You Can't Pay Them Enough: Subsidies, Environmental Law and Social Norms

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You Can’t Pay Them Enough:
Subsidies, Environmental Law and Social Norms

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“No important change in ethics was ever accomplished without an internal change in our intellectual emphasis, loyalties, affections and convictions. … In our attempt to make conservation easy, we have made it trivial.”

I INTRODUCTION

Governments have many tools at their disposal to attempt to change individuals’ behaviour that harms the environment. In order to address greenhouse gas emissions from the use of cars, for example, governments could prohibit the use of particular types of cars (such as SUVs), mandate certain emission control technology or tax certain fuels or emissions. In part because taxes and prohibitions are politically unpopular, governments also rely on subsidies for environmentally friendly choices (such as the purchase of more fuel efficient cars). These subsidies are intended to change the relative cost of the environmentally friendly action and therefore increase the number of individuals engaging in it. Unfortunately, while subsidies may have such a relative price effect, they also may have an unintended effect – they may negatively alter individuals’ environmental values around the environment and make it more difficult to address environmental harms.

The potential impact of subsidies on environmental values is important because some environmentalists are currently arguing that current instrument choices are insufficient. There is a long-standing debate about the relative advantages and disadvantages of different types of instruments in particular contexts such as the relative efficiency of market-based instruments (such as taxes) as opposed to the more traditional


2 Richard Posner, *Catastrophe: Risk and Response* (Oxford: Oxford University Press, 2004) points to the failure of President Clinton’s B.T.U. tax proposal as evidence of the political difficulty in imposing taxes to address climate change. Taxes may also be technologically infeasible such as where there are a large number of sources or emissions are not easily measured for technological reasons. D. Fullerton and R. Mohr, “Suggested Subsidies are Sub-Optimal Unless Combined with an Output Tax” (National Bureau of Economic Research Working Paper No. 8723, Cambridge, MA, 2002).

3 As discussed in part IV.
command and control approach to environmental harms. However, further progress on current and future environmental concerns such as climate change is argued not to depend on such efficiency concerns but instead on a fundamental shift in values – a new “environmental ethic”. Such values can affect individuals’ actions that impact the environment both directly (such as the choice of car or the use of electricity) and indirectly (such as in individuals’ roles as voters, shareholders or workers).

Assuming that such a new environmental ethic is required, the difficult question becomes how this shift in values is to occur. Unfortunately less work has been done on this question than on the relative efficiency of various instruments. Some argue that the shift in values will only occur as the result of a crisis that makes individuals understand the value of environmental protection. Yet waiting for a crisis that may be irreversible is unattractive. Others argue that law has a “transformative potential” and that government should use this potential to bring about a shift in values. Such an approach raises issues of whether government can impact values and, if it can, when it is appropriate for government to do so.

A large and growing literature focuses the relationship between law and “social norms”. It examines the extent to which social norms enhance or detract from the effect

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6 For example, Speth (2004) argues that a fundamental shift in values is required for progress on environmental issues and that it may only come about in response to a crisis – likely due to climate change. See also Sean Coyle and Karen Morrow, The Philosophical Foundations of Environmental Law (Oxford: Hart Publishing, 2004).


of law on the behaviour of individuals and how social norms influence which laws will actually be enacted. It also attempts to assess the impact of law and government policy on the existence or content of social norms. Examination of both the potential impact of government policy and the appropriate means of developing policy needs to take this interrelationship of law and norms or values into account. If not, policy analysis may lose both its predictive power and its legitimacy. This paper uses the social norms literature, and in particular the law and economics literature on social norms, to examine the potential impact of subsidies on the transformation of environmental values. The concept of shifting values is difficult for law and economics which tends to take values (preferences) as given. Indeed, much of the law and economics literature on social norms remains closely tied to the narrow instrumental reasoning of the rational choice framework. This paper uses this framework but also partially expands on it to discuss a broader approach to internalized norms or values.

These concerns about law and values are discussed in this paper in the context of the attempts by governments to address climate change and, in particular, to change the behaviour of individuals such as their purchase of particular products or use of energy. Such individual choices constitute a significant source of greenhouse gas emissions (as well as of other significant environmental issues). Further, any environmental values which form the basis for such consumption decisions may also be connected to choices of

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10 R. Scott, “The Limits of Behavioural Theories of Law and Social Norms” (2000) 86 *Virginia L.R.* 1603 (arguing that law and economics may lose its predictive power if it does not take into account these broader considerations).

11 Governments also extensively subsidize firms and such subsidies may have an indirect impact on individual values or preferences through their impact on price and, as discussed below, through the expressive function of such government policy. However, this impact is unlikely to be significantly different, and likely to be significantly more attenuated, than direct subsidies based on individual choices.

12 See, for example, M. Vandenbergh, “From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law” (2004) 57 *Vanderbilt L.R.* 515 (defining individuals and households as a separate category of polluters and arguing that they are a major source of emissions that has not been and needs to be adequately addressed). See also Canada, *Project Green: Moving Forward on Climate Change* (accessed at www.climatechange.ca, April 2005).
individuals in the political arena.\footnote{M. Vandenbergh, “Order Without Social Norms: How Personal Norm Activation Can Protect the Environment” (2005) 99 Northwestern University Law Review 1101.} As such, they are a constraint on the ability of the government to take broader action on climate change.

More than perhaps any other recent environmental issue, reducing atmospheric greenhouse gas concentrations will require an enormous shift in our current patterns of production and consumption. Under the Kyoto Protocol, for example, a range of developed countries agree to reduce emissions of greenhouse gases by a specified percentage below 1990 levels.\footnote{Kyoto Protocol to the Framework Convention on Climate Change, (1998) 37 I.L.M. 22. Under the Kyoto Protocol, the parties collectively agree to reduce greenhouse gas emissions by five percent below 1990 levels by 2008 to 2012. Individual countries commit to different reductions. For example, Canada has committed to a reduction of six percent below 1990 levels and the UK, France and Germany to eight percent. The Kyoto Protocol does not set targets for developing countries. The US is not a party to the Kyoto Protocol.} These countries will need a significant effort to achieve these reductions. Further, even countries that are not party to the Kyoto Protocol, such as the United States, are attempting to address emissions of greenhouse gases. Yet these efforts may have little long term impact on climate change as emissions levels will remain high (at slightly below 1990 levels) and greenhouse gases remain in the atmosphere for a very long time.\footnote{Congressional Budget Office, The Economics of Climate Change (Congress of the United States, Congressional Budget Office, accessed at \url{www.cbo.org}, September 2004) and Posner (2004).} To actually reduce the stock of greenhouse gases will require considerably more effort and greater changes in behaviour by individuals and industry.\footnote{See, for example, P. Freidlingstein and S. Solomon, “Contributions of Past and Present Human Generations to Committed Warming Caused By Carbon Dioxide” (2005) 102(31) Proceedings of the National Academy of Science 10832 (using a “simplified approach”, they estimate that if greenhouse gas emissions were reduced to zero in 2000 temperature would continue to increase by several tenths of a degree Celsius for another 30 years, if emissions rate were constant until 2025 and then cut to zero temperature would increase by 1.3 degrees Celsius by 2100 and if emissions were capped at their 2025 levels, temperatures would increase by 2.9 degrees Celsius by 2100).} It is the magnitude of these changes that has led environmentalists to call for a new set of environmental values or norms.\footnote{See, for example, Boyd (2003) and Speth (2004). See also A. Green, “Norms, Institutions and the Environment: A Review of David Boyd, Unnatural Law: Rethinking Canadian Environmental Law and Policy (Vancouver, BC: UBC Press, 2003) and Sean Coyle and Karen Morrow, The Philosophical Foundations of Environmental Law: Property, Rights and Nature (Oxford: Hart Publishing, 2004)” (forthcoming) University of Toronto Law Journal.}
Reducing the greenhouse gas emissions that are connected to climate change is a particularly difficult issue to address for social norms theorists. Much of the literature on social norms examines norms that arise in the context of close-knit groups or situations where there is a potentially large individual payoff for individuals.\(^{18}\) However, individuals deciding whether or not to take actions that reduce greenhouse gas emissions appear to face only net costs (that is, the direct costs of taking action exceed their direct personal benefits). Further, they do so in a context in which the enforcement of social norms appears relatively weak as it is difficult to monitor and sanction individuals in the context of large, loosely knit groups.\(^{19}\) Social norms or values fostering reduction of greenhouse gas emissions seem unlikely to arise or be effectively enforced in such a context. However, individuals do take action at times in such cases; the typically cited case being individuals bearing the costs of voting.\(^{20}\) The question is—what types of “norms” or values back action in such contexts and can government play a role in fostering them?

Part II of this paper discusses the large number, negative pay-off problem underlying climate change, the potential role for social norms or values in addressing this problem and the current strength of environmental values related to the environment. Part III examines the “rational choice” framework of law and economics and its connection to social norms. It discusses both norms that are externally enforced (such as through reputation) and internalized norms. The former fit well with the rational choice framework while the latter requires at least in part a broadened approach to rationality. Part IV builds on this discussion to examine the potential impact of subsidies on both externally enforced norms and internalized norms. It argues that any such impact is weak and may actually hinder the development of environmental values. Finally, Part IV

\(^{18}\) Vandenburgh (2005).

\(^{19}\) See A. Carlson, “Recycling Norms” (2001) *California L.R.* 1231 (discussing large number, small pay-off situations in which social norms are less likely to arise) and Vandenbergh (2005) (discussing negative pay-off situations (in which the costs of the action are externalized) and loose-knit groups (where the individuals do not have a sufficiently large number of repeat interactions or sufficient information exchange to permit effective social sanctions)).

discusses some broader issues around the use of subsidies. It first examines whether
government can adopt subsidies to change norms or values in advance of the norms
existing in the community. It then discusses whether government should engage in such
norms management. It argues that government can and should take such action, at least
to the extent that such norms management is an effective method for addressing the
relevant environmental concern.

II CLIMATE CHANGE, EXTERNALITIES AND SOCIAL NORMS

The paradigmatic “new” environmental issue is climate change. The earth’s
atmosphere contains a range of gases that allow light from the sun to pass through but
trap heat radiating back from the earth. These gases include carbon dioxide, methane and
halocarbons. While some amount of greenhouse gases occurs naturally, their levels have
increased significantly since the industrial revolution. Human activities such as burning
of fossil fuels (in cars or electricity generating plants), industrial activities and practices
such as deforestation are the main causes of the increase. Once emitted, these gases
remain in the atmosphere for a very long time.21

The focus of this paper is on emissions by individuals as opposed to industry. It
is of course difficult to break emissions of greenhouse gases down into actions by
individuals and actions by industry.22 Industrial activities are dependant on consumer
demand for products and decisions for industry are made by individuals. Changing
individuals’ values concerning the environment and hence their consumption patterns
therefore will impact industrial emissions. However, even focusing on direct behaviour
(such as use of low efficiency appliances or driving of cars), individuals’ choices make
up a significant proportion of greenhouse gas emissions. In both the US and Canada,
individual choices impact approximately one-third of the total emissions per capita.23

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22 See Vandenbergh (2004) (attempting to separate out firm and household/individual action). See also
23 For example, in the US, the Environmental Protection Agency estimates that individuals can affect about
32% of emissions per capita through choices related to electricity, waste and personal transportation (US
In economic terms, climate change is a large-group externality problem since individuals undertaking activities that emit greenhouse gases obtain the benefit of the activity but impose some or all of the costs (in terms of impacts on climate) on others. This problem is exacerbated by the nature of climate change. While considerable uncertainty exists about the timing and potential impact of climate change, developed countries emit a large proportion of global greenhouse gases while developing counties will suffer the most significant impacts. Moreover, since emissions remain in the atmosphere for a long time and climate change results from a build up of gases, future generations will experience much of the impacts of current emissions. Thus the costs of greenhouse gases are not borne by current neighbours or citizens of the emitter’s country, but are spread across different regions of the world and future generations.

There are a range of potential solutions to externality problems. Government could assign property rights so that individuals internalize the externality – that is, take into account the costs or harm they are imposing on the environment. However, it is difficult to assign property rights for many of the activities which result in greenhouse gas emissions, although some movement has been made in this direction such as for large point sources of emissions. Further, governments can prohibit or regulate sources of emissions, impose taxes to directly internalize the environmental harm or subsidize EPA, accessed at [http://yosemite.epa.gov/oar/globalwarming.nsf/content/EmissionsIndividual.html](http://yosemite.epa.gov/oar/globalwarming.nsf/content/EmissionsIndividual.html), accessed June 2005). Similarly the Canadian government estimates such individual choices account for approximately 28 percent of greenhouse gas emissions in Canada. Canada (2005).

On the distinction between large group externality problems and “true” commons problems, see Shi-Ling Hsu, “What Is a Tragedy of the Commons? Overfishing and the Campaign Spending Problem” (forthcoming) *Albany L.R.*


choices which have lower greenhouse gas emissions. Like markets, governments face constraints on their effectiveness (such as information acquisition and processing problems).²⁷

In addition to such government action, externality problems may be addressed through social norms or values. As will be discussed more fully in Part III, individuals may change their behaviour in accordance with norms or values that guide their actions. It may, for example, be in an individual’s self-interest to litter where self-interest is narrowly defined to take account only of the costs of taking the garbage to a garbage can versus the benefits they receive from not throwing that piece of garbage on the ground. However, it is in society’s interest that no one litters. Assume for present purposes that a “social norm” is broadly defined as some behavioural regularity followed by individuals, whether or not based on a normative obligation or value. It may therefore include simple conventions such as driving on the right-hand side of the road as well as behaviour rooted in “values” such as respect for the environment. A social norm of not littering can lead individuals to behave in a manner which overcomes their narrow self-interest and take into account (or at least act as if they take into account) the social costs of the activity.²⁸

Before discussing the literature on social norms and their connection to the debate around environmental values, it is interesting to note the evidence that exists around the current strength of environmental values. According to polling data, public concern about the environment varies significantly over time and across countries.²⁹ For example, there was a strong wave of public concern about the environment in the U.S. and Canada in the late 1960s and early 1970s when the basic structure of environmental legislation and administrative institutions was put in place.³⁰ Environmental concern in the U.S. as

²⁷ Moreover, like individuals, nations as a whole have an incentive to take no or minimal action and free ride on the reductions of other countries. The Kyoto Protocol is one attempt to overcome this aspect of the commons problem across nations. See Posner (2004) (discussing how treaties help overcome such commons problems in the area of fisheries).


²⁹ Vandenbergh (2005) (reviewing studies of environmental values across countries).

³⁰ See C. Sunstein, After the Rights Revolution (Cambridge, MA: Harvard University Press, 1990), Vandenbergh (2005) (noting studies indicating survey respondents expressed an increased level of support
expressed in polls has varied since then. While some argue that there has been a generally high level of support for environmental issues in the U.S., in their controversial essay “The Death of Environmentalism”, Shellenberger and Nordhaus claim that “for a vast majority of Americans, the environment never makes it into their top ten list of things to worry about.” In Canada, environmental support has varied with economic concerns. For example, a second wave of environmental concern occurred in Canada at the end of the 1980s followed by a decline in interest in the 1990s as economic issues again became the focus of public. More recently, there was a brief resurgence of environmental concern in 2001.

One interpretation of this data is that everyone has a latent “environmental protection” norm – an abstract norm that need only be activated in order for individuals to take action which does not harm the environment. However, this norm appears to be closely connected to individual welfare (human health and well-being) and therefore may not extend to many of the (non-human centred) ecosystem issues that underlie climate change. Moreover, even where polls show public support for the environment, individuals do not appear to be willing to spend very much to address environmental


31 Vandenburgh (2005).

32 Shellenberger and Nordhaus (2005), at p. 11.

33 Harrison (1996) and Anita Krajnc, “Wither Ontario’s Environment? Neo-Conservatism and the Decline of the Environment Ministry” (2000) XXVI (1) *Canadian Public Policy* 111. In Canada, for example, a poll by Ipsos indicates that more Canadians viewed the environment as one of the top three most important issues in 1990 and 2001 as opposed to the mid-1990s or the later in the 2000s. It was viewed as one of the top three issues by 24 percent of Canadians in 1990, dropped to 3 percent in 1994, rose again to 23 percent in 2001 before falling to between 6 and 9 percent in 2004. (Ipsos-Reid, *Issue Watch: Canadians’ National Policy Issues Agenda* (September/October 2004, accessed at www.ipsos.ca, June 2005). Boyd argues that Canadians are according to some opinion polls “among the most staunchly pro-environment people on the planet.” (Boyd (2004), at p. 4).

34 See, for example, Vandenergh (2005) (examining data on individual attitudes and arguing that individuals have both an environmental protection norm and a reciprocity norm that, if activated, can make a significant difference in polluting behaviour of individuals) and Doremus (2003) (arguing for the importance of norm activation but recognizing that information alone will not be sufficient). But see Shellenberger and Nordhaus (2005) (“Protecting the environment is indeed supported by a large majority – it’s just not supported very strongly.” (p. 11 (emphasis in original)).

issues unless they perceive the change to affect them directly and they will notice a change in their lives.\textsuperscript{36} This result seems to hold across the US, Canada and the EU.\textsuperscript{37}

As a result, concern of the general public appears to be “wide” but “shallow”.\textsuperscript{38} This apparently low level of public support for environmental issues has led environmentalists to call for a shift in environmental values, increasing their importance for the general public. Schellenberger and Nordhaus go so far as to claim that “environmentalism is dead” in its current form.\textsuperscript{39} They argue that instead of focusing on technical solutions, there is a need to try to build public values around issues like the environment. The next Part examines the social norms literature and how it relates to these issues around environmental values.

\textbf{III \hspace{1em} SOCIAL NORMS AND THE ENVIRONMENT}

A central difficulty in discussing “social norms” is to define what is meant by the term. It is useful to first step back and consider some models of how individuals make choices. Law and economics, for example, uses a “rational choice” framework under which an individual chooses among various options based on their relative costs and benefits and on the individual’s preferences. These preferences are taken to be given and stable. In law and economics’ most basic form, individuals are taken to be self-interested.

\textsuperscript{36} For example, Viscusi and Hersch examined a Eurobarometer study conducted in 1999. J. Hersch and W. Kip Viscusi, “Paying for Climate Change Policies in Europe” (Harvard Law and Economics Discussion Paper Series No. 503, 2005). They found modest support for increased gasoline prices if the increased price brought environmental benefits. Individuals were willing to pay more to protect the environment if they were more worried about the environment. Willingness to pay also varied positively with income, risk perception, information, age and education.

\textsuperscript{37} For example, see Hersch and Viscusi (2005) for a discussion of surveys in the EU. Similarly, a study of Los Angeles, California area residents found that it took a large change in climate to generate even a modest change in individuals’ willingness to pay. See R.A. Berk and D. Schulman, “Public Perceptions of Global Warming” (1995) 30 Climatic Change 147-167 and R.A. Berk and R.G. Fovell, “Public Perceptions of Climate Change: A ‘Willingness to Pay’ Assessment” (1999) 41 Climatic Change 413-446. While the levels of support for the environment are at times high in Canada and Canadians tend to say they are concerned about the environment, there is not a high level of involvement by Canadians in environmental or human rights groups. M. Marzolini, “Polling Alone: Canadian Values and Liberalism” (Paper presented at Searching for New Liberalism, 2002, accessed at www.polara.ca, June 2005).

\textsuperscript{38} For example, see Shellenberger and Nordhaus (2005) (noting that for climate change, “while public support [in the US] for action on global warming is wide it is also frighteningly shallow” (at p. 9))

\textsuperscript{39} Schellenberger and Nordhaus (2005).
and self-centred maximizers, in the sense of aiming to maximize their own utility (welfare) which is assumed to be unaffected by the interests of others or issues such as fairness.40

The important difference is between choices and preferences. Choice refers to the individual’s decision to purchase a good or take an action. The preference is the underlying motivation for that choice.41 One approach of economists is to link choices and preferences through the concept of “revealed preference” – individuals reveal their preferences through the choices they make. However, individuals do not always choose what would appear to be in their narrowly defined self-interest. Sen uses the example that a person may choose an apple over a pear from a bowl of fruit despite the fact that she prefers pears to apples such as where, for example, there is only one pear in the bowl and there are other people who will subsequently be choosing fruit.42 Moreover, a person may choose an option that she wishes she had not chosen, such as where she chooses to eat at McDonalds (and has a preference for eating there) but wishes she did not have this preference.43

Part of the answer may lie in the distinction between first and second order preferences. First order preferences are preferences for specific goods or amenities (such as preferences for apples or for a particular type of car). Second-order preferences or meta-rankings, on the other hand, are deeper – they are preferences about preferences such as the preference for being healthy which drives a range of first order preferences (such as the preference for not smoking).44 Environmental groups advocating a change in

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40 Sen argues that rational choice theory has focused on three types of privateness of individuals: (i) self-centred welfare (an individual’s welfare depends on their own consumption); (ii) self-welfare goal (the individual’s goal is to maximize their own welfare); and (iii) self-goal choice (an individual’s choices are guided by meeting their own goals). Sen (2002), p. 30 and p. 213. See also Scott (2000) and Carlson (2001).


42 Sen (2002) notes the distinction between choices and preferences and argues that factors such as menu dependence (the choice of the pear depends on whether there is one or many pears) as well as chooser dependence (that I am choosing the option for someone else) means that simple “revealed preference” may be violated in certain circumstances.


environmental values appear to focus on changing second order preferences towards the environment. The hope is that such a change in underlying preferences will then change consumption choices. It is not enough for people to choose to drive more fuel efficient vehicles, although that is important. They must also make similar choices in other contexts, such as whether to buy appliances that use less energy, to live closer to where they work or to better insulate their homes. A change in second-order preferences or norms may drive these choices.

Unfortunately, much of the discussion around preferences and meta-preferences is vague. Economists have taken the term “preference” to refer to a variety of different aspects of an individual including her tastes, her values or her mental satisfaction. These various definitions cannot be entirely separated but the distinctions need to be clarified in order to understand the issues around norms of behaviour. For example, an individual’s choices and first order preferences may sometimes accord with these meta-preferences and sometimes conflict. Moreover, an individuals’ meta-preferences may themselves not be complete and may change over time either in substance or in strength. It is useful to think through the separate aspects of why an individual may choose a particular option in order to account for these conflicts, gaps and changes.

There are a number of reasons that choices may differ from the decisions predicted by the narrow version of rational-choice theory. For example, imperfect information or limits on rationality may hamper individuals’ ability to satisfy their preferences. Part IV discusses some of the implications of information constraints and


47 On incompleteness of rankings, see Sen (2002). Sen notes that there is a case for both the plurality concept of “preference” (encompassing many aspects) as well that a “theory of human behavior – even on economic matters – calls for much more structure and many more distinctions.” (at p. 304).

48 While economists have long focused on informational concerns, examination of limitations on individual’s rationality has been more recent. It has led to an increasingly large literature on “behavioural”
“bounded rationality”. However, as Sen notes, there are reasons beyond informational constraints or bounded rationality that may lead an individual to take such actions.\(^{49}\) First, an individual may take a decision that does not appear to accord with her own narrow self-interest because of reputational factors.\(^{50}\) Such an approach fits comfortably within a (broadened) rational choice framework. The impetus for taking action in the rational choice framework comes from the net cost – the cost of the action minus any benefits. These costs and benefits include all the typical monetary and non-monetary costs such as the price of the good, the taste of food or the physical exertion required to undertake the action. In the social norms literature, these costs and benefits also encompass benefits or sanction bestowed by the community for acting in certain ways. These benefits or sanctions may include the granting (or withholding) of esteem or the offering (or withdrawal) of transactional opportunities because of conformity (or lack of conformity) with a convention.\(^{51}\)

Second, the individual may have a taste for satisfying the desires of others or ensuring that the process under which decisions are made is fair.\(^{52}\) Such a view is also not a significant extension of rational choice theory. The individual now takes into account the impact on her of the welfare of other people.\(^{53}\) This view may explain a law and economics focusing, for example, on the heuristics used by individuals to act in the face of uncertainty or risk and on the difficulty individuals have in making decisions related to very low probability events such as catastrophic climate change. See, for example, C. Sunstein, ed., \textit{Behavioral Law and Economics} (Cambridge: Cambridge University Press, 2000), Sen (2002) and Posner (2004).

\(^{49}\) Sen (2002) notes that there are several different explanations for the divergence of choices and preferences. He uses slightly different categories than are used in this paper. He argues that there may be a divergence because of (i) reputation and indirect effects; (ii) social commitment and moral imperatives; (iii) direct welfare effects (which appear to include esteem); and (iv) conventional rule following. See also McAdams and Rasmusen (forthcoming).


\(^{51}\) McAdams (1997) (discussing the role of esteem in the development and enforcement of social norms) and E. Posner, \textit{Law and Social Norms} (Cambridge, MA: Harvard University Press, 2000) (discussing the signaling function of social norms). See also McAdams and Rasmusen (forthcoming) discussing the potentially separate role of shame – which is intermediate between guilt and disapproval by others.


\(^{53}\) In Sen’s terms, it moves the analysis away from self-centred maximization (that is, the individual now cares or gets benefit from decisions which impact the utility of others). Sen (2002).
range of behaviour that narrow rational choice theory cannot such as some forms of altruistic behaviour. However, it does not move the analysis away from the focus on self-interest as it continues to assume each individual bases choices on the implications for her own welfare (that is, the individual is still maximizing her own welfare but now that welfare includes implications for others). This “taste” may take the form of a “warm glow”, that is a private benefit from contributing to public goods. Alternatively, as the “warm glow” model provides no account of or scope for moral reasoning, other models of behaviour have been built around the assumption that people want to see themselves as socially responsible. They make decisions in part based on external factors (such as costs and benefits) but also in part on their self-image which results from comparing their actual actions with a “morally ideal” action.

This explanation of the divergence between choice and preferences is closely related to the theory that individuals may be following a norm or rule at least in part because of feelings of guilt when it is not followed and pride when it is followed. Such a theory also fits within the rational choice framework. These feelings of guilt or pride may be viewed as a “tax or subsidy” on action – making it more or less costly (in a broad sense) to take particular actions. Such an approach remains largely self-interested as the action is based on the impact on the welfare of the individual.

Finally, and most controversially from the perspective of the rational choice framework, the divergence between choice and preferences may occur because of a self-imposed requirement that is neither self-interested nor self-centred. Sen refers to such self-imposed requirements as “commitments” in contrast to “sympathy”. Sympathy arises when an individual’s welfare is impacted by the welfare of others. Commitment, on the other hand, involves “breaking the tight link between individual welfare (with or

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54 Sen (2002) refers to this feeling as “sympathy”.


56 Brekke, Kverndokk and Nyborg (2003) and McAdams and Rasmusen (forthcoming).


58 Sunstein (1996) and McAdams and Rasmusen (forthcoming) (arguing guilt is a non-material form of disutility from action and pride is a non-material form of utility).
without sympathy) and the choice of action (e.g. acting to help remove some misery even though one personally does not suffer from it)." The rational choice framework ignores such commitments or assumes they merely reflect an individual’s true preferences.

A commitment is a form of self-imposed constraint on action that limits the possible options available to an individual – individuals choose the best option but within a choice set that is constrained by the commitment. An example may be an individual who would never even consider buying an SUV because it would violate her environmental principles. She does not follow the principle because of a “warm glow” or personal benefit but because it acts as a constraint on her opportunity set – taking the SUV out of the possible options. Sen argues that such a self-imposed constraint is substantively different from (although technically equivalent to) broadening the definition of what an individual is attempting to maximize to include the welfare of other people or the environment. This difference may have implications for policy and institutional analysis. Sen uses the example of Japanese workers who apparently work themselves to death. He argues that such action may be viewed as maximizing some form of welfare but appears to better accord with the individual acting within a constraint on his possible options. Such a constraint or commitment involves concerns for other values or rules (such as rules about work) “over and above” the extent they enter into an individual’s utility function.

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61 Sen notes that an individual may restrict the options in an opportunity set because of a self-imposed constraint and then make a choice that maximizes within that (restricted) set. Alternatively, the individual may be viewed as choosing within the full (unrestricted) opportunity set but as maximizing a preference that includes the impact of the action on others. Sen argues that these can be formally (technically) but not substantively equivalent. Sen (2002), pp. 189-91. Kaplow and Shavell, on the other hand, argue in the welfare economics context for viewing preferences (and the social welfare function) as broadly as possible to include everything an individual may care about, including fairness and concern for others. They argue that providing independent weight to notions of morality (beyond a taste for morality) will in some cases lead everyone to be worse off when these notions of morality are followed. See, for example, L. Kaplow and S. Shavell, “Any Non-Welfarist Method of Policy Assessment Violates the Pareto Principle” (2001) 109 J. Political Economy 281 and S. Shavell, Foundations of Economic Analysis of Law (Cambridge, MA: Harvard University Press, 2004).

62 Sen (2002), p. 177. Sen’s notion of commitment has been controversial, at least in one formulation. Petit argues that Sen has two manners in which commitment can act as a motivation: (i) goal modification (such as an individual modifying her goals to take account of the impact of the action on others); and (ii)
A distinction underlying these different motivations for choice exists between “conventions” and “social norms”. One approach to social norms examines any “behavioural regularities” whether or not they are accompanied by any underlying moral or normative attitudes. Such behavioural regularities may include driving on the right hand side of the road or the use of a particular form of paper as monetary currency. However, following McAdams and Rasmusen, this paper use the term “conventions” for behavioural regularities not accompanied by normative attitudes and the term “social norm” for “behavioural regularities supported at least in part by normative attitudes”. Conventions only involve an individual perceiving that the benefits of following the rule exceed the cost, although conventions may become social norms over time where individuals internalize the behaviour and form a normative attitude towards it.

A further distinction exists within the category of social norms between those that are internalized by the individual and those that are not. The source of the enforcement or incentive in the case of reputation or esteem is external to the individual. On the other hand displacement (following the goals of others rather than oneself). Petit argues that the former approach fits well within the Rational Choice framework while the latter does not make sense as an individual can only ever act in accordance with her own goals (even where she takes another’s goals on as her own). P. Petit, “Construing Sen on Commitment” (2005) 21 Economics and Philosophy. Other commentators agree with Sen’s criticism of rational choice theory as being limited by its assumption that an individual only follows his own goals. However, they limit his extension of rational choice theory to incorporation of goals which are aimed at (or derivative of) collective or shared goals. These shared goals arise, and gain normative force, from identity within a group. See, for example, Anderson (2001) and H.B. Schmid, “Beyond Self-Goal Choice: Amartya Sen’s Analysis of the Structure of Commitment and the Role of Shared Desires” (2005) 21 Economics and Philosophy.


65 McAdams and Rasmusen (forthcoming) and Scott (2000).

66 Carlson (2001). See also Cooter (2000) (discussing the difference between norms that are internalized (which people are willing to pay to obey, regardless of the net cost) and those that are not internalized (which require a negative net cost for people to obey)). Doremus distinguishes between “direct” environmental values (attitudes based on caring for the environment) and “indirect” environmental values (attitudes that are consistent with caring for the environment but are based on other reasons such as reputation or on concern for future generations)) (Doremus (2003)).

67 Cooter (2000) and McAdams and Rasmusen (forthcoming). Some behavioural regularities therefore may be mixed with some people following them for normative reasons and some merely for instrumental reasons.
hand, the motivation in the other two categories (rules backed by guilt or pride or by commitment) is internal to the individual. Sunstein, for example, argues that instead of discussing preferences, it may be more useful to think of choices as being a function of three elements: (i) the intrinsic value of the various options; (ii) the reputational impact of choosing a particular option (for example, the esteem of or shaming by third parties such as neighbours); and (iii) the impact on the individual’s self-conception. He notes that social norms in the broad sense impact all of these elements (for example, social norms can impact an individual’s taste for a particular food and therefore its ‘intrinsic’ value).

It is important to separate internalized social norms from externally enforced norms because the shift in norms or values that some environmental groups argue is necessary is likely tied to an internal normative attitude towards the environment. As noted above, it may, for example, be in an individual’s self-interest (narrowly defined) to litter but in society’s interest that no one litters. A social norm of not-littering, if enforced through informal external sanctions such as shaming, can lead individuals to behave in a manner which takes into account the social costs of the activity (that is, to throw out their garbage).

However, external incentives such as esteem or potential transactions are less likely to change behaviour in the large group, small or negative pay-off contexts that characterize many environmental problems such as climate change. For example, individuals in such contexts may not have information about who is littering (they cannot be watching all the people all the time) or may be unable to effectively sanction the violator (such as where, for example, there are too few repeat interactions between individuals to allow for effective sanctioning). It may be particularly hard for third parties to monitor and sanction behaviour related to an issue like climate change which requires individuals to take a broad range of largely non-observable actions (from using the car less to insulating homes). It is much harder to monitor and collectively sanction


69 See, for example, Speth (2004).

70 Vandenbergh (2005) and Carlson (2001).
such activities than it is to sanction littering, which involves a distinct, relatively observable act. As a result, if the action required by the norm imposes a cost on the individual (absent any sanction), she will not follow an externally enforced norm under the narrow rational choice framework due to the lack of effective enforcement. Further, large groups may suffer from “second order” collective action problems – where individuals do not enforce a social norm because they expect others to do so and they wish to free ride off their efforts.71

Internalized norms gain importance because of these difficulties of externally enforced norms in large number, negative pay-off contexts. Monitoring, for example, may be easier for internalized norms (since compliance with the norm is monitored by the individual herself) than for externally enforced norms (monitored by third parties).72 Sunstein’s third category, self-conception, seems most closely tied to the notion of “internalized norms”. If an individual feels guilt or shame from a choice, it impacts on how she views herself. However, Sunstein’s three part classification does not capture an important difference between the forms of “internalized norms”. Feelings of guilt or pride are tied into the cost-benefit calculus and the choice of action will depend, for example, on the level (cost) of guilt as compared to the other costs and benefits of the action. Commitment, on the other hand, is a side constraint, limiting permissible action and therefore not tied to the necessity of sanctioning either internally or externally. Sen argues commitment cannot be reduced merely to a feeling of guilt at not complying with the underlying rule. The motivation from bad feelings is likely too small in many cases to account for the costs incurred in observing certain rules.73

71 See, for example, McAdams (1996).
72 The costs of monitoring will depend on the nature of the act and the information available to third parties and the individual. Some actions will be transparent and easily observable to third parties while others may be more hidden making it more difficult for a third party to monitor. However, there may also be cases where the costs to the individual of gaining information about whether her act comports with a norm are higher than for some third parties.
73 Sen (2002). However, the impact of such “commitments” is also unknown. For example, altruism alone is, according to economic theory, insufficient to explain levels of private charity (J. Andreoni, “Privately Provided Public Goods in a Large Economy: The Limits of Altruism” (1988) 35 J. Public Economics 57 (using economic theory to show that under the traditional view of altruism (as unconnected to an individual’s utility), as the population grows, free-riding dominates and the proportion of the population giving to charity falls to zero as does the average contribution)).
Norms may therefore be important for making progress on environmental issues such as climate change. Change in consumer behaviour may come from relative price changes but also from the impact of norms (and in particular internalized norms). One difficulty, however, in building a theory around internalization is that any such theory may be non-falsifiable. Any choice not related to relative price or to reputation may be attributed to a taste or a commitment and it may be difficult to then build a testable hypothesis from such a theory. Such a concern does not mean internalized norms should be abandoned. Understanding choice and the impact of legal and policy change requires both working through rational choice theory and considering the limitations on this framework. A fuller theory of “rational” behaviour is important for describing how choices are made but it also may be important in making predictions from the theory more accurate. The difficulty will be in incorporating greater consideration of the context of choice as greater context can make prediction more difficult.

IV CLIMATE CHANGE, SUBSIDIES AND NORMS

As noted above, climate change may be particularly difficult to address through norms because it is a large group, negative pay-off problem. This Part uses the discussion of externally enforced norms and internalized norms to examine whether government may be able to change consumption norms around choice affecting climate change. The government has a range of ways it may be able to change behaviour but the connection of such actions to social norms is less clear. This Part discusses one type of policy – subsidies to encourage behaviour that results in fewer greenhouse gas emissions. It first describes how governments are currently attempting to change individual behaviour through subsidies and the direct effect of such subsidies on choices. It then

74 Scott (2000).

75 Sen describes two functions of examining rationality: (i) to explain what is rational choice; and (ii) to predict what individuals will do assuming choice is rational. He argues that the latter cannot be undertaken effectively without a clearer view of the former. A. Sen, “Why Exactly is Commitment Important for Rationality?” (2005) 21 Economics and Philosophy 5. Moreover, Sen attempts to incorporate these concerns within a general maximization framework both in theoretical and applied work. See Sen (2002) and A. Sen, “Reply” (2001) 17 Economics and Philosophy 51.

examines how subsidies may impact both externally enforced norms and internalized norms.

(a) Subsidies, Relative Prices and Bounded Rationality
As noted in Part II, governments can use a broad range of potential instruments to change individuals’ behaviour such as providing information or changing the relative incentives to take particular actions. They may alter incentives through either carrots (subsidies) or sticks (regulations and taxes). These incentives are not directly targeted at individuals’ preferences for any particular good but at changing the opportunity set facing individuals – that is, the relative costs and/or benefits of different options. Economists generally view taxes or economic instruments such as marketable pollution permits as the most effective and efficient instruments at addressing climate change. However, such instruments may not be politically or in some cases technically feasible and, as a result, governments have been more willing to rely on instruments such as subsidies which come at a lower cost politically.

Governments typically use subsidies in the form of either grants or tax exemptions for individuals taking action which reduces GHG emissions. For example, some governments provide rebates on expenditures on insulating homes, purchasing energy efficient appliances or installing residential solar heating systems. They may also subsidize the purchase of more fuel efficient vehicles or vehicles using alternative sources of energy such as hybrid or fuel cell vehicles. Subsidies change the relative cost of a particular option. For example, a subsidy for an energy-efficient dish washer changes its costs relative to inefficient dishwashers, making it more likely that a person


78 A. Green, “Trade Rules and Climate Change Subsidies” (Paper presented at the American Law and Economics Association meetings, June 2005).

79 For a brief description of proposed US programs see, for example, the US government, “Climate Change Fact Sheet” (May 2005, accessed at http://www.state.gov/g/oes/rls/fs/46741.htm, accessed July 2005). Also the recent Energy Bill passed by the US Congress included a range of energy efficiency subsidies for individuals (for a summary, see http://www.ems.org/nws/2005/07/28/conference_energy, accessed July 2005). In Canada, see the incentives listed at www.climatechange.gc.ca/onetonne (which includes federal and provincial government initiatives as well as private sector initiatives (such as demand side management)).
will buy it regardless of her underlying preference for saving energy or the environment. The resulting shift in choices, given the current set of preferences, can benefit the environment by reducing the levels of GHGs entering the atmosphere.

However, there are a number of concerns about such use of subsidies. First, the large subsidies may be required to change consumption decisions significantly. Significant changes are required as reducing the stock of greenhouse gases in the atmosphere would require even larger reductions in emissions than contemplated in the Kyoto Protocol. Not only would government need to raise taxes to fund these subsidies (or make up for revenue foregone through tax exemptions) but there is a deadweight loss to the economy of these higher taxes. The high direct and deadweight loss cost of subsidies may make them politically unacceptable on a sufficiently large scale to address climate change (let alone other environmental issues).

Second, as with taxes, the government requires considerable information in order to use subsidies to effectively impact consumption decisions in this manner. It must have information about the relative advantages and disadvantages of different products or choices and the level of incentive required to induce individuals to make the desired choice. The potential for government error is high. This potential for error is particularly important because government, through its subsidy programs, will be influencing production and research and development. By inappropriately “picking winners”, government can stunt innovation in particular products and freeze development of new, possible cleaner alternatives.

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80 Cooter (2000) notes that there may be a trial and error impact as individuals determine which choices actually accord with their underlying preferences.

81 However, there may be a “rebound effect” where consumers use the energy efficient appliances more (run the dishwasher more often) possibly leading to an increase in energy use (Bruce Yandle and Stuart Buck, “Bootleggers, Baptists and The Global Warming Battle” (2002) 26 Harvard Environmental L.R. 177).


84 The impact on innovation is one of the reasons economists prefer broad-based taxes (such as an emissions tax) to address climate change. They raise the relative cost of the polluting activity and therefore
Third, even if the government does not make mistakes about where the funds should be allocated, there is a risk of rent-seeking. Public choice theories of government posits a market for political decisions with the legislative or regulatory officials providing policy or regulations in exchange for some benefit such as campaign financing, future jobs or votes. Concentrated interests (such as industry) tend to have more resources and derive greater benefit (face greater cost) from legislative action than the general public which may face small individual costs (from diffuse environmental harm) and encounter collective action problems in organizing to influence political decisions. As a result, in many cases, concentrated interests will have more influence and be better able to shift legislative or regulatory action in their favour and away from “optimal” policy.\(^{85}\)

Some instruments may be more open to rent-seeking than others. For example, Ackerman and Stewart argue that marketable pollution permits increase democratic debate about the true objectives of environmental policy and are therefore less open to rent-seeking than other instruments such as regulation.\(^{86}\) However, there is some evidence that this democratic benefit did not occur in the creation of SO2 trading system in the U.S., that the debate around the system was not about ultimate ends but the distribution of the permits.\(^{87}\) Economists tend to view subsidies with particular suspicion as being open to rent-seeking, in particular because costs of subsidies may be hidden in different programs or tax policies and spread across large, diffuse groups of taxpayers.\(^{88}\)

Even though there are concerns about relying solely on subsidies to address climate change directly, an alternate use of subsidies may warrant government action. Governments may wish to aid individuals hindered in their choices by informational constraints or ‘bounded rationality’. Individuals make choices which they believe satisfy

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\(^{88}\) See, for example, Buck and Yandle (2002) and Posner (2004) discussing the potential role of subsidies.
existing second-order preferences (such as for environmental protection or inter-generational equity). However, because they do not have sufficient information about these choices (such as about the impact or level of the greenhouse gas emissions from their actions), individuals’ choices may be in fact at odds with these second order preferences.\textsuperscript{89} Similarly, individuals have difficulty dealing with small probability outcomes and tend to disregard them in making decisions.\textsuperscript{90} For example, individuals may not be able to properly evaluate the (very low) probability of a catastrophic shift (as opposed to a gradual shift) in climate resulting from a build up of greenhouse gases in the atmosphere.\textsuperscript{91}

Government may have a role where individuals make such mistakes. It could provide information to overcome the informational constraint, although possibly not the difficulties related to bounded rationality (if individuals cannot process the information, more information is not helpful).\textsuperscript{92} Government could also attempt to use law to reduce the impact of bounded rationality such as, for example, by setting default rules that allow choice but aid in fostering a welfare enhancing choice or allowing cooling off periods for individuals to re-think potentially rash decisions.\textsuperscript{93}

More importantly for the purposes of this paper, governments may also take more direct action by using taxes or subsidies. One result of subsidizing (or taxing) may be to off-set mistakes in the cost-benefit calculations individuals make in order to direct them towards more appropriate choices.\textsuperscript{94} This role of government is more intrusive of

\textsuperscript{89} Vandenbergh (2005) (arguing that individuals in the U.S. already have an “environmental protection” norm and a “reciprocity” norm).


\textsuperscript{91} Posner (2004) (arguing that individuals are incapable of making decisions based on such small probability risks as catastrophic climate change).

\textsuperscript{92} See Vandenbergh (2005) (arguing that government should provide information in order to activate existing “environmental protection” and reciprocity norms).

\textsuperscript{93} Jolls and Sunstein (2005) refer to such government action as “de-biasing through law”.

\textsuperscript{94} See Posner (2004) (arguing for emissions taxes in part because of the difficulty individuals have in making choices about very low probability events such as catastrophic climate change).
individual autonomy than either information remedies or “de-biasing through law”.\textsuperscript{95} There may be a further benefit to both subsidies and taxes. Where individuals make decisions on incomplete information, they may take cues from the actions of others. They may assume because one person or a few people take certain actions that they also should take the action, even though they do not have complete information about the risks pertaining to the action. For example, if an individual does not have complete information or understanding of the risks of climate change, they may mimic the actions of others whom they believe have more information. If a number of individuals take such actions, there may be large scale shifts in behaviour which Sunstein labels “informational cascades”.\textsuperscript{96} Subsidies therefore have the potential to bring about significant change without having to initially change everyone’s choices.

While the relative price effect of subsidies may have some impact directly on choices, its impact on norms or values seems weaker. It may change the first order preference around a particular option. For example, subsidies for green cars may induce more people to buy them by changing the opportunity set pertaining to cars. Once people begin to use these cars, they may come to recognize the benefits (such as lower fuel costs) or begin to identify with the choice of green cars. The same seems true for informational cascades. Individuals may be able to identify the individual choices made by others (such as purchasing green cars). However, the connection to second-order preferences, a broader self-conception or internalization of an environmental norm seems more tenuous. It is not clear that the outcome of a decision to purchase a green car, or even the creation of a first order preference for such vehicles, will create a greater overall preference for the environment. It may but the connection seems neither direct nor necessary. A choice of green cars may lead individuals to prefer green cars, possibly even to prefer energy efficient appliances but not necessarily to choose goods that emit fewer halocarbons, or to live closer to work or to refuse to buy products linked to deforestation.

\textsuperscript{95} Jolls and Sunstein (2005).

\textsuperscript{96} C. Sunstein, \textit{Risk and Reason} (Cambridge: Cambridge University Press, 2002). See also Bowles (1998) (referring to this process as an element of “conformist transmission”).
Subsidies therefore likely have two principal effects within the narrow rational choice framework with given preferences (including second order preferences). First, subsidies change the relative price of the subsidized activity, thereby altering individuals’ opportunity sets. Individuals will be more likely to take the subsidized choice (such as purchasing the “green” car). Whether or not they actually take that choice will depend upon the relative costs and benefits of all comparable choices. Unfortunately, as noted above, this relative price effect seems unlikely, on its own, to address climate change. Second, the subsidy may lead to an “informational cascade”, overcoming information constraints and potentially bounded rationality. Such an effect remains within the rational choice framework, although it broadens the framework to allow individuals to make mistakes about satisfying their preferences (including their second order preferences). However, as noted above, information cascades based around subsidies for particular products or choices seem only weakly related to altering underlying norms concerning the environment.

(b) Subsidies and Externally Enforced Norms
A further potential role for subsidies arises when the rational choice framework is broadened to allow norms (or preferences) to change. Unfortunately, as mentioned in Part III, climate change as a large number, negative pay-off problem seems less amenable to solution through externally enforced norms. Can government play a role through law and policy in fostering change of or strengthening norms or values? Many law and social norms scholars argue that law may play a role in changing individuals’ behaviour, and possibly their preferences, through its expressive function.\(^\text{97}\) This expressive function arises because a society’s laws are argued to embody its norms or at least the dominant view of its people. By enacting a certain regulation, such as against littering or picking up after your dog, a government may be able to use law’s expressive function to change behaviour even without applying any resources to enforcing that law.\(^\text{98}\)

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\(^{97}\) McAdams and Rasmusen (forthcoming).

\(^{98}\) McAdams (1997).
There is a narrow, rational choice view of this expressive function of law. The law may merely provide information that allows individuals to update their probabilities of external sanction.\textsuperscript{99} Absent a law about littering, individuals have certain estimates of the probability of being sanctioned by others (such as by loss of esteem) if caught littering. They may update these estimates (and increase them in this case) following the enactment of a law against littering. They may believe that others in society will be more likely to sanction them when they litter as they are violating a law. Further, the potential sanctioners obtain information about whether others will support their sanctioning of the non-complying individual (that is, the law provides information about the consensus in the community which the third party uses to update her probabilities that others will take her side).\textsuperscript{100} Such (Bayesian) updating as a result of the information provided by the law may therefore change behaviour, not by changing preferences or social meaning but by informing citizens of the consensus in the community.

However, such Bayesian updating is not really what many theorists have in mind in discussing the expressive function of law. Instead, the expressive function of law is argued to impact the actual social norm itself.\textsuperscript{101} The law expresses society’s view of the act and therefore individuals’ change their values or preferences. For example, the law against littering not only impacts an individual’s estimates of the probability of sanctions but also increases third party enforcement through sanctions (such as esteem or transactions) by expressing the consensus around the rule. According to McAdams, such a change or modification may occur where the law publicizes a consensus and non-compliance with the norm can be monitored and sanctioned by third parties (in such a manner that the individual loses esteem from non-compliance).\textsuperscript{102} Individuals craving esteem follow the consensus expressed in the law. The law may also provide further information about choices, such as about legislators’ view of the damage from a particular action. For example, where individuals are uncertain about the impacts of


\textsuperscript{100} Scott (2000).

\textsuperscript{101} McAdams and Rasmusen (forthcoming).

\textsuperscript{102} McAdams (1997), McAdams and Rasmusen (forthcoming) and Scott (2000).
climate change, they may update their beliefs because of information provided by laws addressing climate change.\footnote{D. Dharmapala and R. McAdams, “The Condorcet Jury Theorem and the Expressive Function of Law: A Theory of Informative Law” (2003) 5 American Law and Economics Review 1 (arguing that this aspect of the expressive function of the law does not require legislators to have greater expertise than average citizens but instead result from the aggregation or pooling effect of the legislative process.)}

An additional factor may bolster the effect of externally enforced norms. Similar to informational cascades, Sunstein argues that there may “reputational” cascades.\footnote{Sunstein (2002).} A reputational cascade arises where an individual adjusts his expression of opinion about an issue not because he necessarily holds the new opinion but because he is afraid of the social or reputational consequences of taking an opposing view. Such a cascade can amplify the impact of externally enforced norms by increasing the appearance of a widespread consensus.

Unfortunately the manner in which the expressive function of law works to transform norms is not clearly understood.\footnote{Scott (2000).} In part it works through expression about the action or choice such as a ban on smoking expressing a disapproval of smoking. It also works through the level of esteem or disapproval attached to the action or choice. This level is related to the ability of law to change the social meaning of the activity.\footnote{L. Lessig, “The New Chicago School” (1998) 27 J. Legal Studies 661.} It may, for example, change the meaning of purchasing an SUV from one of status to one of imposing costs on others and harming the environment. The regulatory effect comes not just from the deviation from the choice seemingly sanctioned by the law but from the meaning of the deviation.\footnote{Lessig (1998) (tying this notion to McAdams(1997)).}

The meaning of a deviation may, for example, depend on whether the law expresses itself as a price or a sanction for taking a certain action.\footnote{A number of commentators have discussed this distinction. See, for example, Scott (2000) and McAdams (1997).} A law expresses a price if an individual can take the action and pay a fine without any further internal or external sanction. For example, Scott argues that a parking ticket may act more as a...
price. If an individual parks illegally, she gets a ticket. There is in general no further moral aspect to this choice (although there may be in certain cases such as parking in a handicap parking spot). A law expresses itself as a sanction if paying the fine or being found to have contravened the law carries with a moral aspect. It is not sufficient to decide to take the action and pay the fine in such a case. There is something wrong about the action which cannot be overcome by the payment.

It is the moral aspect to the sanctioning aspect of law that connects the law with the externally enforced norm. Prohibitions, such as a ban on littering, are framed more as a sanction, signaling that society strongly disapproves of the activity. This disapproval activates either updating of probabilities of sanctions or the changing of norms by individuals. In accordance with McAdams, this expressive function of law may arise because the prohibition signals a societal consensus about the activity. A subsidy, on the other hand, does not signal anything is “wrong” per se. It is expressed more as a price, like a parking ticket. A subsidy is a cost you bear (that is, the benefit foregone) if you wish to make the choice and if you pay, then the choice is acceptable socially. Subsidies seem less likely to lead to significant updating. The consensus expressed is not that the behaviour must change but that it would be nice if it did. It gives some information but is weaker than prohibitions or regulations in expressing society’s disapproval of the act.

(c) Subsidies and Internalized Norms

Subsidies may therefore only weakly (if at all) create or activate externally enforced norms. They may still, however, play a role in fostering internalized norms – norms either enforced by feelings of guilt or pride, backed by a “taste” or created through a commitment. Unfortunately little work has been done in the law and norms literature on the connection between law or policy and internalized norms. Cooter has posited a theory of “pareto self-improvement” in which individuals change their behaviour to comply with norms in order to build a reputation as a cooperator. The individual

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110 McAdams (1997).
presumably hopes that those who interact with her will take adherence to norms as a signal that she is a cooperator and therefore be more likely to enter into transactions (economic and non-economic) with her. The state can signal new norms through its laws (such as against littering) and individuals, in order to appear to be cooperators, will comply with the law even without enforcement. The individual’s internal norms change as she strives for good character.\textsuperscript{111} Further, he argues that if individuals have an internalized second order preference for obedience to law, they may also internalize the particular requirements of a specific law.\textsuperscript{112}

McAdams also discusses internalization as part of his esteem theory of social norms.\textsuperscript{113} Law signals a consensus and, if others can monitor and sanction non-compliance, individuals will change their beliefs about a choice. They internalize the new consensus because they are striving for esteem. This internalization is slightly different from the updating of probabilities discussed in the last section. The underlying values or norms of the individual change, not just their estimate of the risk of sanction.\textsuperscript{114}

Both of these theories are closely related to instrumental decision-making and the rational choice framework. A closely related concept comes from “crowding out” theory, based on the work of both economists and cognitive social psychologists.\textsuperscript{115} If an individual obtains intrinsic benefits from an act, or possibly sees acting from altruism as part of their self-conception, paying her for taking the act may remove this benefit or reduce the impact of the act on her self-conception.\textsuperscript{116} The result is that the use of a price incentive can have two effects: the standard relative price effect and a “crowding out” effect on intrinsic or moral motivations. This impact is closely tied to the view of internalized norms as a “taste” for the particular action.

\textsuperscript{111} Cooter (2000). Posner (2000) similarly discusses the impact of following norms on transactional opportunities.

\textsuperscript{112} Cooter (2000).

\textsuperscript{113} McAdams (1997).

\textsuperscript{114} Scott (2000).


Perhaps more importantly, subsidies may also have an impact on commitment. While the approaches to internalization discussed above may partly explain the connection between subsidies and norms, they appear to neglect moral and ethical reasoning and any notion of commitment not tied to one’s own welfare. Central to the connection between environmental policy and commitment may be a sense of social responsibility. For example, for individuals to actually reduce their consumption of products that produce greenhouse gases, they may need to alter their view of their responsibilities as citizens. The concept of social responsibilities relates to the notion that individuals’ identification with a group is central to creating commitments. Under this view, an individual’s commitments (in the sense of constraints on a choice set) arise through his identification with different groups and adopting their rules or shared goals. Individuals both receive these rules or goals from the group but also can be part of developing these commitments through discussion within the group. If the shared goals relate to responsibility for or protection of the environment, they may act as a constraint on the individual’s choice set. However, if the individual does not identify with a particular group with shared goals on the relevant issue or if there is a shared goal of individual choice or autonomy on that issue, the individual may not be subject to any commitment. She will then follow standard utility maximization.

This theory relates to the discussion of prices versus sanctions. If the measure is framed as a fine or sanction, it may signal that the act is considered morally wrong – the rule or shared goal of the group is that the act should not take place. This shared goal may be internalized as a commitment. Unfortunately, a subsidy more likely signals a price than a sanction. It is generally not thought a moral failing if individual does not take an action which could provide her with savings. A subsidy may provide a weak signal to an individual about societal values but considerably less than a regulation or prohibition.

There is some empirical work related to crowding out theory (discussed above in Part IV(b)) supporting this view. For example, a study by Gneezy and Rustichini found

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118 This discussion of identity and commitment relies on Anderson (2001), Sen (2001) and Schmid (2005).
that the introduction of a fine on parents arriving late to pick up their children from
daycare actually increased the number of late-comers. They argue that the fine became
a price that parents were willing to pay for late-arrival. Arriving on time was no longer a
question of courtesy or responsibility. Empirical studies in both psychology and
economics in such disparate areas as incentives for work and the siting of nuclear waste
facilities also provide support for the potential for this crowding out effect.

A variation of the “crowding out” model views individuals’ actions as based in
part on the costs and benefits of the action but also on the individual’s self-image arising
from the relationship between the individual’s actual action and her view of the “morally
ideal” action. Working through an economic model incorporating these moral
sentiments, Brekke et al. argue that a fee for non-participation in a public good may lead
individuals to undertake less effort towards the supply of the public good than would be
the case without the fee. In part this effect depends on the individual actors’ view of the
size of the fee. If the fee appears to cover the cost of providing the public good,
individuals may reduce their effort to supply the public good as they see the government
as responsible for its provision. In such cases, “the fee gives moral justification for not
showing up” – individuals believe the government can provide the public good without
them and do not obtain the same self-image benefit from their effort. If they see the
fee as merely symbolic, effort will not decline as individuals retain responsibility (and
moral obligation) to provide the public good. The shared goals of the group relate to
individual responsibility.

In addition to the level of the subsidy, the form the subsidy takes may be
important to the impact on an individual’s commitment. In examining the norm around
recycling, Carlson concluded that esteem was influential in promoting recycling.


120 See Frey and Jegen (2001) for a survey of the empirical studies related to crowding out. For example,
Frey and Oberholzer-Gee (2001) found that offering compensation for local siting of a nuclear waste
facility lowered the level of acceptance among nearby residents as compared to levels when no
compensation was offered.


122 Brekke, Kverndokk and Nyborg (2003) (basing their conclusions in part on survey data regarding
recycling behaviour and voluntary community work).
However, she found that the biggest impact on the level of recycling came from reducing the cost of recycling rather than attempting to change individuals’ preferences or work through signaling or esteem.\textsuperscript{123} This result points to the importance of how the government action is framed. If the subsidy is provided as a price reduction or rebate, it may be perceived as a payment for taking the action. The choice would then be framed in the language of a price rather than an obligation or responsibility. On the other hand, if the money were spent on making environmentally-friendly choices easier (such as providing curb side recycling or at home audits for greenhouse gas emissions), it may not re-frame what is perceived as a responsibility as a price. The individual may be more willing to take the action (because the cost is lower) without the impact on values. It may also connect to external enforcement as such policies may activate third party enforcement to the extent that individuals are seen as disrespecting others by not incurring a trivial cost to take the action.\textsuperscript{124}

\textbf{(d) Subsidies, Price and Norms}

The impact of subsidies will therefore require an examination of all their potential effects. Subsidies have a relative price effect which in general increases the subsidized choice. This effect can be strong, particularly if it creates an informational cascade that leads to a large scale swing in behaviour. However, the relative price effect of subsidies seems unlikely to significantly reduce the emissions of greenhouse gases. Given the size of the changes required, the magnitude of the subsidies may be both economically and politically infeasible. Further, any cascades seem most likely to occur around choices of individual behaviour (first order preferences) rather than deeper, second order preferences such as for environmental protection.

However, beyond the relative price effect, subsidies may impact norms. Unfortunately, while they may impact externally enforced norms, they are unlikely to do so strongly. Individuals may perceive less of a “right” to sanction another (either through

\textsuperscript{123} Carlson (2001).

\textsuperscript{124} See, for example, Carlson (2001) (arguing that rather than norm management, governments can do most to increase recycling by reducing the costs to individuals of complying with a norm of recycling (such as by providing curb side pick up)).
esteem or transactional opportunities) where the other person fails to take an action that is subsidized than where the action is prohibited. There may be cases where there is a connection (such as for example where a blue box program is subsidized and there appears no great reason not to take an action that harms others) but the impact seems weak.125

Subsidies may also impact internally enforced norms or commitments. They may provide information to the public about products or activities that the government believes are tied to climate change. In this way, it aids in individuals acquiring information to further their existing preferences or norms or values about the environment.126 However, subsidies may have a crowding out effect - either simply off-setting existing motivations or changing an individual’s commitment to a particular behaviour. As Doremus notes “paying people for environmentally responsible behaviour may erode the societal desire to conserve.”127

It is of course difficult to know which type of motivation is at work in each case – whether an action is driven by relative prices, reputational factors, commitment, some form of benefit/guilt mechanism or a combination of these factors. The risk is that anything that cannot be explained by an obvious relative price effect will be attributed to a norm. However, as noted above, some empirical work supports these effects on behaviour. It will be important to further develop the role of these motivations in order to make more accurate predictions about the impact of instrument choice and to understand the role of environmental values in individual choice.128

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125 Subsidies may allow individuals to obtain some esteem for taking the subsidized action. However, individuals tend to be more sensitive to losses than to gains (this tendency is termed “loss aversion”). Sunstein (2000). As a result, even if such a positive esteem effect exists, it may be weaker than the negative impact on esteem of failing to comply with regulations or prohibitions.

126 Vandenbergh (2005) (discussing the role of information in activating existing norms).

127 Doremus (2003), at p. 328.

V Institutions, Instruments and Social Norms

Government subsidies may therefore alter norms, although the effect is likely fairly minor. However, it is not clear whether government can even take this type of action when the norms that some may wish to govern individuals’ choices do not yet exist. Must individuals have experienced a change in values before the law can change or is there the possibility of a leading role for law? This positive question about the possibility of a leading role of law is separate (at least in theory) from the normative question about whether the government should engage in such norm management if it is capable of doing so. The positive issue will be discussed in the next section and the normative question in the following section.

(a) Can Government Lead?

Government seems unable to act to change norms when the political will in favour of the (non-existent) norm does not yet exist.129 Unfortunately, how norms arise and the role of government in the evolution of norms is not clear.130 Some norms may develop through an evolutionary process such as where altruism fosters survival of a group.131 Further, conventions or behaviour that is not normative may become normative over time where individuals come to view the expected behaviour as the correct behaviour.132 Such norms may persist because even where they are not focused on satisfying an individual’s immediate goals, in the long run they actually produce better results in terms of those goals than “relentless maximization according to one’s goals”.133

129 Scott (2000).

130 As Bowles, for example, notes, “We know surprisingly little about how we come to have the preferences we do.” (Bowles (1998) at p. 80).

131 McAdams and Rasmusen (forthcoming) connect this evolutionary theory to biological theory. See also E. Pennisi, “How Did Cooperative Behavior Evolve?” 309 Science 93 (July 2005) and Shavell (2004).

132 McAdams and Rasmusen (forthcoming) use the example of driving on the right hand side of the road. While in itself there is nothing normative about this convention, it may become a norm where individuals come to view individuals who violate it (drive on the left) as immoral.

However, government does seem to be able to play a “transformative” role in norm creation and change.\(^{134}\) The difficulty is in describing how it does so. Using a rational choice framework, Ellickson argues norms are the product “of the purposive actions of discrete individuals, especially those who are particularly suited to providing the new rule and those who are particularly eager to have it adopted.”\(^{135}\) He posits a market for social norms in which norms are supplied by change agents - norm entrepreneurs, self-motivated leaders and opinion leaders. Norm entrepreneurs are individuals or groups (such as environmental groups) that have a highly technical understanding of the costs and benefits of particular issues and attempt to change social norms to accord with them.\(^{136}\) Self-motivated leaders are individuals who are likely to obtain a high level of the direct benefits of the norm change (such as monetary or environmental benefits). Opinion leaders (such as some politicians) have an above average ability to recognize a norm which will attract support of a group and the status to help promote it. The demand side of the market consists of an “audience” which pays these suppliers for the norms through esteem or future transactions. The social norms of a group will change when there is an exogenous change in economic conditions facing the group (such as new scientific information on a risk or an environmental crisis) or there is a change in the composition of the group (such as where the membership expands to encompass individuals with different preferences).\(^{137}\) The change agents may act through legal and policy change, even in advance of a general shift in norms.

Unfortunately, there is no guarantee within this model that social norms will develop in a beneficial direction. Norms that are inefficient (or not socially beneficial) could develop where, for example, some of the costs of one group obeying the norm are

\(^{134}\) Heinzerling (2000) at p. 1433.


\(^{137}\) Ellickson (2001). Ellickson notes that the process can be subject to informational and reputational cascades. He argues that “the speed of norm evolution is influenced by the magnitude of the gains from change and the rate at which the members of the group acquire the technical and social knowledge necessary to appreciate the new norm is more utilitarian than the old one.” (p. 27)
externalized onto others. In addition, members of the group may have difficulty rewarding the suppliers with esteem (because of, for example, collective action problems) or the esteem they provide may simply be too low to overcome the costs of creating and supplying the norms. Further, individuals or groups may adopt sub-optimal norms to maintain status with others (such as purchasing a heavily polluting SUV to signal social status). Finally, the norm suppliers may suffer from information or rationality constraints limiting their ability to recognize and promote welfare-enhancing norms.

As noted in Part IV, whether or not beneficial, norms may be subject to large swings due to informational or reputational cascades.

Such a rational choice approach to the development of norms may neglect important characteristics of norms. One criticism of this approach is that norms and values may not be the result of calculation of the costs and benefits by suppliers of norms and those who obey them but may instead depend more on the context of the community in which the norms develop. In important respects, however, the rational choice approach can take account of context, including issues such as race, class and gender. For example, it can be broadened to encompass the role of interest groups and the context of choices in the creation and stability of norms.

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138 Ellickson (2001). See also G. Miller, “Norms and Interests” (2003-2004) 32 Hofstra L. Rev. 637 (applying public choice theory to the development of norms and arguing that groups may attempt to foster norms that further their own interests at the expense of other groups (for example, industrial lobbies promoting consumption around holidays, occupational lobbies such as for lawyers and broad-based movements seeking to promote their own status or views of welfare or ideology)) and McAdams (1998).

139 Ellickson (2001).

140 Sunstein (2002).

141 Sunstein (2002) and Ellickson (2001). Cooter (2000) also discusses how behaviour can change rapidly, such as where a norm becomes internalized raising the probability of conformity.

142 For criticisms of the rational choice approach to social norms, see D. Litowitz, “A Critical Take on Shasta County and the ‘New Chicago School’” (2003) 15 Yale J.L. and Humanities 295 (arguing the rational choice approach places "too much faith in methodological individualism and a kind of naïve positivism that insists on 'science' and 'verification' while underestimating the impact of race, class, gender, ideology, and irrational human emotions" (at p. 309)) and J. Rachlinski, “The Limits of Social Norms” (2000) 74 Chi-Kent L. Rev. 1537.

143 See, for example, Miller (2004) (discussing the role of interest groups in the creation of norms) and Albert Hirschman, Shifting Involvements: Private Interest and Public Action (Princeton: Princeton University Press, 1982) (discussing large scale shifts in individuals’ focus on public or private concerns based on a theory of disappointment).
A further criticism is that the rational choice framework neglects the role of deliberation in the creation of norms or values. Rationality may include self-scrutiny of (internal deliberation about) one’s own values and choices.\textsuperscript{144} Environmental values may arise from such self-scrutiny, perhaps enhanced by personal experience with nature.\textsuperscript{145} Rational choice theory can incorporate such self-scrutiny but in general does not do so well.\textsuperscript{146} Self-scrutiny is related to another form of deliberation that is not dealt with well by rational choice theory – deliberation within a group. Such deliberation can affect the resulting values and norms of the group.\textsuperscript{147} An analysis of norm or value creation should take account deliberation by (and conflict within) a group in a particular context and who is included in such deliberation.\textsuperscript{148} Through such deliberation, a group may set shared goals and therefore provide a basis for commitment by members of that group.\textsuperscript{149} Government can lead by creating processes and institutions, as well as using instruments, that promote inclusive deliberation. Such a role may not be “leading” in the sense of determining the appropriate norm and imposing it on a helpless public. However, it takes

\begin{itemize}
\item \textsuperscript{144} Sen (2002), p. 36.
\item \textsuperscript{145} Doremus (2003) (arguing the formation of direct environmental values requires creation of emotional connections with and personal experience of nature).
\item \textsuperscript{146} Sen (2002) and Petit (2005) (arguing that Sen does not state that individuals in rational choice theory do not deliberate at all on their own goals or even that they only engage in selfish deliberation, but that rational choice only allows deliberation from one’s internalized goals at a particular point in time).
\item \textsuperscript{147} Sen (2002), p. 287.
\item \textsuperscript{148} M. Poirier, “The NAFTA Chapter 11 Expropriation Debate Through the Eyes of a Property Theorist” (2003) 33 Environmental Law 851 and Doremus (2003) (arguing for the role of debate in formation and activation of environmental values, through local decisions through debates involving small numbers of people).
\item \textsuperscript{149} Sen (2004) (arguing that citizens should be involved in environmental policy through discussion). This view of deliberation connects with a view of commitment as relating to shared goals that arise from identity with a group. Schmidt (2005), for example, argues that such shared goals give rise to individuals’ goals aimed at fulfilling these goals (the goals of individuals he terms “contributive” goals) as well as a normative force behind fulfilling these contributive goals. However, he notes that in some cases individuals can choose not to follow these contributive goals. The question is how such identity and the corresponding normative force arise? It may be in part through deliberation or discussion within the group. See, for example, Anderson (2001) (arguing that the group would set its joint strategy by discussing the policies and reasons for action).
\end{itemize}
into account the role of individuals as “agents” or independent actors\textsuperscript{150}, as participating in the creation of the society’s norms.

Understanding the potential role for government (good or bad) will involve examining how different institutions and actors interact in the process of norm creation. It will require examining both the role of individuals as “change agents” but also how individuals in a group interact to set shared goals that drive norms. Government may be able to play a “transformative” role but the framework for such a role (the institutions and instruments that are used) will be crucial to the both the effectiveness and the legitimacy of the resulting norms.

(b) \textit{Should Government Lead?}

So far this paper has discussed the potential effect of subsidies on values or norms and whether government can manage values or norms before they exist in society. The other underlying question is – should government use subsidies to manage values or norms? Should government manage norms to improve welfare or are the risks from informational problems and interest group capture too great?\textsuperscript{151} This normative question raises issues of government capability, the relative effectiveness of subsidies and the impact on individual autonomy. These will be discussed in turn.

While government in theory can change norms in ways that benefit society, they may not actually be able to do so in many cases. Governments face significant information constraints on choosing the appropriate subsidy policy. For example, they need to know the existing norms, the new norm they wish to create, the current costs and benefits of each particular option, the probability of the impact on third party enforcement and other similar information. The potential for government error seems large. Further, as noted above, rent-seeking by interest groups may pressure governments


\textsuperscript{151} Ellickson (2001) (discussing the optimistic and pessimistic views of government’s role in norm management and arguing that an activist government does not necessarily improve welfare), Lessig (1998) (arguing for a positive role for government in some cases) and Sunstein (1998) (arguing for a role for government).
to attempt to alter norms in a direction that aids these particular groups but not society as whole.\textsuperscript{152}

These concerns point to the need for a comprehensive comparison of different institutional structures. “Spontaneous” norm creation through societal groups (without any direct government action) also suffers from constraints and deficiencies. Individuals within a group may not know or understand the potential impacts of climate change and may face collective action problems even when they do have this information. Further, certain groups may attempt to sway norms in their favour such as industrial organizations seeking to promote consumption of their goods or services or broad-based movements such as environmental groups promoting a particular version of welfare or ideology.\textsuperscript{153} They may push to change existing norms through advertising, information campaigns or changing the relative costs of particular behaviours (such as lowering the cost initially to develop a taste for a product).\textsuperscript{154} Ellickson, however, argues that “the basic point is that a narrow interest group cannot capture the diffuse forces of ‘civil society’ as easily as it can the state.”\textsuperscript{155}

The point here is not to argue that governments or “markets” are superior in all cases. It is instead to argue that any attempt to determine the appropriate government policy must make a detailed comparison of the potential institutions and instruments. It must examine not only the direct impact of a potential government policy on behaviour given current preferences, but also the potential impact on these preferences. Further, it must take into account the potential for government error relative to the potential harm by the market and rent-seeking in all its forms. As Lessig notes, the examination must consider the relative effectiveness of all the constraints on action, whether from government, market or societal norms, and the substitution of one constraint for another.\textsuperscript{156}

\textsuperscript{152} Miller (2004) and Ellickson (2001).
\textsuperscript{153} Miller (2004) and Ellickson (2001).
\textsuperscript{154} McAdams and Rasmusen (forthcoming).
\textsuperscript{155} Ellickson (2001), p. 42.
\textsuperscript{156} Lessig (1998) (arguing that there are four main constraints (markets, law, norms and architecture (meaning the features of the world such as the inability of humans to see through walls) and that the
This comparison is important not only between institutions (such as market versus government) but also between different government instruments and the various effects of different instruments. For example, taxes are in effect the flip-side of subsidies. However, economists argue that they are much more efficient at changing behaviour. For example, Richard Posner argues in the context of climate change, that emissions taxes are the most efficient instrument since they overcome the limitations of individuals in dealing with low probability events such as catastrophic shifts in climate. Moreover, being broadly based, emission taxes tend to spur innovation without either the “picking winners” aspect of narrowly targeted subsidies or the revenue raising impact of large scale, broad subsidies.157 However, taxes also impact norms or values. Taxes, like subsidies, seem to express concerns about climate change as a price rather than a sanction or responsibility.

Regulations or prohibitions such as ban on SUVs, on the other hand, seem more clearly expressed as a sanction or responsibility than a price. They are therefore more likely to support both reputational norms (through third party sanctioning) and the adaptation of internal norms (either guilt-based or commitment). Moreover, like subsidies or taxes, regulations have a relative price effect (they change the costs and benefits in an opportunity set). However, economists tend to see regulations as less efficient, less effective and more costly in most contexts than taxes.158 Any analysis of regulations must take into account their stronger impact on norms along with their potentially lower efficiency and higher cost.

Any comparison of instruments must also consider the potential limits on the extent to which guilt and pride should be used to change behaviour. For example, Kaplow and Shavell argue that guilt and pride are costly to induce in individuals, there may be a limit to which people will be able to feel and react to such feelings and they effectiveness of each must be examined (including the impact of using each on the other constraints)). Coase, of course, argued for institutional comparisons in the seminal article (R. Coase, “The Problem of Social Cost” (1960) 2 J. Law and Economics 1).


158 Revesz and Stavins (2004). The instrument choice analysis will have to take account of the strengths and weaknesses of all instruments (including subsidies, taxes, regulation and information provision) and the connection to norms or values.
tend to be broader and less differentiated than law.\textsuperscript{159} Law therefore has some advantages such as that it can be more narrowly targeted at a particular concern, can be changed more easily and may be able to impose higher sanctions. Norms, on the other hand, allow for cheaper enforcement and do not require monitoring by third parties.\textsuperscript{160} Assessing instrument choice in terms of their impact on norms requires examining whether the benefits obtained by the norm exceed the costs of creating, monitoring and enforcing the norm, the costs to any particular party from the norm and the impact relative to other instruments.\textsuperscript{161}

A further concern about government attempting to “manage” norms or values is that such a role for government strikes at the core of individual autonomy. Government using information to attempt to “activate” existing norms or even to “de-bias” individuals does not seem particularly intrusive of autonomy. However, using subsidies (or other instruments) to purposely manage norms or values may seem more intrusive. Working through norms may be more intrusive even than regulations or prohibitions because individuals act on internalized norms without thought, whereas the costs and benefits of breaking rules are weighed before an action is taken.\textsuperscript{162}

However, it is not quite this simple since, as noted before, these new norms may be overcoming inefficient or welfare-reducing norms which potentially limit autonomy.\textsuperscript{163} Further, the issue of autonomy relates to the discussion of self-critical analysis, deliberation and the process for choosing instruments. The process for making


\textsuperscript{161} Miller (2004). Kaplow and Shavell argue that any attempt to include “commitment” in social decisions will lead to conflicts with the pareto principle – that is, considering such principles as fairness apart from the extent to which people have a “preference” or taste for fairness will under certain conditions lead to everyone being worse off. See, for example, Kaplow and Shavell (2001). However, this is not necessarily a negative provided that the decision-maker recognizes the trade-off. McAdams and Rasmusen (forthcoming).

\textsuperscript{162} Lessig (1998) (discussing Posner’s view of law and norms and the impact of each on freedom).

\textsuperscript{163} Sunstein (1998) (discussing the autonomy and welfare reducing nature of some norms).
decisions, including incorporating different interests, plays a role in the creation of values but also in the legitimacy of government’s attempts at revising norms. Deliberation helps create shared goals and values and may promote internalization of these shared goals as commitments. However, it may also build confidence and trust in the decisions made by government to the extent it treats individuals as part of the process, as “agents rather than merely as patients”.164

The use of subsidies will therefore have to be judged on the relative effectiveness of the use of subsidies versus other options such as taxes, regulations or even no action. It will also depend on the nature of the decision-making process. Addressing environmental issues such as climate change will be “dependent on value formation, related to public discussions, both for their influence on individual behavior and for bringing about policy changes through the political process.”165 However, these aspects of instrumental analysis overlap and raise issue about how the process used is related to effectiveness of the option.166 The nature of this overlap requires further work. However, it is important to take the full range of impacts into account in choosing instruments to aid in addressing issues such as climate change.

Thus, there is a paradox at the core of the use of subsidies by government. Governments may not be able to pay people enough to act in their own long term best interests. For example, there may not be enough money or political will to use the relative price effect to make significant progress on climate change. Further, any attempt to pay individuals to act in their own best interests may actually reduce their willingness to act to preserve the environment in which they and their children will live. It may reduce the impact of externally or internally enforced norms or commitment. Such

164 Sen (2004) (discussing the need for discussion for instrumental reasons but also because social participation is something to be valued in and of itself).

165 Sen (2002), p. 289. See also McAdams and Rasmusen (forthcoming) arguing that consideration of norms is necessary in order to understand the origin of laws.

impacts are context dependant but must be taken into account if real environmental change is to occur.