforts alone, while others require both.

With respect to the dimensions of policy problem characteristics set out in Table 3, therefore, this means climate change may not be a severe problem area or when it is will often be one characterized by low visibility and high scope, meaning it is likely to be a problem which receives periodic but not sustained interest or demands for ameliorative action on the part of government (Downs, 1972; de Vries, 2010).

5.2. How avoidable is blame for climate change: intensity and intentionality

But what kinds of action are likely to follow in this instance? As discussed above, this is a function less of the severity of the problem situation per se than it is of the political aspects of avoidability, specifically the *intensity* of public concern and attributions of *intentionality* to governments involved with the problem. Here it should be noted that in addition to the countries where climate change is simply not a major issue on the ground, in many other impacted countries climate change is considered by large segments of the population to be a quasi-naturalistic process and problem for the creation and amelioration of which governments are not necessarily held responsible (Connor and Higginbotham, 2013; Lorenzoni and Pidgeon, 2006; Rabe et al., 2011). And the intensity with which opinions about the need for government action are held are muted by other concerns such as economic growth or national development (Patchen, 2010; Hobson and Niemeyer, 2011).

Hence in the climate change area both intentionality and intensity are low and thus with respect to the situations portrayed in Table 4 we would expect climate change innovation efforts to be largely procedural in nature and characterized more by negative attacks than positive action. This is not to say that some actions will not be taken, but, as many of the other articles in this special issue have noted, they will tend to occur in spurts of activity interspersed with periods of inaction, and will tend to be fairly small-scale and often symbolic in nature (Holt and Barkemeyer, 2012).

5.3. The resulting pattern of small-scale experiments and large-scale problem denial

Of course this is precisely the pattern of activity seen in many countries in recent years, especially in North America (Hansen et al., 2013) although not limited to there (see for example, Europæiske Miljøagentur, 2013), in which bouts of largely symbolic activity and small scale pilot projects and experiments occur within a general milieu of negative procedural policy responses (Harrison and Sundstrom, 2010; Adelle and Russel, 2013). As the record of activities of countries such as the US, China, Australia and Canada, to name only a few, attests, the pattern of innovations seen in many countries is often composed less of responses focused on constructive changes to existing policy regime elements intended to remediate climate change problems, but rather have manifested a procedural pattern including large-scale problem and agenda denial, often involving attacks on supporters of greater positive efforts and those predicting more dire interpretations of climate change data and futures (Harrison and Sundstrom, 2010).

This is not to say that some substantive positive actions have not been undertaken in some countries in specific areas such as subsidies for wind or thermal power, creation of emissions-trading systems or carbon taxes, but that this record of innovations has been very uneven across nations and sectors and, in general, has

lacked both consistency and scale (Griffin, 2013; Toke, 2008; Sovacool, 2011; Hoffman, 2011). In other countries where intensity is higher we have seen more small-scale experiments across a broader range of problem areas (Hoffman, 2011) but these have been rarely scaled up (Vreugdenhil et al., 2012; Rotmans et al., 2001; Mulder, 2007; van Buuren and Loorbach, 2009; Voß and Bornemann, 2011).

As the two-level model of policy innovation developed here suggests, these responses are not inexplicable but are due to the characteristics of climate change problem blame avoidance contexts. The low visibility and low intentionality of climate change issues in many sectors and countries allow blame-averse governments to pursue procedurally-oriented negative strategies of agenda denial and attack rather than positive new substantive efforts to innovate to grapple with climate change problems. The fact that governments are generally not held to be responsible for creating climate change problems gives them the freedom to respond in a limited or negative way to a situation which they perceive as only demanding short-term or periodic bouts of largely symbolic activity.

6. Conclusion

Altering any aspect of an existing policy regime, or policy innovation, contains a risk of failure (Hood, 2010b; Howlett, 2012). And risk averse governments are often happier do nothing or little rather than do something which might lead them to be blamed for a failure. This aversion in the climate change case extends so far as leading some governments to engage in a number of procedural strategies intended to downplay a problem and deny the need for substantive action to deal with it rather than take positive action towards its remediation. Such strategies include attempting to reduce the size and extent of the issue, that is, to de-compose it so that it can be addressed piecemeal in a much less failure prone fashion, or to attack the legitimacy and credibility of proponents of more substantive activity (Saward, 1992).

However, while many prescriptions for more immediate action and policy changes have been put forward in the area of climate change adaptation and mitigation it has not generally been clear under what conditions innovation may be facilitated or constrained or which changes are likely to be adopted and when, all subjects of interest to those who would like to understand or promote such efforts (Biesbroek et al., 2010; Meadowcroft, 2009; Jordan et al., 2010). This is the central question of this special issue and the case studies it contains. However the case studies contained here for the most part suggest a pattern of very limited innovations in this sector.

An explanation as to why this general pattern exists in the climate change arena can be discerned from the more general literature in the policy sciences on policy failures and blame-avoidance behaviour on the part of decision-makers. This is a general characteristic of policy-making, especially in democratic systems where the consequences of failure on government stability and its hold on power are much acute. That is, attributions of blame translate through the ballot box into a loss of power very quickly and decisively in democratic regimes. Hence governments in many countries and sectors who would like to downplay the duration and extent of a problem can do so by a variety of means – such as arguing, for example, that a problem is a cyclical phenomenon rather than a linear one and thus likely to be self-correcting over the medium to long-term. And when forced into action by the high visibility or scope of a problem they do not necessarily have to respond with positive corrective action, as many climate change observers would like, but can also in many cases respond through attacks on problem proponents and their recommendations for action or through purely symbolic activity with little or no on-the-ground impact.

Understanding the micro-behavioural roots of public policy decision-making in blame avoidance helps us to understand why governments have framed climate change policy-making in this way and, more significantly for this special issue, why innovations in this area have generally been limited to the more minor aspects of existing policy regimes (Bassett and Fogelman, 2013). Climate change policy is a very good case illustrating general blame avoidance policy dynamics and their impact on the nature and type of policy innovations which occur in a sector. In such a context a 'winning' strategy for a blame-avoiding government is very often to react to the low visibility of climate change problems by (a) downplaying its extent and duration while (b) emphasizing its unpredictability and inevitability; and (c) taking periodic action but not so much to address the problem in concrete terms, but to attack its messengers or at best engage in small scale short-term experimentation when visibility and intentionality concerns are higher (Corner and Randall, 2013).

While this may paint a bleak picture of the propensity and possibility for climate change innovation in the near future, it should also be pointed out that there is a dynamic element to this analysis which cannot be overlooked. That is, any increase in the visibility of climate change effects is likely to increase the need for governments to respond on a more consistent and substantive basis to these issues and may also increase the intensity of beliefs about the responsibility governments have to correct the problem, whether or not they are held to blame for its origins. Thus if a failure to take substantive action now does lead to a worsening of the climate problem, as many experts expect to happen, then present efforts at issue mitigation on the part of governments, which are rational and effective in evading blame under current circumstances, would be much less so in future.

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