Institutionalized Inhibition: Examining Constraints on Climate Change Policy Capacity in the Transport Departments of Ontario and British Columbia, Canada

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Abstract. This paper examines the interaction between transportation policy and climate change policy in two Canadian provinces, British Columbia and Ontario. The concept of policy capacity is used to qualitatively measure the effectiveness of instruments in advancing goals in an area where established policy paradigms may not be congruent with new initiatives. A review of official policy documents and budgetary information on policy-related spending, as well as primary interviews with policy managers in relevant provincial ministries, reveals that overlapping policy goals and instruments may have created a situation of institutionalized policy inhibition, in which conflicting layers of policy goals and instruments constrain the available policy capacity.

Keywords. policy capacity; climate change; transportation; policy layering; Kyoto Protocol

Résumé. Cet article examine l'interaction entre la politique du transport et la politique de lutte contre le changement climatique dans deux provinces canadiennes, la Colombie britannique et l'Ontario. Le concept de capacité d'analyse des politiques publiques est utilisé pour mesurer qualitativement l'efficacité d'instruments afin de faire progresser des objectifs dans un domaine où les paradigmes courants ne sont pas compatibles avec des initiatives nouvelles. Un examen de documents officiels de politiques publiques et d'information budgétaire sur des dépenses liées à ces politiques révèle que des objectifs et instruments de politiques publiques se chevauchant ont pu créer une situation d'inhibition institutionnalisée, dans laquelle des strates contradictoires d'objectifs et d'instruments de politiques publiques limitent la capacité disponible d'élaboration de politiques publiques.

Mots clefs. capacité d'élaboration de politiques publiques; changement climatique; transport; strates politiques; Protocole de Kyoto

Introduction

Since the 1970s, when Theodore Lowi (1972) famously highlighted the reciprocal interaction between public policy and politics, public policy scholars have been faced with the challenge of developing an effective - and non-linear - explanation of the policy-politics relationship. Early attempts to understand how policy influences politics (and vice versa), such as those offered by Heclo (1974) or Kingdon (1984), have since been refined and improved, or even superseded, by more intricate theories of authoritative dynamics in the policy process.[1] Recent studies have revealed particular dynamics of the public policy cycle that can influence the oscillation between policy and politics, highlighting the multiple dimensions of policy goals and instruments (eg. Cashore and Howlett, 2007). These more complex formulations of the policy process underscore the insights to be gained by advancing beyond linear models of policy, which frequently attempt to describe analytical and deliberative efforts in terms of a single dimension.

One complicating, but increasingly relevant problem faced by theories of the policy process is how to analyze cases where alternative policy frameworks interact. This problem is inadequately addressed in the public policy literature to date. Cross-cutting issues, like climate change adaptation and mitigation, raise ample opportunities for policy subsystem interactions, since they present policy problems that span multiple issue areas and thus call for an integrated set of goals that will enable pursuit of cohesive objectives. Because of the presence of multiple issues and interwoven

policy challenges, it is unlikely that an overarching theory of the policy process such as the Advocacy Coalition Framework (Sabatier, 1988) or the Institutional Analysis and Development Framework (Ostrom, 2007) will be sufficient to deliver an explanation of policy development that can account for these kinds of interactions. More likely, a useful explanation will rely on some multi-dimensional framework that can give full weight to the effects of policy layering on large scale social and economic transitions (Kern and Howlett, 2009). Such an approach could be particularly illuminating in the effort to assess Canada's capacity for policies that can advance climate change mitigation and adaptation.

This paper examines the interaction between transportation policy - one of Canada's earliest established policy domains[2] - and climate change policy in two Canadian provinces. We will use the concept of policy capacity to qualitatively measure the effectiveness of instruments in advancing goals in an area where established policy paradigms may not be congruent with new initiatives. A review of official policy documents and budgetary information on policy-related spending, as well as primary interviews with policy managers in relevant provincial ministries, has revealed that the overlapping policy goals and instruments (newer climate change policy goals and instruments layered on top of older transportation goals and instruments) may have created a situation of institutionalized policy inhibition, in which conflicting layers of policy goals and instruments sharply constrain the available policy capacity.

More specifically, we find that the twenty-year elaboration of a transportation policy paradigm has elevated market principles - such as increased private sector engagement, freer competition, and deregulation - into core beliefs and principles that guide policy implementation. These core principles have created an inhibition to deploy certain policy instruments that have been adopted in jurisdictions that have become global leaders in climate action.[3] To maximize the chances for success, climate policy requires taxing and pricing mechanisms, legislated greenhouse gas emissions targets, and stricter regulation, which would all work to orient the market. If policy makers in Canada are to successfully address climate challenges, they will likely have to overcome some of these transport policy inhibitions.

What is Policy Capacity

"Policy capacity" or "policy analytical capacity" attempts to describe the link between policy development at the bureaucratic level and policy decisions taken by elected and appointed government officials. While this concept is not new (see Perl and White, 2002 for example), it has received an increasing amount of attention, mostly (but not exclusively) from Canadian authors, in recent years (e.g. Edwards 2009; Howlett 2009; Wellstead and Stedman, 2010). It is a necessarily subjective concept, but some attempts to quantify it have begun to advance policy insight (see Howlett and Newman, 2010, for example). The subjectivity of the concept is, in part, softened by considering policy capacity from the viewpoint of those who pursue it firsthand: government policy analysts, the civil servants involved in policy development and planning, and elected and appointed government officials.[4] To this end, direct interview techniques were necessary to gather data on policy capacity.

In the past, "policy capacity" has sometimes been used to refer to a state's ability to govern, in the context of the recent propensity of some governments to favour alternative service delivery mechanisms, austerity measures, and styles of public administration that mimic private sector corporations (e.g. Peters, 1996; Bakvis, 2000). However, a more precise term for this might be "state capacity", "governing capacity" or even "governance capacity". *Policy* capacity, by contrast, reflects the ability of civil servants to produce useful advice and to effectively communicate that advice to government decision-makers.

Many scholars agree that measuring policy capacity is most effective when it is focused on policy inputs and not policy outputs. The provincial auditor of Manitoba wrote in a 2001 report on policy capacity: "It is important to clarify at the outset that our review examines capacity; it does not in any way assess or question the merit of government policies" (Provincial Auditor, 2001: 4). In addition, the interview respondents from this Manitoba report as well as interviewees from other studies (eg. Rasmussen, 1999) saw policy inputs as most pertinent when attempting to calibrate the degree of policy capacity. Howlett (2009: 162) makes the distinction between "policy capacity", which covers the whole gamut of policy-making from formulation to implementation, and "policy analytical capacity", which focuses in on the part of the policy cycle where planning, research, advising and decision-making are being pursued (and not implementation or any kind of street-level bureaucracy). For the most part, when we talk about policy capacity we are referring to analytical capacity (i.e. formulation and not implementation).[5]

Several authors (Howlett and Oliphant, 2010: 20-21; Institute on Governance, 2010: 9; Provincial Auditor, 2001: 16; Anderson, 1996: 472; Riddell, 1998: 5) discuss factors that might be considered components of policy capacity. These mainly boil down to levels of effort or inherent capability in:

- personnel (i.e. education, job experience, technical research skills)
- innovative leadership in policy management
- long term prioritizing and strategic planning
- vertical communication between policy analysts and managers[6]
- horizontal communication and coordination between policy units and across departments
- access to IT, information, and analytical tools (like databases or clinical research or published reports from other countries etc.)

Empirical research has yielded some conclusions about the state of policy capacity in democratic governments. Policy managers in the civil service, whose job it is to develop and produce policy recommendations for governments, have reported that having educated and skilled policy analysts is paramount (Provincial Auditor, 2001). Likewise, vertical communication has been reported as an important factor in

achieving adequate policy capacity (Rasmussen, 1999). In addition, respondents of survey and interview research have suggested that better technology (in the form of database and other IT resources) would help them improve policy capacity (Provincial Auditor, 2001). Implicit in these studies is the notion that policy capacity in current civil services is not always adequate for the effective production and communication of policy advice.[7]

In the present study, we explore the policy capacity of civil servants in the transportation sector in two Canadian provinces: British Columbia and Ontario. We propose that these civil servants are faced with an institutionalized inhibition in developing effective policy advice on climate change mitigation that can be incorporated into the policy options that have already been ratified by elected officials. The resulting *in*capacity is the result of relatively recent ideas and approaches related to the newer climate action issue area having been layered on top of an established policy paradigm which had become institutionalized in the transportation sector at least a decade earlier.

The recent policy goals of climate action and the established transportation goals - as well as the prospective policy instruments of climate action and the established instruments of transportation - thus far lack a compatible fit, resulting in policy layering (Kern and Howlett, 2009). Layered policies create a particular bureaucratic constraint in which certain policy instruments are judged to be incompatible with established policy goals. This presents a significant challenge in both of the provinces we have investigated, where governments have elevated climate action to a more prominent position on their policy agenda.

Why BC and Ontario present a good opportunity to examine climate capacity in transport policy

Climate change has become an issue that has made it onto the political agenda in every Canadian jurisdiction. As of 2009, all 10 provinces and the federal government had official greenhouse gas emissions reduction targets (Snoddon and Wigle, 2009: 5). However, only four Canadian provinces have to date enacted substantive legislation that opens the door for public sector initiatives on climate change. The four jurisdictions that have moved beyond exhortation and into substantive policy development include British Columbia, Québec, Ontario, and Manitoba. Legislated climate action will mean that policy initiatives in that area will have a higher priority, which increases the need to coordinate climate policy with other policy domains.

British Columbia's suite of climate legislation is by far the most comprehensive and also the most precisely targeted. BC's *Greenhouse Gas Reduction Targets Act* of 2007 has detailed quantitative targets for greenhouse gas emissions reduction. BC has also passed the *Greenhouse Gas Reduction (Cap And Trade) Act* of 2008. Although this law is largely not in force yet, it is scheduled to become active in 2012.

Québec has the next most detailed climate action legislation with its *Loi sur la qualité de l'environnement* (2009). This law does not set any firm targets, but it does require greenhouse gas emissions reporting by industry and it also empowers the Minister of the Environment to set targets and implement a plan of action, which is, however, not legislated. There is, in addition, a very detailed carbon trading framework in this law, but it is not yet in force.[8]

Manitoba also has legislated quantitative greenhouse gas targets. The Manitoba legislature enacted *The Climate Change and Emissions Reductions Act* in 2008, and it also includes the quantitative targets. However, in the subsequent sections it gives the Minister of the Environment (now "Minister of Conservation") a fair amount of flexibility in setting new targets. The law does not specify if the new targets are to be more or less strict than the initial target, leaving some ambiguity regarding the numbers in this piece of legislation.

Ontario, on the other hand, has taken a different approach. Despite having enacted legislation to address climate change specifically, Ontario's *Green Energy Act* of 2009 contains no comparable numerical (or even qualitative) objectives. It merely sets up a framework under which the provincial government *could* legislate quantitative targets if it chose to do so in the future.[9] Nonetheless, there is reason to view Ontario as answerable to a specific climate action policy commitment, found in other legislation. The *Environmental Protection Act* originally enacted in 1990, but amended several times, as recently as 2010, for example, also does not set quantitative targets but does allow the government to regulate greenhouse gas emissions, including the use of a carbon trading system.[10] Ontario also has an *Environmental Bill of Rights*, which it enacted in 1993, but amended as recently as 2009. One of the 2009 amendments raised the profile of climate mitigation performance:

> *s.*58.2 (1) The Environmental Commissioner shall report annually to the Speaker of the Assembly on the progress of activities in Ontario to reduce emissions of greenhouse gases, and the Speaker shall lay the report before the Assembly as soon as reasonably possible.

Section 58.2 also empowers the Environmental Commissioner to oversee reporting of greenhouse gas emissions, which gives the regime a measure of independence that could increase the government's accountability on this file.

However, not all of these provinces are ideal candidates for this study. In fact, there is one very compelling reason to exclude the province of Québec. Québec is one of only two Canadian provinces that do not produce any oil or natural gas.[11] This could change, if and when Québec starts exploiting its shale gas deposits, but the debate over a policy framework that could enable such production is only just beginning (see Moore, 2011). Oil and gas production account for a major proportion of greenhouse gas emissions: in 2006, Canada's emissions from the fossil fuels production industries generated 158 megatons of CO_2 equivalent ($MtCO_2eq$) - 21.9% - second only to the transportation sector with 159 $MtCO_2eq$, at 22% (Environment Canada, 2008: 31). With the emissions attributable to fossil fuel production representing such a large and increasing share of the country's total emissions (see ibid.: 28), energy is clearly a sector whose impact on greenhouse gas emissions and on climate action in gen-

eral can simply not be ignored. The exclusion of Québec is therefore justified here because the absence of a gas or oil industry in that province makes climate change policy formulation and implementation substantively different than it would be in Ontario or BC. At the very least, Québec's climate action policy debate exists in a different context than that of the other jurisdictions.

Manitoba was also excluded from our study, but for different reasons. Like BC, Québec and Ontario, Manitoba has shown a willingness to participate in inter-jurisdictional efforts to combat climate change, including by becoming a founding partner of the now moribund Western Climate Initiative.[12] It has specific climate change legislation, as noted above. However: neither the 2008 *Climate Change and Emissions Reductions Act* nor the 1987 *Environment Act*, amended in 2009 to include climate change considerations and greenhouse gas definitions,[13] provides for any kind of cap-and-trade or carbon emissions trading framework. According to several of the policy professionals interviewed for this study, carbon pricing mechanisms and in particular, carbon trading, are seen as the most effective and easily accepted instruments for achieving provincial emissions reduction targets. Therefore, if Manitoba has not legislated its commitment to what is seen by many as the single most promising category of climate action policy instruments available to North American jurisdictions, then it is not yet operating within the same policy framework as neighbouring political jurisdictions that have launched substantive climate action initiatives.

We will thus focus in on British Columbia and Ontario in the present study, because they are the only two jurisdictions that have enacted climate change legislation, produce oil and gas, and aspire to participate in inter-jurisdictional climate efforts, and have laws that at the very least allow the government to activate a carbon emissions trading scheme. It could be argued that these are the two jurisdictions that have taken the most initiative to date in legislated actions to address climate change in Canada's evolving policy context.

At present, we do not consider the federal government to be a leading policy actor in advancing climate change policy that influences the transportation sector. Federal government action is constrained by NAFTA and other forces of continentalization in our political economy (Cohen, 1996; Clarkson, 2002; McBride, 2003). The strategy apparent in Ottawa suggests that Canada should not formulate national climate policy until the US does so, because such a policy would be unenforceable and uncompetitive in the absence of a US policy (Sawyer and Fischer, 2010). The other provinces (besides those noted above) have either taken a "wait and see" approach, or passed hortatory legislation that does not set specific targets for greenhouse gas reduction, so their influence at this time is most likely to have the effect of constraining climate policy capacity through their unwillingness to participate in collective action (Snoddon and Wigle, 2009: 6). Saskatchewan, for example, has passed an extensive climate change bill through its legislature, but has suspended the bill indefinitely.

Once a climate protection policy has been enacted, the transport sector must become a major part of the mitigation and/or adaptation efforts, since transport is either the biggest or second biggest greenhouse gas emitter in Canada[14] (Environment Canada, 2008: 7).[15] However, reconciling climate change mitigation and adaptation efforts to the existing transport policy paradigm may pose significant challenges. Transportation policy in both BC and Ontario is extensively developed, and ideas about the role of state and market that were introduced in the 1980s and 1990s have advanced well beyond the implementation stage of the policy cycle. Transportation policy programs in both provinces have established goals that embrace industry deregulation, increased market competition, roadway expansion, transit infrastructure megaprojects, and public-private partnerships - all policies that were ratified 10 or more years ago. On the other hand, in both of our case study jurisdictions, climate policy is very much still in the policy formulation stage - or at the very furthest, in the decision-making stage - of the policy cycle,[16] since according to our interview subjects, climate action initiatives have really only been on the policy agenda since 2007.

Although they have taken some actions that contribute to climate policy, transportation departments find themselves largely reactive to climate policy initiatives from other government departments – mainly by providing data or forecasts about climate impacts and possible mitigation and adaptation measures. In this sense, the newer climate action policies are being layered over the older, established paradigm of provincial transportation departments. This is more likely to introduce policy instrument choices that are inconsistent with established policies and programs (Kern and Howlett, 2009). Yet avoiding such tools and techniques can lead to incoherent policy in which goals are not aligned with the means to attain them. This disconnect will be the focus of our next section.

Transport and climate change policy paradigms in BC and Ontario

The policy paradigm guiding the transportation sector in Canada was dramatically altered following release of the 1985 federal government white paper "Freedom to Move: A Framework for Transportation Reform" (Mazankowski, 1985). This report, which became the basis for the 1987 *National Transportation Act*, established that competition in an open market between private carriers should be the federal government's top priority in transportation policy. This represented a major break from the previous 120 years of federal transportation policy, under which public financial support of infrastructure development, public enterprise, subsidies for private carriers and strict economic regulation of the industry were the preferred policy instruments (Gratwick, 2001: 2).

The "Freedom to Move" white paper was unequivocal in promoting deregulation of the transportation sector, especially trucking and rail. There were repeated references to a need to reduce regulation and encourage competition in

transportation, to removing barriers of entry to the marketplace, and to doing away with monopolistic practices - even where crown corporations were concerned. The report called for new legislation to take down regulatory obstacles to competition in the transportation marketplace, replacing the traditional public interest as expressed through a "public convenience and necessity" test for market entry with a more competitive orientation, in the form of a "fit, willing and able" test. In essence, the 1985 report and the subsequent 1987 Act heralded Canada's shift from an era in which government intervention was a frequent mode of policy implementation to one in which the government initiative in the transport sector was much reduced.

These principles of deregulation and open market competition have solidified into an institutionalized federal transportation policy paradigm. The current transportation legislation, now called the *Canada Transportation Act*,[17] retains both the language of the 1987 Act and the spirit of the 1985 white paper. For instance, section 5 of the current Act declares that the objectives of federal transportation policy "are most likely to be achieved when…competition and market forces, both within and among the various modes of transportation, are the prime agents in providing viable and effective transportation services." For the past 25 years, increased market competition and decreased government regulation have become the core principles of federal-level policy in transportation. This is evidenced by the sale of crown corporations in the sector, including Air Canada and Canadian National Railways; the commercialization of major airports; and the use of public-private partnerships (P3s) in developing new infrastructure, such as in the construction and operation of the Confederation Bridge link between Prince Edward Island and New Brunswick. Evidence of the entrenchment of this policy paradigm can be found in its continuation after successive changes of prime minister and parties in power.

Following Ottawa's lead over the last 15 years, BC and Ontario have applied the federal policy paradigm in their own jurisdictions over the transport sector. Their approach during this time has been to increase market autonomy and decrease government intervention. Materially, this has manifested itself in the sale of provincial crown assets, such as BC Rail; increasing use of P3s for infrastructure development, including the Sea-to-Sky Highway connecting Vancouver and Whistler and Ontario's Highway 407; private operation of public transit, such as in North York's Viva Transit system or Vancouver's Canada Line; BC's commercialized management of its coastal ferry system; and Ontario's outsourcing of some major administrative duties, such as the GO Transit fare system maintenance and provincial driver examination services (Ontario, 2006). Changes to the language used in public documents reflect this shifting policy paradigm, as they increasingly talk about "value for money" and refer to their target audience as customers rather than citizens (see for example, British Columbia, 1996: 4; Wright, 2001: 2).

It is noteworthy that partisanship does not appear to be a factor in the market-oriented language of policy papers published by these two transportation ministries over the last 15 years. The same emphasis on deregulation, lower levels of government intervention, and promotion of market competition appears in documents released by the right-of-centre Progressive Conservatives in Ontario from 1995-2003 and by the left-of-centre NDP government in BC from 1995-2001. In British Columbia from 2001 right up to the present, the centrist provincial Liberal government has made extensive use of market ideology and its associated slogans, such as "slashing red tape" (British Columbia 2005: 9) and "development of partnerships with the private sector" (British Columbia, 2003: 8) in all of its publicly-available transportation documents. This promotion of market principles in transportation, and its non-partisan character, illustrate the depth of the entrenchment of this policy paradigm.

The centrist Liberal government of Ontario has not used this kind of language in its transportation policy documents and annual reports since it came to power in 2003. This is likely due to a perceived political advantage acquired by distancing themselves from their unpopular Progressive Conservative predecessors. However, despite these issues of presentation, Ontario has not introduced new transportation regulations or modified its position on the importance of market competition in the transportation sector. In practice, the current government appears committed to the policy paradigm, including legislation and private-sector partnerships, that was established before it came to power.

This current transportation policy paradigm has been institutionalized, through financial agreements and regulatory precedents, into a well established framework which orients future policy choices. Transportation policy options in BC and Ontario are developed to advance goals of improving market competition, increasing private carrier revenues, and decreasing government intervention. This is apparent in current practice, such as BC's implementation of its Gateway Program, which involves roadway expansion to support the growth of port commerce. In addition, our interview subjects were unanimous in their acceptance of the transport sector's market-oriented policy paradigm, suggesting a fully entrenched paradigm that even senior officials do not question. As one interview subject put it, "the provincial government's number one goal is moving people and goods around to facilitate economic growth and development. This is the 'economic imperative' ".

Compared to transportation, climate change is a relatively recent policy concern. Canada ratified the Kyoto Protocol in 2002, but since then, the federal government has backtracked on its initial commitments, and between 2002 and 2007, provincial governments made virtually no advances on the climate change file (Rabe, 2007). BC's "Climate Action Plan" was not released until 2008, and "Go Green: Ontario's Action Plan on Climate Change" was published in 2007. As mentioned above, BC and Ontario have established carbon trading regimes but have not implemented them, as they await progress at the interprovincial and international level, and other options, like carbon tax mechanisms, are still being adjusted. In other words, these governments are still in the process of developing an effective set of policy instru-

ments to address climate change. A policy paradigm in this area has not yet become established.

Undeterred by their relative inexperience in the area, both BC and Ontario have publicly declared their intentions to pursue aggressive climate targets. BC has legislated targets that reduce carbon emission to 33% below 2007 levels by 2020 and 80% below these levels by 2050. Ontario has consistently claimed it will attempt to achieve 15% below 1990 emissions levels by 2020 and attain reductions of 80% below 1990 levels by 2050 (Ontario, 2007: 6; Ontario, 2008). These are indeed ambitious targets, considering that between 2002 and 2006, even after Canada had pledged its commitment to the Kyoto Protocol, Canadian greenhouse gas emissions continued to rise (Marshall, 2006: 1).

More to the point, between 2002 and 2006, while carbon emissions were rising, provincial governments largely maintained a hands-off attitude towards climate policy (Marshall, 2006: 3). In other words, without government intervention of any kind, the private sector was unable or unwilling to reduce greenhouse gas emissions and address climate change on its own. Globally, this has been analogous to the weaker climate change mitigation and adaptation results of developing nations, who do not have the financial or other resources to enforce climate policy (Bodansky, 2010). Successful climate change strategies will require further government action (Ontario, 2007).

This presents a challenge for policy makers who deal with climate change strategies in the transportation sector. On the one hand, the established policy paradigm in transportation is one of lower government intervention, minimal regulation, free market competition, private sector autonomy, and alternative service delivery. On the other hand, without government intervention to enforce emissions limits, subsidize the launch of alternative energy technologies, and regulate fuel standards, climate action appears sharply constrained. Policy makers must somehow reconcile the demands of climate change policy with the institutionalized paradigm that prioritizes market-friendly policy instruments in the transportation sector. This may yet prove difficult in an environment where effective regulation of the transportation industry has been dramatically reduced, where Crown assets have been divested, and where key segments of new road infrastructure is under private management. In a further confounding step, transportation deregulation in Canada has led to harmonization with American transport policies (Madar, 2000: 9), which would make an aggressive climate change program near impossible without the collaboration of US border states or possibly even their federal government.

The nexus of climate change and transportation is the result of the collision of two different policy areas - policy areas that may or may not have compatible goals, but that, in Canada at any rate, call for employing conflicting policy instruments. In the public policy literature, very little attention is given to explanations of policy drivers in situations where layered policy paradigms co-exist. Because climate change is a cross-cutting issue that affects such disparate industries as forestry, residential waste management, and cement production among others, it is unlikely that newer climate change goals and policy instruments will align smoothly with the established goals and instruments that exist in transportation.

Kern and Howlett (2009) posit two dimensions along which colliding policy issue areas can be examined: goals and instruments, both of which can be either aligned or not aligned.[18] Therefore there are four possible states of existence when two policy areas (such as transportation and climate change, for example) come into contact: "replacement", in which the goals in the two policy areas are aligned, and the policy instruments in the two areas are also aligned; "conversion", in which goals in the two policy areas are aligned but the instruments are not; "drift", where instruments are aligned between the different policy areas but the goals are not; and lastly, "layering", where neither goals nor instruments are aligned.

The intersection of transportation and climate change policy likely fall under the category of policy "layering". The main goal of transportation policy is to move people and goods, for various reasons which are not usually considered in policy making. The main goal for climate change policy is to reduce carbon emissions. At their most basic level, these two goals are inherently incompatible, as illustrated by the simplest strategy for reducing emissions which would be to limit mobility.[19] And as has been discussed above, the policy instruments in the two areas are considerably different in their logic of authority: climate action relies on some new form of government action, whereas the currently prevailing transportation policy paradigm calls for as little government intervention as possible.

In a layered situation, attempts to use instruments from the newer policy area, such as regulated tailpipe emissions standards, may meet with resistance from the entrenched policy paradigm, such as a trucking industry that is largely deregulated. Such differences are institutionalized, meaning that they are hard-wired into the organizational structures, formal roles and responsibilities, and/or the organizational culture of the transport policy subsystem.

Earlier, we defined policy capacity as the ability of civil servants to create and communicate quality policy advice to elected officials. The capacity of policy advisors working on climate action initiatives in the transportation sector will be constrained as a result of conflict produced by the layering of climate change goals over the existing transport policy instruments. This makes for what we have labeled an "institutionalized inhibition" in climate mitigation and adaptation within the subsystem – meaning that the policy capacity of subsystem actors to implement policy is constrained in ways that are resistant to informal adaptation, and cannot be applied formally without addressing paradigmatic tensions.

Mandates and Resources

The institutionalized inhibition that results from the interaction of an entrenched transportation policy paradigm with the newer demands of climate change adaptation and mitigation efforts, as described above, affects policy capacity at the *macro*-level of the transportation policy subsystem. At the other end of the spectrum, the professional competencies of

individual policy analysts, the challenges of staffing policy units, and the purchase and maintenance of specialized information technologies and research tools can be considered to be the policy capacity constraints at the *micro*-level. In between, at the *meso*-level, there is the tension between the variable demands of a ministry's changing policy mandate and the availability of resources to match those demands. In some ways, the influence of meso-level issues can rival macro-level effects in importance on assessments of policy capacity.

The ability of a ministry to keep up with changing policy mandates by applying the appropriate level of resources is a key component of policy capacity building. Mandates and resources can rise or decline, and when they do not move in the same direction there will likely be consequences for policy capacity. Thus there are four areas of activity for a government ministry faced with these challenges (see Figure 1):

Figure 1. Criteria for Assessing Policy Capacity: Mandates and Resources

		Resources	
		Increase	***Stable or Decrease***
Mandates	***Increase***	Challenging environment met by augmented policy analytical capacity	Likely ineffective policy capacity characterized by short-term fire-fighting
	Stable or Decrease	Enhanced policy capacity to meet long-term challenges	Weak policy analytical capacity contributing to propensity for policy failures

Source: Craft and Howlett, 2011

The term *mandate* is not currently a technical expression in the academic literature that deals with policy capacity. Where "mandate" is used, it is loosely referred to in its standard dictionary definition, as the areas in which a particular ministry or department is operating. We use *mandate* rather than *jurisdiction* here because "mandate" implies that a government department is being allowed or directed to pursue a particular policy path by a higher authority (i.e. the cabinet or executive, legislation, or popular will), rather than viewing a government department or even its associated cabinet minister as being able to write its own rules or to set its own policy direction. This is an important distinction, as recognizing that a given ministry may not be ultimately in control of its policy direction is crucial for a complete understanding of the tension between mandates and resources. Government departments cannot unilaterally adjust their policy decisions to match their available resources.

This is equally true in the Canadian political context, where ministries and departments do not set their own policy parameters. Schacter (1999: 4) identifies six drivers of executive policy direction for Canadian governments:

- the personal priorities of the prime minister or premier
- preferences of ministers and cabinet
- the "size and scope of government operations"
- the "nature of the policy challenges facing the government"
- financial considerations
- public opinion

And while exogenous factors like public opinion and financial constraints must be taken into consideration, the majority of scholars of Canadian government agree that executives - more and more frequently dominated by their first ministers - are exclusively responsible for setting policy direction for each and every one of their government's ministries and agencies (Mallory, 1984; Ward, 1987; Savoie, 1999). While Weller (2003) argues that Westminster-derived executives can be sometimes dominated by a first minister and at other times are capable of collective decision-making, this distinction is immaterial for the present discussion, as the fact remains that in Canada's state tradition, executive decision-making is largely conducted in secret, and the authors of specific policy directives are never identified.

The policy "mandate" of a particular ministry is therefore understood as the direction given to it by its associated executive, whether that be through the collective decision of cabinet or the sole authority of the prime minister or premier. It is the scope, scale, and domain of activities in which a ministry is directed to operate. We therefore take the perspective that a ministry's mandate is a set of instructions that any one minister or ministerial official cannot alter unilaterally.

British Columbia's and Ontario's transportation policy mandates have changed over the past 10 to 15 years. In a broad sense, both provinces' transportation ministries are still principally occupied with the same policy domains that they have consistently pursued for the last 50 years: highways, the trucking industry, public transit, rail administration, inland waterways, and rural airports (and in BC, especially in the last 40 years, coastal ferries and driver insurance). However, both BC's and Ontario's provincial ministries of transportation have experienced significant changes in how they approach policy formulation and implementation in these areas. For one thing, the shift to deregulation and increased market competition in transportation, as described above, can be seen as a major change in policy mandate, requiring a reorientation of ministry priorities and resources. More recently, legislative enactments establishing new climate change goals in both BC and Ontario have placed increasing responsibilities on these provinces' ministries of transportation in what must necessarily be viewed as a major change in policy mandate.

In British Columbia, "climate change" was first mentioned in the Ministry of Transportation's Annual Report for fiscal year 1998-1999 as one of the "key areas affecting the ministry" on matters related to the environment (British Columbia, 1999: 7). However, by 2006-2007, climate change

adaptation and mitigation had become a major policy priority for the BC provincial government, and this is reflected in all annual reports and service plans that have been published since then. The Ministry of Transportation of Ontario has not published annual reports since 2003-2004, although the same emphasis on climate change adaptation and mitigation priorities can be seen in the publication of numerous climate-related policy documents since 2008, all of which place a heavy emphasis on transportation policy domains (see for example Ontario, 2009). At the executive level, climate change (and especially climate change issues in the transportation policy domains) has appeared in all of the Throne Speeches of both the BC and Ontario governments since 2007. It is evident that the provincial executives in these two jurisdictions wish it to be known that climate change initiatives are now important policy considerations in many areas, including transportation. This represents a major expansion in policy mandate for these two provinces' ministries of transportation, who must now adjust to this change in policy direction by incorporating climate change requirements in their operations.

But do the ministries of transportation of British Columbia and Ontario have the resources to meet the policy requirements of their new climate change mandates? Resources can refer to financial capital, but they can also mean quantity and experience of personnel. For the purposes of analyzing policy capacity, the most important resource is the quantity and experience of policy staff within the ministry of transportation. A reasonable metric for this resource could therefore be the dollars spent on policy-related staff salaries, as this will take into account the number of staff, as well as their levels of education, experience and responsibility (as better trained, more experienced, more important policy personnel will likely be paid higher salaries).

Figure 2. Policy Salary Resources for BC and Ontario Ministries of Transportation, 1998-2010

	BC Ministry of Transportation policy salaries as a percentage of BC Ministry of Transportation total salaries[a]	Ontario Ministry of Transportation policy salaries as a percentage of Ontario Ministry of Transportation total salaries
1998 / 1999	1.96%	2.96%
1999 / 2000	2.12%	3.47%
2000 / 2001	2.32%	3.45%
2001 / 2002	2.80%	3.76%
2002 / 2003	0.49%	3.68%
2003 / 2004	0.63%	4.92%
2004 / 2005	0.71%	5.64%
2005 / 2006	0.72%	4.81%
2006 / 2007	1.08%	4.79%
2007 / 2008	1.31%	4.00%
2008 / 2009	1.07%	4.28%
2009 / 2010	0.94%	4.49%

[a] In BC, the Fund report lists salaries and employee benefits for "policy and legislation" for the Ministry of Transportation from fiscal year 2002-2003 onward. Before 2002-2003, the Consolidated Revenue Fund report does not list a policy-specific line item. Its nearest equivalent is "highway planning and major projects".

Figure 3

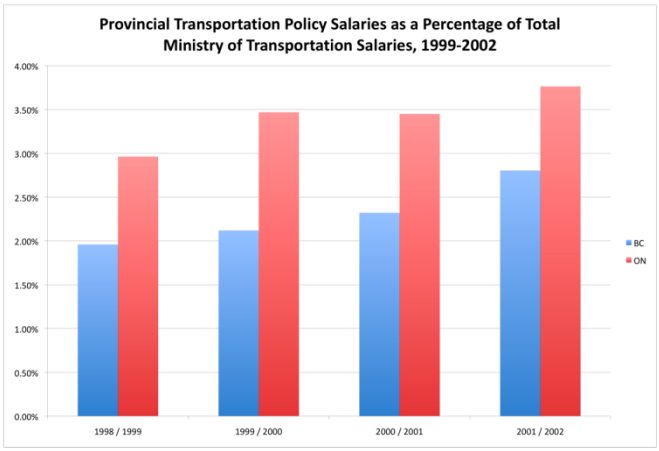

Figure 4

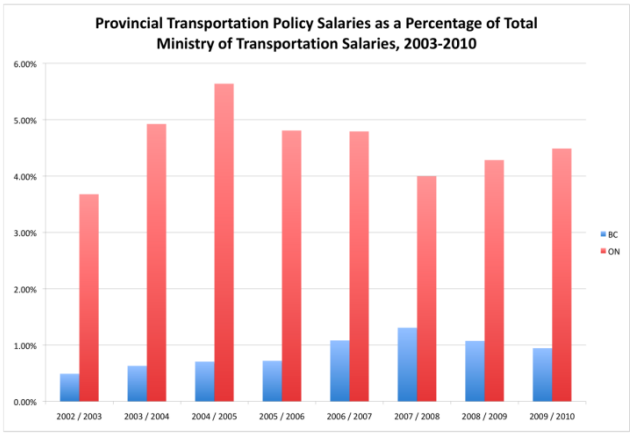

Figure 2 tabulates policy salary data for British Columbia and Ontario, as compiled directly from the Consolidated Revenue Fund reports from the provincial ministries of finance.[20] Figures 3 and 4 display these data as a bar chart, where the trends can be more easily seen. In order to eliminate the effects of inflation, the amount of money spent on policy-related salaries within the ministry of transportation was divided by the total spent on all salaries for the entire ministry for each year, and these numbers are expressed as percentages. Because of changes to the way BC accounted for policy expenditures in the Ministry of Transportation after 2001-2002, it was necessary to divide the data into two charts.

There are some trends that emerge from these data. Spending on policy-related salaries in the Ministry of Transportation increased through the recession years of 2000-2001 and 2001-2002 in both BC and Ontario, and then decreased in BC in the recession years of 2008-2009 and 2009-2010. In both jurisdictions, policy spending was increased over a change in government, in BC from the NDP to the Liberals in 2001, and in Ontario from the Progressive Conservatives to the Liberals in 2003. In BC, total policy salaries

in the Ministry of Transportation have declined in each of the three years since climate change was introduced to the political agenda. In Ontario, total transportation policy salaries have risen in each of these years.

In relation to policy mandates, a more interesting picture emerges over a longer time-scale than the trends noted above. Between fiscal years 1998/99 and 2006/07, climate change was not on the political agenda in either Ontario or BC, and those provinces' ministries of transportation were operating under a stable policy mandate - or even one that had been slightly reduced, as deregulation, increased market competition, sales of Crown assets, and a retrenchment of government intervention in the industry all became goals for transportation policy. During this time, spending on policy-related salaries within these two ministries of transportation fluctuated as expected: increasing and decreasing according to business and electoral cycles, with identifiable short-term trends emerging but with no clear overarching long-term direction. From 2007/08 onwards, climate change had become (and continues to be) a major policy priority for these two provinces, with some emphasis on the relationship between climate issues and the transportation sector. If transportation policy capacity were to match the demands of the expanding mandates required by climate action, policy salaries in the ministries of transportation should be expected to have risen since 2007/08.

This is not, however, exactly what has happened. Despite the advancement of climate change as a provincial priority, spending on policy-related salaries in the BC Ministry of Transportation fell every year since its high point in 2007/08. This indicates that the economic climate in those years may have been a more important driver of policy capacity resources than the expanding mandate of climate change. In Ontario, policy salary spending in the Ministry of Transportation increased in the years since climate change was first introduced as a policy priority - but this is a marginal increase, since its current level of 4.5% of total Ministry of Transportation salaries is still lower than it was for several years and considerably less than the peak of 5.6% that it reached in 2004-2005.

In short, policy resources in the ministries of transportation of British Columbia and Ontario have not matched these ministries' expanding mandates in recent years. Despite significant political emphasis on the importance of climate action, these two provincial governments have not increased the resources that would be required for effective policy capacity in this area. This could be an indication that the established policy paradigm in the transportation sector is too inflexible to adapt to the demands of the newer climate change policy regime that has been layered on top of it.

Interview findings

We conducted semi-structured interviews with seven mid-level and senior policy managers within the BC and Ontario provincial governments. This small sample size is representative of the fact that in both of these jurisdictions, a relatively small number of individuals are dedicated to supporting policy formulation at the intersection of the transportation and climate change subsystems. To encourage candour, every attempt has been made to preserve the anonymity of our interview subjects. Therefore, direct quotations cannot be attributed to particular individuals, and position titles cannot be identified.

Interview subjects were asked to evaluate policy capacity in their departments and ministries, and to describe any changes in policy capacity that they have observed over time. They were asked about challenges in creating climate change policy for transportation, and about the effect of political priorities on policy advice. They were also asked for their assessment of policy trends in transportation over the past decade and to comment on what effect this might have on climate action. Nearly all of our interview subjects volunteered at least some relevant information that was not directly queried. While their policy and political orientations may have varied, our interview respondents were largely in agreement about the topics we discussed, suggesting a significant degree of consensus. This is especially pertinent in light of the fact that combined, our subjects represent four different ministries in two provincial governments.

Considering Policy Capacity

Our interview subjects saw themselves mainly as professional policy analysts. They described their role as that of researching and presenting policy options to elected leaders, rather than serving as decision makers themselves. In their view, politicians present a policy directive and then ask civil servants to investigate the means and financial feasibility of making that directive a reality - including weighing parallel options for achieving the main goal, how much these options would cost, the benefits and drawbacks of each, and so on. The civil servants prepare a menu of policy options and then communicate that back to government leaders, who then decide which option to choose - if any - at their complete discretion. Once a decision has been made, the initiative returns to the bureaucrats who work on advising the government on how to best implement that policy decision.

This Weberian understanding of the chain of command has important implications for our assessment of policy capacity. A majority of our respondents were quite unequivocal that political initiative was the most important influence on policy capacity. Several pointed out that BC's Climate Action Secretariat was able to accomplish more, had more fiscal resources, and more attention from other departments when it reported directly to the Office of the Premier.[21] This implies a deferential attitude towards resolving many political conflicts, such as those that can arise between goals and instruments in policy making. In other words, when it comes to making difficult choices between contending policy paradigms, policy analysts generally do what elected leaders demand of them, and require political leadership to validate policy decisions. This mode of operation would tend to limit opportunities to alter entrenched policy paradigms, and would make it harder to advance initiatives in a layered policy context such as that found when climate action is added to the transportation subsystem's policy agenda.

Some interview respondents suggested that they would be able to improve the policy capacity of their departments by hiring some more policy analysts with specialized technical knowledge to dedicate to some very specific policy development tasks, since the staff currently on hand is mostly composed of policy generalists. When asked to elaborate, they noted that some of the policy issues and options relevant to climate change mitigation in the transport sector are so technical and demanding that they would benefit greatly from having some staff with specialized experience to work on them. However, we do not have sufficient data in this study to determine if this is a situation that is unique to transportation or if it is an issue that is common to other instances of layered policy goals and instruments.

Policy Inhibitions

All of the interview subjects acknowledged that the most widely used instruments for dealing with climate change in the jurisdictions that have shown considerable success such as Sweden (Sarasini, 2009), including increased regulation, enforcement of emissions standards, and strong stimuli to reduced dependence on fossil fuels, present a serious challenge to policy makers in the current transportation policy paradigm, which emphasizes deregulation and market autonomy. In addition, many respondents identified expanding roadway infrastructure as a transportation policy that is clearly at odds with the goals of climate change mitigation. However, the vast majority of respondents claimed that ultimately, climate policy and transportation goals could be compatible. They mostly suggested that the answer lies with climate policies that make use of market mechanisms - such as carbon trading regimes. In fact, carbon pricing mechanisms, including carbon trading, carbon taxes, and intergovernmental efforts like the Western Climate Initiative were cited by all respondents as the best policy option for advancing climate action in transportation. Some respondents went further and identified ways that climate policies could be "sold" to the private sector: by engaging them in sectoral working groups that build their input into future policy development, by slowly phasing in policies that would prove to be costly to business otherwise, and by offsetting financial costs arising from new climate-related regulation by reducing regulations in other areas of transportation or even other sectors entirely outside the transport sector.

What this indicates to us is that the marketized transportation policy paradigm is so well entrenched that all efforts to mitigate or to adapt to climate change must either be reframed to accommodate transport's policy goals or be backed by the kind of political leadership that our respondents identified as being necessary to re-prioritize policy goals. Until such political leadership determines otherwise, the most effective climate change policy instruments are those that incorporate the preferred policy goals of the transport sector: marketization, increased private sector competition, deregulation, and so on. As one interview subject commented, "We don't use the heavy hand of regulation much anymore".

Discussion/Conclusions

The transportation sector in BC and Ontario operates in an entrenched policy paradigm in which private sector competition is promoted and government intervention is discouraged. This presents significant challenges for climate change policy initiatives in transportation, since the most effective climate policy options may require influencing unfettered market activities through some form of enhanced regulation. In the meantime, climate and transportation policy overlap in layers, where policy incapacity is institutionalized by the conflict engendered by competing paradigms. Policy analysts must attempt to frame climate action instruments in the language and methods that are compatible with transportation goals - and in this effort, carbon pricing mechanisms are seen to be the most promising policy instruments for taking action on climate in the transport sector. Either they could be the vanguard instruments that prompt a reassessment of the role of regulatory policy instruments, or they could prove to be false starts in the effort to reconcile climate and transport policies. The result is likely to depend on the degree and nature of political leadership that is blended with other elements of policy capacity.

This paper has examined the collision of a long established policy domain and a more recent problem that has made it onto the policy agenda. We have explored the policy process in a situation where new and old policy subsystems overlap - a scenario that is not well-described in the public policy literature. Our interview research and content analysis of policy documents supports the finding that the layering of two conflicting policy paradigms has resulted in an institutionalized inhibition that limits the capacity of the subsystem to attain identified goals. We have also found that public policy analysts in the civil service believe that the capacity to attain new goals within layered policy subsystems can be enhanced by greater leadership offered by elected officials. Further research could benefit from exploring the understanding of those "political masters" regarding their role in managing the integration of the policy layers that will affect action on climate change. Direct interviews with elected officials were not undertaken for the present study, because the objective here was to examine the perspective of policy analysts in evaluating policy capacity in the layered areas of transportation and climate change. However, future studies could expand and deepen this analysis by considering the perspective of elected leaders in the policy process and the effect of political direction on capacity in layered policy areas.

The level of complexity can rise quickly, as more policy areas are considered. Since climate change is cross-cutting, it is certain that climate action policies are influenced by many more policy subsystems than just transportation alone. Further research is required to investigate the interactions between climate change and other policy areas in order to make more robust conclusions about the role of political leadership in catalyzing policy capacity.

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Endnotes

1 For an overview of the current predominant theories of the policy process, see Nowlin, 2011.

2 Transportation, and specifically, railways and canals, was and continues to be a foundational part of the mythology of Canadian confederation. Both the maritime provinces' and British Columbia's accession to confederation hinged on the promise that they would be connected to the rest of the country by rail - the Maritimes through the Intercolonial Railway and BC through what later became Canadian Pacific (Dyck, 2008: 51-52).

3 For example, Sweden (Sarasini, 2009: 636).

4 In this study, we did not interview elected officials. However, communication between the elected decision-making level of government and the permanent bureaucracy is an essential aspect of policy capacity. Therefore it may prove exceedingly useful to query elected leaders directly to determine their perspective on policy capacity in a particular department, the policy process in general, and links or conflicts between layered policy issue areas. While this may be one obvious limitation in the present study, we believe that this is could be a promising area of future scholarship.

5 It is important to note that while policy capacity usually refers to policy inputs and not outputs, policy language that promotes private sector involvement (such as deregulation or alternative service delivery) almost exclusively focuses on policy outputs and not inputs. The potential input of the market into the policy process is left unspecified, although scholars have elaborated this dynamic previously (eg. Lindblom, 1977).

6 Both directions; extends upwards as far as the political executive level, but downwards only as far as dedicated policy employees.

7 The input of private sector analysts, whether through contracted research or policy partnerships, can fill part of this gap. However, it can also raise other issues, such as principal/agent dilemmas, international policy convergence, and complicated costing problems resulting from differing accounting practices. For an in-depth analysis of the impact of consulting on policy capacity, see Perl and White, 2002.

8 The law was enacted but the carbon trading portion was immediately suspended, pending wider acceptance of carbon trading by other Canadian jurisdictions and US states, just as BC has done.

9 And even then, most of the law's provisions relate to the public sector - although there are some sections that relate to consumer goods, and a section on private property sales that is not yet in force.

10 The details of such a system are not, however, prescribed in the law.

11 Prince Edward Island is the other one.

12 For an overview and assessment of the cap and trade system proposed by the Western Climate Initiative, see Olewiler, 2008.

13 See section 12.0.2, for example.

14 Depending on how you count the emissions (full life energy cycle including infrastructure would make it the biggest, counting point of combustion emissions makes it the second biggest).

15 Environment Canada (2008: 7), Table 1, "Summary of emissions and economic activity by sector, 1990 and 2006" shows that the Transportation sector was the highest producer of greenhouse gas emissions in 2006 at 159 Mt CO2 equivalent. It was number 2 behind Heavy Industry and Manufacturing in 1990, but Transportation greenhouse gas emissions outpaced Industry's in the years in between 1990 and 2006 (also on this table, Fossil Fuel Production was second in 2006 at 158 Mt CO2eq, close behind Transportation -- but Fossil Fuels had the greatest percentage

increase since 1990, at 53%. By comparison, Transportation saw a 31% increase in greenhouse gas emissions in this time).

16 See Howlett, Ramesh and Perl, 2009 for a detailed analysis of the five stages of the policy cycle.

17 Enacted 1996, but amended as recently as 2008.

18 Kern and Howlett use the terms "coherent/incoherent" for policy goals and "consistent/inconsistent" for policy instruments. This allows them to present a clearer two-by-two matrix of the possible states of interaction (2009: 395-396).

19 Even a mode of transportation that is 100% electric will have a carbon footprint: the manufacturing of vehicles, steel for rails, concrete and pavement all produce greenhouse gas emissions.

20 BC's Consolidated Revenue Fund data are available from the Office of the Comptroller General at http://www.fin.gov.bc.ca/ocg/pa/10_11/Pa10_11.htm (last accessed May 26, 2012). Ontario's data are available at http://www.fin.gov.on.ca/en/budget/paccts/2010/ (last accessed May 26, 2012). In BC, the Fund report lists salaries and employee benefits for "policy and legislation" for the Ministry of Transportation from fiscal year 2002-2003 onward (before 2002-2003, the Consolidated Revenue Fund report does not list a policy-specific line item. Its nearest equivalent is "highway planning and major projects", which is not exactly the same and was therefore treated separately. Still, a trend can be discerned from the data). For Ontario, the Consolidated Revenue Fund report lists salaries and employee benefits for "policy and planning" for the Ministry of Transportation from 1998-1999 onward. The Consolidated Revenue Fund is the account that tracks the total of all monies coming into the government through all forms of revenue and all the funds that leave the government through all expenditures in a given year.

21 The Climate Action Secretariat is currently a part of the BC Ministry of Environment.