

**"WHY DO GOVERNMENTS SELECT VOLUNTARISM AS AN ENVIRONMENTAL
POLICY INSTRUMENT?"**

**CPSA Conference, York University, 3rd June 2006
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*Preliminary paper
Suggestions, comments, corrections are welcomed*

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Introduction

In 1991, the U.S. Environmental Protection Agency issued an invitation to polluting firms in that country to voluntarily reduce their emissions of seventeen priority toxic substances by 33% over one year and 50% over four years (OECD, 2003). Three years later, in this country, Environment Canada initiated a similar program, titled Accelerated Reduction and Elimination of Toxics (ARET) which also challenged firms to reduce their emissions of their own accord, with no accompanying fiscal or regulatory incentives (VanNijnaten, 1999). Throughout this period of the early 1990s, environmental regulatory agencies across Europe, Australia and Japan began introducing similar programs. Although they took many forms, these programs all shared the basic characteristic of primary reliance upon exhortation as the means of changing firm behaviour. Nor yet was this shift to voluntarism limited to the policy field of environment – in Canada and other countries similar programs were introduced in a wide range of regulatory fields previously characterized by primary reliance on the instrument of administrative law (Webb, 2004).

Why did this happen? How can we explain the fact that such a major evolution in choice of policy instrument happened almost overnight, without the kind of prior public debate and expert policy analysis, as least in Canada¹, which had preceded similar policy innovations, such as the 1960s expansion of regulatory controls in the areas of occupational health, product safety and environment, or the 1980s economic deregulation of the transportation and communications industries? One possible answer is that this was simply another manifestation of the phenomenon of a triumphant neoliberalism and shrinking state, regulatory capture so powerful that the regulators abandoned their most effective instrument, in effect dropping their swords and fleeing the field of battle. Another, very different explanation, is that this was an example of policy learning, as regulators came to realize that the blunt instrument of law could only achieve so much, and had to be complemented by "smart" regulation, focussed, effective and efficient, in consideration of the fact that pollution prevention was a more diffuse type of problem, and one which needed a more preventive approach (Bell, 2004, p.7). Other possible explanations lie between those two poles.

Voluntary agreements can be seen as one of the two major alternatives to command and control coercive legislation, market-based instruments being the other. However market instruments have a stronger theoretical backing, coming from economics, whereas voluntary agreements appear more as a practical response to the weaknesses of traditional regulation methods (Böcher and Töller, 2003, p. 15). When policy instruments are categorized in a strict conceptual basis, market-based instruments form a distinct category, whereas voluntary agreements appear only when authors draw a practical list of instruments which are used in practice, such as the list Neil Carter draws (Carter, 2001, 284-303)

The purpose of this paper is to provide the preliminary answers to these questions, and others, which have emerged to date from a three-year, SSHRC-funded research effort being carried out by researchers from Université Laval and the University of Toronto. The project is an interdisciplinary effort, combining environmental studies, political science, economics and management studies. With a primary focus upon the governments of Québec and Canada, the project is exploring three questions: (1) why have governments selected the instrument of voluntarism to achieve environmental policy objectives?; (2) in the opinion of government and business officials and others directly involved, what have we learnt to date about the

effectiveness and efficiency of voluntary instruments?; and, (3) how might the findings and analysis generated by this project contribute to future use of voluntarism in the field of climate change policy? The present paper is a first attempt to answer the first question, the one dealing with the reasons for choosing voluntary agreements.

Policy analysts have been studying instrument choice since the 1970s, and there is now a rich and varied literature on the subject (Doern and Wilson, 1974; Hood, 1986; Howlett and Ramesh, 1993, Bemelmans-Videc, Rist and Vedung, 1998; Peters and Van Nipsen, 1998; Salamon, 2002). This research project is based in that literature and in works from economic and organization theory, as set out below. The project is intended to contribute to further development of these bodies of literature, since increased understanding of the factors that motivated this change in instrument selection will contribute to the understanding of instrument choice in general.

Taxonomy is an ongoing theme in the instrument choice literature, since to date analysts have not yet reached consensus on one standard system of instrument categorization. This problem immediately arose when analysts began to study the new use of environmental policy instruments (Gibson, 1999; OECD, 1999; ten Brink, 2002). Since the effectiveness of voluntary instruments is linked to the threat, implicit or explicit, of potential use of more coercive instruments, even the term "voluntary" is something of a misnomer² and it is impossible to either cleanly differentiate voluntary instruments from others or to establish sub-categories of voluntary instruments, each completely distinct one from the other. For the purposes of this project, accordingly, we use a very broad definition of "selection of voluntarism as an environmental policy instrument selection" simply saying that it is a phenomenon which is characterized by two elements: (1) explicit and conscious action by a state agency intended to improve the environmental performance of private actors or other governments; and, (2) which does not impose upon those actors any immediate, new, legal or financial motivations for behaviour change³.

Our primary research method is a qualitative study of cases. To date, we have begun to examine five: (1) the case of *Collecte Selective Quebec*, a 1988 decision by the Québec government to accept voluntarily provided business subsidy for local government domestic waste recycling costs, which was replaced in 2002 by a legally mandated obligation to make such contributions; (2) selection in 1995 by Canadian federal and provincial governments of voluntarism, in the form of the Voluntary Challenge and Registry program, as the major instrument to achieve climate policy objectives, followed in 2002 by the federal government decision (not yet implemented) to impose legally-binding greenhouse gas emission reductions; (3) introduction of a parallel program, *EcoGeste*, by the Québec government in 1996; (4) the 1998 transition from law to voluntarism in the joint Québec-Canada St. Lawrence River program; and, (5) the signature by the trade association and three major aluminium companies in Québec of voluntary agreements to reduce their greenhouse gas emissions.

As can be seen, these cases provide two instances in which voluntarism was subsequently replaced by law; one in which law was replaced by voluntarism; and two in which voluntarism has not yet clearly been replaced by any other instrument.

We are studying these five cases by means of primary document review and structured interviews in a way which will allow, hopefully, comparative analysis. At the time of writing this paper, we have completed our secondary literature review and examination of primary documents, we have held a one day focus group meeting with participants from business and governments, but not yet commenced interviews. Funding is available to study other cases, if needs be. Whether to do so and which to examine are major research decisions to be made in the

near future. We very much hope that comments elicited by this presentation of our preliminary findings and analysis will help our research planning through to completion of the project.

The format of this paper is, in essence, presentation of the relationship between three theoretical perspectives and data from our five cases. The three perspectives are: (1) economic theory; (2) organization theory; (3) policy analysis, based in political science. Each of the three is very briefly sketched in the pages which follow. After that, the paper is divided into five sections, one for each case. Each of those sections begins with a very short presentation of basic data pertaining to the case at hand, including context, a listing of policy instruments proposed by relevant state and non-state actors during the policy development period and the instrument or instruments selected. For each case, we discuss the relationship between theory and the data presented. The concluding section summarizes our thinking to date, and poses the research decision questions we must resolve during the coming year. As we said, any and all suggestions are welcome.

1. The economic perspective on voluntary agreements, as a policy instrument choice

The economic literature distinguishes three kind of voluntary agreements (VA) depending on whether the program was initiated and designed by the industry, the government agency or both (Carraro and Lévêque 1999, Lyon and Maxwell 2003, Thalmann and Baranzini 2004). First, there are *Unilateral commitments* (UC), or self-regulation (Maxwell, Lyon and Hackett 2000), where firms pledge to achieve some social or environmental goal⁴. The case of Collective Sélective Québec, at least in its initial phase, would be an example of unilateral commitment.

The second kind of VA is that of *Public voluntary programs* (PVP) (Lyon and Maxwell 2003, 2004), where the regulatory body sets up a program to which firms may voluntary choose to participate or not. To induce participation, the program usually entails some advantage for the participants, which could be direct subsidies (Stranlund 1995), (positive) public exposure (Arora and Cason 1996, Cavaliere 2004) or access to knowledge. The cases of *EcoGeste* and the Canadian *Voluntary Challenge and Registry program* are instances of PVP.

The third kind of VA is that of *Negotiated agreements* (NA) (Grepperud and Pedersen, 2004) or *tailored regulations* (Blackman and Boyd 2002) where the regulatory body contracts with individual firms or industries very specific agreements. NA are distinct from PVP because they involve a much stronger commitment by the participants. Participation is voluntary but failure to deliver may be sanctioned. Some parts of the *St Lawrence River program* fall under the umbrella of NA, especially in its initial phases.

PVP and NA are considered as additional instruments available to the regulatory body besides emission (pigovian) taxes, abatement quotas, tradable permit systems, etc. As such, they may be complementary when a single instrument is not sufficient⁵, but their aim differs from the traditional instruments by the emphasis put by design on the voluntary participation of the firms. As pointed out by Thalmann and Baranzini (2004), any regulation is usually negotiated with the industry to ensure compliance. But, *participation* becomes a major concern with this instrument. The literature distinguishes the instances where participation is more or less a stringent constraint for the regulator. Leaving aside the trivial cases of win-win situations where the regulator merely acts as a coordinator or a channel of information among firms, there are the cases where inducing participation is easy because of a regulatory threat (Segerson and Miceli 1998) and the cases where no such threat is present (Lyon and Maxwell 2003)⁶.

The modern economic analysis of regulation (Laffont and Tirole 1993) emphasizes the role of asymmetric information and participation in the design and the selection of an appropriate instrument. Without regulation, firms emit too much since they don't take into account the economic cost of pollution while maximizing profits. Regulation is a fix to induce them to

participate to the goal of reducing emission to the socially efficient level: one at which the marginal damage of a unit of emission is equal to the firm's marginal abatement cost. Participation is obtained either by providing the firm with a subsidy (if it reduces its emissions) or by imposing it with a fine (when it doesn't), or both. Information about abatement cost matters because it determines the firm's socially efficient abatement level. Particularly, it makes sense to impose on some firms abatement efforts that would drive others firms out of business.

There is asymmetric information between the firm and the regulating body when the former has more information about its abatement costs or the magnitude of the damages caused by its emissions. In addition, in the case of non-point source pollution, there is asymmetric information because the regulating body can't monitor the abatement effort of the firm. This hampers the regulatory body ability to discriminate the firms abatement levels⁷.

Because of the asymmetric information problem, an efficient regulation always implies some partial decentralization toward the firm of setting its own abatement level. This happens, for instance, with a tax on emissions since each firm then adjusts its abatement level so that its marginal cost of abatement equals the tax. In more general settings, achieving decentralization may involve subsidies transferred to the firms. Firms are then said to gather an "informational rent". Because these subsidies are costly to the regulating body,⁸ regulation involves a tradeoff between efficiency and the allowance of informational rents to firms.

VA can be analyzed with this approach, but they appear as much weaker instruments than emission taxes. This is why the literature has focused on peripherals reasons that would rationalize their adoption by the regulating body. For instance, VA may be the sole instrument available when the regulating body has no legal authority to impose a tax on polluters (Lyon and Maxwell 2003). Or they might offer a transitional alternative that economizes on the transaction costs of passing a new legislation. Besides, an argument can be made that the regulator does not always act optimally in setting abatement levels (Baron 1985, Viscusi and Hamilton 1999) and that would call for a softer kind of regulation like a VA⁹.

Recently, the focus has shifted toward explanations that emphasize the strategic interest of firms to engage into an UC to bypass or preempt a legislation by the regulator (Hansen 1999, Maxwell, Lyon and Hackett 2000, Bermudez 2005). Following the Boyer and Laffont (1999) seminal paper on the political economy of regulation, it is shown that firms may gather significant rents by engaging unilaterally into activities that render ex post legislation politically unfeasible (Lyon and Maxwell 2003). In comparison with the previous literature, this line of research tries to explain as an endogenous variable the background legislative threat upon which the previous analyses relied (Glachant 2005).

From a normative perspective, it is fair to say that economists are generally not impressed by the capacity of VA to achieve efficiency in comparison with more traditional (and stronger) instruments like emission taxes or tradable permit systems. Yet, they increasingly recognize that VA may play a significant role in the complex regulatory game played by the firms, the various regulatory bodies, the pressure groups and the public generally.

Following this brief review of perspectives on instrument choice coming from economics, we now turn to a perspective drawn from organization theory.

2. An organization theory perspective on voluntary agreements, as a policy instrument choice

Because of the fact that the choice of voluntary agreements is made by organizations – public and private – it is reasonable to think that this decision can be understood through concepts coming from organization theory. In brief, let us first mention the schools of thought, within organization

theory, that, in our view, can be put to contribution, and they are the following: classical organization theory, contingency theory, decision theory and information management, institutional economics, sociological neo-institutionalism, resource dependency, and, finally, population ecology. Some notions, from other schools of thought, will be called upon, but the main bodies of thought are those that have been enumerated.

One of the first questions we have to answer is whether we look at the decision to use voluntary agreements as a change from a previous situation, or whether the term “voluntary agreement” is used to continue a type of interaction which already takes place, but was called under another name. For most of what we will look at here, we assume voluntary agreement constitutes change.

The next question is whether we look at the organizations under investigation as closed, natural or open systems, using the categories of W. R. Scott (1998). For example, looking at the decision from a “utility maximizing individual” point of view would be combining a rational and closed system view. In such a case, each organization could be broken down in as many individuals involved in the decision, but this is not a path we will follow extensively here. We have chosen to look at the process of choice as an open system, beyond the individual, and into the environment, whether rational or natural.

Our third introductory remark is to make explicit the fact that most of the elements we will be analyzing here, in organization theory, are related, in some way or another, to the processing of information. There will be, thus, parallels to be drawn between these “processing of information” concepts of organization theory, on the one hand, and the notion of “information asymmetry”, concepts of economics, on the other hand.

The classical school of organization theory was very much interested in the productive effect of the division of labour, and both Adam Smith and F.W. Taylor can be seen as advocates of the increase in the division of labour. We need only to change the emphasis from “labour” to “information processing” to make some of their analysis pertinent to our subject. Indeed, the choice to move from command and control to voluntary agreements can be seen as a choice to move away from a hierarchical mode of division of labour to a horizontal one. The information flow has become too large to be managed by a single, hierarchical point, and it has thus been “parcelled out” to another organization – in this case the regulated industry.

Viewing now the same phenomenon under the concepts of the contingency school, the passage from command and control to voluntary agreements can be seen as a passage of the U form of organization to the M form, from unitary to multidivisional. Let us remember that, as historically analyzed by Alfred D. Chandler (1962), the advent of the M form is caused mainly by the fact that the quantity and the diversity of information that the “center” (in our case, the government) has to process has become too large; the center’s response is to shift the responsibility for information processing back to the units; the center then controls the process, not by specifying the procedure, but by looking at the results. In the words of James D. Thompson (1967), a sequential type of interdependence – where detailed procedural steps are specified in advance – is replaced by an intensive type of interdependence, where there is a greater consideration for future contingencies.

In placing the detailed decision making for environmental improvements closer to the industry itself, as in the case of environmental voluntary agreements, we are simply placing it closer to where the pertinent information is located, as Herbert A. Simon advocated, in recognition of the cognitive limits of the decision makers at the top of the hierarchy.

The remarks made above leads us to the need to characterize the type of information required to reduce pollution at the industrial level. In merging decision theory with elements of contingency theory, we can postulate that a complex and interdependent type of information can entail

centralization for coordination purposes, but that a still greater increase in complexity can lead, *au contraire*, to decentralization, especially if this complexity is accompanied by a high level of change in information content. Several authors, and very different authors, from André Gorz to Manuel Castells, insist on the fact that the contemporary mode of dealing with the tremendous increase of information is through flexible and decentralized procedures; the public sector, in adopting these techniques, is only adjusting itself with what has already become necessary in the private sector.

In this new information-rich environment, we can see the move to voluntary agreements as a choice of mode of governance, between market, contract and hierarchy (Williamson, 1996). Through our previous remarks on information flow, we can exclude hierarchy, for several reasons. First of all, government and industry are not formally part of a single hierarchy; second, even if they were, the amount of information would preclude “center knows all” command and control. We can also exclude market, since we are in a situation of some form of regulation. So, there only remains the contract mode of governance, and indeed voluntary agreements are a form of contract.

But what type of contract? Voluntary agreements are obviously “open” contracts, or part of “soft contracting”, where the parties agree to pursue their common interests as much as possible, and not exclusively their own, narrow interest. The fact that there are some characteristics that would lead, theoretically, to hierarchy, namely specificity of assets, uncertainty and frequency of transactions, makes us realize that, as opposed to hard contracting, which is closer to market, soft contracting is closer to hierarchy. Indeed, when choosing voluntary agreements – in effect choosing open contracts – governments may be looking for certain advantages of hierarchy, namely better controlling for the risks of any principal-agent relationship through some of the characteristics of hierarchy, namely the continuity of the relationship and the flexibility in front of unforeseen conditions. It is almost as if government was intending to treat industry as part of a “mega government-industry firm”, of which the industry is made to feel part of. In other words, government is trying to build some form of social capital between itself and industry, in part by giving “voice” to industry, in order to prevent “exit”. The voluntary agreement also provides a setting for a dynamic and interactive exchange of information, information which could not be gathered, in any case, by government alone. The relationship is highly bilateral. W. R. Scott reminds us that Arthur Stinchcombe (1985) had developed the concept of “hierarchical contracts”, which combined some of the arm’s length features of contracts with authority relations, under conditions of extraordinary complexity and uncertainty (Scott 1998, p.203). The notion of “hierarchical contracts” was developed to explain the type of relationship that exists between the U.S. Department of Defense and industry providing military material.

Our German colleagues, Michael Böcher and Annette Elisabeth Töller, looking at the dynamics of alternative environmental policy instruments in their own country, and drawing more from the public policy literature than from organization theory, draw the same conclusions, for very similar reasons. “Bureaucrats”, they explain, “are strongly dependent on the knowledge available at the site (p. 22) and “government is thus even more dependent on knowledge available only on part of industry” (p. 18). “Agreements build partly upon the self-regulation and partly on a chance of governmental learning from societal actors in the course of implementation” (p.18). The reasons why we arrive at this situation are structural and they go beyond individual organizations. They include: modernization, differentiation, high complexity, internationalization and decreasing societal acceptance for political decisions (p.13). These factors favoured “alternatives within the law” (procedural or reflexive law, for example) or “alternatives beyond the law”, such as voluntary agreements. In the second case, we can benefit from “societal capacities for self-

organization”, and societal and governmental actors co-operate...mostly “under the shadow of hierarchy”...Opposite to fiscal measures that were born in the brains of economists, agreements have resulted from pragmatic administrative practice” (p.15). These voluntary arrangements can reduce, thus, knowledge asymmetries and facilitate the transgression of sectoral boundaries (p.15).

At this point, in examining voluntary agreements through the lenses of classical organization theory, contingency theory, decision theory and institutional economics, we have looked at choice as the exercise of rational judgement. We will soon look at the choice of voluntary agreements as a decision better explained by non rational elements. However, between the rational and the non rational interpretations, there lies an explanation that is neither, and that interprets these types of choices through notions of power. Let us briefly give some examples of this type of interpretation.

The resource dependency school (Pfeffer and Salancik, 1978) of thought, for example, would look at government’s choice of voluntary agreement as a method of adaptation in the face of powerful industry. Going one step further, we could postulate that government would prove especially timid or prudent in the face of industries which are major exporters or who employ a large number of individuals. In a sense, this type of explanation is not totally dissimilar to a contingency approach, since government is in a sense adapting to environmental, outside elements, but the effect here is not so much on structure as it is on a relationship with the outside world, or elements of it, based on an asymmetrical situation of power. Another way to look at the power relationship between government and industry would be to say that voluntary agreements are the result of a strong bilateral situation of co-dependence, where industry has the advantage of knowledge regarding its operations, but where government has the advantage of legitimacy.

Another way to look at voluntary agreements through power is to consider this form of regulation as an expression of governmental power, which is simply more subtle and indirect. In fact, it goes even beyond command and control, because it demands that industry espouses and internalizes government goals. In Amitai Etzioni’s words, we have gone from coercive to normative expressions of power. In this view, the regulatee does onto itself what government had to impose in a previous phase of regulation. European authors, such as Lascoumes and Le Galès (2004, p.19), in the field of public policy, sometimes refer to the work of French philosopher Michel Foucault to elaborate on this point.

Having looked at voluntary agreements through the lenses of power, we are now ready to interpret them as non rational phenomenon. The pertinent discipline here is sociology. There are many dimensions to this approach. Let us try to look at them separately.

Taking as a starting point the work of DiMaggio and Powell (1991), we could look at the choice of voluntary agreements as an expression of isomorphism. Isomorphism, as suggested earlier, refers to the fact that organizational characteristics do not result from rational choice but from one of three causes: coercion, imitation, or search for legitimacy. Isomorphism also refers to the fact that, over time, organizations in a given “field”, which constitute a “clusters of organizations” (which includes an industry sector, but also a series of other participants, such as regulators), will strongly resemble each other as to their organizational characteristics and their cognitive elements. In this spirit, we can look at voluntary agreements as an “organization form” that has been adopted through processes that are not totally rational. Of course, it does not necessarily follow that the spread of voluntary agreements is “irrational”. This is certainly true for coercion, but imitation and the search for legitimacy can also be, in a sense, rational. What would be less rational would be what has been called “loose coupling” between the institutional, the management, and the technological level, where for example, an institution would declare

itself as practicing voluntary agreements at the institutional level, while not applying it at the management or at the technological level. Another case, in a similar vein, would be to officially put in place voluntary agreements, while not really following through on implementation and verification. According to some observers in Québec, verification, generally, would be especially weak in that province, but our German colleagues note that even in regulatory law, implementation is particularly weak in environmental protection generally (Böcher and Töller, 2003, p.14)

Isomorphism could also occur at the international level, where organizational forms are adopted through processes that are not the result of a rational choice as to their operational superiority. Lester Salamon (2002, pp.553 and ff.) mentions the influence of international norms as a factor in instrument choice. Going one step further, and taking our cue from comparative administration, we could state that each national tradition has a very particular way of operationalizing voluntary agreements, and that, for example, they are viewed as a form of hierarchy in France, a contract in the United States, a series of mutual obligations in Japan, and a format for conciliation and compromise in the Netherlands.

Of course, all that we have seen up until now, in terms of organization theory, takes for granted that the choice of voluntary agreements is a choice that constitutes a departure from a previous form of regulation. But there exists a school of thought that would posit that organizations do not really have the capacity to change. Indeed the population ecology school does not see organization as adapting to new circumstances, as there are strong forces of inertia. Viewed in this manner, voluntary agreements would not so much constitute change, as they would indicate that we are calling “voluntary agreements” what was done before, in essence only a change in vocabulary.

One last point from organization theory, before moving on to other perspectives. Drawing from remarks reported in W. Richard Scott’s classic introductory text on organization theory (1998, p.272), it is possible to make a distinction between “early adopters” and “late adopters” of voluntary agreements. Indeed, early adopters could have chosen these policy instruments after some form of rational analysis, whereas later adopters could be more motivated by factors related to isomorphism, in essence imitation.

In conclusion from these notions drawn from organization theory, we can already see that under the concepts of information asymmetry, coming from economics, and information management, coming from organization theory, there are parallels which can be drawn from these two perspectives, in the understanding of the choice of voluntary agreements as an instrument choice.

3. A Policy Analysis perspective on Voluntary agreements, as a policy instrument choice

Since the 1980s the policy instrument approach has been a renewed branch of policy analysis. Investigators studying policy instruments have pursued two main objectives. The first relates to the identification and classification of instruments, and the second is concerned with explaining why governments choose the instruments they do (MacDonald 2000, p.163). Policy analysts usually acknowledge the difficulty to come to an agreement to establish a common typology of instruments; however there is even more divergence for understanding the rationale for policy instrument choice. Sometimes associated with the stage of implementation of the political process, sometimes with the stage of formulation (Howlett 1991, p.3), the issue of instrument choice is approached from numerous theoretical lenses, within the policy analysis perspective. Another branch of policy analysis called policy diffusion has also its own explanation for

understanding instrument selection. So why should a government use a voluntary instrument? We will succinctly present here five categories of explanations.

3.1. Instrumentalism

Economists, policy analysts, but also political scientists, first took an instrumentalist perspective, sometimes called “naïve instrumentalism” (Böcher and Töller, p.3), often coupled with a prescriptive stance. Driven by ideological biases, some of those analysts endorse particular instruments, assume and claim their effectiveness and urge decision makers to adopt them (Anderson 1977 cited in Linder and Peters 1998, p.37). This commitment to a limited repertoire of instruments is said to be influenced by the discipline to which the analyst belong to. Therefore, political scientists describe lawyers as more inclined to favour legal instruments, whereas economists are said to support market-based instruments (Linder and Peters 1998, p.37). Another part of this normative and instrumentalist literature on policy tools is represented by students of instruments whose primary concern is to inform and assist decision makers on the relative merits of the instruments which are at their disposition (Elmore 1987, p.174). They usually focus on creating a comprehensive typology of instruments and consider that each instrument has its own characteristics and its own dynamic that bring a special « spin » in the political process (Elmore 1987, p.175, Salamon and Lund 1989). They suppose that decision makers, when facing a particular policy problem, are able to evaluate the relevance of each instrument. That is why it is also called the synoptic approach. Those two trends share a common vision of policy tools being no more than “administrative technique”, the selection of which reflects a rational logic of adequacy between goals and means, effectiveness being considered as a blueprint of the decision-making process. The “normative-instrumentalist” perspective tends to assume that governments select a policy instrument because of its intrinsic effectiveness, and if the wrong decision is made, then the policy program may fail. According to this approach, it could be argued that governments resort to voluntary instruments because it makes it possible to reach not only a better environmental protection, but also a greater economic efficiency.

3. 2. The level of coercion as a factor of choice

A classical feature of public policy is the power of the State to coerce actors to behave according to the prescriptions of the Government. Since the end of the 1970s, Doern, with various co-authors, have developed a model of instrument choice based on a continuum of coercion, a mode of classification which has been often used, most recently by Evert Vedung (1998, p.29) These authors postulate that governments are strongly inclined to use the least coercive instrument initially, and to adopt gradually more coercive instruments as the less coercive one fails. However, as many critics underscore, many examples prove this theory to be false, since regulation, the more coercive instrument, is often used in the first place. This postulate sometimes rests on an ideological neoliberal assumption that government must not interfere in the market (MacDonald 2000, p.167). The coercion model is thus less instrumentalist, but it can be somewhat normative.

3. 3. The Public Choice theoretical framework

In a much lesser normative stance, but still in a somewhat instrumentalist perspective, the Public Choice framework proposed by Trebilcock and Hartle (1982), considers that decision makers or politicians as self-interested. They try to maximise their utility (re-election) in choosing an instrument that directs sizeable benefits to a group of specific voters, with the costs spread over the unexpecting “public”. But critics of this interpretation point to the fact that it is difficult to measure precisely the benefits (or costs) of each instruments (Woodside 1986, p.781). Furthermore, it overlooks the existence of institutional constraints and routines preventing or promoting the selection of particular instruments (Atkinson and Nigol 1989, p.112).

3.4. Contextual and institutional factors: contingentist, constitutivist, proceduralist, and networks perspectives¹⁰

The contextual and institutional turn in the instrument literature is first illustrated by the contingentist approach. Hood (1986) argues for example that instrument choice is a “matter of faith and politics”, which reveals much about the relationship between the government and the targeted group. For Hood (1986, p.118-120,141-143), instrument selection is a function of the resources available to the government, the nature of the problem to be solved (ex: diffuse pollution, "point source" or "non-point source", for example); the legal constraints and the political pressures (nature of the targeted group, for example), the lessons learned from previous experiences (policy learning increases or decreases the probability that certain instruments might be chosen). The contingentist approach emphasizes contextual variables, and yet it can be described as a "revised instrumentalism"(Bagchus 1998), for it is still driven by a logic of the "optimal fit" between goals and means.

Along the same line, Linder and Peters (1989) propose a sophisticated model combining several variables similar to the contingentist perspective. But it deserves a special attention because they introduce "the cognitive factors" that shape instrument performance appraisal. Decision makers are actually constrained by these subjective factors as well as the institutional framework which they defined as the synthesis of the national policy style (or systemic context), the organizational culture of the agency in charge of the implementation of the policy, as well as the policy community within which it functions, and the problem situation defined as the particular circumstances. One can be satisfied or one can regret the fact that these models incorporate (too) many variables without balancing the influence of each one of them in the decision making process. In fact instrument choice literature is facing the same problem as many other theoretical issues: does one look for a parsimonious theoretical framework or is it better to include as many variables as possible in order to reflect the reality with more precision? This is a hotly debated and unsettled issue for the moment.

Another perspective suggested by Majone (1976, 1989) argued that the performance of an instrument cannot be deduced from its technical characteristics, since it depends more on the institutional context and on the procedure that accompany instrument choice. Of particular relevance are the mutual adjustments occurring in the political process. In this proceduralist approach, instrument selection results from the relative distribution of power between the government and the targeted group, the political constraints and the capacity of the decision maker to manipulate the political system. This is a critical contribution to the field of instrument choice, because in addition to giving attention to procedure, it opens up the way to policy network analysis advocated by Bressers and O'Tool (1998). They claim that instrument selection depends on the characteristics (the cohesion and the interconnectedness) of the policy network, understood in a restricted sense as the relations between government and the targeted group. Howlett (2005) is also interested in policy networks or «policy subsystems». He underscores the focus on contextual variables as well as on policy mix as the specificity of the second generation of policy instruments studies. Basically, he distinguishes between substantive and procedural instruments. Unlike traditional substantive instruments directed at affecting the delivery of goods and services in society, procedural instruments are designed to manipulate network configuration in order to gain legitimacy (Howlett, 2000; 2005). He thus asserts that the capacity of the state and the complexity of the policy subsystem determine the choice of traditional substantive instrument. As for procedural instruments, which have now become an essential feature of the modern governance (Howlett, 2000, p.412), the delegitimation of the state can be a major

explanatory variable. The combination of procedural and substantive instruments will give the implementation style.

Finally, the choice of instrument can be understood as a kind of instrument institutionalization. Indeed, Bagchus (1998) synthesizing many contingentist and constitutivist variables, analyses how an instrument becomes gradually institutionalized within a policy community to the point where the logic of appropriateness of a particular instrument (as opposed to the logic of effectiveness) dominates. Similarly, Ringeling (2005) also notices that there is some form of instrument institutionalization. But this institutionalization exceeds the policy community to characterize the dominant type of governance in the country. For Ringeling (2005), instruments are strongly ideologically connoted, they are chosen according to the institutional specificity of the country, its culture, its traditions and its politico-administrative structures. Nevertheless, the problem with these two models is that they are of little relevance when explaining instrument change over time.

3.5. The literature on policy diffusion: explaining the spread of similar instruments in various countries

All the previous theoretical approaches share the characteristic to confine instrument choice within the borders of the national political framework¹¹. Therefore the influence that international developments may exert on the process of instrument choice is largely overlooked. Nevertheless, there is a whole body of literature derived from comparative politics, and influenced by international relations, which focuses on the adoption of similar instruments in various countries. Recent European publications are precisely dedicated to the propagation of new instruments in environmental policy, also known as NEPIs such as ecotaxes and voluntary agreements. Rejecting the idea that one possible explanation for the rapid diffusion of voluntary instruments could be that governments are reacting similarly to similar environment problem pressures, they interpret this phenomenon as a process of “policy diffusion”. The principal argument that one could retain from this policy diffusion literature is, notably, that new instruments emerge because there is a certain dynamic that “make(s) it increasingly difficult for national policy makers to ignore new approaches in environmental policy that have already been put into practice in frontrunner countries” (Tews et al., 2003, p.569).

According to Jordan et al. (2003, p. 4), the policy diffusion literature is unsatisfactory because it does not provide a detailed explanation of why decision makers in a particular national setting choose one instrument from a repertoire of innovative policy tools. It would be more accurate here to distinguish between two theoretical frameworks: ideational and institutional theories. The first suggests that the adoption of NEPIs could be mainly an instrumental process of putting new ideas into effect. This is very similar to “policy learning”. The second underscores that deeply rooted national institutional legacies inhibit or shape the choice of certain instruments. The problem with ideational theories is that they say little about what happens when ideas are implemented. We can nevertheless merge these two theoretical framework within the following two propositions: 1) The implementation of common set of ideas is likely to produce very different outcomes in societies with different institutional settings and 2) Only the instruments, and ideas, that are compatible with a particular institutional arrangements are likely to be adopted.

Having now looked at instrument choice through the lenses of economics, organization theory, and, finally policy analysis, we can now try to summarize and to integrate some of the different notions we have touched upon.

4. Integrating our three theoretical approaches

It might seem, at first glance, that our theoretical perspectives do not have much in common in explaining instrument choice or, more specifically, the choice of voluntary agreements for environmental policy. Yet, when looked at more closely, they do have common elements. We will try to show here these common elements.

Of course, there are many ways that these three perspectives can be linked. We see, essentially, two. The first is that they can essentially state the same things, albeit in different language. The second is that they can be complementary, one completing or complementing the other, for example.

Let us first mention the six themes where our three theoretical approaches share common or complementary elements. These are: rationality, power, information asymmetry, contextual and institutional factors, the “logic of appropriateness”, and, finally, policy learning.

Albeit in different ways, economics and policy analysis share an interest in some form of rationality. There is the search, in economics, for a socially efficient treatment of externalities, and for understanding the rational behaviour of the firm in reacting to threats, subsidies, taxes and fines. In policy analysis, the rational search is not so much oriented toward efficiency as it is towards effectiveness, as when the instrumentalist approach tries to determine the best “fit” between the environmental problem at hand and the appropriate, and best, tool to solve it. Of course, economics and policy analysis meet even more squarely when, through Public Choice theory, they both interpret individual behaviour as an attempt to maximize interests.

On the question of power, our second theme, the meeting is between the resource dependency school of organization theory and the different treatments of power that policy analysis provides. In both cases, one organization is constrained by another, whether we call these constraints “resource dependency”, “level of coercion”, or, more euphemistically “network configuration”.

Our third theme is information asymmetry. Although not always using the same terms, both economics and organization theory refer to the fact that business often possess information that government does not have. The consequence, in economic terms, is “partial decentralization”, and in organization theory terminology, it is called “open contracts” or “hierarchical contracts”, but both would stress the importance of the cognitive limits of the individual involved, especially those from government. Policy analysis would seem to be less involved in this specific theme, although we could interpret the asymmetry of information situation as one that fosters a specific “configuration of actors” or a specific type of network. The notion of “procedural instrument” of Michael Howlett could also come into play, in the sense that, because government does not possess the necessary information, it is limited to setting up general framework (which voluntary agreements are, to a large extent) and not a specific and determined substantive content.

Our fourth theme concerns contextual and institutional elements, and it is a case where theoretical approaches are more complementary than identical. Let us only briefly state, in this case, that policy analysis picks up where economics ends. Indeed, traditional economics (excluding neo institutional economics) looks at the larger, institutional setup as something outside the proper domain of economic analysis and it is precisely this institutional environment that a good deal of policy analysis is looking at when analyzing instrument choice. Viewed from economics, elements such as national policy styles or legal constraints are often seen as peripheral reasons that limit rational action.

Our fifth theme, closely related to the previous one, is the “logic of appropriateness”. Here, it is organization theory and its notion of imitation (“isomorphism”) that meets the institutional school of policy analysis, in stressing the fact that the larger institutional setup constitutes a powerful constraint on instrument choice.

Our last theme, policy learning and the role of ideas, comes essentially from policy analysis. But it also can be linked to economics' notion of cognitive limits, in the sense that one can also learn about one's own interests, in view of the fact that part of our interest can only be discovered through action, and the general framework of voluntary agreements, provides a process for this, and other types of learning. Again, a parallel with Michael Howlett's notion of procedural instruments can be drawn here.

Having attempted to draw some parallels between our three theoretical approaches, we are now ready to deal with our five cases, outlining, in each one of them, how they can be explained by the theoretical concepts that we have outlined here.

5. Our five case studies

5.1. Case #1: The case of Collecte Selective Quebec, the financing of municipal government curb-side recycling

Context and history

Like most North American jurisdictions in the 1980s, driven by environmental concerns and shrinking disposal capacity, Québec began to develop policies to divert up to half of the solid waste stream from disposal to reduction, re-use or recycling. There has been an ongoing debate in Québec ever since between advocates of deposit-refund systems and recycling. In the late 1980s, local governments stated they were unable to absorb the costs of new curbside recycling programs. In June, 1988, business firms whose products ended up in municipal recycling boxes offered to provide an annual subsidy for those municipal costs. It is not clear how much this was a "voluntary" contribution and how much an attempt to pre-empt taxation, which had been mentioned by the Québec Minister. The Québec government accepted that offer, thus implicitly using the instrument of voluntarism, and created a non-profit organization: Collecte Sélective Québec (CSQ) was created to manage the funding. By 1992, CSQ was publicly stating that business donations were insufficient, and lobbying for mandatory business contributions. The principle of business responsibility was adopted by the Québec government in 1998 as part of an over-all solid waste program, and enacted as law in 2002.

Instruments discussed

During the 1990s, after the initial operation of Collecte Selective Quebec as a voluntary agreement, environmentalists, business and local governments suggested the following policy instruments:

- deposit-refund systems in place of recycling
- mandatory business funding
- tax on wastes sent to landfill disposal

We have not yet found evidence that two other obvious instruments, full provincial subsidy or full payment through local property taxes, were discussed.

Instruments selected

1988 Voluntary funding, as a voluntary agreement

2002 Legally required funding

Explaining case 1 through theories of instrument choice

How can we explain the move from voluntary agreement to law in the case of Collecte Selective Quebec?

This case of instrument choice, more specifically instrument change, can be explained in a quite straightforward manner: both business and government come to believe that, for reasons of effectiveness, a level playing field for businesses involved could be better achieved through law than through voluntary agreement¹². The problem of garbage disposal is an immediate problem and the effectiveness of the instruments seems to be paramount. Of course, other notions can also

shed lights on this case. It confirms that governments like to start with the least coercive instruments, moving to more coercive ones when the former ones fail. It may also be a case of policy learning. Through a voluntary agreement, where voluntary agreements provide a flexible, procedural type format which permits to learn about the problem at hand, both for enterprises and governments. There may also be an element of ideology, in the sense that the very “public” scheme of deposit-refund lost at least part of the battle to the more “private” scheme of recycling.

5.2. Case #2: The case of Ecogeste as a first Québec government climate change policy instrument

Context and history

For the first part of the 1990s, Québec developed its climate policy as part of the federal-provincial process described in the following case study. In 1994, for reasons unrelated to climate policy, Québec began boycotting all federal-provincial meetings. Québec developed its own report to the first meeting of the UNFCCC parties in 1995, separate from the national report submitted by Canada. The plan set forth a more rigorous objective (a 25% reduction), but like the Canadian plan, relied upon voluntary action. This was motivated, the plan stated, by the desire to avoid putting Québec industry at a competitive disadvantage.

In September, 1996 Québec launched the EcoGeste program, a public registry of emissions and plans for reductions, similar to the federal-provincial Voluntary Challenge and Registry (VCR) program. Sectors such as aluminium, forestry, gasoline and chemicals gave written statements to the Québec government that they would stabilize their emissions.

Like the VCR, the EcoGeste program was ended a few years ago. Since then, the Québec government climate policy, like all other Canadian provinces, has not advanced beyond the level of general principles and wishful thinking. Voluntarism is still the principle instrument, with no use of law or tax and very little use of the spending instrument.

Instruments discussed

Prior to the launch of EcoGeste in 1996, Québec was aware of the various instrument suggestions made on the national stage, listed in the next case study. Specific suggestions made by Québec bodies included the following:

- In February 1994, Hydro-Québec and l'Union québécoise pour la conservation de la nature proposed the creation of a new organization, consisting of all energy stake-holders; a gas-guzzler tax on motor vehicles was also recommended
- In September 1994, l'Association canadienne du gaz supported the use of voluntary instruments by Québec
- In September 1995, Québec environmentalists recommended a carbon tax, other green taxes, and support for renewable energy sources

Instrument selected

1996 Voluntary program

Explaining case 2 through theories of instrument choice

At first glance, it may be surprising that for such a huge and multi-faceted problem as climate change, a simple voluntary registry was chosen as a policy instrument. However, precisely because of the importance and size of the problem, governments are in a learning pattern, and voluntary agreements seem like a good way to start. We may point out here that “learning”, in this case, is also learning about how different sectors of business will react to these first moves. Some of these business actors are powerful, some even important exporters, so there is also an element of resource dependency here. Also, both Québec and Canada have one eye on their competition in the United States, where no forceful national climate change policy exists.

This public voluntary program, as described by economic theory, can be also seen as a procedural instruments (as per Michael Howlett), that economizes, for the moment, the heavy transaction costs of more coercive instruments. The choice confirms, again, government's tendency to choose least coercive instruments first.

There also may be institutional dimensions here, in the sense that North American governments, in general, seem to be more timid in attacking climate change than their European counterparts, possibly because of institutional elements, more particularly the absence of real equivalent of the European Union, which seems to transmit international norms more directly and forcefully, somewhat paradoxically, to its member states.

5.3. Case #3: The VCR (Voluntary Challenge Registry) and the selection of policy instruments for the Canadian, 1995, climate change policy

Context and history:

The government of Canada made a unilateral commitment to stabilize greenhouse gas emissions in 1990 and then committed to that objective again by ratifying the UN Framework Convention on Climate Change in December, 1992. In 1993 and 1994, governments, environmentalists and business discussed the instruments which should be used to reach that objective. On February 20, 1995 the federal-provincial (not including Quebec) national climate plan was released. The primary instrument used was voluntarism, in the form of the Voluntary Challenge and Registry (VCR). The federal government (alone, distinct from federal-provincial program) also, however, used these instruments: (1) research, education, demonstration projects; (2) very small financial incentives for ethanol; and, (3) regulation, in the form of appliance energy standards (eg refrigerators) which represented a very small portion of total GES emissions.

The federal government was selecting instruments here in the framework of federal-provincial consensus-based decision making.

In the fall of 1994 there was an internal debate in the federal cabinet between the Natural Resources Minister, who advocated voluntary programs, and the Environment Minister, who advocated regulation.

In 2002 and again in 2005 the federal government, this time acting without the provinces, said it would use law-based instruments. None have yet been used, however.

Instruments discussed, 1990-1995

The following instruments were mentioned by environmentalists:

- motor vehicle efficiency standards
- building code energy-efficiency insulation standards
- government funding for alternative energy sources
- more rigorous appliance energy standards
- a carbon tax
- provincial support for urban transit

The following instruments were mentioned by different government organizations:

The House of Commons Environment Committee, 1990:

- conservation measures
- support for renewable sources
- no position on nuclear energy financing

The Government of Canada Green Plan, 1990:

- research, technology development, demonstration projects
- agreements with private sector energy uses to increase efficiency
- information, education aimed at general public

- monitoring of GES emissions
- monitoring and publishing information on energy consumption
- climate change research
- law for appliance energy efficiency, with mandatory labelling
- reforestation, to provide carbon sinks

The Federal Provincial working group, February, 1994:

- recommended a "registry" program to induce voluntary action, modelled on a US Energy Department program, already in existence.

The Federal Provincial National Air Issues Co-ordinating Committee, June 1994

- voluntary program

These federal-provincial bodies and multi-stakeholder consultation groups reviewed a wide range of possible instruments. We only highlight the voluntary programs here because the VCR was eventually selected.

The Government of Alberta:

- voluntary instruments
- opposition to motor vehicle taxes

As for non governmental actors, let us mention two of them, in addition to the environmentalists referred to earlier:

Academics discussed the following instruments:

- In 1993, the Royal Society recommended green taxation
- In March 1994, the Conference Board recommended a fossil-fuel tax

Business discussed the following instruments:

- voluntary programs (BCNI, July 1994; Canadian Association of Petroleum Producers)

Instruments selected

1995	voluntary program	
2002	legally-binding contracts (covenants)	never used
2005	regulation under CEPA	never used
1998-2005	spending, primarily on research and technology development	

Explaining case 3 through theories of instrument choice

All the theoretical elements we have called upon to explain case # 2, Quebec's Ecogeste voluntary registry, apply here in the quite similar case of Canada's VCR (Voluntary Challenge Registry). However, because we are dealing with a national government, the situation is more complex, and thus we need to add additional theoretical elements.

As in the case of Ecogeste, the VCR is a voluntary program, and it constitutes the main federal response to climate change implemented until now. However, in the case of the federal government, there are a few other instruments used such as education, limited financial incentives and appliance energy standards. Also, and much more than in the case of Quebec, a wide variety of instruments were proposed by a wide variety of actors, in the consultation phase. One could analyze the instruments proposed by each of these actors as being motivated by self-interest, particularly in the case of Alberta, the petroleum sector, and business in general, all proposing voluntary instruments. More neutral participants, such as The Royal Society and The Conference Board of Canada, recommended measures that were more forceful, essentially in the form of taxes on energy as fossil fuels, instruments regarded by most economists as being more capable of bringing substantial and lasting change.

Compared, again, to Quebec, the institutional framework comes into play in the case of Canada, but in a more complex way. First of all, there might be here a degree of international

isomorphism-imitation-, in the sense that the VCR was modelled from the American Environmental Protection Agency of 1991. Also, the presence of Alberta, an important oil producing province, makes any reform more difficult to achieve from an institutional-political point of view, because of a specific “configuration of actors”-or network- that it brings about. In addition, the institutional conflicts between the Ministry of the Environment, more open to more coercive instruments at the outset, and Natural Resources Canada, the other major ministry in the discussion, more inclined towards voluntary measures, are more serious and structural than in the case of Quebec, which has no fossil fuel production to speak of.

Turning back to the larger institutional picture, it seems the Canadian federal government was in an almost schizophrenic dilemma between, on the one hand, act according to the diffusion of international norms and to its own (undeserved) reputation on environmental matters, and its oil producing agenda and proximity to the United States, on the other hand. In this latter case, there is the additional constraint of wanting a level-playing field with the United States, which can lead to a kind of “race to the bottom”.

In résumé, all that was said to analyze, theoretically, the case of Quebec’s Ecogeste apply in the Canadian case of the VCR, including the policy learning dimension, resource dependency, procedural dimension, and, here again, the tendency to use non coercive methods initially. The difference is that the institutional context is more complicated and the various interests more sharply opposed.

5.4 Case #4: Canada and Québec instruments addressing pollution of the St. Lawrence

Context and history

Although the courts have confirmed both federal and provincial governments have jurisdiction, in practice water pollution emissions are regulated by the provinces. Firms discharging wastes to the St. Lawrence were regulated by Québec in the 1970s. In 1986, the Québec Minister publicly called for increased federal spending on St. Lawrence pollution management, which led to meetings between the Québec and Canadian Ministers. In 1989, the two governments signed an agreement for a joint program, St. Lawrence Action Plan 2000, each committing to significant expenditures. The plan first focussed on the fifty largest polluters, and relied primarily upon extensive study of ways of reducing their pollution, accompanied by negotiation of agreements for "voluntary" action. The governments made it clear, however, they would use law if needed and a number of firms were subjected to regulatory requirements. This was followed by another five-year program.

In 1997, planning began for Phase III of the St. Lawrence program, this time aimed at small factories, villages and agricultural operations. Documents published by the Québec government talked about the problems of addressing pollution from a large number of small sources and made the argument that participatory action, based on voluntarism, was needed. The farm association, l'Union des producteurs agricoles, stated that farmers wanted to improve their operations. Phase III was launched in 1998, using the instrument of voluntary action.

Instruments discussed

We have not found evidence that any other instruments were suggested during planning prior to the 1998 Phase III program.

Instruments selected

For the first two phases, these instruments were used:

- spending on information
- negotiated agreements
- law-based regulation

In the third phase, these instruments were used:

- . exhortation to voluntary action, "participatory" programs
- . spending

Explaining case 4 through theories of instrument choice

The St Lawrence Action Plan 2000 is a theoretically interesting case, in the sense that it is our only case where relatively more forceful instruments were first chosen and gave way, subsequently, to a less coercive instrument, which would invalidate the theory that governments move from less coercive to more coercive. Yet, as we will try to show, and, because of the particularities of the case, the theory is not really contradicted by the case here.

Within policy analysis, the contextual factors are sometimes called upon to explain instrument choice, and these contextual factors sometimes refer to the type of problem we are dealing with, and the way actors of a network are configured. Our contention here, based on those elements, is that when governments of Canada and Quebec moved from phase I and II to phase III, they were addressing a very different environmental situation, even though both aimed at improving the water quality of the St Lawrence river.

Indeed, using language from the contextual approach within policy analysis, governments were facing a point source of pollution with relatively homogeneous group of actors in phase I, whereas they faced a non point source, diffuse, pollution problem along with a large set of different and heterogeneous actors in phase III. These contextual factors, drawn from the contextual approaches from policy analysis, make a world of difference. Consequently, we were not so much moving from coercive to less coercive instruments as we were moving from one type of problem to a very different one.

In phase one, when dealing with point sources and a limited number of identifiable actors (large companies), governments used a mixture of negotiated agreements and law-based regulation. We can explain the choice of negotiated agreements by information asymmetry, resource dependency and policy learning factors, and by the fact that less coercive instruments are used first, even "under the shadow of hierarchy". In organization theory terms, because of high bilateral dependency, governments have chosen "soft contracts", or in other words "open contracts". But we are left with the unanswered question of why, in addition, governments used law-based regulation, and our answer here, although still contextual, is slightly different. In our view, more coercive instruments were used in addition here, because the case of water, when pollution sources are known, is more constrained, from a public opinion point of view, than either air or soil, probably because drinking water is a more immediate potential health problem¹³.

If, in the case of phase I, just discussed, we are dealing with a certain degree of information asymmetry, favouring industry, the knowledge involved can be considered as "possible to learn" by governments, and thus leads in good part to (Howlett's) substantive instrumentation. But in phase III, when dealing with a diffuse problem caused by a wide variety of heterogeneous actors¹⁴, we are not dealing as much with knowledge asymmetry as we are dealing with "unknown knowledge", which leads governments to choose (Howlett's) procedural instruments, in this case participation, because it is the only option available for policy learning.

There are, unfortunately, reasons to be pessimistic here for greenhouse gas (GHG) reduction, in the sense that at least part of GHG reduction programs will face the same structural situation as the one described there in phase III, with many non point source pollution, caused by a wide variety of heterogeneous actors. In such a case, it may very well be that there is no easy "good fit" between the problem and the instrument, from an instrumentalism point of view of policy analysis, whereas, when facing point source pollution coming from an identifiable and limited number of sources, a relatively wide variety of instruments can effectively be chosen from.

5.4. Case #5: Voluntary programs to reduce aluminium industry greenhouse gas emissions

Context and history

This case was selected because formal written agreements for voluntary action were signed between the Quebec government and the aluminium trade association and three firms operating in the province (with many branch plants) in 2002-03. The context, however, was the over-all Québec approach to climate policy, discussed above, which was firmly based on voluntary action alone. The application of this approach to the large emitters, like aluminium smelters, was provided in the Québec climate plan, 2000-2002 (Gouvernement du Québec 2000, p.30), as follows:

"En vue de fournir aux grands émetteurs de GES l'occasion de prendre des engagements en fonction de leur capacité financière, des technologies disponibles et de leur compétitivité à l'échelle canadienne et internationale, des négociations seront entreprises au cours de prochains mois entre le gouvernement, les associations industrielles et les grandes entreprises pour parvenir à des accords volontaires, en commençant par les secteurs où les gains potentiels sont les plus significatifs. ... La négociation d'ententes avec les secteurs les plus émetteurs de gaz à effet de serre est un moyen de préparer les entreprises à des réductions futures de GES."

Although we do not yet have data on this, it appears that Alcan was acting to reduce its global emissions on a voluntary basis prior to signing the Québec agreement.

Instruments discussed

We do not yet have evidence of any suggestions for other instruments which might have been used to reduce aluminium emissions.

Instruments chosen

In January 31, 2002, a Memorandum of Understanding (MOU) was signed between Québec and the trade association, l'Association de l'Aluminium du Canada, with the objective of a 200,000 tonnes reduction by member firms by 2008; the MOU allows trading amongst firms.

On June 17, 2002, a MOU was signed between Québec and Alcoa Inc., with the objective of a 200,000 tonne per year GHG emission reductions, 2002-2004; this MOU was to be followed by new targets for 2005-2007 period.

On October 17, 2002, a MOU was signed between the Québec government and Alcan Inc., with new targets to be set each year.

On February 8, 2003, a MOU was signed between Québec and Aluminerie Alouette Inc., with the objective of a 12.3% reduction over the period 1996-2004.

Explaining case 5 through theories of instrument choice

The case of the voluntary agreements in the case of aluminium produces in Quebec, just described here, is quite similar to phase I of our previous case (case #4), the agreements dealing with a fairly limited group of large polluters along the St Lawrence river, only the characteristics of the case # 5 are pushed even further. The polluters are even more homogeneous and concentrated, and their power is greater, for they are exporters who employ a large number of people, and so the theoretical elements that were applied in phase I of case 4, namely information asymmetry, resource dependency, policy learning, and "soft contracts", all apply in case # 5, with even more pertinence.

Again, here, the decision of choosing, first, at least at the outset, less coercive instruments, confirms the policy analysis conclusion on the pattern of coerciveness.

There may be, in addition, an element of isomorphism, policy learning, and adaptation to international norms, but, in this case, it may very well occur as much at the company level than at the government one. Indeed, it may be that the Quebec companies are all the more willing to participate to these local programs that the international company of which they are part are

going in this direction internationally. And so, from a rational actor point of view, they can gain goodwill and good reputation at little extra cost, while still being “late adopter” within their industrial sector.

From a larger, socially efficient point of view, it is in any case rational for governments to first look at large emitters, such as those of this case, but also in case #4, because much quantitative progress can be made with relatively limited transaction costs.

In the present case, we must come back to the policy analysis notion of power, because we believe it plays here a crucial role. Indeed, as was observed in the case of “business strongly integrated into global markets... (and) highly capable of withdrawing from... regulation (that) alter conditions for production in unacceptable way”, in the case of Germany (Böcher and Töller, 2003, p.42), multinational enterprises have a definite negotiating advantage.. Their strength can change the process “from idea-based discussion to conflicts over distribution” (Böcher and Töller, 2003, p.30), and this is the type of process that often lead, in all probability, to the abandonment of taxes on energy or on fossil-fuels. In other words, ideas, even good ideas, can advance in the discussion phase, but they can come to a quick demise if they question in a structural way a certain distribution of power and property rights. In a more subtle way, the strength of these business concerns transform an environmental question into an “environmental and economic” question, and even into a “constellation of various objective and goals...solutions that make everybody happy” (p.44), whether or not they effectively address the initial problem at hand or not.

Having now dealt with each one of our five cases, we are now ready to conclude on how our different theories of instrument choice contribute generally to better understanding the choice of voluntary instrument for the solution of environmental problem.

General conclusion

Theories coming from economics, organization theory and policy analysis have helped to understand our five cases. Can we go further, in seeing how these three conceptual domains can be integrated at a more general level? In the following paragraphs, we will try to advance towards this goal.

Different theoretical domains can sometimes say very similar things, using different terms, as when economics refer to “information asymmetry” to describe what organization theory calls sometimes “information management”. But two theoretical domains can also be complementary as when policy analysis considers as its main focus what economics considers “outside”, “exogenous factors”.

As a starting point for integration, we must give a privileged position to policy analysis, if only because policy analysis now considers instrument choice as one of its central preoccupations, whereas economics and organization theory consider this question as a relatively peripheral topic. Policy analysis gives us, more importantly, important elements of context: the problem context and, secondly, the institutional context.

Dealing first with the problem context, policy analysis offers us concepts to characterize the environmental problem we are dealing with: is it a point source pollution, as in phase I of the St Lawrence case? Is it a diffuse problem, as in phase III of the same case? The problem context also refers to the configuration of the actors: for example, are they homogeneous, as in the case of the aluminium company of case #5?

Then policy analysis helps us understand the institutional context, and that is certainly its greatest contribution. In this spirit, we are dealing with the “logic of appropriateness”, made up of ideas, ideologies and national governance styles. For a time, at least, this institutional context becomes

more important than the effectiveness of the instrument. Of course, within this context, actors can pursue their individual advantage, as per Public Choice, but the institutional limits would seem more constraining for the shaping and the expression of these interests than first thought; also, with political institutional constraints, the goal of governments seem to be geared more towards “limiting losses” than towards “maximizing gains”.

The institutional context also includes the understanding of power. In case #5, the aluminium companies’ power, or Alberta’s power in the case of the Canadian VCR, certainly have impacts on the choice of instruments.

Institutional context also refers to the international context, and this approach can help us understand how international norms, through policy learning, shapes instrument choice, as when the Canadian VCR was modeled after the American EPA register, previously set up. In this spirit, there is a great deal of what organization theory calls “isomorphism”, or imitation.

We would like now to move away from policy analysis to look more closely at the larger socio-economic context (as opposed to the institutional context), where organization theory concepts would be very helpful in understanding the choice of voluntary agreements. Indeed, all the organization theory that explains why a large quantity of constantly changing information brings about an important change in organizational structure dealing with this information, from a centralized U form structure (U=unitary) to a decentralized M form (M= Multidivisional) one, greatly help us understand the choice of voluntary agreements as a decentralized format to deal with substantially increased levels of information. This understanding can be easily complemented with economics’ notion of information asymmetry, and with neo-institutional notions of “soft contracts” and “open contracts”, implemented “under the shadow of hierarchy”, in the spirit of reducing transaction costs.

Then, all these contexts, the problem context, the institutional context and the socio-economic one, come together in reality when the policy instruments is chosen and implemented. At this moment, a new form of learning occurs, in the form of a “reality check”. If, in a previous phase, the logic of appropriateness superseded the logic of instrument effectiveness, the situation can be reversed at this point. Indeed, if we do not necessarily choose the best instrument, in a naïve instrumentalist view, experience and a post-implementation reality check at least tells us what doesn’t work, as in the case of the problem of the level playing field in case# 1. But the reality check is also about how politically feasible the initial policy choice was. And, as we will suggest later, learning is about other elements of reality also. All this learning from a reality check may not all be objective, however, as the perception of what works, what doesn’t, and why, is partly (but not completely) a question of subjective perception.

Through all this, some elements of policy analysis are strongly confirmed, as in the idea that governments tend to use less coercive instruments first, and our case 4 does not disconfirm this, when phase I and phase III are considered as two different problems, and not as one. Also, the distinction that Michael Howlett makes between substantive and procedural instruments is very helpful in our cases, as voluntary agreements can often be seen as a procedural instrument which, in a subsequent phase, can give way to a substantive approach. In this sense, voluntary agreements, and perhaps procedural instruments in general, appear as a “format for learning”.

As economists remind us, voluntary agreements do not appear as strong or effective as instruments such as taxes, but they are chosen for what economists call “exogenous” reasons, as they often are the only politically acceptable instruments, and one which permits the players, all the players, to learn.

At this point, we would like to draw attention to the multifaceted dimensions of learning, in the case of voluntary agreements. Indeed, in a technical sense, and as we saw previously when

looking at organizations theory notions of information management, learning is about the technical matters at hand. But it is also about learning to discover other participants' reactions, as when both the Quebec and the Canadian governments are presently trying to learn in the case of greenhouse gaz reductions, as in our case 2 and 3. Learning can also be about better identifying what is one's true interest.

And so, voluntary agreements would very much appear as a learning format, a type of learning that involves many dimensions of learning. In a sense, this is why voluntary agreements often lead to something else, once the learning has occurred, or, then again, it may persist as a kind of permanent learning structure.

Many questions remain. For example, are there different structural types of voluntary agreements, each reflecting, in part, a certain type of learning? Are voluntary agreements operationally different in different contexts of learning? Will more case studies help us understand better, and/or will it help us understand in a more complete and parsimonious way instrument choice in general.

One last point. If, in this paper, we have concentrated on instrument choice, a larger question, not addressed here, is how useful can voluntary agreements can be for greenhouse gas reduction policies. Drawing from our cases, specifically from cases 2, 3 and 4, we have to be at least partly pessimistic, because those cases underline the inherent difficulties of dealing with diffuse problems which comprised a large number of heterogeneous actors.

¹ **Notes:**

The lack of analysis and of studies on voluntary agreements can be contrasted with the case of Germany, where it seems, there has been an interest in studying this policy instrument. See Michael Böcher and Anne Elisabeth Töller, "Conditions for the Emergence of Alternative Environmental Policy Instruments", paper presented at the 2nd ECPR-Conference, Marburg, 18-21, September, 2003, pp. 39 and 41

² Michael Böcher and Annette Töller make the observation that, in Germany, in the case of a replacement of a substance that is being phased out for environmental reasons, voluntary agreement provides some flexibility in a first stage, to be followed by a second stage where legal clarity is established through prohibition. See their "Conditions for the Emergence of Alternative Environmental Policy Instruments", p. 34, and note 54.

³ Panagiotis Karamanos identifies four essential elements to voluntary agreements for the environment: there has to be (1) a voluntary element (2) an agreement (3) between at least two different partners (government, business, non profit) and (4) it has to be for the environment (Karamanos, 2001). In our own study, we look essentially at the case of government-enterprise agreements. But Böcher and Töller (2003, p.32) note that in all the cases they have studied, even declarations by business associations, government actors had a role to play.

⁴ There have been different criticisms directed towards some types of these Unilateral Commitments. For example, codes and certification processes have been described as "blunt and imperfect tools for augmenting the accountability of global firms...(they proliferate) and compete for legitimacy ...(but) there is no guarantee that the most effective standards in environmental ...terms will win these battles". See: David V.J. Bell, "Voluntary Codes and the New Sustainability Paradigm", Working Paper, January 2004, p.15).

⁵ David (2005) discusses how VA may be used to improve an emission tax in an environment where firms have market power.

⁶ Of course, there has been a variety of explanations which was advanced to explain, more generally, firms' willingness to pay more attention to the environment. Referring to Brian Garrod, David V.J. Bell mentions three possible explanations: a new sense of social responsibility, the desire to gain competitive advantage, and finally the attempt to mislead through "greenwashing". Referring again to Garrod, the conclusion seems to point to a mixture of the second and third explanations (David Bell, "Voluntary codes and the New Sustainability Paradigm", p. 16).

⁷ In a more general sense, there can be an important asymmetry "between regulation and those supposed to be regulated" and "the higher the complexity and dynamic of modern technologies, the greater is the asymmetry". (Böcher and Töller, p.18; see also p.22, when mentions is made of the fact "agency bureaucrats are strongly dependent on the knowledge available at the site").

⁸ They may be unavailable. When they are available, it is emphasized that the process of transferring a dollar from one sector of the economy to the other (through fiscal means) is a costly process.

⁹ There also have been reasons given why voluntary instruments have been preferred to market-based instruments by industry itself, and we should not assume that business actors welcome market-based instruments, (even) opposite to regulatory instruments". Böcher and Töller explain (p.22): "this is partly due to the fact that regulation establishes a kind of public recognition of the process once approved and thus produces security for the enterprises concerned". Although market instruments have the reputation of having "much more discretion and flexibility", their "implementation...is rigid by nature". Another reason for not embarking in market instruments is that they (market-based instruments) show more clearly the costs and the distribution of costs of the intended instrument, the "different burdens according to the different sectoral emission-intensity...winners and losers appear as a result of this re-distribution of property rights...The policy process transforms into zero-sum game, where mostly the power interest influences the choice of environmental policy instruments...Only market-based instruments that do not change the existing distribution of environmental policy costs too much can be achieved although these instruments do not have much in common with economic textbooks (pp.42-43).

¹⁰ The labels « contingentist » as well as « constitutivist » and « proceduralist » are taken from a typology of instrument choice proposed by Linder, S.H., and Peters, B.G. (1998) *The Study of policy instruments: Four schools of thought*. In G.B. Peters, and F.K.M. Van Nipsen (Eds.), *Public Policy Instruments: Evaluating the Tools of Public Administration*. pp. 33-45. Cheltenham, UK; Northampton, MA, USA: Edward Elgar.

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importance of external factors.

¹² In the German case, as reported by Böcher and Töller (2003, p.36), a very similar pattern of events prevailed: "...there seems to be a kind of trial-and-error process. We can identify three very recent cases where waste agreements offered or concluded in the mid-nineties were replaced by a legal regulation".

¹³ We have some preliminary quantitative data, comparing water, air and soil, which goes in this direction.

¹⁴ Böcher and Töller (2003, p.35) point to the same difficulties when dealing with heterogeneity of participant in public environmental public programs.

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