Economic Council of Canada
Conseil économique du Canada

Technical Report No. 12

The Choice of Governing Instrument: Some Applications

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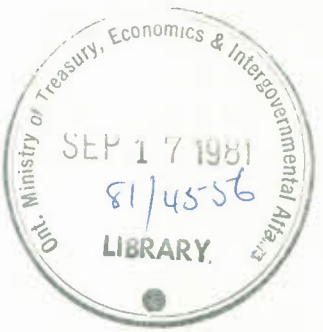

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ISSN-0225-8013

JULY 1981

ACKNOWLEDGMENTS

In the preparation of these applications, Daniel Vincent played a major research and writing role with respect to Chapter II, John Gibson undertook some of the research and writing for Chapter II (with Elaine Kirsch) and for Chapter V, and carried the principal research and writing responsibilities for Chapter III. Chapter III draws heavily on a recently completed LL.M. thesis at the University of Toronto, Faculty of Law, undertaken by Albert Hudec. We gratefully acknowledge the assistance of these researchers.

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Résumé

Le principal objectif de la présente étude est de tenter d'expliquer ce qui motive le choix des instruments de réglementation dans une société démocratique. Dans la plupart des situations, les responsables des décisions en matière de politiques ont à leur disposition un large éventail d'instruments dont ils peuvent se servir pour promouvoir certains objectifs. Par exemple, si un gouvernement cherche à relever le niveau de revenu des agriculteurs, il peut leur envoyer des chèques mensuels, créer des offices de commercialisation des produits agricoles qui imposeront des restrictions sur les prix et la production, faire des concessions fiscales spéciales, ou contingenter les importations. Quelles considérations entrent-elles en jeu lorsque les décisionnaires font ces choix ?

Il est important à plusieurs égards, en vue de la réforme de la réglementation, de trouver la réponse à cette question. Deux conséquences très importantes en dépendent. D'abord, en supposant que le choix d'un instrument ne se fait pas au hasard, mais reflète plutôt une décision qui tient compte de certaines contraintes, l'identification de la nature de telles contraintes est essentielle pour déterminer quelles options s'offrent aux réformateurs de la réglementation, dans leur

tentative de réaliser une combinaison différente des instruments et des objectifs. Deuxièmement, il semble que le fait qu'un large éventail d'instruments soit disponibles aux autorités publiques, dans de nombreux contextes, laisse supposer qu'il existe de grandes possibilités de substitution d'un instrument par un autre. Une des conséquences de ce degré élevé de substitution possible serait que les réformes visant un instrument particulier seraient rendues inefficaces si les décisionnaires y substituaient un autre instrument. Dans un tel cas, il faudrait que les réformes couvrent tous les instruments pouvant facilement servir de substitut.

L'étude passe ensuite à l'examen des perspectives des principaux acteurs dans le processus décisionnel collectif, et de la façon dont ces perspectives peuvent influer sur le choix d'un instrument particulier. Les auteurs relèvent ensuite les caractéristiques techniques et politiques des principales catégories d'instruments d'intervention -- les enquêtes publiques, les politiques fiscales et budgétaires, l'entreprise publique et la réglementation -- dans le but d'identifier les principaux facteurs qui déterminent le choix. Ils examinent enfin le choix des instruments utilisés dans quatre domaines d'application : la culture, les rentes énergétiques, l'environnement et le commerce.

Summary

The central purpose of this study is to attempt to explain the choice of governing instruments in a democratic society. In most policy contexts decision-makers have available to them a range of alternative instruments which can technically be deployed in the promotion of given policy objectives. For example, if a government wishes to enhance farmer's incomes, it can send farmers cheques each month, create agricultural marketing boards which impose price and production restrictions, provide special tax concessions, or impose import quotas. What considerations inform the calculus of policy-makers in making such a choice.

Resolving this question is central to many aspects of regulatory reform. Two very large issues are bound up in its resolution. First, assuming that the process of instrument choice is not random but reflects decision-making under certain kinds of constraints, identifying the nature of those constraints is important in determining the options open to reformers of regulation in seeking to achieve a different matching of instruments and objectives. Second, the fact that a wide choice of instruments is available to policy makers in many contexts appears to imply a high degree of substitutability among many of these instruments. The implication of this for reform of regulation is that to the extent that there is a high degree of substitutability among particular kinds of instruments in particular policy settings, reforms that are instrument-specific may be rendered ineffective as decision-makers substitute away from the "reformed" instrument. In this case, for reforms to be effective, they would need to address all close substitutes.

The study proceeds by way of examining the perspectives of the principal actors in the collective decision-making process, and how these perspectives are likely to bear on the calculus of instrument choice. Then the technical and political characteristics of the major

classes of instruments of intervention - public inquiries, tax and expenditure instruments, public enterprise, and regulation - are surveyed with a view to identifying important determinants of choice. The study concludes with an examination of instrument choice in four applied settings: cultural regulation, rent capture in the energy field, environmental regulation, and trade protection.

CHAPTER I

INTRODUCTION

That in most policy contexts decision-makers have available to them a range of alternative instruments which can technically be deployed in the promotion of given policy objectives seems an uncontroversial fact. If a government wishes to control a monopoly, it can apply competition law to it (e.g. require divestiture or order cessation of monopolistic practices), it can tax away monopoly profits, it can regulate prices and output through a statutory regulatory agency or other agency of government, it can (in the case of natural monopolies) auction off monopolistic entitlements; it can take over and publicly own the resources in question; in the latter event, it can rely on public ownership alone, or subject the publicly owned firm to regulation by a statutory regulatory agency or other agency of government. We in fact observe all of these instruments being employed to control monopolies. If a government wishes to promote indigenous cultural activity, it can engage in public ownership (C.B.C., N.F.B.), provide direct subsidies to theatre groups, finance granting institutions (Canada Council), provide tax incentives (capital cost allowance on films, expense allowance for advertising), and engage in regulation (C.R.T.C. Canadian content rules). If a government wishes to enhance farmers' incomes, it can send farmers cheques, create agricultural marketing boards which impose price and production restrictions, provide special tax concessions and impose import quotas. If a government is concerned about the hazards of products

or the hazards of the workplace, it can create private rights of action, introduce insurance schemes, provide, or mandate the supply of, information about the hazards to affected parties, set standards, and if it chooses to set standards, do so directly through a department or government or indirectly through a statutory regulatory agency. Across the entire landscape of government activities, we note the fact that these kinds of choices are almost always available. Moreover, we observe in fact a wide spectrum of instruments being chosen, often in conjunction with one another, by different governments at different times in given policy contexts.

The puzzle that this phenomenon presents is, in the first instance, to identify the factors which enter a policy-maker's calculus in matching instruments with objectives, or means with ends. Resolving this puzzle is central to many aspects of regulatory reform. Two very large issues are bound up in its resolution. First, assuming, as we should, that the process of instrument choice is not random but reflects decision-making under certain kinds of constraints, identifying the nature of those constraints is important in determining the options open to reformers of regulation in seeking to achieve a different matching of instruments and objectives. For example, to urge that in the future instruments should be chosen on the basis of a certain set of selection criteria when these deny inherent constraints in the political process would be to proffer advice of little or no utility.

Second, the fact that, both technically and empirically, a wide choice of instruments is available to policy makers in many policy contexts appears to imply a high degree of substitutability among many of these

instruments. The degree of substitutability among instruments in meeting an objective might, in economic jargon, be measured as the cross-elasticity of supply of the instrument. This factor will directly influence the effectiveness of instrument-specific reform proposals. That is, to the extent that instruments have a high cross-elasticity of supply in a certain setting, a change in the characteristics of one of the instruments is likely to lead to substitutions among the instruments. Therefore, if the change is perceived by the decision-makers as an increase in "price" of the instrument, one should expect that the decision-makers will, over time, decrease the utilization of that instrument, substituting for it relatively lower priced instruments. For example, if public participation and openness of decision-making are considered unattractive by the decision-makers, a change enhancing public participation and openness in a particular instrument is likely to lead to a decrease in that instrument's utilization absent comparable reforms to all other instruments having a high cross-elasticity of supply. The implication of this concept is that attempts at instrument-specific reforms are substantially constrained by the substitutability of instruments and that to the extent that there is a high degree of substitutability, the effect of the changes will be largely illusory. The concept also implies that in circumstances involving a high cross-elasticity of supply of instruments, changes should be more broadly structured so as to avoid undue focus on any particular instrument.

These two issues - the nature of the constraints under which policy makers choose instruments, and the factors which determine the degree of substitutability among instruments - are the dominant themes addressed in a companion volume, The Choice of Governing Instrument: A Conceptual Framework of Analysis, which we have written for the Economic Council of Canada (publication forthcoming). In that volume, we develop the hypothesis that the process of instrument choice in our political system involves three key sets of variables.

First, the choice of instrument may be legally or constitutionally con-constrained. Second, rational instrument choice involves, to the maximum extent possible, the deployment of instruments that confer benefits on marginal voters and impose costs on infra-marginal voters. Third, rational instrument choice must take account of imperfect information on the part of both voters and political parties. Political parties will respond to voter ignorance by choosing instruments which provide highly concentrated benefits on marginal voters while imposing widely dispersed costs on other marginal voters (where costs can not be confined to infra-marginal voters). As well, the provision of subsidized, selective information, along with symbolic reassurances, will seek to expand perceived benefits over real benefits and reduce perceived costs below real costs. In short, a strategy that seeks to magnify the gains and depreciate the pains will be influential in

instrument choice. In addition, imperfect information on the part of political parties may lead to the selection of instruments that maximize reversability and flexibility, by providing opportunities for continuous marginal adjustments in policy "objectives".

Our hypothesis was contrasted to that of both Becker,[1] who has argued that politicians will choose the instrument that attains a given objective at least cost, and Doern/Wilson,[2] who have argued that politicians will minimize coercion in their choice of instrument. Under the analysis we develop in the companion volume, politicians must reckon not only with real costs and real coercion but, more importantly, with perceptions of costs and benefits. Even where costs or coercion are perceived, it may be consistent with the vote maximizing calculus of a political party to proceed with a policy nonetheless, either because these perceived costs are imposed on infra-marginal voters, or even if imposed on marginal voters, are outweighed, in terms of voting behaviour, by the response of the marginal voters for whose benefit the policies are intended and whose preferences for them may be more intense than the preference of the cost bearers in opposition to them.

The following axioms seem to emerge from our analysis as influential in instrument choice:

1. It is in the interests of a governing party to choose policies which confine the benefits to marginal voters and confine the costs to infra-marginal voters.

2. In order to overcome the information costs faced by marginal voters, it is in the interests of a governing party to choose policies which provide benefits in concentrated form so that their visibility is enhanced and to impose the costs in dispersed form so that their lack of visibility is enhanced.

3. A governing party cannot choose only policies which provide highly concentrated benefits, because as the benefits become more clearly visible, the smaller the group of voters on which a party can realize a political return.

4. It will be rational for a governing party to treat highly concentrated or well-endowed interest groups as marginal voters to the extent that they possess an ability to provide (or threaten to provide) subsidized, selective information directly to marginal voters that might change their political preferences or to provide resources to the governing party with which it can in turn either confer benefits on marginal voters or provide subsidized, selective information to marginal voters intended to influence their political preferences.

5. In order to secure the co-operation of bureaucracies in implementing policies, a governing party is likely to attach special weight to the views of bureaucrats in formulating policies. Bureaucrats in advocating policies to their political overseers will have a tendency to favour policies which have a heavy bureaucratic orientation, entailing more jobs, larger fiefdoms and more power and prestige. The virtues of non-collective, decentralized forms of resource allocation are likely to be depreciated.

6. The more widely dispersed the group of marginal voters sought to be benefitted by a chosen policy the less real the benefits need be.

7. Perceived benefits can be made to appear to be greater than real benefits by the provision by a governing party (typically through the mass media) of subsidized, selective information, often of a highly symbolic nature.

8. Where, in order to confer benefits on a relatively dispersed group of marginal voters, it is necessary to impose costs on a relatively concentrated group of marginal voters, it will be in the interests of a governing party to choose a policy instrument that minimizes real costs over time while obscuring the erosion of real benefits through the provision of symbolic reassurances to the beneficiaries of continuing commitment to the initial policy.

9. Where the dispersion of costs does not fully obscure their existence from marginal voters who are bearing them, it will be in the interests of a governing party to provide subsidized, selective information and symbolic reassurances to the cost-bearers to reduce perceived costs below real costs; costs will be represented, to the extent perceived, as "sacrifices" or "investments" made to secure long-term benefits.

10. It will be rational for a governing party to choose policy instruments that confer benefits, or perceived benefits, on marginal voters throughout, or at least late in, the current electoral time period, while attempting to defer real, and perceived, costs borne by other marginal voters to some point in time beyond the current electoral time period where causal connections are attenuated. Where this is not possible, instruments may be chosen that impose these costs at the beginning of the current electoral time period rather than at the end so as to exploit incomplete voter recall. For similar reasons, a governing party will tend to offer policies at election time designed to maximize voter support while between elections policies may tend to be offered which maximize interest group support.

11. Where a governing party is uncertain as to the impacts of alternative policy instruments on marginal voter interests or on marginal voter awareness of these impacts; the intensity of voter preferences surrounding these impacts; or opposition parties' alternative policy proposals on these issues and voter responses thereto; it may be

rational to choose an instrument that maximizes reversability and flexibility, so that continuous marginal adjustments in the balancing of interests can be made over time.

12. In the case of policies which impose real and perceived costs on marginal voters, it may be rational for a governing party to assign the administration of the policies to an "independent" agency of government so that the causal relationship between the costs and the party is attenuated in voter perceptions.

13. Widely dispersed interest groups and groups of voters who possess inferior information-processing capacities are particularly vulnerable to the substitution of symbolism for substance in the choice of policies.

14. Recognizing the limited investments in information about policy issues that most voters are willing and able to make, the media will often tend to trivialize complex policy questions both in the identification of the issues and in proposed prescriptions for their resolution. This may often involve advocacy of simplistic collective policy responses to perceived matters of public concern so that stories can be turned over at a sufficient rate to retain the public's attention. Because the public may be influenced by this advocacy, publicians may also be compelled to attach weight to it.

In the present volume, we develop some specific applications of the general analysis of instrument choice developed in the companion volume. In these applications, we examine the factors that appear to have informed instrument choice in a variety of policy settings.

In Chapter II, we examine instrument choice with respect to the promotion of Canadian content in broadcast programming, in particular the choice of direct regulation rather than taxes and subsidies and the specific regulatory modalities that have evolved. In Chapter III, we examine instrument choice with respect to rent capture in the energy field, particularly the respective roles of price regulation, taxation, and public enterprise in this respect. In Chapter IV, we examine instrument choice with respect to pollution control and attempt to explain the general policy preference for regulatory standards rather than abatement taxes. In Chapter V, we examine instrument choice in the field of trade protection, and attempt to explain why governments erect non-tariff barriers to trade (e.g. quantitative restrictions, anti-dumping legislation, customs valuation procedures, discriminatory technical standards, domestic subsidies) in substitution for explicit tariffs whose deployment they may be willing to foreswear (under GATT).

CHAPTER I

FOOTNOTES

1. Comment, (1976) 19 J.L. & Ecs. 245.

2. Issues in Canadian Public Policy (1974) at 339.

CHAPTER II

CANADIAN CONTENT REGULATION IN BROADCASTING *

I. Introduction

This study examines part of the history of the Canadian government's intervention into broadcasting, a mode of communication that seems to be playing an increasing role in cultural, social and political change in the western world. While the government has also used direct subsidies and tax incentives for the achievement of cultural objectives (a term defined below), its attempts to create an indigenous Canadian broadcasting service have relied mainly on ownership and regulation. Ostensibly, the policy "goal" is clear - the promotion of a distinctive Canadian culture. But it is not always clear why the government has chosen the specific means that it has now how effective these interventions have been. Before turning to a brief discussion of the many involvements of the Federal Government in the cultural field it is important to clarify a few basic concepts.

The meaning of the word "culture" is, to say the least, ambiguous. To some the term culture encompasses almost all aspects of the social attitudes and behaviour of people living in the same community on a continuing basis. It covers such seemingly trivial matters as table manners and such undeniably important matters as respect for authority. To others the term "culture" is almost synomous with "the arts" - the expressions of a people in drama, music, the dance, film and the print media.

As intellectually stimulating as these semantic issues may be, this paper adopts the following undoubtedly unsatisfactory, and no doubt cowardly, working definition: culture is what the Government of Canada supports, as such, in one way or another. And as we will soon see, this means that culture encompasses a wide variety of activities indeed.

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* We wish to express our gratitude to Charles Dalfen for his comments on an earlier draft. Of course, he is neither responsible for any errors nor for the opinions set forth. Daniel Vincent played a major research and drafting role in the preparation of his study. Neil Wilson also assisted us at a later stage. We wish to thank them and absolve them simultaneously.

A distinction must be drawn between the concept of "culture" and the concept of Canadian cultural endeavours. Canadian culture might be thought to include a set of unique qualities of the kinds of cultural products we have listed above - music, dance, books, film and so on. Canadian cultural endeavours, on the other hand, would include the production of these kinds of cultural outputs using Canadian-owned inputs (at least in part) and/or cultural outputs physically produced in Canada. Obviously, Canadian artists and technicians can produce a film in Canada that has nothing distinctively Canadian about it other than the fact that it was produced by Canadians in Canada. Indeed, in order to be salable in a wider market, it might well be that, at least in some instances, any uniquely Canadian qualities either in subject or treatment, would be strictly avoided. Presumably because it is so difficult to define the inherent qualities of cultural products that are uniquely Canadian, government assistance for the most part involves assisting Canadian productions, or the use of Canadian inputs, rather than the uniquely Canadian quality of the product itself.

A third point needs to be made. The stated intentions of government policies can diverge from their actual effects - whether consciously or not. Government intervention may be rationalized as the attempt to at least protect, or preferably release, the latent culture of the nation without altering it. But conceivably the intervention may be molding it in particular directions, intentionally or not. These directions might be unacceptable if they were widely recognized. Liberal democracy is predicated upon the assumption that governments carry out the will of the majority of the citizens. The notion that governments consciously manipulate, or try to manipulate, the tastes and preferences (and hence desires) of its citizens carries one into dangerous territory. Obviously, if a government could readily make the citizens want what the government wants "the popular will" or "majority rule" would be meaningless in every ideological sense. It is not my intention to pursue this matter further in this paper. However, it should be noted that the potential dangers no doubt explain in large part the way in which support has been given. As will be seen, it has seemed important for government neither to interfere nor to appear to be interfering in the substance of the cultural activities

supported, at least directly. This aspect of government involvement in so-called cultural matters presents an ever present danger.

It is important to recognize that by supporting Canadian culture the government, in effect, is usually supporting Canadian cultural endeavours and thereby benefitting the Canadian-owned inputs (human capital, equipment and facilities) used in these endeavours. This is not significantly different in principle than its support for any Canadian industry except that this one happens to yield a product that is deemed to be "cultural". Whether or not the personal benefits from government support policies derived directly by Canadian owners of inputs into the Canadian cultural industry are an intended or an unintended side effect is not important: they exist.

Hardly surprisingly, the two groups that press for more government support are the cultural nationalists who believe they would derive a benefit from changes in the quality of product, presumably brought about by more government involvement, and the Canadian owners of inputs into Canadian cultural industry. Obviously these owners are also typically avowed cultural nationalists, at least publicly.

Leaving aside the obvious self-interest arguments for government support of Canadian culture, the widely-held presumption is that a uniquely Canadian culture could not long exist without government intervention. Consider the fact that the American population outnumbers the Canadian ten to one: consider the fact that, with the important exception of French Canada, English is common to both countries and hence creates no barrier to cultural imports: consider the fact that Canadians have American cultural products readily available at low to zero cost: consider the fact that in many cases production costs are independent of market size so that a product that can only be distributed in Canada costs ten times as much per capita as an American product. All of these facts, coupled with a history based on the search for a Canadian uniqueness and independence from the United States, presumably are the reasons why most Canadians favour government support for Canadian culture and Canadian cultural endeavours.

While one may not be able to define satisfactorily what culture is, one thing is certain: for the federal government, culture is big money. In the 1978-79 fiscal year, the programme budgets for agencies, corporations, and boards, etc. (including the CBC) set up to aid cultural development totalled seven hundred and eighty-one million dollars.[1] David Silcox, director of cultural affairs for Metro Toronto, estimated that the federal government spends $30 per capita on culture-related activities.[2] Such figures do not include revenues forgone through tax incentive programmes, nor the costs generated by the regulation of various sectors. A look at how the government spends this money shows the various means by which it attempts to aid Canadian culture.

The federal government agency directly responsible for the promotion of Canadian culture is the Department of Communications. It is mandated to assist in the continuing development of federal cultural policy and programs to encourage and support artistic and cultural projects of national significance which are complementary to, or outside the concern of, federal cultural agencies.

A rough indicator of the nature and extent of the federal government's involvement in cultural activities, excluding regulation, can be obtained from its direct and tax expenditures. (Tax expenditures are concessions that forego revenue.)

In 1979-80 the direct expenditures (in millions of dollars) were as follows:[3]

Canadian Broadcasting Corporation	$522
National Film Board	31
National Library	15
National Museums	50
Canada Council	41
Public Archives	21
Social Science and Humanities Research Council	36

Unfortunately quantitative estimates of the tax expenditures are not available. However, the following items are listed (along with some others)

under "culture" in the "Government of Canada Tax Expenditure Account" published in December, 1979.[4]

Tax Expenditures

Non Taxation of capital gains on gifts of property under the Cultural Property Export and Import Act

100 percent write off for Canadian films

Write off on art work purchased by businesses

Exemption of newspaper and magazine producton from from sales tax

Exemption of books from sales tax

Exemption on the outputs of craftsmen, artists and sculptors from sales tax

II. Culture and Broadcasting

In general, the government has played the role of the country's largest and most generous patron of the arts. Specifically, in the field of broadcasting, however, it has taken an even more direct stance. While the state has a number of technical and legal regulatory responsibilities in national broadcasting, as far as culture in this medium is concerned, the most ostensible aim of government has been to aid the development of a strong, distinctly Canadian, broadcasting system and program production industry.

Since 1932 the broadcasting policy of the federal government has supposedly rested on a consistent set of national objectives. Most recently, these goals have been expressed in the statement of "Broadcasting Policy for Canada" contained in s.3 of the Broadcasting Act R.S.C. 1970, c. B-11. The broadcasting system is to be a single system "effectively owned and controlled by Canadians." It should offer a varied, comprehensive choice of programs, permitting a "balanced opportunity for the expression of differing

views on matters of public concern." Broadcasting service must be offered in English and French, "be extended to all parts of Canada", and serve the needs of all regions of the country. Programming is to be of "high standard", "using pre-eminently Canadian and other creative resources". It must balance "information, enlightenment and entertainment for people of different ages, interests and tastes". Broadcasting must provide educational services. The system is to promote the "exchange of cultural and regional information and entertainment". Finally, national broadcasting must "contribute to the development of national unity [which is surely very different from a "cultural" objective in the minds of most Canadians] and provide for a continuing expression of Canadian identity."[5] In short, the broadcasting system has consistently been conceived as a vehicle for promoting Canadian culture as a means of expressing the distinctive values and preferences of Canadians. Control over broadcasting has been regarded as vital to the development of the Canadian identity.

To this end, the federal government has relied extensively on two forms of policy instruments -- public ownership and government regulation.[6] In the former case, a Crown Corporation was created to help the government monitor and control the industry. The Canadian Broadcasting Corporation, established in 1936 following the dismantling of the Canadian Radio Broadcasting Commission, was to be the dominant force in the Canadian broadcast media. From 1936 to 1958, officially at least, private broadcasting operations were looked upon only as supplements to it and were regulated by the public service. The Corporation was partially financed by revenues gained through its licensing functions and through advertising. By 1960, however, certain developments in the broadcasting system led to the Corporation's increasing commercialization. The growing cost of operations following the introduction of television, the loss of the CBC's licensing revenues in 1953, and other sources of funds later in 1958, caused the CBC to become more dependent upon advertising revenues. Following the 1958 Broadcasting Act, private networks were allowed both to form and were officially recognized as competitors with the Corporation.

The growing competition led the CBC to commercialize further. In the 1960's, the federal corporation began to broadcast progressively more American

shows. Only after public opposition grew in the latter half of the decade, though, was a policy decision taken in 1969 to actively promote Canadian programming.[7] While advertising revenues still form a large part of the CBC's revenues -- about 20% of the Corporation's operating costs -- approximately 63% of its current programming consists of Canadian produced shows.[8]

Despite continuing commercial pressures, the federal government still claims to rely on the CBC as a major instrument for the promotion of national cultural objectives. In a speech, "Touchstones for the CBC", A.W. Johnson, president of the Corporation, set forth his interpretation of its role in Canadian culture:

> Today the CBC reaches 99 per cent of the 23 million Canadians from the 49th parallel to beyond the Arctic Circle. The Corporation operates two national television networks, four radio networks, a northern service, an international service, an Armed Forces service, and the most sophisticated, complex, and extensive distribution system in the world. The CBC serves Canadians in seven time zones, and broadcasts in our two official languages, in 10 native languages in the North, and in 11 languages in the international service.
>
> The sheer volume of CBC programming is overwhelming; about 150,000 hours of radio programming per year, and nearly 18,000 hours of original television productions.
>
> No major network in the world does as much local and regional programming as the CBC.
>
> We produce three times as much television programming and twice as much radio programming as the BBC - with half the staff. We are more decentralized than any other major broadcasting system in the world. We produce network programming across the country while most other broadcasting corporations concentrate network production in only a few locations.
>
> Our Canadian programs reach millions of Canadians. On the English television network for instance, Front Page Challenge and Marketplace are viewed by more Canadian adults than such mass appeal American programs as Kojak, The Streets of San Francisco, Mary Tyler Moore, or Carol Burnett. French network programming such as Les Beaux Dimanches, Le Soixante, or almost any teleroman (popular drama) do equally well.
>
> We have 11,000 employees and spend about 500 million dollars. That's an enormous amount of money. We get some of it from commercials, but most of it from the taxpayers. It works out to

about $1.60 a month that every Canadian pays to keep public broadcasting going in this country.

Much of the money goes to pay for the pure geography of Canada - getting our radio and television signals across the Nation through our satellite and other distribution systems to more than 1,000 radio and television stations, affiliates, and rebroadcasters.

Our creative people - the performers, the producers, the composers, writers, musicians, editors, reporters, researchers, directors, and all the hands-on program people are paid 130 million dollars of this total. About 50 million dollars specifically goes to members of the talent unions in Canada - AF of M, ACTRA, Union des Artistes, and Societe des Auteurs et Compositeurs. It is worth noting here, because so much fuss has been made about it, that of all the performers hired in English TV variety and drama production, more than 95 per cent have been Canadian residents, and if you add Canadian performers living outside Canada who are members of ACTRA, the full Canadian figure is 97.7 per cent.

The radio service alone is a significant means of support for the 13 Canadian symphony orchestras that are heard regularly on our networks.

Beyond any question the CBC today is the greatest single source of support for the arts of Canada.

But the federal government has not relied upon the CBC exclusively to promote Canadian programming: with the introduction of private networks in Canada, such a policy likely would not have been feasible. In fact, government regulation of programming content has been the primary tool over the past twenty years to promote a "distinctively Canadian" broadcasting system. The CBC has always exceeded Canadian content requirements.

III. Content Regulation: A Brief History

The decision of the federal government to use the regulatory instrument in broadcasting, its effect and its future, will concern the rest of this paper. While the state has been able to employ all forms of instruments in its efforts to promote a national culture, its decision to utilize regulations to achieve this goal in broadcasting offers a prime opportunity to examine the forces at work in choosing a policy instrument.

Although many radio and television broadcasting stations are provincially incorporated, the courts have interpreted the B.N.A. Act as giving the federal government exclusive regulatory power over all aspects of radio, television and cable television transmission and programming, subject only to exclusive provincial control of education under s.93 [of the British North America Act, 1867, 30 and 31 Vict. c-3 as am. (UK).] In Re Regulation and Control of Radio Communication [1932] A.C. 304, the Privy Council stated that federal regulatory authority could be defended on several grounds: 1. broadcasting was a matter of "national concern" and therefore fell within federal authority to make laws for the "Peace, Order and good Government of Canada", 2. under s.132, the federal government has implementing power with respect to international treaties such as the International Radio Telegraph Convention (1927); and 3, broadcasting constitutes a "'telegraph' line connecting the Province with other Provinces and extending beyond the limits of the Province under the s.92(10) (a) exceptions to provincial powers. The court defined a "telegraph" as "an apparatus for transmitting messages to a distance, usually by signs of some kind." The question of exclusive regulatory powers re intellectual content (i.e. programming) of broadcasting was finally resolved in Re C.F.R.B. and the Attorney-General of Canada, (1973) 3 O.R. 819; (1974), 38 DLR (3d) 335. Control of program content was held to fall within the federal government's "Peace, Order and good Government" power as a matter of national concern. It appears to be clear that as intrepreted by the courts, the principal limitation on this power is that the provinces have authority over the educational aspects of broadcasting under s.93 of the B.N.A. Act. (In addition there are provincial laws restricting certain kinds of advertising) The Supreme Court of Canada in late 1977 also declared cable television undertakings, including program content, to be subject to exclusive federal regulation, thus legally confirming regulatory policy since the inception of cable television in the early 1970's.

The federal government, through its agencies, the earlier Board of Broadcast Governors and the current C.R.T.C., has administered content regulations in television for two decades and in radio for one decade. It was hoped that by requiring the production of a significant amount of

Canadian programming, Canadians would in time attain a higher degree of professional competence in the different types of television programming. This, in turn, it was thought, would result in a wide range of high-quality, Canadian-produced programs which would be enjoyed by significant numbers of Canadian viewers in all broadcasting time periods including peak veiwing hours.[9] The increased demand for Canadian shows would add a needed increase in the funds devoted to the program production industry and the artists dependent on them. The decision to implement regulations was in response to the commercialization of the broadcasting system following 1958, and the resulting growing rendency by both public and private broadcasters to provide American shows almost exclusively.

Until the Broadcasting Act of 1958, the CBC Board of Governors was responsible for the regulation of all broadcasting enterprises in Canada. With the recognition of private networks as CBC competitors, it was determined that the responsibilities for regulating the industry should be allotted to an independent agency, the Broadcast Board of Governors. Concern over the tendency of private networks to carry almost exclusively American productions, and the desire to fulfill its charter of ensuring the provision of a "varied and comprehensive service of a high standard that is basically Canadian in content and character", led the BBG to implement the first Canadian content regulations in 1960. Following an extensive public hearing in November, 1959, the Board announced that 55% of all broadcast time was to be Canadian in content and character. In response to a strong protest from the private broadcasters, the averaging period was extended from one week to four weeks and it was decided not to impose a special quota for prime time programming. Later, the Board also extended the transition period, enforcing no content rules the first year and only 45% Canadian content the second. The full regulations were to be effective as of April 1, 1962.[10]

Programmes that were to constitute "Canadian" productions were defined as follows:

a) any program produced by a licensee
   (i) in his studio, or using his remote facilities and;
   (ii) to be broadcast initially by the licensee;
b) news broadcasts;
c) news commentaries;

d) broadcast of events occurring outside of Canada in which Canadians are participating;

e) broadcasts of programs featuring special events outside Canada and of general interest to Canadians;

f) (50 per cent of) programs produced outside Canada
   (i) in Commonwealth countries, or
   (ii) in the French language; and

g) programs or films or other reproductions which have been made in Canada (meeting certain specific criteria)[11]

In March, 1962, the Board recommended applying the 55% Canadian content quoto to the 6:00 p.m. to midnight, "prime-time" as well as overall. After another strong reaction from the private sector, the prime-time quota was returned to 40% on May 9, 1962. At the same time, Commonwealth and French language productions were allowed full Canadian credits and audio-converted work in Canada received one quarter of a credit. Later revision in 1964 extended the calculation period to calendar quarters and made changes to alleviate the problem of diminished advertising revenues.[12]

In 1964, as well, the government appointed Robert Fowler to conduct his second inquiry into the state of Canadian broadcasting.[13] The report was severely critical of the performance of both the private stations in general and the CBC. Fowler charged that "television broadcasters earning very high rates of return in broadcasting are not providing the public service contemplated by the Broadcasting Act; the opposite is true."[14]

The Board itself was accused of representing the interests only of the private broadcasters. The Fowler Committee noted in particular that the content regulations then in force, were not working. Despite this, the Committee did not recommend searching for alternative means of achieving the goals of the Act. Rather, they suggested extending the regulations: "We recommend that the principle of the present Canadian content regulations should be retained for the control of television programming and progressively adapted and applied to radio programming."[15] The Committee recommended the establishment of both more stringent and more realistic guidelines. A government White Paper, following the report, reiterated its support for

content regulations stating "...the employment of Canadian talent of all kinds is something that public policy should require by demanding that all broadcasters include a substantial Canadian content in their programming, particularly in prime time."[16] As a reader of a draft of this study commented: "The half-life of this kind of idea reveals that of radium - not to mention radio."

In response to the pressures from all areas of the broadcasting industry, the government introduced a new Broadcasting Act in 1968. The position taken in the White Paper indicated that the Liberal government had intended one of the results to be new Canadian regulations. In addition to setting out the Canadian broadcasting policy mentioned above, (p.6) the Act created a new regulatory body, to replace the Broadcast Board of Governors, the Canadian Radio Television Commission (the CRTC).[17] The Commission was to be "a single, independent public authority", mandated "to regulate and supervise all aspects of the Canadian broadcasting system with an aim to implementing the broadcasting policy enunciated (in the Act).[18]

Originally, the CRTC and the CBC were both the parliamentary responsibility of the Secretary of State. Following its assumption of telecommunications responsibilities, the Commission came to report to Parliament through the Department of Communications. In neither case did the Minister have the power to direct the commission. Placing responsibility for the two agencies under one Cabinet minister began with David MacDonald and continues with Francis Fox.

Currently, the Commission is made up of an Executive Committee of nine full-time members, of whom the Governor-in-Council chooses one to serve as chairman and two as vice-chairmen. The Executive Committee has power to exercise the responsibilities of the CRTC in consultation with ten other part-time members.[19] The internal organization of the Commission consists of six branches: three concerned with broadcasting and cable operation; one with telecommunications; and two with broadcasting and telecommunication responsibilities.[20] In 1979-80, the Commission's estimated expenditures were $14,500,000.[21]

The Commission was given four powers through which to achieve its broadcasting mandate: the power to issue, renew, suspend, amend and revoke broadcasting licenses; to make programming regulation; to attach conditions to licenses; and to hold public hearings.[22] The power to licence extends to all "broadcast undertakings" which includes radio and television stations, cable television (CATV) systems and radio and TV networks.

Licencing rulings by the CRTC are subject only to Cabinet approval of the total number of frequencies available, the reservation of certain frequencies and the prescription of certain classes to whom licenses may not be granted.[23] The Cabinet may not issue direction concerning Commission decisions or regulations.[24] The regulations set forth by the CRTC applicable to particular classes of licences have the force of law and violations are subject to prosecution with fines not to exceed $25,000. Such regulations become law when forwarded to the Clerk of the Privy Council and the Deputy Minister of Justice.[25] The CRTC also has power to attach conditions to all licences granted. (However, see the qualification in sec. 17 of the Broadcasting Act, 1968.) In order to monitor compliance with CRTC regulations, all broadcasters are required to maintain daily logs and submit them to the Commission on request. The Commission may revoke licences of those who do not comply with their conditions, but this power is rarely used. Finally, the CRTC has power to hold hearings, not simply in connection with the granting of licences, but for all matters the Commission deems to be in the public interest.[26] It has been stressed that such hearings are less judicial procedures than administrative functions. The opportunity to cross-examine any applicant to the Commission is denied. In addition, the CRTC maintains a policy of keeping financial statements of most broadcast licensees confidential. The result, it can be argued, is that opponents of applications to the Commission have little or no opportunity to make their case.

Decisions within the Commission normally follow a three-stage process. The CRTC staff will conduct an investigation and, after a public hearing, the panel of Commissioners present will forward a recommendation to the whole Commission. Following this formal consultation, the Executive Committee will make the final decision. While technically this final stage is a one-

man one-vote process, conclusions are usually reached by consensus. Former CRTC Chairman Pierre Juneau claimed that decisions often were arrived at by "osmosis", and that following discussions of an issue, decisions would just "bubble to the top".[27] The staff usually does not make recommendations but when it does they are rarely rejected. Such a process may well follow what Aaron Wildavslay has termed "the politics of anticipation":[28] Members of the decision-making process may anticipate the probable reactions of their colleagues and superiors to certain issues before putting forth their own views and amend their positions accordingly. It is important to note that such adjustments, when they occur, occur not only on the same level but between different levels of the decision-making process. To speculate for a moment, if the politics of anticipation were to hold, CRTC staff members would make recommendations that they felt were likely to be acceptable by the Commission. The Commission, in turn, would rarely make a decision that had a strong possibility of meeting unfavourable reaction from the Cabinet. The drastic consequences in terms of prestige and job advancement that may result from an overriden decision presumably ensures the dynamics of this typically bureaucratic process. Although the "politics of anticipation" provides one plausible explanation for much government agency decision making, it is not testable - at best by an outsider.

The information upon which decisions are based comes from both CRTC staff research and the interested parties. Surprisingly, perhaps, the Commission is frequently in a situation of having inadequate information. The Commission has been known to threaten to suspend the hearings when certain information was not brought forward by an applicant. However, for the most part applicants have been able to successfully avoid providing information when they were determined to do so.

Pierre Juneau had been slated since 1966 for the first chairmanship of the Commission. From that time he had worked for the BBG, in particular, on a special committee to examine the problems involved in the old content regulations. His appointment was a clear indication that the federal government expected a revised form of regulations to be introduced.

The Commission, from the outset, made it known that new regulations

would be forthcoming. In its 1969 Annual Report, it declared that "the uppermost concern of the CRTC as enunciated in the Act, is for the provision of programme service and to set and maintain programming standards." The Commission initially set up a committee of three men -- Harry Boyle, CRTC Vice-Chairman, Bernard Ostry and Ross Maclean -- to examine the regulation policy. But the new licensing and ownership responsibilities became a more immediate priority and little progress on altering the guidelines was made in the Commission's first year and a half.[29]

While little work was being done immediately, certain special interest groups began to lobby for consideration of their own particular proposals concerning content regulations. In particular, ACTRA (the Association of Canadian Television and Radio Artists) virtually bombarded the Commission with applications and briefs. ACTRA felt strongly that the BBG regulations had not succeeded and asked for much more stringent guidelines. On August 16, September 25, and at CRTC public hearings on November 19, 1968, the Association attempted to induce the Commission to introduce a stricter policy. Luncheon meetings with Boyle and Juneau were used to promote ACTRA's case. ACTRA paid special attention to Pat Pearce, a former Montreal television critic and at the time a full-time Commissioner, in an attempt to gain a sympathetic ear on the Commission.[30]

New regulations were first drawn up by a Committee of Programme Policy from the staff of the CRTC programming branch in 1969. Juneau had declared in May of that year the CRTC's intention to examine the application of content regulations to radio. This option had been recommended by the Fowler Committee and was supported by an internal CRTC study conducted by Douglas McGowan, head of the Radio Program Branch. The study had concluded that many stations in the major Canadian cities were viewed by American broadcasters as "pacesetters", often launching new recordings that became hit records. The radio regulations that were ultimately announced followed closely the recommendations of this study.[31] - presumably because the pace being set by Canadian radio was dominated by American recordings.

Television regulations presented more difficult decisions. The Committee directed its attention towards two related issues. First, it was

decided to alter the existing definition of a "Canadian production". The slant of the new rules was to regulate "foreign content" rather than "Canadian content."[32] The second, and probably the critical decision, was to develop only a set of generally applicable guidelines. The Fowler Committee had recommended that the regulators be empowered to impost particular conditions on individual licences. Such conditions might have been one way of ensuring that the quality of programming was regulated. The 1968 Broadcasting Act gave the Commission the power to attach conditions of licence in response to the Fowler Committee's recommendation. However, it was ultimately decided that quality conditions would be too difficult to enforce.[33]

The process of drafting the regulations continued through the summer of 1969 and passed through at least four different drafts. The final revision was completed in October. After the Commissioners approved them, it was announced that they would be put forward at the Commission's public hearings in February, 1970. On February 12, Juneau set forth the new regulations and announced that hearings would be held starting April 14, 1970 to discuss the proposed measures.

While ACTRA had been lobbying vigorously for the new regulations, the private broadcasters appeared to have been taken somewhat by surprise. The Canadian Association of Broadcasters attempted to have the April hearings postponed to June on the grounds that they were unprepared. T.J. Allard, executive vice-president of the Canadian Association of Broadcasters, claimed that the regulations "come as a great shock to the industry" and that it was a matter of some concern thatthe CRTC had not taken us into its confidence more prior to doing what it did".[34] On February 27 Toronto Telegram columnist, Bob Blackburn reported:

> This week, last week, this minute and next week, large and small broadcasters are holding large and small meetings to figure out ways of fighting off the mild-mannered man they regard as Attila of the Airways.
>
> They're in an extremist mood - one has suggested that all stations should go off the air for a week as a protest. One has suggested that Canadian programs be prefaced by the statement: "This lousy programme is being brought to you at the insistence of the CRTC." And so on.[35]

The new television regulations required a 60 per cent quota of Canadian programs both for the whole day and for the period between 6:30 p.m. and 11:30 p.m. They also proposed restricting the maximum amount of programming from any one foreign country to 30% and eliminated the special treatment of French-language, Commonwealth country and special feature programs. For the first time in Canada, regulations were also to be imposed on AM radio - 30% of the musical compositions on AM radio had to be met by at least one of the following four criteria:

1) the playing, singing (or both) of the composition by a Canadian;
2) the music to be written by a Canadian;
3) the lyrics to be written by a Canadian; and
4) the performance to be recorded in Canada.

The rule was to apply to all four hour periods starting at 7:00 a.m. and ending at 11:00 p.m. All stations would have to provide weekly program logs indicating the relevant totals and percentages.[36]

The April hearings lasted seven days and 111 briefs were presented. The first days were concerned with the renewal of the broadcasting licences for the CBC and CTV. The CAB made its presentation on the third day. It consisted of a bitter attack on the financial ramifications of the rules and the lack of availability of sufficient Canadian talent -- particularly in the recording industry -- to help the producers meet the quota. They also questioned the legal right of the Commission to regulate the "intellectual content" of the media. With long and drawn out argument the presentation of the CAB took the form of a filibuster, lasting to midnight of the day of its appearance.

The dramatics were not limited to the CAB. ACTRA chartered a plane to fly in thirty-one writers and performers to make their presentation which included a special film, an official brief and a number of entertaining individual submissions from various performers such as Pierre Berton, Don Harron and Bruno Gerussi. The pop rock group, Lighthouse, also made a presentation. Ross Maclean of the CRTC claimed that the appearance of the performers was "most important, the most active measure taken by ACTRA in ten years."[37]

The Commission itself appeared firmly on the side of the performers. One journalist, observing the hearings, claimed that Harry Boyle had made it more apparent than ever that he and his fellow-commissioners have had their fill of 'negative flack'. He said, in effect that it might not be too soon, in fact, to predict that the remainder of this hearing would be largely a formality, and that the Commission already was more resolved than ever to stick by and enforce its new regulations on schedule.[38]

Despite the apparently firm commitment of the CRTC, when the regulations were formally issued in May, 1970, a number of modifications had been made. Private broadcastings were to be allowed an extended phase-in period for the regulations which were now not to be in full effect until October, 1972. The Commission also introduced a category allowing for re-production of certain programs. Modifications were also made to the AM radio guidelines. Their implementation deadline was extended to the full broadcast day, and special provisions were to be allowed in cases in which the quality of the current programming would be too severely affected by the guidelines.[39]

Despite these relaxations, the private broadcasting sector continued to put pressure on the Commission, through both the press and Parliament. Liberal backbenchers began to put strong pressure on the Secretary of State Gerard Pelletier, insisting that the quotas be relaxed.[40] Juneau was called to defend the new measures in front of the Standing Committee on Broadcasting on May 5, 1970. After this meeting, the Committee chairman stated that major modifications of the proposals were possible.[41]

And, further modifications were, in fact, forthcoming. On April 26, 1971, the Commission redefined the prime-time period as 6:00 p.m. to midnight. In addition, the maximum limit on programming from a single foreign country was raised to 40% and the averaging period was changed to a full year from calendar quarters. ACTRA reacted strenuously, pointing out that the effect of the rule changes would be to concentrate American programs in the "real" prime-time, 7:30 to 11:00 p.m., in the winter and recommended that the Commission look into the financial structure of the CTV network.[42] Despite this opposition, on March 10, 1972, the CRTC announced further relaxations. The private broadcasting now had to meet only a 50% Canadian content

criterion in the prime-time period (while the CBC had to continue with its 60% quota) and the restrictions against program importation from any one country were abolished. Co-production guidelines were made more specific and granted preferred treatment to production made in cooperation with Commonwealth and French language countries.[43]

These latter changes coincided with a report commissioned by the CRTC on the structure of the CTV. The Commission announced that certain changes would be forthcoming in the financial structure of the private network that would allow the creation and support of additional network affiliates. Such an expansion would partially relieve the CBC of the considerable financial burden of expanding broadcasting coverage and it is likely that the relaxation of the guidelines was, in part, a guid pro quo to get the private broadcasters to agree to such a change. The CRTC also announced a verbal commitment on the part of the CTV to promote Canadian programming and the allocation of an additional two million dollars for that purpose.[44]

In 1975, the Commission issued new policy statements concerning content guidelines. While regulations were not to be imposed generally on FM radio, the CRTC did decide to ensure a commitment to Canadian programming through individual conditions of licence.[45] In the same year the Commission announced that all television advertisements, except those produced by the station broadcasting them, were to be registered with the Commission to determine their origin. The CRTC would thus be able to monitor the level of employment of Canadian resources. It also recommended that the broadcasting industry attempt to achieve levels of 70, 75 and 80% Canadian produced advertising in the years ending in September of 1976, 1977 and 1978 respectively.[46]

IV. Cable Television

Since 1970, the CRTC has also instituted policy measures concerning cable television (CATV). The term is usually used to denote the industry that receives, amplifies and distributes TV signals on a subscription basis. An operation normally consists of a head-end (receiver and amplifier), a trunk-line (connecting the head-end to a distribution point) and a distribution coaxial cable that delivers the signal to the household. Such systems

are technically not pay-television services because, while most cable companies do offer some community service programming, they are basically distributors, rather than originators, of programs. The systems, many of which are now equipped with micro-wave transmitters, are capable of providing a wide variety of television channels, including, of course, American channels, to their subscribers.

Canada has led the world in much cable TV technology. The first system was set up in London, Ontario, in 1952 but it was not until the mid-1960's that the industry really began to expand. From 1967 to 1975 the number of cable subscribers increased 554%, which total revenues soared from $22.1 million to $162.3 million.[47] By 1978, 49.5% of all Canadian households were serviced by cable television.[48]

The CRTC found the rapid growth of the cable industry worrying on two counts. First, the growing availability of foreign (i.e. American) channels meant that even fewer Canadian shows were likely to be watched. With the increased cable penetration in Calgary, for instance, the audience share of Canadian programmes fell from 46 to 35% in two years.[49] Perhaps concern with this turn of events was one of the impetuses that led to the introduction of the new content regulations in 1970.

Concurrently, there was concern over the effects of cable on Canadian broadcasters. The industry was worried that the resulting audience fragmentation--worsened by the enhanced popularity of American channels -- would weaken their position in the broadcasting system. A study by Robert Babe, in 1973, estimated that the introduction of one American channel would diminish a typical Canadian channels' viewing time by 20-25%.[50] More critically, the study found cause for concern over the resulting loss in revenue for Canadian channels and recommended that the CRTC take action to protect the broadcasters.[51]

The CRTC took action to control the cable operators. On February 26, 1970--the same month as the content regulations were announced--the Commission issued a policy statement declaring that it would establish the composition of basic Canadian services which a cable company would be required to provide, and stated that all operators were to be subject to the same licensing and licensing and procedures that applied to TV stations.[52]

Consistent with the policy, the CRTC, in 1971, issued a further policy statement which introduced two important instruments for "furthering the Canadian identity in broadcasting": simultaneous program substitution and commercial deletion.[53] The substitution regulation requires a cable licencee to carry a high priority station on the cable channel normally carrying the signal of a lower priority station, where both are broadcasting the identical programme at the same time.[54] Thus, for example, if Channel 9 in Toronto and Channel 4 in Buffalo are both airing Kojak in the same time slot, the cable operator, at the request of Channel 9 (as the higher priority station under s.6)[55], must delete the Channel 4 signal and replace it by the Channel 9 signal. The effect to the viewing audience is virtually the same as if no deletion had taken place; the effect for Channel 9 and its advertisers, however, is markedly different, for there is no audience fragmentation. Consequently Channel 9 can command a higher "cost per minute" (price) from its advertisers.

The commercial deletion policy was adopted in the mid-1970's when it was charged that Canadian television stations were losing as much as $20 million a year in advertising revenue to American border stations. The policy authorizes CATV operators to remove commercials aired on stations not licensed to broadcast in Canada (viz. the American stations).*

The anticipated effect of this policy was, again, to drive Canadian advertisers away from buying space on foreign stations (because these commercials might be deleted) and provide additional incentives for increasing the advertising revenues Canadian operators. Following a public letter from the Minister of Communications, in 1977, stating the government's opinion that certain developments made the commercial deletion policy obsolete,[56] the CRTC announced that it would review, but not implement the measure (with results stated below). The CRTC has also insisted, as a

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* The deletion policy was inserted in all CATV decisions, but was not to be implemented except by express Commission authority, which has never been granted. The substitution part of the policy was never even adopted. Random deletion was, in one instance, with Commission acquiescence.

general policy - perhaps more honoured in the breach than in the observance - that cable operators carry no more than three commercial and one non-commercial foreign station.

Ironically, while the virtual explosion of cable was one of the reasons the content regulations were issued in this first instance, by offering audiences an alternative to the enforced Canadian programming, they have also seriously undermined the regulations' effectiveness. Given the voracious demand by Canadian viewers for American programming, even when Canadian programming is available, the CRTC's three plus one channel policy is unlikely to long remain. Now that improved technology makes additional choices readily available, greater pressure for reconsideration of the content regulations is inevitable, as will be discussed.

V. Obsolescence and Technological Change

Although the new fibre optic technology has not yet had an appreciable impact, other developments have tended to threaten to diminish the effectiveness of the content guidelines, making them, in effect, obsolete. In particular, direct broadcast satellites and pay-television pose serious difficulties for the regulators.

(a) Satellites

Developing satellite technology may soon affect the efficacy of the content regulations, not to mention Canada's sovereignty over its own airwaves. Most of the satellites currently in use--including the Canadian Anik A series and 50 per cent of Anik B's capacity--operate on low power, low frequency (6/4 G H_2) basis. Because of the low power transmission, relatively large and expensive receiving stations are required. Under current government regulations, only Telesat stations, recognized telecommunication carriers, and broadcasters licensed by the Department of Communications may receive signals from the satellites.[57] Recently, however, the development of 14/12 GH_2 satellites has allowed the use of more powerful transmission signals. As a result, less expensive receiving equipment is needed, sometimes discs of less than two metres in diameter, opening up the possibility of direct-to-home satellite broadcasting.

Experiments are now being conducted by the Department of Communications on the high frequency capabilities of the Anik B satellite. With the increasing ease of signal reception has come the increased incidence of unauthorized receiving stations. A recent committee reporting to the CRTC termed the situation in some parts of the country "epidemic".[58]*

No doubt stirred by this finding, the Minister of Communications announced a crackdown on illegal receiving stations except those in remote areas not served by legitimate operators. Individuals who do not distribute to others the signals obtained from illegal receiving stations also would not be prosecuted, he stated.[59]

The threat to Canadian sovereignty (and U.S. sovereignty also for that matter!) over the airwaves arises from the fact that satellite transmissions are rarely pinpointed on the intended receiver. Therefore, many Canadian satellites "overspill" into the northern United States and, similarly, American satellites cover much of Canada. As a result, Canadians with receiving capabilities can intercept the American signals. In fact, one American satellite "superstation" supplies the only television signals available to some northern Canadian communities.[60] As the ease with which these signals can be received increases, effective CRTC control over the Canadian broadcasting system is almost certain to diminish.

(b) Pay TV

While the issue over the introduction of pay TV to Canada is relatively recent, the concept itself is as old, or older than, commercial television. The service is usually a television programming package, financed entirely through payment by the viewers.

This would occur on one of three bases:

(1) pay-per-program; or
(2) subscription, in which the consumer pays for the opportunity

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* It is important to note that signals from U.S. satellites are being received. These operate on the $6/4GH_2$ band.

to receive a non-TV channel, normally on a per month basis;

(3) universal pay TV which would be offered as a basic service on all cable systems and financed by an across the board rate increase charged to all cable subscribers.[61]

The primary concern of the CRTC is to ensure that the development of a pay TV service would advance the goals set forth in the 1968 Broadcasting Act. Canadian broadcasters are worried that pay television would further fragment audiences and "siphon" off programs that they would normally carry. Members of the Canadian production industry (including artists) are concerned that, in order to be financially viable, a pay-TV system would be forced to offer primarily the most popular (and that means predominantly American) programing, thus shutting off the Canadian industry from a potential source of revenue.

The development of a pay system has appeared, in the last decade, to remain just around an ever-present corner. In its first announcement on pay-TV in 1972, the CRTC acknowledged that the service could have major ramifications in Canada and indicated that it wished to examine the possible effects before developing a policy. A similar statement was issued in December, 1977 and the Commission invited proposals for possible systems from the public. After studying a total of 140 submissions, the CRTC once again announced that it was not ready to develop a thorough policy on the issue. Throughout the last five years, the attitude towards the potential introduction of the service--even on the part of its opponents--has been that it is inevitable. Despite this, as recently as August 1, 1980, an extensive report to the CRTC again indicated that pay television was still unlikely to develop within the next three to five years.[62]

The hesitancy of the CRTC on the pay TV issue has now been ended, however. On October 21, 1980, the Minister of Communications, Francis Fox, in a Toronto speech to the Broadcast Executive Society of Canada (and the CRTC in a press release) announced that it was the intention of the CRTC to move quickly to introduce pay TV in Canada. John Meisel, Chairman of the CRTC, was reported in the Globe and Mail of October 22, 1980 as saying that "he would be surprised if applications are not being considered by the end of the year". The minister stated that U.S. Pay TV systems threatened to

dominate the Canadian market unless domestic operators were given the go-ahead and allowed to compete. He told reporters later that: "the question is not whether we'll have pay-television in Canada, but who will control it...we're running out of time".

In its announcement, the CRTC was non-committal as to how pay TV would be introduced but did specify its terms and conditions. Following recommendation number 28 of the Committee on Extension of service to Northern and Remote Areas (the Therrien Report), pay TV and other optional services would be financed by differential pricing for local delivery, and would be conditional on the new services making: "a significant and positive contribution to Canadian broadcasting...effective use of Canadian resources (and that)...a significant amount of the revenues flow to the program production industry" (our emphasis).

These terms and conditions of operation were made only slightly more explicit when the actual call for Pay TV licence applications was made on April 21, 1981. The new service is to be made available on an optional, subscription "pay-per-channel" basis over the existing cable system. It will be commercial free; revenues therefore will come from differential user-fees which the industry estimates will originally be between $9.50 to $12.00 per month.[63]

The guidelines governing Canadian content on the new system will be, originally at least, quite broad and flexible. In its call, the CRTC announced that an applicant's commitment to both the funding and scheduling of new Canadian programming "will be a major consideration in the commission's decision."[64] No operator who attempted or proposed to "siphon" existing programmes from "free" TV would be licenced. Three basic guidelines were established as a basis for judging the applications. These were:

(a) the percentage of schedules devoted to domestic productions;
(b) the number of Canadian programs acquired; and
(c) the percentage of revenues spent on domestic material.[65]

Thus, despite some general claims ten days earlier by John Meisel about the need not only for quantity quotas but also quality regulation[66], there was to be no minimum Canadian content set for Pay TV at this time.

The necessity of making a seemingly large commitment of funds to Canadian programming was recognized immediately by the potential Pay TV operators. A consortium of cable operators - Pay Television Network - promptly announced that of the 85% of total revenues to be spent on programming, over 50% would be spent on new Canadian programs. They claimed that this would generate $225 million in funding for new Canadian programs, movies and general entertainment specials over a two-year period.[67]

It is important to note that the Therrien Report explicitly stated that there should be competition for Pay TV operating licences. In adopting this recommendation the CRTC argued that it wanted to licence enough operators to ensure that all Canadian program producers have a chance to offer their shows for sale. This policy has probably scuttled the proposed CBC/CTV national monopoly. As the Star's Jack Miller reported:

> Anyone applying for a nation-wide monopoly pay TV licence would have to calm a lot of built-in CRTC worries to have any chance of getting it.[68]

However, a large number of pay TV operators seems equally as unlikely. One of the major concerns of the CBA in its reaction to the announcement was a desire to keep the number of operators low so as to avoid audience fragmentation which would drive advertising revenues down.

VI. The Effects of the Content Regulation Policy

The declared objective of the content guidelines was to increase the exposure of Canadian audiences to Canadian shows and to stimulate the program production industry. Judged against this standard, the policy instrument has had little effect. A quick survey of the briefs submitted in September, 1980, to the CRTC concerning the review of the regulations indicate agreement from all parts of the broadcasting community that the guidelines have not worked. Ostensibly, the regulations ensure that Canadian programs will be broadcast 60 per cent of the whole day and 50 per cent of the prime-time. In general (although not completely) these standards have been met. Such highly visible figures, however, must be set against other, more relevant, data in order to determine more accurately the achievements of the policy.

The decision of the Committee on Programme Policy not to regulate the sort and/or quality of the shows points to a real difficulty in setting quantitative standards. Broadcasters have tended to view such guidelines simply as costs-of-operation and therefore meet the quotas by supplying the cheapest (and usually, least attractive) Canadian shows available. While 75 per cent of all TV shows watched are entertainment shows, over half of all Canadian programming consists of information and news programs, most of which were likely to have been carried in any event.[69] The remainder of Canadian programming (from private broadcasting, at least) is made up of low-cost, low-risk sports and game shows. Such programmes require little investment and, as a result, provide a minimum of funds to Canadian producers and artists.

As an "ends" oriented measure, regulations have not altered the incentive structure of the broadcasting industry. Because they seem convinced that Canadian produced programs cannot compete successfully in popular foreign markets, Canadian broadcasters, in attempting to maximize profits, have primarily sought to provide programs that are both popular and inexpensive. For the most part, American produced programs meet both of these criteria. Although costs for these shows are rising, it is estimated that the typical American programme costs about 10% of the amount required to produce a comparable Canadian show.[70] The reasons for the differences are clear. Typically, American producers can recoup about 80 per cent of their initial investment in their home market; most foreign sales are "pure gravy". The product can, to some extent and to some degree be dumped on foreign markets.[71] On the other hand, Canadian shows obviously have a much smaller domestic market and only slightly lower investment costs are involved.[72] Aggrevating the situation -- and the point which most concerns the broadcasters -- is the fact that Canadian shows do not have the same drawing power as the American shows, even among Canadian audiences. Data from a standard program week in 1978 showed that, in prime-time, Canadian shows drew an average audience that was only 57 per cent of that of the American shows: in the daytime the average dropped to 28 per cent.[73] Whether this is the cause or the effect of the low investment in Canadian programs is a moot point.

These cost and popularity factors have undermined any attempt to boost the independent Canadian program production industry--the sector most likely

to produce the popular entertainment shows. Private broadcasters prefer to utilize in-house productions which allow them a greater influence in controlling costs and determining program sort and choice. CRTC policy over the past ten years, has not been to discourage such production (although recent, unofficial comments by John Meisel may be a sign of changes in this policy towards quality regulation).[74] The result is a profusion of information and sports shows which require few facilities and employ few Canadian creative resources.

Regulation modifications, since 1970, have allowed broadcasters to circumvent many of the potentially costly effects of the guidelines. Most notably, the decisions 1) to allow the averaging of content quotas over a full year and 2) the definition of prime- time as 6:00 p.m. to midnight. These changes stripped the guidelines of any effectiveness they might have had - which perhaps was not great even when they were most stringent. The prime-time, 8:00 p.m. to 11:00 p.m., attracts almost 33 per cent more viewers than other periods; and in the winter months it attracts well over 50 per cent more viewers.[75] The result is that Canadian programs are relegated to less popular periods. Only 10-20 per cent of prime-time programming is Canadian.[76] Because of this phenomenon despite regulations, 75 per cent of all Canadian viewing time is spent watching foreign shows.[77] The "objective" of attracting more viewers to Canadian shows has not been obtained. Conrad Wynn, in "Potpourri", claims that the AM radio regulations have accounted for the increase in the Canadian recordings broadcast in Canada from 5 to 10 per cent. But he also notes that this increase could have been much greater if other policies such as changing income tax laws, copyright laws and the domestic record distribution system were also employed.

These results, and the technological developments in the 1960's and 1970's, suggest that it is important to re-examine the actual goals of government intervention in broadcasting. Over the past twenty years, the regulatory instrument has not succeeded in bringing consistently popular, high quality, Canadian productions to large audiences. Nor has it helped to develop a strong, self-supporting program production industry. (The rather flexible guidelines established by the CRTC as a basis for determining Pay TV licences may change this situation but at this time, it is an

unknown factor.) The ineffectiveness of content regulations cannot be blamed simply upon a lack of awareness of the involved agency of their potential effects. The CRTC is in the best position of all to predict and monitor television programming patterns. There are other factors in play that have helped lead to the failure to fulfil the declared national broadcasting aims: factors that concern the vested interests of, and the roles played by, the various interest group involved in content regulations. What emerges is a somewhat more understandable explanation of the development of the guidelines and provides one illustration of how policy instruments are chosen.

In pursuing these questions it is useful to distinguish between those Canadians who have a direct interest in broadcast policy and those who do not. The latter are briefly considered in the next section.

VII The General Population

The Broadcasting Act (1968) has as its stated purposes "the development of national unity" and the "continuing expression of a Canadian identity". Presumably the CRTC in exercising the powers conferred on it by the Act is to be guided by these goals in its deliberations. As was stated at the outset of this paper, neither goal has a clear and precise meaning. Presumably, however, the Government of the Day thought that the goals as set forth were meaningful enough to provide some desired direction to the commission and/or would appeal to some marginal voters as the kinds of purposes they would wish Canadian broadcasting to serve.

The desired states of affairs encompassed by the two goals are "pure public goods", to use the economists' phraseology. That is to say, in neither instance would the quantum consumed by one citizen diminish the quantum available for consumption by others. A hallmark of public goods is that the number of individuals deserving them is large and amorphous, so that organizing them into an effective pressure group is almost impossible. The fact that those who bear none of the costs of providing the goods cannot be excluded from enjoying the benefits they provide - the "free-rider problem" - compounds the difficulty of creating an effective pressure group. Because the group of Canadians desiring more national

unity and more expression of Canadian identity supposedly is large, disbursed and ill-organized, and because the goals are so intangible, it is in the political interest of the party in office to introduce policy measures that are highly visible in order to ensure that they are aware that something is being done that they wish to be done.

By choosing such visible instruments the government can overcome many of the information costs of the concerned voters. However, it is also able to exploit these information costs to its advantage. For the party in power, the attractiveness of a policy instrument may often lie less in the actual effectiveness of an instrument than in the fact that voters perceive that the tool is accomplishing something. Measures which are objectively ineffective but have the appearance of effectiveness, are more desirable to a government party than those where the converse holds. Content regulations have a strong symbolic value. The government is able to appear to be taking a firm stand against the encroachment of American television. Minimum level figures such as the 60 per cent and 50 per cent quotas are easily conveyed and easily understood. The more complicated results of the guidelines are rarely made known and their implications not fully grasped by many. The result is that the general public virtually assumes that their objectives are met almost concurrently with the implementation of the policy measure (content guidelines).

Under these conditions it is not too surprising that the failure of the regulations has not caused a sharp outcry from the Canadian public. Rather, the opposite has occurred. While most Canadians prefer American television, they still favour the imposition of content regulations.[78] Most Canadians seem convinced that the guidelines are working and are necessary to advance the Canadian broadcasting industry. For the federal government, as well therefore, the guidelines have been effective. The voters they wish to please are pleased at little or no cost to other, more powerful sectors of the community.

VIII The Canadian Artistic and Program Production Community

This sector, consisting of artists, authors, screenwriters, directors, technical employees, producers, and so on, are the most actively involved of

the cultural nationalists. They have strong vested interests in the creation of an independent, financially powerful Canadian production industry: their own livelihoods depend on it. Their active lobbying for the maintenance and strengthening of content regulations through the various groups such as ACTRA, Union des Artists, Council of Canadian Filmakers, the National Association of Broadcast Employees and Technicians, and others, was likely one of the main factors that induced the Commission to introduce the rigid guidelines of February, 1970. By applying early pressure on the Commission, through Pat Pearce, as well as on Juneau and Boyle, this sector was able to influence the Commission programming decision long before the private broadcasters had taken action. Their success was marked by the strict regulations that were first suggested by the CRTC.

This pressure group gained a great deal of influence through their ability to claim to represent not simply their own personal interests but the desires of many other Canadians.[79] It is not immediately apparent then, why their initial success was so short lived. The later rule changes --the redifinition of prime-time as 6:00 p.m. to midnight and the allowing of broadcasters to average quotas throughout the full year, are the two most important ones--undermined the attempt to gain greater Canadian audiences for Canadian shows. The argument that could be used to explain the general public acceptance of these measures-lack of knowledge about their ramifications--does not hold for this group. The lobbyists are well aware of the implications of the various regulations and ACTRA, for one, strenuously objected when the above alterations were announced in 1971 and 1972.

Two other possibilities may explain why members of the program production community have not succeeded. First, it should be noted that while Canadian programming quality may not have drastically improved, by setting a minimum level of content, the regulations have ensured that at least some Canadian programs are being produced. While this has not satisfied the production sector, it does mean a certain level of work is always available. The Commission may have felt that by meeting the vested financial interests group in this way, the other objectives could be sac-

rificed in favour of other priorities. The more obvious, but less firm answer, is simply that these lobbyists do not have the political power base that other conflicting interest groups may enjoy. It is not possible to discern exactly why this should be the case, but financial resources likely play a big role, as may the relatively diverse and, therefore, perhaps less cohesive make-up of the producing sector.

Despite the failure of the regulations to meet the artists' expectations, ACTRA still approves of the principle of their application. The aim now is to alter the guidelines to remove some of the aspects which are causing problems. A recent ACTRA brief to the Secretary of State, Francis Fox, recommended that the definition of what constitutes "Canadian Content" be tightened to cover only 100% Canadian produced shows, and that some form of qualitative standards be set. In addition, as a measure to boost the program production industry, it was suggested that broadcasters be required to allot 20% of their gross revenues toward a public production fund for Canadian shows. While aware of the weaknesses of the regulatory instrument, ACTRA also appears to recognize the alternative benefits that can arise from quantitative guidelines.

IX Private Broadcasting Sector

It is with the introduction of the private broadcasting sector into the matrix of pressures working on the content instrument, that some light is shed on why events occurred as they did. The private broadcasting industry is represented, with some important exceptions, through the Canadian Association of Broadcasters. This Association is made up of 486 private radio and television broadcasters representing almost 90 per cent of the private industry. It has substantial resources and a well organized structure that allows for the formation of coherent and influential policies.[80] [The substantial influence of this particular group is understandable.] The Association is relatively small (486 corporate members as compared, for instance, to the over 8,000 individual members of ACTRA). Whereas groups such as ACTRA - and the new so-called "joint action committee" on satellite and pay TV - have to reconcile the special interests of a diverse range of groups--actors, performers, authors, composers etc.--the broadcasting sector

is much more homogeneous and is thus more likely to find common interests.

Private broadcasting in Canada is big business. There are over 2,000 privately owned radio and television stations in Canada[81] and the opportunities for making substantial profits are high. Robert Babe estimates that in 1973, when much of the cable penetration had already occurred, the average return on net assets and working capital (before taxes) for private television broadcasters was 41.3%. Even after the entry of a larger number of additional stations in 1974-73 the rate of return was 34%.[82] The objective of private broadcasters is to maximize profits and it has already been shown why the choice of American programs is preferred by the private sector. Low cost and high popularity are a good combination of qualities to offer to advertisers who in turn search for a product that will offer the lowest cost per thousand viewers. By these standards, Canadian programs present a poor second choice. The cost per thousand viewers of a Canadian prime-time show is about 25% more than its American counterpart; it is almost 300% more for day-time shows.[83] These figures could be even have been more severe but, in order to maintain some advertising revenue, private networks usually charge substantially less for Canadian sponsors. At the same time, the CTV has a policy of requiring all sponsors who buy a spot on an American program to purchase a Canadian spot as well.[84] The deep concern of both advertisers and broadcasters over the enforcement of regulations has a strong basis in the financial penalties the rules impose.

In 1970, the broadcasters could support their fight against the content regulations by arguing that the current sudden growth of the cable industry had already put them in a grave financial situation. At the April 1970 hearings, the broadcasters claimed that in order to be competitive, the content regulations should actually have been relaxed rather than tightened.[85] The CRTC had already noted the potential threat to broadcasting that cable posed, and the arguments of the forthcoming audience fragmentation may well have convinced the Commission of the broadcasters' difficulties.[86] The concern of the CRTC for protecting "free" broadcasters in the face of cable company operated Pay TV in the application announcement is further evidence of this strength.

The influence of the broadcasters would have been powerful in any

circumstances. However, their vast revenues almost dictates that this be so, and the fact that many broadcasters are also in the publishing business (admittedly only minority positions for the most part) may give them additional political power. Certainly it does appear that they had considerable support in Parliament itself. On May 13, a group of about twenty Liberal backbenchers attempted to have the Secretary of State, Gerard Pelletier, ask Juneau to relax the guidelines. At the time, Pelletier claimed to be staunchly in support of the Chairman. But it is interesting that the CRTC formally issued its regulations, with modifications, only five days later.

The problem for the decision-makers in choosing the appropriate policy instrument was how to reconcile the conflicting interests of (a) the popular demand for cultural support (coupled, somewhat ironically, with a strong desire for access to American programming) and (b) the demand of a strong pressure group that their own financial interests not be damaged. The importance of symbolic government action suggests why content regulations offered the best political solution. The relatively dispersed nature of the majority of cultural nationalists allowed the government to implement an instrument in which the measurement of the benefits for this group, the achievement of a strong distinctively Canadian program porduction industry, could be partially obscured. The clearer 50 and 60% figures were the ones that came across; the less evident information on the probable ramifications of such changes were not so widely realized.

Another, more general, example of symbolic action in the cultural policy area is the Federal Cultural Policy Review Committee. When the Liberals returned to power, they transformed the "permanent" Federal Advisory Committee on the Arts - which had been established by the Conservatives - into a travelling review quasi-task force. Its purpose is to gather public opinions as to what Canadian culture is and where it should be going. The committee will report back in the spring of 1982 to the government who will subsequently publish a white paper on culture.[87]

Again, given the importance of symbolic action, this committee is an effective policy instrument from a political point of view. It satisfies the demands of cultural nationalists that they be heard: Yet, it dissipates

to some degree the influence they may have had by removing the body from its permanent position inside the government. While the very nature of and the publicity surrounding such a review committee would seem to obviate control over (and, therefore, the flexibility of) such a policy instrument, it must be noted that two of the Committee's members have long histories in Liberal cultural - and especially communications - policy. These members are Assistant Under-Secretary of State Leo Dorais and Deputy Minister of Communications Pierre Juneau.

The CRTC was perhaps not so concerned about the lack of prior consultation with the broadcasters because of the nature of the regulations. It can be argued that where uncertainty exists concerning the acceptance of a policy instrument, the decision-maker will tend to choose instruments with a high degree of flexibility. While content guidelines have an air of authority and rigidity, it has been shown that relatively minor rule changes can alter their effectiveness drastically. Primarily it was the redefinition of prime-time as 6:00 p.m. to midnight and the decision to allow broadcasters to average their programming over the full year (thus relegating many Canadian shows to the unprofitable summer months) that stripped the regulations of any strength they may have had. Likewise, Pay TV operators will only have to contribute a "reasonable" share of their revenues to Canadian programme production. The Commission was able to minimize the real costs to the broadcasters while at the same time assuring the general public that the rules could achieve the desired objective.

The very nature of the ultimate goal itself, the promotion of Canadian culture, presents problems of measurement. The private industry is well aware of their own objectives and have a tangible yardstick by which to measure the level of success--i.e. their profits. Culture buffs have a much less concrete objective. It might well be charged that the regulations are not achieving a high level of quality Canadian productions but there are few standards against which to assess this claim. The lack of availability of tangible information on the progress of the Canadian broadcasting culture makes it difficult to accurately monitor the success of the regulatory instrument. Only if other pressure groups such as ACTRA supply data of their own to these voters are they made aware of the possibility that regulations are not achieving the goals for which they were intended.

X The Decision-makers

Up to this point, in this study, the decision-makers in the process have earned the rather vague, amorphous term "the government". While expedient, such a definition is not entirely sufficient, for there are a number of potentially conflicting forces within the decision-making hierarchy itself that tend to defy such easy definition. These interest conflicts have to be resolved as well as those outside the government structure in the process of determining the appropriate policy instrument.

The ultimate decision-making body was, and to a large extent still is, the federal cabinet. This body played its most direct role in 1968 with the enactment of the Broadcasting Act and the creation of the CRTC. The statement of broadcasting policy in the Act was a clear response to the pressures developing in the 1960's for government action to aid the creation of a strong pan-Canadian identity. All broadcasting decisions were to be made with this priority constantly in mind. This action was a response that presented little in the way of actual costs to the government but at the same time could assuage nationalists' concerns.

It is likely that in delegating the authority for any real action to an independent agency, the governing party was submitting to the accepted view that the politically sensitive portions of government should not be actively involved in such a powerful instrument as the broadcasting medium. However, such as action has also allowed the Cabinet to distance itself from unpopular decisions. They can now respond to irate citizens and broadcasters alike by disappearing behind the veil of agency independence.

On the other hand, it is not readily apparent that the Cabinet has given up all real control of CRTC decisions. The Cabinet cannot override the Commission's decisions on general regulations but it could express its displeasure by reversing specific licensing decisions. More importantly it has power of appointment, promotion and dismissal over the Commissioners. In 1968, by appointing Juneau, a long-time Liberal well known to favour guidelines, the federal government had virtually ensured that their position as expressed in the earlier White Paper would be fulfilled. Similarly, when the Chairmanship came open in 1979, David MacDonald the new Conservative Secretary of State made it clear that he intended to alter drastically the

Commissioners' policies, and, as a result, the Cabinet passed up highly qualified candidates within the CRTC (and in particular Charles Dalfen) in favour of an "outsider" from Queen's University, John Meisel.[88]

The Cabinet has, on a few occasions, played a more direct role in the operations of the CRTC. It is possible that Pelletier did, in fact, persuade the Commission to modify the guidelines in response to the pressure from his own party. The Cabinet can and has issued directives requiring the CRTC to fulfil some areas of its mandate.[89] The 1977 public letter from the Department of Communications led to a suspension of the commercial deletion policy. But for the most part, the political nature of the appointments, and the lengthy tenure of the Liberal government, has ensured for the Cabinet a Commission well attuned to its interests.

Even without these historical developments, one is not likely to witness direct conflicts within the decision-making hierarchy. The nature of the bureaucratic structure tends to lead to political consensus rather than conflict. Advocates would rather put forth suggestions that are likely to be accepted than not. Views on controversial matters are best muted. Dissent is frowned upon and strong dissent is discouraged. Bureaucratic-political interests tend to combine to make the decision-making hierarchy both a quasi-political and a quasi-judicial process. The electoral concerns of the politician are not quite so urgent for the Commissioner-his own election only comes up every seven years. But he does remain somewhat vulnerable to the fortunes of the ruling party and this political factor can blunt the technical and bureaucratic nature of the staff advice upon which he is dependent.

While the Executive Committee of the Commission makes the decisions, there are less visible members of the decision-making process who, no doubt, are not without influence. It has been argued by Niskanen[90] and Breton[91], among others, that bureaucrats espouse the adoption of policy instruments that require maximum bureaucratic input. In short, it is in their self-interest to advance highly bureaucratic "solutions" to policy problems. From this perspective, the choice of a regulatory instrument is ideal. Content guidelines require the monitoring of program logs, investigating program origin and making judgments as to whether or not a station has complied with the regulations. Measures, such as requiring advertise-

ments to be given registration numbers from the Commission, mean that more personnel will be needed to exercise these functions. Bureaucratic goals of extended authority and expanding influence can be attained much more easily when the agency plays a watchdog and judgmental role over the industry.

There is no doubt that the staff of the CRTC increased significantly over the past decade. While the Commission has expanded its overall responsibilities in the last ten years, particularly with respect to telecommunications, it is not unlikely that the enforcement of the content guidelines played a role in the staff growth. However any considerations as to the level of influence of vested bureaucratic interest on instrument choice must remain highly conjectural.

The Commissioners themselves may be moved by similar interests but it is important to note that they are less bureaucratic than political appointees. It is in the political nature of the decisions that the importance of the special interest groups can be understood. High visibility, influence with the media, and strong informational and financial resources, give the groups a great deal of political power. The Cabinet and through it, the Commission, is concerned not to alienate them, especially the larger ones such as ACTRA or the CAB. Unfortunately for the government, these two groups had conflicting objectives. The conflict was partially resolved by the imposition of guidelines, followed by subtle modifications arrived at by appeasing the initially offended group, the broadcasters. In the realm of politics, these modifications were what really counted. The symbolic appeal of the guidelines remained intact and the performers' demands had already been met to a degree. The one powerful group initially dissatisfied, the CAB, was also one that was not likely to be content with superficial changes. Because their costs were real the subsequent benefits had to be real as well. A strong case had already been made--accurately or not about the grave situation in which the private broadcasters were finding themselves. The concern had induced backbenchers to criticize their government's actions, an almost unheard of situation but also clear evidence of the need to soothe the broadcasters. In the event, the conflicting interest groups each gained part of their objectives. While each also expressed concern that they had not met with

complete success, the lack of adverse political consequences and the bureaucratic advantage of the regulatory instrument indicates that at least the government, including the CRTC, its staff, and the governing party, had been successful in choosing the policy tool.[92]

XI Conclusions

When considering the reasons why particular policy are chosen when substitutes are available several important points must be borne in mind: various objectives may overlap, or conflict, and the shot-gun effect of some policy tools may mean that they significantly affect several objectives. It is likely, for example, that the CRTC's decision in 1972 to broaden the definition of prime-time was (at least, partially) in return for the changes instituted by the CTV that would lead to extended national coverage. In this case it appears that the Commission considered its responsibility to provide broadcasting services to all Canadians as having priority over its cultural aims. Another example might involve the simple allocation of funds. While the federal government has followed a subsidization policy for most of the arts, to do so significantly in the high-cost field of program production probably would have had serious ramifications on other expenditure programs that ranked higher on the government's scale of priorities. The breadth of such possible "external" influences is so broad as to preclude any concrete analysis, but in the examination of the internal influences involved in this policy decision, the existence of other, outside factors, must be acknowledged.

Nonetheless, the decision-making process is explicable in terms of rational political action. Two salient features of the history of the content regulations emerge. First is the crucial role of symbolism. Any policy concerning cultural advancement is likely to be bound up in symbolic actions and the content guidelines policy is no exception. Governments can provide the impression of "doing something" in the minds of marginal voters without actually achieving anything. (Or the effects can differ from the perceptions both in kind and extent). Concurrent with the concept of symbolism is the "problem" of imperfect information. Intangible goals by their nature offer little in the way of objective standards by

which to measure the extent to which they are realized. While most groups actively involved in broadcasting agree that a strong, distinctively Canadian program producing industry has not developed, it is not so simple to offer tangible proof as to the reasons why it has not. Nor is it possible, of course, to prove or disprove that the situation would (or would not) have been substantially worse in the absence of the policy.

A second factor that is evident is the major influence of special interest groups. The latter half of the 1960's witnessed a rise in Canadian nationalistic feelings, but the lobbying groups affected by the policy played dynamic roles both in the institution and the subsequent modification of content regulations. Decision-makers found it most critical to reconcile the interests of these groups because of their high visibility and powerful political influence. When the interests of the strongest group, the broadcasters, conflicted with the desires of the marginal voters, the difference was dissipated by the reversion to symbolism to appease the latter group and to the adoption of subtle rule changes to satisfy the former.

1) Decision-makers have tended to give a great deal of consideration to the desires expressed by the special interest groups in broadcasting. In particular, the most influential, and therefore most successful, groups had been the broadcasters. An organization well suited to the pursuit of lobbying activities, strong financial interests and seeming political influence has given this sector a strong voice in the selection of policy instruments.

2) The decision-making process appears to follow standard political and bureaucratic patterns. Civil servants' interests have been more than adequately met by the instrument choice. Expanded kingdoms, increased power and prestige have been the natural result of the Canadian content policy. At the same time, other Government interests are taken into account because of the structure and process of decision-making. Conflicts rarely emerge: instead, tacit power relationships, such as those between the Cabinet and the Commissioners, may well ensure, through the "politics of anticipation", prior modifications of views to achieve a large measure of consensus within the government.

3) Because purely political interests come into play, the wish to cater to certain voter groups is evident. The group concerned consists of the "Canadian cultural nationalists." The dispersed and unorganized nature of the group has made it particularly vulnerable to the problem of imperfect information. This factor, combined with the subjective nature of the goal itself, makes it very difficult for cultural nationalists to determine objectively if their goals are being achieved. Particular policy instruments may be taken as proxies for goal achievement.

4) In satisfying the demands of the cultural nationalists, therefore it often seems to be sufficient for the government to implement measures that are largely symbolic (as opposed to being technically efficient.) Those bearing the financial costs of the policy instrument, broadcasters, can be appeased by taking advantage of the flexibility of the instrument. Certain rule changes have dimished the cost of the policy tool for the broadcasters. The resulting loss in effectiveness, though borne by the marginal voters, is easy to disguise and, therefore is not especially disadvantageous for the government agency to implement.

Footnotes

1. Public Accounts 1978-79, Vol. II 24-10.

2. David Silcox, "Let's not misunderstand each other", Macleans, August 11, 1980.

3. Estimates for the Fiscal Year ending March 31, 1982, Ch. 3.

4. Government of Canada Tax Expenditure Accounts: A Conceptual Analysis and Account of Tax Performance in the Federal Income and Commodity Tax Systems, December, 1979, Department of Finance, Ottawa.

5. Broadcasting Act. R.S.C. 1970 C.B.-11 5.3

6. Other policy measures do have a spill-over effect. As noted above, TV series and films are increasing by taking advantage of the 100% CCA for Canadian films. Government support to performing artists, theatre groups and orchestras helps to create a talent pool for Canadian television as well.

7. Robert Babe, Canadian Television Broadcasting Structure, Performance and Regulation, Economic Council of Canada. 1979 p. 108.

8. Ibid. pp. 62, 103. In 1977-78 40% of the Corporation's programming was non-commercial.

9. CRTC Public Announcement "Canadian Content Review" Dec. 31, 1979.

10. Peter Grant, "Canadian Content" appendix to an as yet unpublished work. pp. 256-57.

11. Babe, Canadian Television, pp. 20-21.

12. Grant, "Canadian Content" pp. 256-57.

13. Fowler also conducted a Royal Commission in the 1950's to examine the performance of the newly introduced Canadian television service.

14. Quoted in Babe, Canadian Television, p. 90.

15. Report of the Committee on Broadcasting, 1965, (Fowler) II, p. 63.

16. Quoted by J.R. Gray, "The 1970 Regulations Covering Content in Broadcasting", unpublished thesis, presented to the University of Toronto, April 1971 p. 51.

17. Later to become the Canadian Radio-television and Telecommunications Commission when responsibility for telecommunications systems was added to the Commission's duties in the mid-70's.

18. Broadcasting Act Part II sec. 75.

19. Babe, Canadian Television p. 43, "The Commission was originally made up of five full-time and ten part-time members.

20. Ibid

21. Estimates for the Fiscal Year ending March 31, 1982, p. 3-52.

22. Babe; Canadian Television, p. 30.

23. Broadcasting Act, 11 1) a).

24. A licensing decision can be set aside or referred back to the Commission for rehearing by order of the Governor-in-Council. The CRTC is also subject to appeals to the Federal Court of Appeal on questions of law or jurisdiction. Broadcasting Act Part II Sec. 26 (1); Babe, Canadian Television, pp. 30-31.

25. Babe, Canadian Television, p. 33.

26. Ibid., p. 37.

27. Gray, "1970 Regulations", p. 54.

28. For an analysis of this process see David Good, The Politics of Anticipation: Making Canadian Tax Policy, School of Public Administration, Carleton University, Ottawa, 1980.

29. Gray, "1970 Regulations", p. 62. CRTC, Annual Report 1968-69, p. 29.

30. Gray, "1970 Regulations" p. 61.

31. Ibid. pp. 56-58.

32. Ibid. p. 69a.

33. Ibid.

34. Ibid. p. 21.

35. Ibid. p. 72.

36. CRTC Annual Report 1969-70. Ottawa, 1970.

37. Quoted by Gray, "1970 Regulations", p. 80.

38. Ibid., p. 81.

39. Grant, "Canadian Content" pp. 258-59.

40. Globe and Mail, May 14, 1970.

41. Gray, "1970 Regulations", p. 82.

42. Grant, "Canadian Content", p. 259.

43. Ibid.

44. CRTC, Annual Report 1971-72, Ottawa, 1972.

45. The FM Regulations do not specify a Canadian content requirement. Instead, the CRTC has issued a policy statement and places conditions on each individual licence issued. Section G of the FM Promise of Performance deals with licences, and the CRTC has made the following comments regarding how it must be completed:

> "In this section, applicants will be expected to set out in a schedule their specific commitments for the encouragement of Canadian composing and performing talent as well as the use of Canadian recorded music. The nature and extent of

these commitments will vary according to the programming mix, the locality, and the resources available to each station.

Applicants will also be required to specify the percentage of musical compositions qualified as Canadian under the AM Radio Regulations which they will broadcast in each day. In this regard, the Commission will consider that, except in unusual circumstances, stations programming selections from Category 6, Music - General, should achieve at least thirty per cent Canadian content and stations programming selections from Category 7, Music - Traditional/Special Interest, should achieve at least seven per cent Canadian content.

The Commission will also encourage the use of Canadian syndicated programs or the networking of programs on a co-operative basis. While no Canadian quota on this material is proposed, the use of foreign syndicated programs will be allowed only on the basis of demonstrated need. Accordingly, applicants will be asked to set out the nature of the foreign syndicated programs they intend to use, the reasons for such use, and the applicant's policies towards the increased use of Canadian material."

The music falling under Categories 6 and 7 is defined in Schedule II of the FM Regulations to include:

Category Music ----	Category Music ----
General	Traditional and Special Interest
61 General Popular	71 Classic
65 Rock and Rock-Oriented	72 Opera
66 Country and Country-Oriented	73 Operetta and Musical
67 Folk-Oriented	77 Folk
68 Jazz-Oriented	79 Non-Classic Religious

In licensing decisions since 1975, the CRTC has in fact established the 30% and 7% rules for categories 6 and 7 respectively.

46. CRTC Announcement, "Canadian Production of Commercials", Jan. 12, 1976.

47. Babe, Canadian Television, pp. 123-24.

48. Statistics Canada, Culture Statistics, Performing Arts 1978, Ottawa, 1978, p. 7.

49. Babe, Canadian Television, p. 63.

50. However, this study also concluded that the addition of more U.S. channels had a steadily decreasing effect. Robert Babe, "The Impact of Cable Television Audiences", Carleton Economic Papers, 1973.

51. Ibid. p. 41.

52. CRTC, "Canadian Broadcasting, "A Single System", CRTC Policy Statement on Cable TV, July 16, 1971, pp. 13-14.

53. Ibid. p. 21.

54. SOR 75-665 Canada Gazette Part II, November 26, 1975, p. 3103.

55. Although the program substitution policy may derive statutory policy via s. 19 of the Cable Regulations.

56. Re Capital Cities Communications vs. CRTC (1975) 52 D.L.R. (3 (d)) 415; S.C.C. unreported November 30, 1977.

57. The 1980's: A Decade of Diversity, Broadcasting, Satellites and Pay-TV. Report of the Committee on Extension of Services to Northern and Remote Communities, CRTC, Ottawa, 1980, p. 11.

58. Ibid. p. 17.

59. Speech by Francis Fox, Minister of Communications to the Broadcast Executives Society, Toronto, October 21, 1980.

60. Macleans, Aug. 18, 1980.

61. Report on Pay TV, CRTC, March, 1978.

62. A Decade of Diversity, and the Globe and Mail, August 1, 1980.

63. Star, April 22, 1981, p. 1.

64. Globe and Mail, April 22, 1981, p. 3.

65. Ibid.

66. Star, April 11, 1981.

67. Ibid., April 22, 1981, p. 1.

68. Ibid., April 22, 1981, p. 24.

69. Culture Statistics, p. 22, Babe, Canadian Television, pp. 79-80.

70. In 1974-79, for five weekly hours of Canadian prime-time programming, the yearly program costs per hour were $972,120 while the revenues were $1,104,900. For six and one half weekly hours of American programming, the hourly costs were $127,615 (or 22% of the Canadian costs) against revenues of $1,803,446 (or 163% of the Canadian revenue). Babe, Canadian Television, p. 64.

71. It is estimated that American producers export almost 200,000 hours of programming yearly. Proposals for a Positive Policy and Regulatory Approach to Canadian Content, Ministry of Transport and Communications, Government of Ontario, 1980, p. 9.

72. At similar or higher risks. In the United States, out of perhaps 400 program options, only about fifty pilots will be produced, and only a very few of these are actually broadcast. Ibid., p. 8.

73. Joint Broadcast Committee, Brief to the CRTC concerning the renewal of the broadcasting licence of the CTV. November 7, 1978, p. 3.

74. Speech by John Meisel, CRTC Chairman to the Gerstein Conference on Mass Communications and Canadian Nationhood - quoted in the Star, April 11, 1981, p. 6.

75. Government of Ontario, Proposal for a Positive Policy, pp. 13-14.

76. Babe, Canadian Television, pp. 144-45.

77. Culture Statistics, p. 7.

78. A recent Gallup Poll gives some indications of how the regulations have been received. When asked "Generally speaking, do you approve or disapprove of the requirement for Canadian produced programming?" the

response was 64% in favour, 24% against and 9% undecided. These results were in spite of the fact that 68% of the viewers thought that American television was better than Canadian. Toronto Daily Star July 26, 1980.

79. A Similar poll taken in 1970 also indicated general support for content regulations. CRTC Annual Report 1970-71.

80. Memorandum on the CAB. An information brochure published by the Association.

81. CRTC Annual Report 1978-79.

82. Babe, Canadian Television, p. 69. These figures make an interesting comparison with the average rate of return of a different, monopoly industry subject to the CRTC of 14%.

83. Joint Broadcast Committee, Brief to the CRTC November 7, 1978. p. 3.

84. Ibid. The CTV charges 73% of the normal rate for Canadian advertising.

85. Grant, "Canadian Content" p. 258.

86. In the event, the cable penetration appears not to have been a serious factor. From 1972 to 1976, private broadcasters enjoyed an average annual growth of advertising revenue of 16.5%. Babe, Canadian Television, p. 57. Harry Boyle (in a telephone conversation) stated that he did not think that the concern over cable played a major role.

87. See Discussion Guide, Federal Cultural Policy Review Committee, Ottawa.

88. See the Toronto Daily Star, October 20, 1979.

89. In 1971 for example, a Cabinet directive was issued to the Commission insisting that no broadcasting licence be granted to persons who are not Canadian citizens nor to non-Canadian corporations.

90. Niskanen, W.A. Jr., Journal of Law and Economics, (Dec. 1975), Vol. 18, pp. 617-643.

91. Breton, A. and Wintrobe, R., "The Equilibrium Size of a Budget Maximizing Bureau", Journal of Political Economy, (Feb. 1975), Vol. 83, pp. 195-207.

92. The same can be said for the Pay TV issue. The broadcasters gained protection from Pay TV through the policy of no commercials and no "siphoning" off. The cultural nationalists did not get the type of Pay TV they desired but did receive the commitment of a certain degree of funding.

CHAPTER III

THE REGULATION AND TAXATION OF THE OIL INDUSTRY

I. Introduction

This case study is concerned with a major policy objective in the energy sector in Canada - collecting pure economic rent from the production of crude oil. It focuses on the choice among a range of governing instruments available for this purpose to provincial governments and the federal government. The analysis starts with a definition of pure economic rent and an examination of the reasons for collecting it. This involves identifying the interests which benefit and lose from the appropriation of rent by a given level of government. Three categories of governing instruments are explored: (1) price regulation, (2) taxation, and (3) public enterprise. The instruments are evaluated according to the following criteria: (1) technical efficiency, i.e. transaction costs, (2) constitutional limits, (3) impact on other policy objectives and (4) maximization of electoral support.

II. Economic Rent Defined

Economic rent is defined as the surplus value of a product above the cost of a product.[1] Costs include 1. labour, 2. materials, 3. capital, and 4. a return on capital invested corresponding to the level of risk in the industry. This conception of costs includes the opportunity cost of capital investment. Any return on investment in excess of its opportunity cost is rent. In the short run, once

resources are invested, then price changes which alter the level of rent will not change the allocation of resources in the industry. The OPEC cartel has forced the price of crude oil on the world market to escalate between October 1973 and July 1979 from 3.01 U.S. dollars to 18.00 U.S. dollars. Increases such as these generate very substantial rents. However, it is important to realize that in the long run, price increases make the extraction of different grades of resources (eg: oil from the tar sands) economically viable. There is an inherent tension between capturing the rents and promoting the development of new supplies. From a long run perspective, "pure economic rents" must be defined as revenues which can be appropriated without adversely affecting incentives to explore and develop new resources.

III. Economic Rent and the Functions of the State

(a) Introduction

Once the definition of pure rents is accepted, the policy objective of appropriating rents accruing to the oil industry as a result of OPEC pressure on the world price of crude oil becomes an imperative for both the provincial government in Alberta and the federal government. Since control of the petroleum industry in Alberta is dominated by American multinational enterprises, failure to collect the rents would result in a transfer of wealth from the Crown, which owns the reserves, to the shareholders of American corporations which lease the

right to extract the oil. Collection of resource rents facilitates the performance of the two principal functions of the state in western capitalist countries: 1. the provision of social services and 2. the promotion of economic growth. Resource rents can be directed to the financing of the essential components of the "welfare state". At the same time, rents can finance the development of an industrial economy and guarantee stable returns on investment:

> Capitalist enterprise depends to an even greater extent on the bounties and direct support of the state and can only preserve its private character on the basis of such public help. State intervention in economic life in fact means intervention for the purpose of helping capitalist enterprise. In no field has the notion of "welfare state" had a more precise and opposite meaning than here: there are no more persistent and successful applicants for public assistance than the proud giants of the private enterprise system.[2]

The "welfare state" guarantees a minimum standard of living for the individual and in Keynesian theory maintains the level of aggregate demand in the economy. Economic growth guarantees stable profit and employment levels. These two functions are performed by both levels of government in Canadian federalism. Competition for resource rents is inevitable.

(b) Resource Rents and the Alberta Government

Alberta's share of resource rents is directed to the provision of social services to Albertans and to the diversification of the provincial economy. In May 1976 the Alberta government established the Heritage Savings Trust Fund which absorbs at least 30% of the

province's revenues from non-renewable resources. At least 65% of the fund must be invested in provincial enterprises which will yield a reasonable rate of return and will preferably diversify the economy. A further 20% can be invested in enterprises generating more long term economic and social benefits to Alberta regardless of their short run profitability. The remaining 15% is designated for investments in other regions of the country. Alberta's diversification strategy centres on the development of forward linkages such as the processing of energy and agricultural staples.

(c) Resource Rents and the Federal Government

The federal government's share of resource rents collected through corporate income taxes and export taxes helps to finance federal participation in "welfare state" programmes. However the dramatic rise in Alberta's revenues has had an adverse effect on the federal government's formula for equalizing provincial goverments' revenue capacity. Ontario pressure forced an amendment to the equalization formula so that federal taxpayers in Ontario would not bear the weight of an increase in federal taxes which would have been necessary to increase equalization payments to "have-not" provinces as Alberta oil revenues escalated. Courchene explains:

> By far the most significant modification of the old equalization programme relates to the measures adopted with respect to energy. In the fall of 1974, Ottawa unilaterally amended the formula so that only one third of

> additional oil royalties generated because of a rise in oil prices would be eligible for equalization. Maintaining full equalization of energy royalties and permitting the domestic price of energy to rise to world levels would have resulted in a tripling of equalization payments from their 1975/76 level. In the process Ontario would have become a have-not province, and Ottawa would have had to increase federal personal income tax rates by 25% to raise enough money to finance the increase in equalization payments.[3]

Given its commitment to equalizing revenue-raising capacity among provincial governments, the federal government has an incentive to minimize Alberta's share of resource rents

(d) The Political "Margin" in Federal Politics

Resource rents appropriated by the federal government are utilized to promote economic growth. However federal priorities regarding the direction and locus of economic growth conflict with those of the Alberta government. Throughout the seventies Ontario ridings have been critical to the success of federal parties. The Progressive Conservatives have had consistent electoral success in the western provinces, while the Liberals have relied on a solid basis of support in Quebec and northern Ontario. These electoral regions may be termed "infra-marginal". They are more or less permanently committed to - or alienated from one party or the other. Competition between the two major parties has been most intense in the "marginal" ridings of southern Ontario, where there is a plurality of voters not permanently committed to/or alienated from either party. Rational political strategies for federal politicians

involves selecting policy objectives and governing instruments which confer benefits on marginal voters and impose costs on infra-marginal voters. The interests of southern Ontario voters are diametrically opposed to those of Alberta voters. Ontario stands as the manufacturing centre of the Canadian economy. Manufacturing accounts for 70% of Ontario's goods-producing output, but only 30% of the West's. Seventy per cent of the West's manufacturing is in the resource processing industries. As a centre of consumption for oil produced in the West, Ontario has consistently opposed the price increases called for by Alberta. Southern Ontario is a "marginal" electoral region in federal politics. The explanation for the relative lack of alienation of Ontario citizens from the federal government can be found in the coincidence of interest between the Ontario and federal governments in preserving an integrated national economy in the face of increasingly strong pressures towards continental integration arising out of the predominantly north/south flow of trade in the resource staple industries. The following table[4] is evidence of the fact that in all other provinces, citizens feel closer to their provincial governments than to the federal government. It is to provincial governments that citizens in peripheral provinces will look to further their interests.

Affect for Level of Government by Provinces (raw percentages)

	LEVEL TO WHICH RESPONDENT FEELS CLOSER		
	Federal	Provincial	Both
Newfoundland	18%	67	15
Prince Edward Island	14%	77	10
Nova Scotia	25%	55	20
New Brunswick	21%	60	20
Quebec	31%	45	23
Ontario	51%	34	16
Manitoba	22%	60	18
Saskatchewan	25%	65	11
Alberta	13%	78	9
British Columbia	20%	71	9
Total	34%	49	17

(Source: Political Choice in Canada (1978) p. 72)

Similarly, Ontario citizens tend to consider the federal government more important than their own provincial government:[5]

Evaluative Orientations - Level of Government Most Important by Province

(raw percentages)

	LEVEL		
	Federal	Provincial	Both
Newfoundland	41%	36	22
Prince Edward Island	29%	43	29
Nova Scotia	36%	33	31
New Brunswick	38%	41	20
Quebec	33%	38	29
Ontario	52%	28	20
Manitoba	32%	44	24
Saskatchewan	32%	47	22
Alberta	36%	50	15
British Columbia	28%	50	23
Total	40%	37	23

(Source: Political Choice in Canada (1978) p. 80)

If neither level of government collects the rents, the winning interests are the multinational oil companies and citizens throughout Canada are the losers. Appropriation of oil rents by the Alberta government benefits Alberta citizens and business interests (aside from the oil companies). Federal taxpayers, particularly Ontario citizens who carry the weight of federal taxes for financing equalization payments, are losers. Central Canadian manufacturing interests also lose under this division of resource rents. However, winning and losing interests are reversed if the federal government appropriates the rents. Institutional competition for resource rents is firmly rooted in economic conflict between staple producing and manufacturing regions.

IV. Criteria for Choice Among Governing Instruments

(a) Introduction

What criteria do federal and provincial politicans employ in selecting governing instruments for implementing the policy of collecting resource rents from the oil industry? The first criterion is constitutional: does the level of government have authority under the divisions of powers in the British North America Act, 1867 to use the instrument? The second criterion is technical efficiency: how accurate is the instrument in measuring "pure rents" and what are the monitoring and enforcement costs to government and the compliance costs for oil industry? The last criterion is political: what is the impact of the instrument on other government policy objectives, and how effectively does the instrument 1. maximize

perceived gains to marginal voters, 2. impose costs on infra-marginal voters, and 3. minimize perceived costs imposed on marginal voters?

(b) Price Regulation

(i) The Division of Regulatory Powers

What regulatory powers can the federal government and the provinces rely on under the BNA Act in defence of their opposing interests? In the event of a national emergency - such as a drastic reduction in the supply of imported oil or severe threat to Canadian manufacturing interests as a result of dramatic inflation of energy prices. Parliament could activate its emergency power under the general grant of power in s. 91 "to make laws for the Peace, Order and good Government of Canada". It has been established in the Reference Re Anti-Inflation Act[6] that resort to the emergency power effects a temporary alteration in the division of powers for the duration of the emergency. Parliament has a more permanent, but equally draconian power - the declaratory power. Using the exception to provincial power contained in s. 92(10)(c), Parliament could declare all oil wells in Alberta to be local works "for the general Advantage of Canada or for the Advantage of Two or more of the Provinces". Another draconian power in the federal arsenal is the power to reserve or disallow provincial legislation. Aside from these unilateral

powers, the exercize of which would spur grave opposition from provincial governments, Parliament can legislate under s. 91(2) in matters respecting "The Regulation of Trade and Commerce." But s. 91(2) comes into conflict with a range of provincial powers. Section 92(13) gives the provinces jurisdiction over "Property and Civil Rights in the Province". Conflict with s. 91(2) is evident since trade and commerce involves the transfer of property rights through contractual arrangements - and the right to make contracts is a civil right. Under s. 92(16) the provinces have jurisdiction over "generally all matters of a merely local or private nature in the Province". Section 109 gives the provinces ownership of natural resources in crown lands. Further, under s.92(5) the provinces have jurisdiction over "the Management and Sale of the Public Lands belonging to the Province and of the Timber and Wood thereon." While ownership and control of public lands was initially reserved to the federal Crown on the terms on which Manitoba entered confederation in 1870 and Saskatchewan and Alberta in 1905 (in order to guarantee federal control over the settlement of the West), in 1930, through an amendment to the B.N.A. Act, ownership was transferred to the provincial Crown.

This apparent conflict in regulatory powers - assigned "exclusively" to one level of government or the other - has created serious problems for judicial interpretation. The most perplexing problem is how to draw a line between s. 91(2) and ss. 92(13) and 92(16). The relevant

principle of interpretation is "mutual modification". The meaning of the broader class in narrowed to exclude the narrower class. Sections 92(13) and 92(16) must be subtracted from s. 91(2). The courts have grappled with this problem of defining the limits of jurisdiction in cases involving provincial and federal regulation of marketing but as yet they have not been consistent in their approach. The "pith and substance" approach embodied in The Queen v. Klassen[7] and Carnation Co. Ltd. v. Quebec Agricultural Marketing Board,[8] permits either level of government to legislate incidentally respecting matters which are ordinarily outside its jurisdiction, provided that the fundamental purpose of the leglislation is directed to a matter within its exclusive jurisdiction. Clearly federal and provincial legislation may overlap in which case the doctrine of federal paramountcy comes into effect - striking out any part of the provincial legislation which is inconsistent with federal legislation. The "pith and substance" approach was applied by the Supreme Court of Canada, in Caloil Inc. v. Attorney General for Canada[9]. Caloil challenged the authority of the federal government to regulate the trade of imported oil respecting its distribution for consumption. Under the National Energy Board Act[10], the federal government issued a regulation on May 7, 1970, prohibiting the delivery of imported oil west of the Ottawa River. Pigeon J. recognized that the federal government had jurisdiction under s. 91(2) to regulate interprovincial and international trade. Yet under s. 92(16) the provinces could regulate particular trades or businesses within the province, and under s. 92(13) the province could regulate

intra-provincial transactions. However, in this case, the regulation of intra-provincial transactions was "an integral part of a scheme for the regulation of international or interprovincial trade". Pigeon J. asserted that "the restriction on the distribution of the imported product to a defined area is intended to reserve the market in other areas for the benefit of products from other provinces of Canada". If the "pith and substance" approach were applied rigorously to the regulation of natural resource industries, the federal government could rapidly dominate the field of marketing regulating merely by phrasing its legislation so as to manifest an intent to regulate inter-provincial and international trade. By freezing the price of oil, it could guarantee that eastern consumers would collect oil rents. This would be possible since the production of oil within any province is inevitably part of an inter-provincial or international flow of trade.

However, the prevalent approach of the Supreme Court of Canada to the division of regulatory powers makes federal-provincial agreement essential. The clearest expression of this approach is contained in the Reference re the Farm Products Marketing Act.[11] Kerwin C.J. stated that the provinces could regulate intra-provincial transactions, but "once an article enters into the flow of inter-provincial or external trade, the subject matter and all its attendant circumstances cease to be a mere matter of local concern", and then become appropriate subjects for federal regulation. What emerges from this analysis is an attempt to categorize marketing legislation as a regulation of either intra-

provincial transactions or extra-provincial transactions. Federal-provincial cooperation would be essential for the effective regulation of the marketing of natural resources such as petroleum. At any given time it would be practically very difficult to distinguish products that are destined for intra-provincial markets from those destined for extra-provincial markets. The "categorization" approach has been endorsed in an unreported decision of the Supreme Court of Canada on March 16, 1979, Dominion Stores v. The Queen and Attorney-General for Ontario.

With respect to the regulation of production, Pigeon J. stated in the Reference re Agricultural Products Marketing Act[12] that the control of production, whether agricultural or industrial is prima facie a local matter, a metter of provincial jurisdiction". A flow of inter-provincial or international trade does not extend back as far as production. While Pigeon J. insisted that provinces cannot directly regulate extra-provincial trade, he would permit the provinces to achieve the same effect indirectly by setting production quotas. However, it is clear from Central Canada Potash Co. Ltd. et al. v. Government of Saskatchewan et al.[13] that provinces cannot set production quotas for the purpose of regulating prices of resources sold out of the province; production quotas must be designed primarily for conservation of resources.

In conclusion then, the constitutional limits on the regulation powers of federal and provincial governments are not clearly drawn. Giventhe difficulty of distinguishing inter-provincial from intra-

provincial trade flows, regulation of the price of oil depends on federal-provincial agreement. Secondly, although the provinces have authority to set production quotas for conservation purposes - indirectly regulating the price of oil - they may face insurmountable difficulties in establishing a genuine conservation purpose.[14]

(ii) Price Regulation and Energy Self-Sufficiency

In November 1980 the price of oil sold in Canada was $19.70 approximately half the world price of $39.00 per barrel

River. An export tax placed on Alberta oil sold to the United States finances a subsidy for imported oil which supplies markets east of the Ottawa River. Since Canada both exports and imports oil at world prices, the opportunity cost of every barrel consumed domestically is the world price. Therefore, if the price of oil sold on the domestic market is lower than the world price, production of domestic oil is discouraged where the cost of production is greater than the domestic price. Artificially depressing the price of oil provides a subsidy to Canadian consumers, but it adversely affects the goal of energy self-sufficiency. The policy of energy self-sufficiency has a strong political appeal - it offers security of supply and a degree of insulation from OPEC price increases. Hartle points out that self-sufficiency cuts against economic efficiency:

> The well-being of the Canadian economy, and hence of the average Canadian, is determined by the economic well-being of our trading partners, especially the United

> States. If Canada were self-sufficient in energy by, say, 1995, but our energy was for some reason extraordinarily costly relative to the energy costs of other trading nations, the Canadian standard of living would be lower because the Canadian dollar would have to be lower. We would have to export more in exchange for a given level of imports.[15]

Hartle estimates domestic consumption at 700 million barrels per year. Sold at approximately $20.00 below world price, this amounts to a $ 14 billion subsidy to Canadian consumers. While price regulation collects rents for consumers, it distorts production incentives and cuts against the goal of energy self-sufficiency. The Liberal government announced The National Energy Program in the federal government's budget of October 28, 1980. While security of supply is ostensibly the main objective of the NEP, it focuses on reducing demand for conventional oil - primarily by encouraging conservation and substitution of natural gas for oil. However, the NEP perpetuates the policy of holding the price of oil below the world price - it specifically provides that the domestic price will never rise to world levels. This will most likely encourage increased consumption of oil. Furthermore, the artificially low prices will discourage investment in exploration and development to expand supply.

(iii) Price Regulation and the Political Margins

Regulating the price of oil to provide a subsidy for consumer interests is a highly visible and attractive governing instrument. Given existing taxing arrangements, an increase of $1.00 in the price of oil would be allocated approximately 45% to the producers, 45% to the Alberta government, and 10% to the federal government. Tables

TABLE I

Sources and disposition of crude oil and petroleum products by region, Canada, 1978 (millions of barrels)

Canadian sources of crude oil production	Region	Domestic disappearance of petroleum products
-	Atlantic	87.8
-	Quebec	182.8
0.6	Ontario	217.7
3.8	Manitoba	21.7
60.5	Saskatchewan	25.0
442.3	Alberta	56.9
13.7	British Columbia	63.7
0.9	North	4.1
Sub-total: 521.8		
Trade in oil and products:		
Imports 243.5		
- Exports -144.6		
Change in inventories, etc: 39.0		
659.7	Total Canada	659.7

SOURCE: Compiled from Statistics Canada, Crude Petroleum and Natural Gas Production (26-006) and Refined Petroleum Products (45-004)

TABLE 2

Net direct effect on gross income by region resulting from a $2 increase in

Region	($ million)	% of total income
Atlantic	-175.6	-1.3
Quebec	-365.6	-0.7
Ontario	-434.2	-0.5
Manitoba	- 35.8	-0.4
Saskatchewan	+ 71.0	+0.8
Alberta	+770.8	+3.0
BC and North	-106.4	-0.4
Federal Budget	+197.8	
Value of change in inventories, etc.	+ 78.0	
Total Canada	0	

SOURCE: Calculated simply by applying a $2 price increase to the volumes in Table 1. The improvement in the Federal Budget is the net result of saving $2 per barrel of import subsidies and losing $2 per barrel of export tax. Provincial gross incomes for 1978 were estimated by dividing Canadian 1978 GNP according to provincial shares of 1977 GDP, the latter from Statistics Canada, Provincial Economic Accounts.

1 and 2 on the following page, demonstrate the effect of price increases on the various economic regions of the country. Given Ontario's position as a "marginal" province in federal politics, combined with its apparent interest in low energy prices, the use of price regulation to allocate oil rents to consumers is a politically rational strategy for federal politicians. Depressed prices provide benefits for manufacturing interests and consumers. The losers are the oil companies and the Alberta government. In terms of electoral support, the Alberta government has a clear mandate, both from producers and citizens, who benefit from higher profits and lower taxes and better social services respectively, to negotiate for a rise in domestic oil prices to world levels. It might be argued that the federal government could allow prices to rise to the world level and then impose an excess profits tax on the increased revenues in order to compensate consumers for increased oil prices. Leaving aside the difficulties of preventing an increase in provincial royalties, such a policy has little appeal to manufacturing interests who lobby for depressed prices to sustain the competitiveness of Canadian products in world markets. Increasing oil prices and reducing personal income taxes has little appeal to manufacturing interests. Manufacturers are an effective pressure group at the federal level since the jobs of marginal Ontario voters hinge on the profitability of their operations. The political importance of the subsidy inherent in maintaining prices below world levels was made clear in the most recent federal election. The major issue was the extent to which the Conservative government would eliminate the subsidy, if re-elected. The National Energy Program announced by the Liberal

government in Ottawa provides for an increase in the price of conventional oil at the rate of $2.00 per barrel er year between 1981 and 1983. However, the annual increase will be less than the rate of inflation predicted by the government. What this means is that the real price of oil will fall under the impact of the NEP.

(c) Taxation

(i) The Range of Taxing Instruments

What are the alternative taxing instruments which governments can use to collect resource rents? In the fiscal year ending March 31, 1978, 25% of Alberta's natural resource revenues came from public auctioning of rights to exploit oil and gas reserves. If one assumes informed non-collusive "cash bonus bidding", auctioning of crown rights is an effective means of collecting resource rents. Governments can also use gross royalties. This involves the appropriation of a percentage of production and normally takes the form of a percentage tax on the value of output. Gross royalty schemes may incorporate rate differentials based on production cost differences among wells. A variation on this instrument is negotiated royalties which involve negotiation of royalty levels applied to specific wells or projects. In this case, the government must have technological and market information as well as specialized negotiating skills. A net royalty system is calculated on the basis of a prior deduction of costs (such as exploration and development) from gross revenues. An alternate instrument is a ground rent which involves a property tax on the net realizeable present value of oil in the ground. Governments may also

impose excise taxes on ultimate consumers. Another alternative is an excess profits tax which is levied on revenues in excess of those required to yield profits equal to the opportunity cost of investment. The federal government relies on a corporate income tax system which does not allow oil companies to deduct provincial royalty payments from taxable income.

(ii) The Technical Efficiency of Taxing Instruments

Instruments vary considerably in terms of technical efficiency. Failure to capture 100% of pure economic rent is often the result of inherent inadequacies in the instrument. The vertically integrated structure of multi-national oil companies facilitates transfer pricing practices which disguise revenues as costs for purposes of minimizing tax burdens. Net royalty, excess profits tax, and corporate income tax instruments are particularly prone to transfer pricing since they involve accurate measurement of costs. With these instruments governments face high information costs. Cash bonus bidding places the onus on the industry to accurately estimate rents, but only anticipated rents can be collected by government. Gross royalty systems are not prone to transfer pricing, but since they are imposed equally on lucrative and ordinary wells, they may produce serious disincentives for the development of marginal reserves. Negotiated royalties and ground rents however present governments with the information costs of estimating the value of resources in specific properties.

Taxing instruments are characterized by low administrative and compliance costs. Since rent collection instruments can be readily superimposed on existing corporated income tax systems, administrative costs are relatively small in comparison to those associated with complex regulatory schemes or public enterprise. However, taxing instruments vary radically with respect to the incentives they create towards managerial efficiency - that is, the efficiency of the enterprise in combining factor inputs so as to maximize output at minimum cost. Cash bonus bidding and gross royalty systems are the most efficient since all residual profits accrue to the private enterprise. Conversely net royalty and excess profits tax instruments provide real incentives to inefficiency if they are effective in capturing rents, since all the benefits from efficiency in production are directed to the public purse.

(iii) The Division of Taxing Powers

How are taxing powers divided under the B.N.A. Act, 1867 and what limits have the courts placed on the respective federal and provincial powers? Under s. 91(3) the federal government is given what is apparently a plenary power: "The raising of Money by any Mode or System of Taxation". Further, s. 122 reserves customs and excise revenues to the federal government. On the face of the Act, the only limits to federal taxing powers appear to be s. 121 and s. 125. The former prohibits inter-provincial tariffs and the latter prohibits taxing of Crown property. Nonetheless, the principle of

"mutual modification" requires that the narrower provincial taxing powers be carved out of s. 91(3) to provide an exclusive field for provincial tax. Section 92(2) gives the provinces jurisdiction over "Direct Taxation within the Province in order to the raising of a Revenue for Provincial Purposes". Natural resource royalties are direct taxes which provinces have an exclusive right to levy under s. 109. However, export taxes fall under s. 91(3) since they are considered to be indirect; the person on whom they are levied can pass them on and avoid bearing the burden of the tax.

Applying the principle of "mutual modification" to the problem of defining the limits of the federal taxing powers under s. 91(3) and provincial taxing jurisdiction under s. 92(2) inevitably leads one to the conclusion that Parliament cannot tax, either directly or indirectly for "provincial purposes". Yet a literal reading of s. 92(2) excludes provinces from indirect taxes for provincial purposes. While there is no express limitation on Parliament against taxing for provincial purposes, this can be construed from the scheme of the division of powers. The direct - indirect distinction was first drawn by J.S. Mill. A direct tax is a tax levied on the person whom the legislature intends to have pay it. An indirect tax is a tax levied on one person, but the legislature expects him to indemnify himself at another's expense. The original rationale for the prohibition of indirect taxing by the provinces was to prevent them from undertaking ambitious expenditures. Direct taxes were assumed to be more visible and much harder to enact without arousing strong political opposition. However, in the twentieth century, provincial

expenditure responsibilities - the provision of social services and the promotion of economic growth - have grown to an extent quite unforeseeable in 1867. The direct-indirect distinction is an anachronism.

However, the direct - indirect distinction has been stubbornly adhered to by the Supreme Court of Canada in Canadian Industrial Gas and Oil Ltd. v. Government of Saskatchewan.[17] After the dramatic rise in the world price of oil in 1973, the Saskatchewan government introduced legislation designed to capture the windfall. Saskatchewan imposed a mineral income tax equal to 100% of the new well-head price (i.e. world price) minus the "basic well-head price" (i.e. the pre-1973 statutory price received by producers). Ninety-eight percent of Saskatchewan oil is produced for sale out of province.[18] In the majority decision, Martland J. characterized the mineral income tax as an export tax imposed on production. As such it was an indirect tax. While it purported to be direct, Martland J. asserted that "what differentiates this legislation from other legislation imposing export taxes is that the true effect of the legislation is to impose a freeze upon the actual income which the producer-exporter can derive from the sale of his product."[19] What most impressed Martland J. was the provision which compelled the producer to sell his oil at what the minister determined the fair market price to be. According to his reasoning the tax was responsible for the increase in price, and in fact this increase was paid by the purchaser. The tax was indirect and therefore ultra vires of s. 92(2). If the tax is responsible for an increase in the price of the product, then the tax is indirect - and the final consumer bears the increase. If the price remains constant,

regardless of the tax, then the tax is direct - and the producer bears the tax. In this case, the mineral income tax did not increase the price of oil sold to the final consumer. It was, in fact, a direct tax. What was really at issue was who would reap the windfall - the oil companies, or the Saskatchewan government. In either case, the position of the consumer would remain the same. Until over-ruled this case stands as an obstacle to provincial excess profits taxes.

The interpretation of s. 125 has assumed considerable importance in the context of federal-provincial competition for the revenues from the taxation of the oil industry in Alberta and Saskatchewan. The provinces have leased or granted rights to extract oil to private companies, but they have reserved royalties under s. 109. These royalties are clearly provincial property. The federal government in an effort to capture a portion of the economic rent resulting from the continued escalation of world oil prices, has refused to permit oil companies to deduct the royalties paid to the provinces from taxable corporate income. Does this amount to a violation of s. 125? Is the federal government in effect taxing the provincial crown for its royalty income? It seems likely that the courts will interpret s. 125 as a prohibition of any direct taxes on Crown property. In that case, the non-deductibility of royalties would not constitute an infringement of s. 125. The non-deductibility issue is really one of double taxation, but both instruments: provincial royalties and federal corporate income taxes are constitutionally valid.

(iv) The Impact of Taxes on Other Objectives

1. Energy Self-Sufficiency

How do taxing instruments affect other policy objectives? The federal tax system is used simultaneously to collect resource rents and to promote energy self-sufficiency. The double taxation effects of the decision not to allow oil companies to deduct provincial royalty payments from taxable corporate income have been softened by resource allowances which reduce the federal tax on resource income. The resource allowance is a deduction from corporate income approximating production profits which include profits and royalties. Exploration, development, earned depletion and interest expenses are not deducted from resource profits for the purpose of this tax abatement. The Income Tax Act[20] also provides for fast write-off of exploration costs as distinct from development cost which are deferred then written off. The Act also includes depletion allowances permitting the deduction of a percentage of certain exploration and development expenses. The apparent redundancy in permitting the deduction of exploration and development expenses in both fast write-off provisions and in earned depletion allowances compensates for any disincentives produced by the provincial gross royalty systems. Different taxing instruments have varied effects on overall allocative efficiency in the production of oil. To the extent that a resource market functions as a fully competitive sector of the economy cash bonus bidding displays maximum allocative efficiency. Similarly net royalty and excess profits taxing systems which include a deduction of costs from revenues sustain incentives to exploit marginal resources. However, gross royalties are capable of substantial allocative inefficiencies since they do not differentiate on the basis of production costs.

2. Allocation of Risk

Taxing instruments may be chosen on the basis of the locus of risk between government and producers. While governments can spread risk across the whole population, the political costs of economic failure may be very high. Natural risk aversion tendencies of private industry can be offset by vertically integrated production and marketing structures combined with geographic integration of production. Cash bonus bidding places all the risk on private enterprise since bids are placed prior to full knowledge of the value of any given oil reserve. Gross royalties shift the risk partly to government - revenue depends on the success of exploration The risk is even further shifted to government with net royalties since revenue depends on the profitability of production.

3. Reducing Industry Concentration

Included in government policy objectives may be the goal of reducing industry concentration. Taxing instruments which place high risks on private enterprise encourage industries to consolidate in order to diversify risk. Similarly, because resource and earned depletion allowances only apply to actual resource profits, they increase barriers to entry. These tax concessions are of no use to an entrepreneur until he is firmly established and making a profit. The fast write-off provisions in the Income Tax Act are only useful for established firms with current income. Consequently, resource

industries are increasingly dominated by large corporations most of whom are multinational enterprises. Generally, the use of taxes for rent collection cuts against the objective of achieving increased Canadian ownership in the oil industry.

(v) Taxes and the Political "Margins"

For exploiting the political margin the use of tax instruments has a particular advantage. The federal government has used the non-deductibility scheme to give the appearance of taking a tough line with the oil companies and the Alberta government. But at the same time, the resource and earned depletion allowances provide substantial concessions to producers. Tax concessions have very low visibility. Tax bills are debated in the committee of the whole House of Commons where there is no opportunity to call witnesses: they are not subject to detailed analysis by sub-committees. Also tax concessions are not subject to annual budgetary review. In effect, they are disguised expenditures which subsidize oil companies and create barriers to entry in the oil industry. This type of manipulation of the tax system enables the federal government to exploit the political margin in Ontario while simultaneously softening the blow to western producer interests. Tax exemptions,concessions and deductions are effective instruments for attracting marginal voters also. Because of their low visibility, they can be employed to confer benefits at no apparent cost. The target efficiency i.e. the accuracy with which

full benefits are conferred on intended beneficiaries - of tax concessions is questionable. The optimal strategy for collecting rents and promoting energy self-sufficiency demands that benefits be given only to firms that would not have invested without the subsidy. It is probable that many of the firms receiving tax concessions would have invested in development anyway.

(d) Public Enterprise

(i) The Range of Public Enterprise Instruments

What types of public enterprise can governments turn to for the purpose of collecting resource rents? Governments could nationalize the oil industry and manage all elements in the process of extracting and marketing oil. An alternative to this would be to create a state trading agency - a monopsony intermediary between producers and distributors. It could purchase oil from producers at prices prescribed in legislation or regulation, and then sell all oil at the world price. Another alternative would be to set up a state-owned producer, competing with private companies, to prevent collusive bidding. For effective rent capture, non-collusive and competitive bidding among producers is an essential prerequisite. Otherwise the price of oil purchased from producers would have to be determined administratively. Another possible instrument is the joint venture between a state owned enterprise such as Petro-Canada and a private

company. In this type of arrangement, government collects a share of rents in proportion to the costs it bears. Alternatively, "carried interest" schemes may be used whereby the private enterprise bears all the operating and capital costs, but the government takes a share of the revenue generated. The government's potential interest is financed or carried during the exploration stage and it has an option to participate in the development of a commercially viable find provided that it bears a share of the development costs. For example, Petro-Canada has the right under the Territorial Lands Act[21] to opt into a venture at the point of renewal of oil and gas leases under the Canada Oil and Gas Lands Regulations.[22] Governments may enter production sharing agreements through which the private company assumes all exploration capital, and development expenses, which are reimbursable from production receipts, but the government takes a share of production revenues in excess of expenses. Finally a private company may enter a service contract with the state - the company is reimbursed for all exploration and production expenses, but the government appropriates all the resources produced.

(ii) The Technical Efficiency of Public Enterprise Instruments

How do public enterprise instruments measure up in terms of technical efficiency? The establishment of state ventures reduces many of the transactions costs associated with regulatory or taxing instruments. In the case of full nationalization, transfer-pricing

obviously ceases to be an obstacle to full rent capture. Joint ventures give governments an opportunity to measure accurately the costs incurred by private companies. However, in comparison to taxing systems, the administrative costs associated with public enterprise are very high especially if new bureaucratic arrangements are called for. In terms of managerial efficiency, public enterprises may lack effective incentive and penalty structures - joint ventures may tend to be more efficient than full public ownership. However, conclusive evidence is lacking with respect to the comparative efficiency of public and private firms in this sector.

(iii) Public Enterprise and the Constitution

Unlike taxing systems and regulatory instruments there are few constitutional constraints on public ownership. However, full nationalization of an industry is seen by the courts as a form of regulation, and hence, the right to nationalize follows the division of regulatory powers.[23] But short of nationalization, either level of government may freely use public enterprises to collect resource rents. Given the limitations on federal regulatory and taxing powers, public ownership instruments could be an effective vehicle for increasing the federal share of rents.

(iv) The Impact of Public Ownership on Other Objectives

Depending on the specific arrangements for the sharing of exploration and development costs, joint ventures place substantial

risks on government; full public ownership allocates all risks to government. Richards and Pratt[24] contend that effective bargaining power for dealing with multinational enterprises in the resource sector hinges on a willingness on the part of governments to assume risks. The threat of public ownership may be crucial in securing the agreement of oil companies to a given system of taxes:

> A sine qua non for a government to capture rent and other benefits is that its leaders be ideologically oriented to take entrepreneurial risk - be prepared to reject a low level of rent available with certainty and bargain for a higher level that may prompt prospective investors to retaliate, be prepared to invest public funds if the price of private investment is too high, be prepared to sacrifice immediate for probable but uncertain future benefits.[25]

Participation of Crown corporations in cash bonus bidding facilitates rent collection by rendering collusion ineffective. Public ownership is clearly a valuable instrument for promoting other objectives such as reducing industry concentration and the degree of foreign ownership.

(v) Public Enterprise and the Political "Margins"

In terms of exploiting the political margin, public enterprise has high symbolic appeal. While full public ownership of the oil industry runs counter to the prevailing ideology of free enterprise capitalism, less ambitious forms of public enterprise, such as Petro-Canada, offer considerable advantages to politicians. Forced to operate as a competitor with private enterprises, Petro-Canada incurs minimum administrative costs, but enjoys high political

visibility. Rent capture is more readily visible to electors when governments use public enterprise instruments rather than forms of regulation and taxing systems. Goverment participation frees politicians from the charge of subsidizing high risk exploration operations without receiving any rights to the revenue generated in return. Hence Petro-Canada has been a valuable instrument for exploiting the federal political margin in southern Ontario. It wins the support of consumers throughout the country and it benefits central manufacturing interests (especially given its energy self-sufficiency promotion objectives). At the same time, governments can use forms of public enterprise without alienating private oil producing interests. Multinational oil companies are particularly anxious to secure public backing. Joint ventures which impose heavy financial commitments on governments offer private industry real security. Governments can use public enterprise as an instrument for keeping business interests honest, while simultaneously shouldering much of the entrepreneurial risk.

Footnotes

1. See A.E. Hudec. A Comparison of the Relative Merits of Tax Policy and Government Equity Participation as Alternative Instruments for Achieving Canada's National Energy Policy Objectives (Law and Economics Programme, Faculty of Law, University of Toronto: March, 1980), from which much of the material in this case study is drawn.
2. R. Milliband. The State in Capitalist Society (London: 1969) p. 78.
3. T.J. Courchene, Refinancing the Canadian Federation: A Survey of the 1977 Arrangements Act (C.D. Howe Research Institute,1979) p. 31.
4. Political Choice in Canada (1978) p. 72
5. Ibid., p. 80
6. Reference Re Anti - Inflation Act (1976), 68 DLR (3d) 452
7. The Queen v. Klassen (1960), 20 DLR (2d) 406
8. Carnation Co. Ltd. v. Quebec Agricultural Marketing Board (1968) SCR 238
9. Caloil Inc. v. Attorney General for Canada (1971) SCR 543
10. National Energy Board Act,1959 Can. c. 46 PA. VI
11. Reference re the Farm Products Marketing Act (1957) SCR 198
12. Reference re Agricultural Products Marketing Act (1978) 84 DLR (3d) 257
13. Central Canada Potash Co. Ltd. v. Government of Saskatchewan et al. (1978), 88 DLR (3d) 609
14. See Central Canada Potash, op. cit.
15. D.G. Hartle , "Federal Provincial Relations and Energy" in Energy Policies for the 1980s: An Economic Analysis II (Ontario Economic Council, 1980) p. 119
16. J.L. Powrie, "Taxation and Energy" in Energy Policies for the 1980s: An Economic Analysis I (Ontario Economic Council, 1980) pp. 74-75

17. Canadian Industrial Gas and Oil Ltd. v. Government of Saskatchewan (1977), 80 DLR (3d) 449.

18. Ibid., see the dissenting judgement of Dickson J. p. 466

19. Ibid., see the majority judgement of Martland J. p. 462

20. Income Tax Act RSC, 1952 c. 148

21. Territorial Lands Act RSC, 1970 c. T-6

22. Canada Oil and Gas Lands Regulations under Territorial Lands Act op. cit. s. 27.

23. see s. IV (i) above

24. J. Richards and L. Pratt, Prairie Capitalism: Power and Infuence in the New West (Toronto: McClelland and Stewart Ltd., 1979)

25. Ibid., p. 327

CHAPTER IV

POLLUTION CONTROL

I. Introduction

Economists have long argued that traditional regulatory policies are ineffective or inefficient in dealing with pollution problems. They have argued that market oriented policies such as effluent charges or effluent rights would be more efficient and more effective. Such suggestions have thus far been almost completely ignored. This case study examines current regulatory policies in some detail, and compares them with possible market oriented policies with respect both to efficiency and to political acceptability. The fate of recent attempts to introduce market policies is examined to discern the strengths and weaknesses of those proposals. Conclusions are then drawn as to the actual efficiency of market oriented policies in realistic as opposed to idealized situations. We also consider the features that can make market oriented policies more or less likely to succeed politically, and to be substituted for traditional policies.

II. Pollution Control Problems and Current Policies

(1) The Form of Current Regulatory Policies

A variety of forms of emission limitation are used in Canada and in the United States. It is common for environmental legislation to contain a general prohibition against discharges which are harmful or may be harmful. For example, the Canada Fisheries Act,[1] Section 33(2) states that " ... no person shall deposit or permit the deposit of a deleterious substance of any

type in water frequented by fish ...". Section 14(1) of the Ontario Environmental Protection Act[2] states that " ... no person shall deposit, add, or emit or discharge a contaminant ... into the natural environment that (a) causes or is likely to cause impairment of the quality of the natural environment for any use that can be made of it". While these general provisions appear very protective, in some cases other sections of the legislation exempt discharges that comply with specific regulations or orders of the relevant ministry.[3]

In addition to the general prohibitions, the regulations promulgated under a number of environmental acts prohibit discharges that cause ambient concentrations in excess of some specified standard. For example, Section 5 of Regulation 15 under the Ontario Environmental Protection Act prohibits any discharge from a source that causes an ambient concentration of a pollutant greater than that specified in Schedule 1 of the Regulation.

One of the most common pollution limits is a limitation on the pollution density allowed in the waste water or the stack gas. For example, most air pollution regulations prohibit the discharge of smoke with a density greater than some degree of opacity on the Ringleman Chart, effectively limiting the density of particulates in the stack gas. Regulations made under the Fisheries Act governing the discharge from mines limit the concentration of arsenic, copper, lead and other heavy metals to a certain concentration of the waste water volume.[4]

Another common form of effluent regulation is a limitation of the waste that may be discharged per unit of process input or output. For example,

the Chlor-alkali Mercury Effluent Regulations[5] state that mercury discharge may not exceed .0025 kilograms per ton of chlorine produced. Similarly, the Pulp and Paper Effluent Regulations[6] provide that the suspended solids discharged from a mill may not exceed an amount determined by multiplying a coefficient times the number of tons of wood processed or tons of product produced. Here, the emission coefficient is specified separately for each of twelve in-plant processes. This coefficient is different for new and for existing mills and for different methods of pulp production.

Finally, the regulation of effluent discharges from pulp and paper mills begins with ambient water quality goals and translates these into emission objectives for each mill depending upon its situation and the quality of its receiving waters. The resulting effluent limitations are essentially limits on total waste for each mill, expressed in tons per day.[7]

Within this regulatory framework, both Canada and the United States make an important distinction in practice between pollution control for new and expanding sources and for existing sources of pollution. Regulations establish construction permit requirements for new or expanding sources which do not apply to existing sources. They set new source operating standards for new and expanding sources which do not apply to existing sources, or they formally establish more stringent operating standards for new and expanding sources than for existing sources. Below are several examples from both countries of this new/old distinction.

(a) Ontario Environmental Protection Act

The Ontario Environmental Protection Act[8] and its regulations do not generally distinguish between new and existing sources in that both require program approval for operation under s. 10. However, s. 8 requires a new or expanding source to obtain a certificate of approval from the Ministry prior to construction. This may provide the Ministry with some leverage over new or expanding firms which is not available over existing firms, as is the case with any construction permit requirement.

More importantly, a distinction is made in the policy and practice of the Ministry between new and existing sources.[9] In practice, the Ministry has an ongoing abatement program which attempts with varying degrees of success to bring existing sources within pollution control standards and objectives. Sometimes compliance is impossible because of costs, the layout of existing plants, land use, water availability and sewer system planning that predated pollution control laws, and other considerations. In the case of new or expanding plants, different criteria are applied in the planning stages , so it is possible to come much closer to, or to achieve, compliance with the standards and objectives.

(b) Canada Fisheries Act

Federal water pollution control in Canada comes under the auspices of the Fisheries Act.[10] The general pattern of regulation under the act is a

combination of enforceable regulations which set effluent standards for new or expanding sources coupled with unenforceable guidelines, or no guidelines or regulations for existing sources. This pattern applies to petroleum refineries,[11] pulp and paper mills,[12] meat and poultry products plants,[13] metal mines (which include mills and smelters)[14] and potato processing plants.[15] The pattern has not been followed in the case of mercury liquid effluents from chlor-alkali plants,[16] perhaps because of the acute toxicity of mercury. The only other exception to the pattern is the metal finishing guidelines which do not distinguish between new and existing sources; these are unenforceable in any event.

(c) Ontario Water Resources Act (O.W.R.A.)

The O.W.R.A. does not generally distinguish between existing and new sources. However there is a construction approval requirement. S. 42 provides that the establishment, extension or change of sewage works requires the approval of the Director. ("Sewage" includes industrial wastes whether or not they flow into municipal sewage treatment works). The same procedural distinction that applies to new and old sources under the E.P.A. also applies under the O.W.R.A.

(d) Canada Clean Air Act

Regulations under the Canada Clean Air Act[17] relating to industrial emissions (from secondary lead smelters, asbestos mining and milling, mercury

cell chlor-alkali plants and vinyl and polyvinyl chloride plants[18], do not distinguish between new and existing sources. However, nonenforceable wood pulp industry emission guidelines apply only to new sources, and these guidelines were intended to be adopted as enforceable regulations by the provinces.[19]

(e) U. S. Clean Air Act

The U. S. Clean Air Act[20] requires every major source (new, expanding or existing) to obtain a permit from the State for operation, modification or construction.[21] To obtain a permit, the owner or operator of the proposed new source or modification must show that there will be no violation of N.A.A.Q.S. (national ambient air quality standards), N.S.P.S. (new source performance standards) or N.E.S.H.A.P. (national emission standards for hazardous air pollutants).[22] In addition, if a new source or modification emitting more than 50 tons per year[23] is to be located in a "clean" area (one which meets the N.A.A.Q.S.), it must obtain a permit in accordance with P.S.D. (prevention of significant deterioration) legislation and regulations.[24] On the other hand, if the new sources or modification is to be located in a "dirty" area (one which does not meet the N.A.A.Q.S.) it must obtain a permit as required by the "offsets" legislation.[25] A new plant can be subject to both P.S.D. and offset permit requirements if two pollutants are involved, or if there are cross-boundary effects.[26]

The N.A.A.Q.S. are not different for new or modified sources than for existing sources, but a new or modified source that would violate them

cannot be constructed while an existing source that violates them is rarely shut down to force compliance. N.S.P.S. regulations for twenty-eight types of facilities had been published as of July 1, 1979.[27] N.S.P.S. apply only to new sources, modifications increasing or adding emissions of pollutants to which a standard applies, or reconstructions.[28] The net result of all of this is that the Clean Air Act sets very high permit and performance requirements for new or modified sources, and far less strict requirements for existing sources.

(f) U.S. Federal Water Pollution Control Act Permit Requirement

The Federal Water Pollution Control Act[29] or Clean Water Act as it is generally known:

> prohibits any discharge to public waters without a permit and imposes stringent pollution control requirements on all dischargers, whether existing or new. Requirements on new plants are generally quite similar to requirements on existing plants.[30]

(g) U.S. Federal Water Pollution Control Act Performance Standards

There are three kinds of standards for water pollution control under the Clean Water Act: general performance standards,[31] toxic effluent standards,[32] and pretreatment standards[33] for discharge into publicly owned treatment works.

With regard to the general performance standards, Koch & Leone indicate that:

> Congress mandated a higher level of abatement for new producers: their effluent standard is to be based on

> "the best available demonstrated control technology processes, operating methods, or other alternatives including where practicable, a standard permitting no discharge of pollutants". Although the difference between this standard on the one hand and the 1977 B.P.T. and 1983 B.A.T. standards on the other is somewhat vague, the law clearly allows new-source standards to be set even higher than the B.A.T. standard. Furthermore, new-source standards are applicable soon after promulgation by E.P.A., whereas the B.P.T. and B.A.T. standards were designed to allow several years before compliance. And unlike the B.A.T. standards there are no provisions for any variance from the new-source standards. Finally, the new-source standards represent a moving target. They can be updated yearly as abatement technology improves.[34]

Koch & Leone's assessment of the 1977 Amendments to the Clean Water Act was correct at the time of writing in 1979. Categorical point source regulations covering forty-two types of industrial sources were in effect on July 1, 1979. These established effluent limitations for existing sources (best practicable technology by 1977,[35] best available technology economically achievable by 1983)[36], which contrasted with the new source performance standards (generally equivalent to best available technology achievable).[37] Recently a change in agency policy has come about, according to the Effluent Guidelines Branch of the E.P.A., resulting in the repeal or disuse of the earlier categorical regulations while new regulations are being prepared. It is not clear what the new policies will look like.

In summary, both Canada and the United States impose or have imposed more stringent pollution limits on new or expanded sources than on existing sources in the form of differing performance standards, new source

performance standards and construction permit requirements.

(2) Effects of Current Policies

What are the effects of differential treatment of new and old sources discussed above? Several effects might be predicted. First, imposing more stringent standards on new plants than on old plants should discourage new investment, and therefore prolong the life of existing plants. The relative cost of operating a new versus an old plant is higher with the differential standards than if the standards are identical for new and old sources. Therefore the economic advantage of building a new plant is less under the current policy than it would be under a uniform standard. This necessarily means a slower rate of investment in new or expanded capacity, and therefore higher prices for existing firms. Obsolete plants that might otherwise shut down would therefore continue in operation for a somewhat extended period of time. In addition, the requirements to use best available technology and best practical technology may create disincentives for the development of more effective pollution control technology. Finally, rigid emission standards encourage confrontation and delay on the part of the regulated firm rather than encouraging rapid compliance with the law. A review of several cases can illustrate the existence, if not the prevalence, of all these problems.

There are major examples of strict policies for new plants discouraging investment. Hartman, Bozdogen and Nadkarni[38] demonstrate that the pollution control requirements for new copper smelters in the United States are extremely

difficult to meet, and far more stringent than those for existing smelters. The long lead time for constructing entirely new smelters means that new capacity cannot appear before 1985, and perhaps not until 1990. The incremental expansion of the capacity of existing plants, which has been the primary mode of capacity addition in the past, is impracticable because the standards for new or expanded plants cannot be met by the expansion of existing smelters. Furthermore, uncertainty about the ability of new low emission plants to meet some very strict federal and state standards may mean that no such new investment will be undertaken in the current regulatory environment. Hartman et al. conclude that the current environmental regulations will physically constrain new domestic capacity growth until 1985. They also note that there is sufficient pressure on existing facilities that some existing plants may be shut down because they cannot meet the standards applicable to them. Thus, while none of the existing plants meet the standards set for new plants, no new plants may in fact be constructed for some time to come. This is a clear case where the new-old distinction exists, and new investment has been constrained. This constraint seems likely to be effective despite the prediction that prices will rise 29% higher by 1987 than they would in the absence of environmental restrictions.

As an aside, Hartman et al. suggest that the social costs of this capacity restraint might be avoided by using effluent fees instead of direct regulation. They state that " ... it is safe to assume that a reasonable system

of effluent fees could achieve the desired ambient air quality and water quality standards at a cost less than that stated above."[39]

Another example of the disincentive to investment that permit requirements can cause to industrial facility proposals is described by Quarles in Federal Regulation of New Industrial Plants.[40] Dow planned a $500 million petrochemical project in Contra Costa County in California. It was anticipated that the project would require eight years to complete and that $70 million would be invested in pollution control.[41] A non-exhaustive but exhausting list of federal, state and local environmental requirements for the project includes roughly 48 permits, 18 approvals, 3 certificates, 3 grant easements, a lease, a rezoning, a spill action plan, a land conservation contract and an Environmental Impact Report.[42] Fourteen agencies were involved.

Two years and $4 million later (not to mention the $6 million that was tied up in land during that time), Dow withdrew from the project. At that time, (1) one minor permit and three agreements had been issued; (2) one major permit had been denied; (3) Dow was waiting for a court decision on the adequacy of the Environmental Impact Report; (4) all other permits were dependent upon approval of the E.I.R. and E.I.S.; and (5) approval of the E.I.S. was estimated to be up to a year or more away.[43]

Without knowing how these costs and delays compare to other costs and delays Dow might have expected to incur in, for example, land acquisition and rezoning applications, it is impossible to know if the environmental

regulations were the reason why Dow withdrew the project. Similarly without knowledge of the returns to be expected from such an investment or the tax benefits and subsidies available for pollution control, it is impossible to be sure that Dow made a decision that would be followed by other firms in similar situations. At the same time that Dow was unsuccessfully pursuing its application for the petrochemical plant air pollution control agency officials stated that the proposed plant was the cleanest of its type that they had ever seen.

Even where strict controls on new plants are not an absolute bar to new investment, they may impede that investment. Stelco has constructed a new steel plant in Nanticoke which will be considerably cleaner than other existing Stelco plants.[44] One study of the environmental regulation of this development concluded that " ... the project and its various impacts have been managed relatively efficiently", although Stelco has expressed concern about the cost increase, estimated at 8 percent, attributable to this regulation.[45]

It is difficult to assess the relative regulation of new and existing pulp and paper mills in Ontario. No new mills have recently been completed and none are planned. Thus we cannot expand upon the discussion above of the legislation and procedures which suggests that tough standards for new mills would be applied.

One U.S. study has concluded that strict pollution controls for new plants will not only discourage new investment but will also prolong the life of existing plants. Koch and Leone show that while a given degree of pollution

control is less expensive at new facilities than at old facilities, the difference in pollution control requirements under U.S. law is such that there would be "higher abatement costs for new capacity than for old capacity". This higher cost is in part due to the stricter requirements, and in part due to the fact that existing plants have already installed considerable pollution control equipment. Koch and Leone conclude: "in the long run, pollution controls are likely to reduce the number of plant closings in the tissue industry. Because new capacity has higher abatement costs than existing capacity, the controls have conferred a competitive advantage on existing plants".[46]

The Environmental Defence Fund has alleged that U.S. treatment of electric generating stations has also raised a danger that old and dirty power plants may have their normal economic lifetime extended because of pollution control legislation that imposes more stringent standards on new plants than on old.

> "Ironically, the new source performance standards, because they require emission reductions much more stringent than are applicable to existing plants, actually discourage the replacement of existing generating capacity. This is due to the enormous disparity in control costs between building a new generating unit and continuing to operate the old unit which is required to put on few if any controls. All new power plants must install equipment capable of removing 90% of the sulphur dioxide generated from burning coal. Yet there are numerous existing plants which can burn high sulphur coal completely untreated. As a result, a number of utilities may now be planning to artificially extend the life of their existing plants from a normal expected life of approximately 35 years to perhaps 50 or even 60 years. If this occurs on a widespread scale, it will eliminate any chance of reducing present SO 2 levels

> in the rest of this century absent some other action".[47]

Another problem is that with traditional regulations which require the installation of the best available technology (BAT), or the best practicable technology (BPT) technological development may move slowly. Suppose you were the director of research into pollution control for a major polluting firm. What would be a successful outcome from your research? A successful outcome would be the development of technology that reduced emissions to a negligible level at a minimal cost. This would allow the firm to solve its pollution problems at little cost and without further harassment from the environmental agency. Such outcomes are welcome but rare. Another successful outcome would be no discoveries whatever. If better technology is not discovered, the firm cannot be required to install it under BAT.

What would be an unsuccessful research outcome? The worst outcome would be the development of highly effective pollution control technology that is very expensive. Once the technology is developed and revealed the pollution control agency may determine that it qualifies as BAT and require its installation. This will by definition be very expensive for the firm. Thus any sensible firm will wish to avoid this financially disastrous outcome and in doing so may cripple its own research program. In short, the requirement that BAT be used creates a perverse incentive for the research and development programs of polluting firms.

III. Alternative Economic Policies

(1) Definition of Alternatives

We will consider three alternatives to traditional regulatory policies. The first is the effluent charge in which a price is set for each unit of pollution discharged from each source. A charge might be used for a single pollutant or many, but the rate would be specified separately for each pollutant. An effluent charge might be uniform across a province or the country, or it might vary from one region to another. The charge might be constant over time, or it might be higher during some periods and lower at other periods. The charge rate might be established in legislation, set by regulation or triggered by some specified variables such as ambient air or water quality.

The second alternative is a mixed approach in which a polluter who fails to comply with an emission regulation or abatement program may be subject to a specified charge related to the extent by which he exceeds the standard. The penalty could either be the cost the polluter would have incurred in complying with the discharge regulation or a charge per unit of discharge. This plan is designed to eliminate the profit from postponing or avoiding pollution control.

The third alternative to existing policies is the use of effluent rights, described by Dales.[48] Under an effluent rights program, the environmental agency specifies the maximum total rate of pollution emission for all sources in a region, province, or the entire country. The agency then issues

rights to discharge pollution at a limited rate such that the total discharge under all rights is the desired total discharge of that pollutant. The rights may be sold to polluters by auction, distributed to existing polluters in proportion to recent emissions, or distributed by any other method. Discharge of pollution in excess of the amount allowed by one's pollution rights is strictly prohibited and severely penalized. Once issued, the pollution rights may be bought and sold at whatever price they command. The pollution rights scheme creates a market for the right to discharge pollution, with the market price established not directly by government but by the interaction of the total quantity of rights distributed and the demand for those rights by polluters.

(2) Efficiency Effects

Economists have identified a number of advantages that effluent charges or effluent rights schemes might have over the traditional approach of setting emission standards and imposing fines on violators. It is argued that charges and rights achieve a given degree of pollution control at least cost, that they provide incentives for technological progress, and that they reduce incentives for polluters to delay in compliance. These arguments are well presented in Baumol and Oates[49], Anderson[50], and Kneese and Schultze.[51] They will not be repeated here.

(3) Distributional Effects

While economists have provided dozens of proofs of the efficiency characteristics of effluent charges and effluent rights schemes there have been few analyses of their financial impacts on individual firms.[52] It is generally acknowledged that an effluent charge will impose higher costs on an industry than effluent regulation, because effluent payments must be made in addition to paying for pollution control equipment. The efficiency advantages of an effluent charge reduce this additional cost, and if the charge induces sufficient technological progress over time, the excess financial impact might vanish. Still, in the short run, the effluent charge will impose a higher cost on polluters than effluent standards. Much of this cost can be passed on to consumers in the form of higher product prices and this is desirable because it raises the relative price of pollution-intensive goods. Still, industry has vigorously resisted effluent charges, and if we put aside the long run assumption that all firms and industries earn a normal rate of return, it is not difficult to see why they resist. Furthermore, it is possible to explain industry acceptance of present regulatory approaches, and to identify some market-type approaches that might be no less attractive.

Consider a competitive industry composed of identical firms. All factors of production are supplied at constant cost, and the industry elasticity of demand for the product is -1. Assume further that the capital-labour ratio for pollution control is identical to that for productive activities. Pollution control is achieved by adding treatment facilities (tail-end treatment) and not by changing the production process. We will examine the effect on the

value of shares held by shareholders of firms in this industry and on workers in the industry of imposing alternative pollution control policies.

Suppose that an effluent standard is applied identically to all firms in the industry. This standard requires some expenditure for pollution control, which will raise total costs and therefore the long run equilibrium selling price in the industry. If pollution controls raise costs by 10 per cent, then output will be reduced by 10 per cent for the entire industry . Some firms may exist, or all may reduce their scale of output, depending on the shape of individual firm cost curves.

The impact of this pollution control standard on the share values of the industry depends upon the malleability and mobility of the capital equipment of the industry. Suppose that it is perfectly malleable and mobile, so that it can be transformed from production to pollution control at no cost, or can be shifted from this industry to some other industry at no cost. In this case, imposing effluent standards imposes no loss of value to the original shareholders in the industry, because the same total capital will be required to produce fewer units of output but more pollution control, and the capital will be costlessly transformed. If on the other hand, capital is non-malleable, then 10 per cent of the productive capital of the industry will be lost, and the aggregate value of shares in the hands of the original shareholders will be reduced by 10 per cent.

What of the impact on workers? All employees of plants that are closed will lose their jobs. Whether or not they are soon re-employed elsewhere, they will likely suffer some costs as a result of being laid off. The less

mobile the labour force is, the greater the cost of a given number of layoffs.

Now consider an effluent charge designed to achieve the same degree of pollution control as the effluent standard. Under the effluent charge, the industry must bear costs for pollution control, and must also expend money for the effluent charge, assuming that one hundred per cent pollution control is not economic. While revenues are unchanged because of the unitary elasticity of demand, revenues are no longer divided only between capital and labour. Some revenue is syphoned off by the effluent charge, so that the total capital stock in the industry shrinks, and the productive capital (as opposed to pollution control capital)stock shrinks more than in the effluent standard case. Once again, if capital is perfectly malleable, it will shift from production to pollution control and from production in this industry to production in other industries, with no loss of value to the original shareholders. If capital is not malleable then any reduction in productive capital will be reflected in a destruction of value for the original shareholders. Since costs will increase more in the effluent charge case than in the effluent standard case, because of the charge expenditure, output will decrease more, and therefore the shareholders will suffer a greater loss in value with non-malleable capital under an effluent charge. Thus we should expect firms to resist more vigorously an effluent charge than effluent standard. The former has a more detrimental impact on the value of shares in the industry than does the latter. Similarly the greater reduction in output means that more workers will be laid off under an effluent charge

than under standards. Thus labour, too will resist an effluent charge more strongly.

Suppose that an effluent rights system were used instead of an effluent charge. If the effluent rights are sold by the government to polluting firms, and achieve the same pollution control as the effluent charge, the economic impact should be identical. Presumably firms will have to pay an annual amount or shadow price for pollution rights just equal to the annual cost of an effluent charge that would achieve the same degree of pollution reduction. In steady state, the effluent rights sale should have the same effect as an effluent charge, and thus be equally distasteful to industry and to labour.

Suppose alternatively that the effluent rights are distributed to existing members of the industry at no charge, in proportion to their current emission rates. After distribution, the rights are marketable, and they achieve the same degree of pollution control as the previously contemplated effluent charge. The long run effects of the rights are identical to those of the charge with respect to product price and pollution control. The big difference however is a wealth effect: there is no lump sum payment by the firms for the rights. Instead, they receive a valuable marketable right for free. Because the pollution rights have a market value, they become an asset of the firm, and their value tends to offset the decrease in share value resulting from the pollution controls and the cost of holding

the rights. Clearly shareholders are better off with pollution rights distributed to firms than they are with an auction of pollution rights or with effluent charges. Furthermore it can be demonstrated that under some assumptions shareholders are better off with a pollution rights scheme than with no pollution control program at all.[54] The distribution of pollution rights to existing firms thus provides a program with all the desirable efficiency consequences of an effluent charge program but reducing or avoiding the resistance from industry based on the harmful effects on shareholders of effluent charge programs. The "offset" policy of the U.S. EPA is similar to a free distribution of pollution rights to existing firms, in that new entrants must buy rights from existing firms. The workers, of course, are still no better off than under an effluent charge, and their resistance should not be diminished.

If rights are distributed to existing firms in proportion to their current emissions, an equity problem may arise. Firms that have not complied with control orders or abatement programs will be rewarded with a large issue of rights, while firms that have invested heavily in pollution control and have reduced their emissions will receive few rights. This

may seem unfair. Yet the purpose of a free distribution of rights is precisely to recognize a historic right to pollute, and to award some compensation for changing the rules. It is impossible to award compensation without recognizing some measure of past performance. The problem might be solved in part, however, by awarding rights in proportion to product output (in a homogeneous industry) or to established emission standards, or some other measure that was less directly related to past compliance with pollution control pressures.

Although it seems paradoxical that the pollution rights system could actually make existing firms better off than they would be with no pollution control system, this effect can also be achieved by the typical discriminatory application of effluent standards. When effluent standards are far more strict for new firms than for existing firms, an artificial barrier to entering the industry is erected, and conceivably existing firms could be better off. We noted above that it is common for pollution control policies to impose standards that are more strict for new firms than for existing firms in an industry. This may be economically efficient since new firms can control emissions at lower cost than existing firms but it is inefficient in that it maintains obsolete plants in the industry. It makes political sense, since existing firms will have some political influence while potential entrants to the industry are generally not identified, and not likely to exert any political influence. It may be regarded as fair since existing firms invested at a time when pollution was allowed. Weaker standards

for existing firms than for new firms may be the political price that must be paid to obtain some industry cooperation for this environmental legislation. This characteristic of existing legislation has been completely ignored in most effluent charge proposals, and in pollution rights proposals which do not offer to distribute rights free to existing firms.

Examining the interests of shareholders of existing firms and their workers in polluting industries provides three insights. First, it helps explain existing pollution control legislation. Second, it suggests that simple effluent charges may suffer a serious political disadvantage as compared to traditional regulatory approaches. Third, it suggests that effluent rights schemes can be tailored to reduce the political disadvantage of effluent charges, and to be as attractive, if not more attractive to existing firms in an industry than a system of effluent standards.

IV. The Fate of Previous Proposals

A number of proposals have been made in the past that would implement effluent charges, effluent rights, or some approximation to them. We can now evaluate the fate of those proposals in the context of the analysis presented above.

(a) Non-Compliance Penalties

Donnan and Victor[55] identified several alternatives that the Ontario Ministry of Environment might pursue in seeking compliance with its objectives for the pulp and paper industry in Ontario. One of these options was a "pollution control delay penalty" (PCDP). The PCDP was designed to encourage

compliance with pollution control regulations, and not as a revenue source nor as a means of allocating the burden of pollution control among a number of sources.

The PCDP requires a schedule of effluent reduction that may be uniform for all sources or determined individually for each source and specifies allowable emission rates that diminish over time to some ultimate goal. This is an element in most current programs for pollution reduction. If the polluter fails to comply with the schedule he is not subject to prosecution or administrative proceedings, but automatically owes a penalty based upon the extent to which his emissions exceed the scheduled discharge applicable at that time. A polluter who complies with his abatement program will pay no penalty at any time. A polluter who fails to comply will automatically be liable for payments which can easily be determined by comparing his actual emission rate with the allowable emission rate and multiplying the difference by the penalty rate. This is similar to using an effluent charge to enforce a standard. It differs from present enforcement procedures in that the magnitude of the charge is easily computed, while the magnitude of a fine is difficult to predict. The total charge could be far greater than any fines levied by a court in Canada if the violation was serious. Donnan and Victor suggested that the PCDP might be applied to the discharge of BOD and suspended solids from pulp and paper mills in Ontario. While they did not specifically advocate the PCDP, their evaluation suggested that it would solve the enforcement problem better than other policies.

The PCDP has not been adopted by the Ontario Ministry of Environment for dealing with the pulp and paper industry, nor for any other industry in the Province. Recently, the PCDP was discussed in a report to the Ontario Legislature, which recommended that prosecutions under the existing system should be pursued more vigorously, and that the PCDP alternative should be studied carefully and reported on during 1979.[56]

An enforcement scheme similar to the PCDP has been enacted in the Connecticut Environmental Enforcement Act in 1973.[57] The Connecticut plan retains all the features of a regulatory system, including specifying the allowable emission rate from each pollution source, but adds two elements: "economic remedies and a series of gradually escalating responses to non-compliance that have economic bite but do not require going to court".[58]

The economic remedy used in Connecticut is to impose on firms that are not in compliance with an emission regulation a charge equal to the cost that would have been incurred in complying with the regulation. When a polluter is discovered not to be in compliance, an estimate is made of the capital and operating costs that would be required to bring him into compliance. The capital costs are amortized over the life of the equipment and added to the operating costs to yield a monthly cost of pollution control. During every month when he is not in compliance, the polluter becomes liable for this amount. Thus the polluter earns no more profit, and spends no less by avoiding pollution control than by pursuing it. From an economic point of view he should be indifferent between compliance and non-compliance. The normal

economic incentive to delay and avoid pollution control is destroyed by consistent application of this economic penalty.

The Connecticut plan avoids the difficult problem of estimating the marginal benefits of pollution control, a necessary step for establishing an optimal effluent charge. Furthermore, the economic penalty can be brought into play with little delay. In most cases, if the polluter appeals the cost estimate or his non-compliance, the assessment of the economic penalty continues during the appeal. In all cases, the economic assessment is paid into a fund which will be returned to the polluter when he comes into compliance. Since the money will be returned, the inability of the polluter to avoid payment pending an appeal is less offensive to due process. Furthermore, the objection to effluent charges that they require "paying twice" does not apply because the economic penalty is not collected after pollution controls have been installed.

During the first two years of operation of the Connecticut plan, it is reported to have greatly reduced non-compliance and administrative costs.[59] It has subsequently fallen into disuse.

Recently an amended version of the Connecticut plan has been adopted in Washington. The 1977 U.S. Clean Air Act Amendments include a "delayed compliance penalty" which is a quarterly charge imposed on polluters who delay in compliance with effluent regulations. Previously under the Clean Air Act, the EPA could issue an administrative order requiring that the source comply with the applicable statutes and regulations, it could sue for an injunction,

or it could bring a criminal action for fines and imprisonment.[60] The 1977 Clean Air Act Amendments authorize the EPA to bring civil actions to recover money penalties,[61] and require the EPA to impose an administrative penalty on major sources that are in violation of Clean Air Act limitations.[62]

The amount of the penalty is to be calculated according to an algorithm provided by the EPA. The calculation is designed to determine what it would have cost the source to comply with the relevant law, and to impose upon the source a penalty equal to that amount. Thus once the payments begin, the source in principle saves no money by failing to comply as compared with actually complying. The first payment is due 6 months after the notice of non-compliance was issued, and subsequent payments must be made on a quarterly basis until the source comes into compliance. The payments may be made either to the EPA, or to a state if the state issued the notice of violation. This provides a powerful financial incentive for states to enforce vigorously their anti-pollution programs.

Once a source comes into compliance, there is an "evening-up" calculation in which the actual costs of compliance are substituted for the estimated costs of compliance, and the amount of the penalty adjusted. This should however cause modest increases or decreases in the total amount of the penalty, and will not cause a total refund.

This plan went into operation during the summer of 1979 so its effect cannot be clearly determined yet. Ruff[63] expressed concern that the plan still requires detailed case by case consideration by the regulatory

agency unlike an effluent charge. Orloff[64] expressed the opposite fear that the program was too inflexible and too rigid and would therefore impose undue hardships upon polluting sources. Clearly this plan warrants close examination as a test of the efficiency of a vigorous attempt to enforce compliance with a regulatory pollution control scheme.

These non-compliance penalties differ from past policies by imposing substantial financial costs on firms that fail to comply with standards. Industry should resist them in favour of the status quo, and so should labour unless labour perceives few layoffs and significant environmental benefits. This violates the second axiom of Chapter I by providing diffuse benefits (to all environmentalists) and concentrated costs (to specific firms and workers where output is reduced). Since the policies are rather technical involving new penalties rather than new standards, the benefits may not be understood by many voters. One might expect them to be unpopular except where there is substantial frustration over the failure of the traditional policies.

(b) The United States Sulfur Oxide Tax

In 1971 and 1972 the Nixon administration proposed a tax on sulfur oxide emission into the atmosphere as an incentive to reduce those emissions.[65] The Nixon proposal levied a charge on the discharge of sulfur oxides of 15¢ per pound of sulfur in areas with severe air pollution problems, 10¢ per pound in areas with modest air pollution problems and no charge in areas that do not exceed any ambient air quality standard. The 15¢ per pound rate was intended to approximate the cost of the pollution control technology that was

available then. At the same time, the Coalition to Tax Pollution developed a proposal for a tax starting out a 5¢ per pound of sulfur in the fuel in 1972 and rising in 5¢ increments each year to 20¢ per pound in 1975 and thereafter. A 20¢ per pound tax on the sulfur content of fuels is equal to a 10¢ per pound tax on sulfur oxide emissions. A bill similar to the Coalition proposal was introduced as Senate Bill 3057 by Senator Proxmire on January 24, 1972. There was no geographical variation in the tax rate under the Coalition/Proxmire proposal, a feature consistent with Dales' recommendations.[66]

Neither of the above proposals was adopted, although they generated considerable debate. The Nixon proposal was attacked because it would encourage polluters to move from dirty areas to clean areas thus reducing the entire country to what environmentalists regarded as an unacceptably low level of environmental quality. Congressman Aspin complained that the Nixon proposal left no incentive for polluters to clean up beyond the standards specified in the legislation. He also suggested that the maximum rate of 15¢ per pound was not high enough.[67] All three of these objections were met by the Aspin and Proxmire bills. Some aspects of the U.S. Congressional Committee system created serious political barriers for both bills.[68] Industry opposed the bills because the effluent charge would require not only expenditures for pollution control, but also payments for any remaining emissions. From an efficiency point of view, this is desirable, but it represents a change in implicit property rights which is naturally opposed

by industry. In addition, there may have been a sensible fear that an effluent charge would work whereas regulations can be circumvented.[69] The U.S. Department of Commerce, representing industry views, opposed the bill. Some environmental groups represented by the Coalition to Tax Pollution supported the charges but other groups did not.

The model of the previous section would predict that a simple effluent charge without compensation to industry or labour would be opposed more vigorously by industry and labour than a uniform standard. It would be opposed much more vigorously than the actual practice of more strict standards for new than for old sources. The benefits might be perceived as cleaner air, which could appeal to all environmentalists if they accepted the notion that an effluent charge would lead to pollution reduction at all. Some saw the benefits as achieving the same air quality as direct regulation but at a lower social cost. This efficiency benefit was not well understood and would be spread very diffusely over all the United States. Furthermore, much of the public and some environmental groups would fail to understand that a price system might create incentives to abate at least as great as a "strict prohibition". Environmental opponents of the bills said that polluters might just pay the charge and pass the cost on to their customers. Once again concentrated costs and diffuse benefits violate the second axiom of Chapter I. Furthermore, axiom seven suggests that with such diffuse benefits it would be politically preferable to choose an instrument with low real costs and perhaps illusory benefits. Tough standards that could not or would not be enforced would thus be preferable to an effective effluent charge that might not be

understood by the beneficiaries.

(c) U.S. Water Pollution Effluent Charges

In November, 1971 Senator Proxmire introduced amendments to the Federal Water Pollution Control Act of 1971 which would enable the administrator of the Environmental Protection Agency and the secretary of the Treasury Department to promulgate regulations implementing effluent charges. These charges were to be imposed on water pollutants including but not limited to BOD, suspended soils, heat and toxic wastes.[70] Like the sulfur tax, the Proxmire bill was unsuccessful, but its failure is interesting because of the more extensive debate which it received in the U.S. Senate. Senator Proxmire promoted the amendment as a means of enforcing standards, that is, as an incentive for polluters actually to engage in pollution control. He emphasized that his bill was not a substitute for the traditional regulatory approach, but would complement it by providing a further incentive for pollution control. Senator Proxmire's statements in supporting his amendment are a clear recitation of the arguments that would be made by economists in its favour.

The primary opponent of the Proxmire amendment was Senator Muskie. Muskie regarded the effluent charge as redundant given the "tough" regulatory approach that he was promoting. He attacked the charges on the grounds that they were for effluent reduction and not effluent control, a distinction that remains unclear.[71] Muskie stated that his legislation, which required virtually no discharge of waste by 1985, had rendered effluent charges unnecessary.

He claimed, and perhaps believed, that tough regulatory legislation would solve the water pollution problem and avoid the necessity for effluent charges. The Muskie solution to the previous failure of the regulatory approach was to apply more of the same medicine.

This case virtually repeats the previous one in providing concentrated costs and diffuse benefits. Furthermore, Muskie's arguments are a perfect example of the seventh axiom in action. Muskie's legislation was apparently very tough and would "solve" the problem by 1985. This long time horizon would allow many excuses to be prepared before the inevitable failure of the policy became apparent. Industry would prepare to fight the enforcement of the legislation in a long battle of delay and debate. The effluent charge, on the other hand, might impose very large costs on industry (and perhaps labour) at once, yet it could not generate widespread support from the public because its effects were not well understood, simply because the public does not generally accept the quantity response to a price change.

(d) Sewer Surcharges in Canada

A number of municipalities in Canada levy sewer surcharges which bear some resemblance to effluent charges. The surcharge is levied against firms discharging wastes into municipal sewage systems, when those wastes exceed some specified normal strength. For example, in London, Ontario, the surcharge by-law provides for charges imposed on firms discharging wastes with

BOD concentrations in excess of 300 parts per million and suspended solids concentrations in excess of 350 parts per million.[72] The charge is based on the concentration in excess of the "normal" concentration and the total volume of waste discharged.

The rationale of the charge is that it is a payment to the municipality for treating the extra strength waste discharged by the firm. The magnitude of the charge is therefore based on the portion of the operating costs of the municipal sewage treatment plant that is attributable to the "extra strength"waste discharged by the firm. The by-law specifies the method for calculating the surcharge, and this calculation is tied directly to easily verified expenditures by the municipality. The polluter thus has some assurance that the charge will not be set arbitrarily nor used as a general revenue device. Canadian jurisdictions imposing sewer surcharges include Winnipeg, Edmonton, Calgary, London, Kitchener, and Toronto. Most of these use a formula similar to that first devised in Winnipeg. A complete description of each surcharge formula is contained in Sims.[73]

Sewer surcharges are not imposed on all pollution sources within a city. Typically a jurisdiction will start with the largest sources and test other industrial firms adding a few sources a year as the staff and financial ability of the municipality allow. Because the program requires some expenditures for monitoring and enforcement, it is not extended to small sources even though they might discharge extra strength waste.

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The sewer surcharge programs seem to be successful in that the are accepted both by industries and municipalities as a reasonable way to deal with heavy pollution loads. The municipalities appear to have worked out monitoring arrangements that because they are sufficiently accurate, or sufficiently understate actual discharges, are accepted by the sources themselves. Studies have demonstrated that some pollution reduction does occur as a result of the imposition of surcharges, although the magnitude of this reduction varies widely from one source to another.[74]

It is interesting that the municipalities themselves tend not to view a surcharge either as a means to induce pollution control or as a source of general revenue. It is regarded primarily as a mechanism for the municipality to collect a fee for providing waste treatment services. This is a philosophy that would be congenial to the engineers who dominate municipal sanitation agencies, and would not be repugnant to industrial polluters. Although an effective surcharge might reduce industrial wastes entering the municipal system and thereby reduce the waste discharge by the municipal sewage treatment plant, environmentalists have taken little interest in these charges. Neither have they attracted major political attention.

It is difficult to explain the success of sewer surcharges using the axioms of Chapter I , since they provide no perceived public benefits, and impose small but concentrated costs on the affected firms. Perhaps firms see the surcharge as an acceptable alternative to being forced to treat their own extra-strength waste at a higher cost.

(e) Effluent Charges in Europe

A number of European countries use effluent charges, sewer surcharges like those used in Canada, or some other means of imposing prices on those who discharge waterborne wastes. Johnson and Brown[75] carefully review the European experience. We will only summarize a few points from that review here.

Johnson and Brown conclude that the effluent charge is an important factor in pollution control in France, the Netherlands, Hungary, and the Ruhr area of Germany. Other countries have rejected charges or are contemplating them. Where charges are used, they are not based upon estimates of damage because accurate dollar estimates are not available. They are based in part on estimates of the charge necessary to induce some degree of pollution control. In addition, polluters do not pay the full cost of pollution abatement in any case because all countries with charge programs also have extensive subsidy programs. While the European countries have claimed to embrace the concept that the polluter should pay, subsidies are in fact widely used and greatly undercut this principle. It is ironic that eastern European countries seem more enthusiastic about direct effluent charges than the capitalist regimes of western Europe.

Interestingly, Johnson and Brown found they could not reach definite conclusions about the efficiency of actual effluent standards systems, in part because the actual effluent charge systems deviate so much from the theoretical systems that economists analyze. This suggests that enthusiasm for effluent charges may be based on comparisons of ideal charges with actual standards, and must be tempered if consideration is restricted to feasible charge systems that may be implemented. While Europe has had considerable experience with effluent charges of one sort or another, this experience does not suggest the kind of ideal solution that economists might be looking for.

The European experience with effluent charges is consistent with the second axiom of Chapter I. Because charges alone would provide diffuse benefits and concentrated costs, they are imposed at low levels and coupled with subsidy programs to bear part or all of the cost of pollution control. The costs are thus diffused, like the benefits, over most of the population.

(f) Pollution Rights

Dales[76] recommended that pollution be brought into the market system by establishing pollution rights and auctioning them off to polluters. The total amount of pollution would be limited by the quantity of rights allowed, and the cost of pollution control would determine the demand for rights and therefore their price. Those who emit pollutants without adequate rights would be severely punished.

While no jurisdiction has yet adopted a complete effluent rights program such as that suggested by Dales, two developments in the United States move in this direction. The first is the "Offsets" policy under the Clean Air Act, and the second is the allocation of "prevention of significant deterioration increments" also under the Clean Air Act.

Under the 1970 Clean Air Act, EPA regulations prohibited the construction of a new source of pollution in an area which had not attained compliance with the applicable national air quality standards.[77] Since many major American cities were in non-attainment areas, this combination of law and regulation appeared to impose economic stagnation on many cities. This led to an interpretive ruling in 1976 which was incorporated into the 1977 Amendments for the Clean Air Act which introduced some flexibility while still moving toward achievement of the national ambient air quality standards.[78] Under this offsets policy, a state may issue a permit for the construction of a new major source, or modification of an existing major source in a non-attainment region, so long as the expected emissions from the new or modified source would be more than offset by reductions in emissions from existing sources.

Several conditions must be fulfilled before an offset will be allowed. The offset must result in reasonable further progress towards the attainment of national ambient standards. The new source must achieve the lowest achievable emission rate (which is not necessarily the same as the new source performance standards). All pollution sources owned by the owner or operator of the new source within the state must be in compliance with existing emission limitations. The pollutant must be of the same kind.

This offsets policy provides for the operation of something like a pollution rights market, whereby a new source can agree with an existing source to compensate the existing source for reducing its emissions if that will allow the new source to be constructed. It is not a perfect rights market because there must be an overall reduction in emissions, and because of the variety of conditions imposed on the transaction.

It is reported that such offsets have been used about 115 times since 1976, although most involved reductions at other locations owned by the same firm rather than exchanges between firms.[79] The Volkswagon plant in New Stanton, Pennsylvania was allowed to operate only because the Pennsylvania Transportation Department reduced hydrocarbon emissions from its road surfacing operations. A new General Motors plant in Oklahoma City was allowed to operate only after oil companies within an 85 mile radius reduced emissions from their petroleum storage tanks.

The other possibility for pollution rights markets has occurred with respect to the prevention of significant deterioration (PSD) policy under the Clean Air Act. While offsets arose in areas that did not attain ambient quality standards, it was feared that areas that were cleaner than those standards would deteriorate in quality. The EPA therefore developed a policy which would not allow new sources in clean areas if they would significantly deteriorate the air quality.[80] Limited increments in emissions would be allowed. In 1977 the Clean Air Act Amendments changed the PSD policies somewhat, and in 1978 the EPA amended its PSD regulations to conform with these amendments.[81]

The 1978 PSD regulations addressed the issue of how states should distribute any allowable increase in total emissions in an attainment area. The EPA suggested that states could allocate PSD increments on a first come, first served basis or through the use of economic incentives such as marketable permits,emission fees, and emission density zoning. The EPA also suggested that an offset policy would be appropriate to the allocation of PSD increments.

The PSD policy clearly opens the door for a form of pollution rights market to emerge. The rights may exist for new increments to pollution, and may be augmented by offsets from reduced emissions from existing sources. Once again, it will be interesting to observe whether markets for these rights actually emerge, and how they behave. This may provide a test of pollution rights policies in very limited circumstances.

(g) Overview of the Fate of Previous Proposals

It appears that the U.S. policies have stopped somewhat short of creating a complete market for pollution rights in particular areas. It is interesting that these steps towards pollution rights have been considerably more successful than attempts to impose effluent charges. One reason for this no doubt is the fact that as compared to a direct regulatory policy, pollution rights generated under an offsets or PSD policy do not impose new costs on existing firms. On the contrary, they may yield additional revenue to existing firms as those firms sell off valuable rights to newcomers, at a price that more than covers the costs of reducing their own emissions.

Thus as compared to a rigid set of standards, an offsets or PSD policy should appear attractive to a major political force, namely, existing firms in an area. They comply with the second axiom of Chapter I by conferring benefits rather than imposing costs on concentrated interests. Furthermore, the benefits of the policies are more readily apparent than those of an effluent charge because the policies on their face limit total emission or reduce them. Environmental groups are not boosters of "offsets" but they are supporters of the notion that emissions in an area not be allowed to increase, and it was this limit that created the municipal and industry pressure to allow offsets.

We expect a free distribution of pollution rights to be popular with existing firms because it creates a valuable property right and a barrier to entry. It is interesting that several of the 1977 amendments to the U.S. Clean Air Act dealing inter alia with PSD were supported not just by environmentalists who wanted a cleaner air, but by Eastern industrialists and Eastern coal producers who saw in PSD a way to suppress Western growth and Western coal.[82] This is the creation of barriers to entry on the scale of entire industries and regions of the Country.

If market-oriented pollution control policies can cause more rapid pollution control at a lower cost than would be incurred with direct regulation, why have environmental groups failed to fight to substitute market policies for direct regulation? Firstly, the membership of most environmental groups are probably no better informed about the efficiency and efficacy of market policies than is the general public. They probably assume that regulation is

more effective, and they would not recognize the sources of inefficiency inherent in direct regulation. The leadership of these groups may be better informed, but their relationship to their members is similar to that of a politician to his constituents. If the leadership advocates policies the membership does not understand, there may be a revolt and selection of a new leadership. On the other hand, educating the membership may be very slow and costly. In pressure groups, as in elected governments, there may be little private payoff to educating the voters.

A second reason has been suggested for environmental groups favouring regulation over market policies. Tucker suggests that environmental groups may prefer the centralized decision-making of a direct regulation regime.

> The virtue of centralized decision-making as far as lobbying groups are concerned, is that it exaggerates their powers. Most environmental groups now have elaborate headquarters in Washington, and many run their entire operations within sight of the Capitol. Whereas market-oriented systems would spread decision-making across the country, bureaucratic systems concentrate it in Washington, where the decisions can be easily influenced. Small groups of federal officials or Congressional staff members can be identified, isolated, and influenced by a mere phone call.[83]

Thus the power demands of lobbyists may lead them to prefer bureaucratic approaches despite their inefficiency.

V. Conclusions

In the absence of detailed political analysis of particular programs

it is difficult to draw any conclusions on the validity or applicability of the marginal/non-marginal voter axioms of Chapter I. This does not mean that the choice of instruments for pollution control has not been influenced by such considerations, only that we have not analyzed this relationship here.

The axioms dealing with concentrated and diffuse costs and benefits, on the other hand, seem very useful in explaining the choice of instrument in the field of pollution control. The economic analysis of section III shows that both business and labour will prefer traditional regulation which is more strict for new sources than for existing sources to simple effluent charges. It also shows that effluent rights given to existing firms will be preferred over simple effluent charges. Chapter III suggests that the views of these concentrated interests will tend to predominate over the public interest in a clean environment achieved at least cost, particularly when the public may not understand the operation of market policies, nor appreciate their efficiency advantages. The internal politics of environmental groups may lead them to favour traditional regulatory approaches over market approaches because the former have more symbolic value and the advantages of the latter may not be understood by the membership. In fact, the legislative experience is that pure effluent charges have been universally rejected. The only successful approximation is the sewer surcharge which imposes small costs, and the effluent charge in Europe which is often levied at low rates and accompanied by subsidies for pollution control.

The market policy that has had the greatest success is the distribution of pollution rights to existing sources, which is in part the effect of the offsets and PSD policies in the U.S. This does the least harm (or creates the greatest benefits) for concentrated interests.

We conclude that a variety of substitute instruments exist for pursuing pollution control. Effluent charges are likely much more efficient than direct regulation, but much less attractive politically unless there is compensation of concentrated interests that are adversely and directly affected. This suggests that efficient policies will only be implemented when designs are created that are efficient and that minimize the economic costs imposed on concentrated interests. While compensation of the parties that are adversely affected is possible with both effluent charge and effluent rights policies, it may be easier with the free distribution of rights since this avoids the spectacle of governments paying cash to known polluters.

FOOTNOTES

1. R.S.C. 1970 C. F-14 as amended by S.C. 1977, ch. 35.

2. S.O. 1971, ch. 86.

3. For example, Section 102(2) of the EPA prohibits prosecutions under the EPA when the person is in compliance with a control order. Section 14(2) of the EPA exempts animal wastes disposed of in accordance with normal farming practices from the application of Section 14(1)(a).

4. Metal Mining Liquid Effluent Regulations, S.O.R./77-178, Section 5.

5. S.O.R./72-92, s. 5.

6. S.O.R./71-578.

7. Donnan and Victor, "Alternative Policies for Pollution Abatement: The Ontario Pulp and Paper Industry", Summary and Update, Volume III, Ontario Ministry of the Environment, Oct. 1976, Ch. 2.

8. S.O. 1971, Vol. 2, c. 86.

9. Discussions with Mr. Dennis Caplice, Director of the Environmental Approvals Branch, Ministry of the Environment on July 28, 1980.

10. R.S.C. 1970, c. F-10.

11. C.R.C. Vol. VII c. 828; Existing Petroleum Refinery, Liquid Effluent Guidelines, Jan. 1974, D.O.E.

12. C.R.C. Vol. VII c. 830; guidelines, May 1972, D.O.E.

13. C.R.C. Vol. VII c. 818; no guidelines or regulations for existing sources.

14. C.R.C. Vol. VII c. 819; guidelines, updated, D.O.E.

15. C.R.C. Vol. VII c. 829; no guidelines or regulations for existing sources.

16. C.R.C. Vol. VII c. 811.

17. S.C. 1970 - 71 - 72 c. 47.

18. C.R.C. Vol. IV c. 412, c. 405, c. 406; S.O.R./79 - 299.

19. Canada Gazette, Sept. 22, 1979, Part I.

20. 42 U.S.C. 7401-7642 (1979 Supp).

21. 42 U.S.C. 7410(a) (2)(D): 40 C.F.R. 51.18.

22. 42 U.S.C. 7410(a) (2)(D): 7411; 40 C.F.R. 60.

23. 42 U.S.C. 7475 (b).

24. 42 U.S.C. 7410(a) (2)(D), 7475; 40 C.F.R. 51.24.

25. 42 U.S.C. 7410(a) (2)(D) & (I), 7503.

26. Quarles, "Federal Regulation of New Industrial Plants", 10 Environment Reporter, Monograph No. 28, p. 20.

27. 40 C.F.R. 60.40 - 60.344.

28. Maintenance, repairs, replacement, increases in the rate or hours of production or the use of an alternative fuel or raw material if the facility was designed for that use are not considered to be modifications. 40 C.F.R. 60.14. A reconstruction is a replacement of components of which the fixed capital cost exceeds 50% of the fixed capital cost of a comparable new facility. 40 C.F.R. 60.15.

29. 33 U.S.C. 1251 et seq., as amended 1977.

30. 33 U.S.C. 1311 & 1342; p. 22, Quarles, supra. footnote 26.

31. 33 U.S.C. 1316, 40 C.F.R. 128 and 403-460, replaced by 403 (June 26, 1978) 403 (October 29, 1979)and Proposed Rule 40 C.F.R. 419 (December 21, 1979) Federal Register.

32. 33 U.S.C. 1317 (a), 40 C.F.R. 129.

33. 33 U.S.C. 1317 (b)(c)(d); 40 C.F.R. 403-460 (see footnote 31 above).

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CHAPTER V

THE SUBSTITUTABILITY OF NON-TARIFF BARRIERS TO TRADE

I. Introduction*

The phenomenon of the substitutability of governing instruments is not limited to regulation of the domestic economy. The same general observations that we have made about environmental regulation, cultural regulation and the capture of economic rents in the energy sector can be made about the various instruments used to promote international trade and limit domestic protectionist practices. Furthermore, the substitutability of instruments of international trade regulation is motivated and constrained by incentives and constitutional rules directly analogous to those in purely domestic economic settings.

This case study briefly examines the primary instruments of international trade regulation and their substitutability. In embarking on such a vast topic it is possible only to sketch the broad contours of the substitutability phenomenon at work in international trade regulation. However, even in this brief form the case study does serve to emphasize and illustrate the pervasiveness of the relevance of the substitutability of instruments and the constraints this pervasiveness imposes on regulatory reform.

The lessons of international trade regulation bear directly on the problem of interprovincial barriers to trade within Canada. The growth in recent years of these barriers[1] has led to increasing calls for the intro-

duction of instruments designed to secure a single Canadian economic market.[2] The likely success of such instruments in achieving their stated goals will be directly influenced by the phenomenon of substitutability and the constraints imposed thereon. As a result, the lessons learned from an examination of international trade regulation are relevant to current constitutional debates in the domestic setting.

II. The Context

International trade is regulated by the General Agreement on Trade and Tariffs (GATT), a multilateral treaty binding most Western trading nations to a common set of principles and rules. Its genesis lies in the theory of comparative advantage which holds that global welfare can be increased by lowering barriers to trade and allowing each country to adopt production patterns reflecting its comparative productive advantages. Trade barriers are of two major types: tariffs and non-tariff barriers (NTBs). Under GATT, nation states are limited in the extent to which they can impose barriers to trade. In the immediate post-war era tariffs were the primary type of trade barrier. Through the 1950s and 1960s attempts were made through multi-lateral negotiations to liberalize trade by mutual tariff reduction. These efforts culminated with the Kennedy Round of the Multilateral Trade Negotiations (MTN) during which the major trading nations agreed to substantial mutual tariff reductions.

To have implemented these tariff reductions without further action would have exposed domestic producers in all countries to increased international competition at home and opened potential

markets for exporting firms. That is, the tariff reductions standing alone would have reduced the degree of effective protection afforded to domestic producers while enhancing export opportunities.

In retrospect it seems surprising that few observers appear to have predicted that the tariff reductions following the Kennedy Round would be accompanied by an increase in the utilization of non-tariff barriers (NTB's). Ambassador Grey, Canada's chief negotiator at the most recent round of the MTN (the Tokyo Round), has stated:

> No one seems to have quite foreseen that as tariffs came down, some other devices would have to be used to meet the demands of domestic producers who could make a politically convincing case for protection.[3]

In the years following the Kennedy Round, there was a dramatic increase in the frequency of resort to NTB's as the signatories to GATT tested the limits of the prohibitions contained in the General Agreement. As the Tokyo Round of the MTN was undertaken through the 1970s, culminating with an agreement in 1979, the primary focus of the negotiations was on restricting the ability of domestic government to resort to NTB's. While the Tokyo Round did achieve some modest further tariff reductions, its primary achievement was the production of a series of interpretive codes which are designed to limit access to NTB's by detailing the signatories' obligations under the more general prohibitory language of the General Agreement itself.

The replacement in the 1970s of tariffs by NTB's as the primary form of restriction on international trade is a classic example of the phenomenon of the suitability of instruments. The goals of domestic

governments remained largely unchanged, but the rules governing the available instruments changed. As a result of the rule changes, the governments were forced to search for new ways to achieve their objectives and arrived upon the relatively less constrained NTBs. Furthermore, the drafting of the interpretive codes during the Tokyo Round is a classic example on an international scale of an attempt at regulatory reform in which the gains from the reforms are likely to be dissipated by further substitute instruments.

Before turning to the particular forms of NTBs and an analysis of the new interpretive codes, it is useful to identify the incentive structure facing domestic governments participating in international trade negotiations. It is these incentives which will guide their actions and it is these incentives which have remained largely constant through the various rounds of negotiations. While the substantive outcomes of the negotiations no doubt channel the ways in which the domestic governments may seek their objectives, the incentives to seek the objectives change little.

In the simpliest terms, a domestic government's objectives in international trade negotiations are to secure the benefits derived from the adherence of other nations to GATT (e.g. lower trade barriers and increased export opportunities), while at the same time minimizing the extent to which domestic producers selling in domestic markets are exposed to increased competition from abroad. At one level, these twin objectives are inconsistent since the foundation of GATT is the principle of <u>reciprocal</u> reductions in trade barriers. At another level, however, it is possible

to pursue this strategy by consistently searching for ways to escape from or find loopholes in the international obligations which one agrees to in order to gain the benefits of increased export markets. For example, if a government agrees to a mutual tariff reduction in order to gain greater access to export markets, it may still attempt to erect non-tariff barriers so as to limit the access of foreign producers to the domestic market. Similarly, if a government agrees to a mutual ban on a particular form of NTB in order to get greater access to export markets, that does not necessarily bar it from resorting to a different form of NTB in order to continue to protect the domestic market. Similarly again, if a prohibition on some aspects of an NTB is agreed to, that does not prevent the government from attempting to rely on some other aspect of an NTB as an equally effective form of protection for the domestic market.

This analysis might suggest a paradox: why would nations voluntarily agree to mutually binding rules when their primary motive associated with doing so will be to find ways to undermine or escape their effects? The explanation can be found by analogy to the theory of cartels which demonstrates that of the three possible states of the world - no cartel, being bound by a cartel and cheating on a cartel - the most desirable position for a firm is to cheat on a cartel but that the second most desirable is to be bound by a cartel rather than having no cartel at all. Similarly, for individual nations the worst position is to have no rules at all limiting the utilization of trade barriers since that deprives all

nations of the gains to be made from comparative advantage. In the result there is an incentive to adopt a set of reciprocal self-denying constraints in order to gain the mutual benefits of comparative advantage, just as a cartel generates mutual benefits. However, this is also consistent with each nation then attempting to cheat on the constraints since that would permit it to enjoy the benefits of other nations' compliance with the rules without suffering the costs of complying itself. This agreeing to and then "cheating" on the constraints is the most desirable strategy for an individual nation just as agreeing to and then cheating on a cartel is the most desireable strategy for a firm in a market setting.

The focus on securing export market opportunities while protecting domestic producers in domestic markets necessarily imposes costs on domestic consumers who are deprived of the benefits (in the form of lower prices) which should accrue to a strategy of genuine trade liberalization. However, it should not be a matter of surprise to see such a situation since, as has been argued elsewhere in this study, the incentives to form effective pressure groups to secure favourable government policies varies directly with the size of the stakes and the costs of organization. Given the difficulty of organizing consumer pressure groups and the relatively small stakes involved for each individual consumer, producer interests with low organization costs and high stakes may be expected to exercize political power disproportionate to their electoral size:

> Given the time and money costs inherent in all political action, small groups of individuals who can expect concentrated benefits or losses (large transfers per person) will invest more in political action than large groups with diffused interests and small expected benefits or losses. The counterpart of this proposition from the politician's point of view is that political entrepreneurs, in their desire to gain votes and secure their election, will supply policies which confer concentrated benefits on small organized groups and they will distribute the burden widely on large groups. Beneficiaries and victims of large transfers will find large investments in political action worthwhile, whereas the rest of the population will offer only minimal support or opposition.[4]

Therefore individual producers have more to gain and lose from government intervention than individual consumers and will invest more resources in political lobbying. In the result, the consumer interest in trade liberalization will be systematically under-represented in the incentive structure facing domestic governments, leaving the twin desires of increased export opportunities and continued protection of deomestic markets as the dominant forces.

The power of these incentives driving domestic governments to negotiate export opportunities but simultaneously to limit access to domestic markets by means of protectionist substitute instruments is demonstrated by the international experience with NTB regulation. The initial growth of NTBs as a substitute for tariffs following the Kennedy Round, the new regulatory codes and the likely substitution effects which they will generate represent the predictable pattern of substitute instruments being utilized to dissipate regulatory reforms. We now turn to the specific types of NTB's to illustrate this theme.

III. The Instruments

There are five major types of non-tariff barriers to trade: (1) government procurement policies; (2) technical standards; (3) customs valuation procedures; (4) export subsidies and countervailing duties; and (5) antidumping measures.[5] Each of these N.T.B.'s can be used to accomplish protectionist goals and as a class of instruments they are, to some extent, substitutes for tariffs as a protectionist device. Furthermore, each of these NTB's is to an extent substitutable with the others.

The conclusion of the Tokyo Round of the Multi-lateral Trade Negotiations (MTN) has resulted in specific codes designed to restrain the use of these NTB's attempting to limit their utilization to situations in which there is a legitimate protectionist goal being accomplished (e.g. protecting national security, maintaining agreed upon reciprocal barriers, etc.).

(a) Government Procurement Policies

The use of government procurement policies as a non-tariff barrier may take many forms. It may include formal margins of preference for domestic products, explicit exclusion of foreign bids, failure to advertise contracts or solicit tenders, and failure to disclose selection criteria.

The importance of government procurement policies as NTB's has grown steadily as the purchases of goods and services by governments constitute an increasing share of the Gross National Product of many Western states. For example, in Canada alone it has been estimated

that in 1977 - 78 procurement by all levels of government amounted to some $30 billion with the federal government accounting for approximately $9 billion of that total.[6] More generally it has been estimated that approximately one-quarter of all goods and services traded internationally are purchased by governments.[7]

Recognizing the widespread use and major economic impact of government procurement policies as an NTB, the parties to the Tokyo Round of the MTN negotiated the Code on Government Procurement. It obliges the signatories to:

a) to apply the same treatment to the suppliers of other signatory countries as to domestic suppliers; and

b) to ensure that technical specification do not create unnecessary obstacles to international trade; and

c) to follow agreed rules regarding the qualification of suppliers, notices or proposed purchases, tender documentation, submission, receipt and opening of tenders and awarding of contracts; and

d) to provide prescribed information to suppliers and the governments of signatory countries on all phases of the procurement process, including contract awards; and

e) to maintain procedures for the hearing and review of complaints arising in connection with any stage of the procurement process.[8]

These provisions represent an attempt to guarantee non-discrimination between domestic and foreign suppliers both ex ante and ex post. The ex post protection includes an obligation upon the signatories to give unsuccessful bidders notice of the reasons for their rejection.

Despite this broad commitment to non-discrimination, the Code contains a number of exemptions which will limit its impact and invite substitution effects. In particular, the Code does not encompass service

contracts; it only applies to products and services incidental to the supply of products. The Code has no application to military procurement, research and development expenditures, contracts falling below a minimum value (150,000 S.R.S.), purchases by the transport and fisheries departments, or purchaser by Crown corporations. Perhaps most importantly, the Code does not apply to provincial, regional or municipal governments. In sum, de Mestral has estimated that the Code covers only ten per cent of the expenditures of even the federal government.[9]

Thus, while the Canadian government's ability to use its procurement policy to erect NTBs has been constrained by the Code, the extent of the constraints is quite modest. Furthermore, even these limited constraints are subject to being undermined by substitution effects as protectionist objectives can be promoted by substituting expenditures by exempt entities (e.g. Crown corporations) or in exempt form (e.g. below the minimum value) for otherwise constrained expenditures.

(b) Technical Standards

Technical specifications for the design, packaging, labelling, transport and marketing of products while ostensibly for purposes of health, safety, quality or technological compatibility, can be readily employed as instruments of protection.[10] Alleged examples of this practice are legion: Canadian rules governing the size of metallic cans which barred the importation into Canada of American canned food,[11] American safety standards for automobiles which restrict access by European and Japanese manufacturers to the U.S. market,[12] and Canadian and E.E.C.

allegations concerning American security standards for life jackets[13] are but three examples.

The difficulty in this area is to distinguish regulatory standards whose primary intent is a legitimate domestic concern with health, safety, etc. from those whose ostensible object is a legitimate domestic concern but whose primary motivation is protectionist. While the former standards may be no less restrictive of international trade than the latter, the legitimate standards have a different social welfare effect in that their protectionist impact is offset by their regulatory achievements.

The Tokyo Round of the MTN produced the Agreement on Technical Barriers to Trade which attempts to limit the protectionist use of technical standards. It adopts the principle of equal treatment for imported and domestic products, and prohibits standards which are not rationally related to a legitimate domestic regulatory objective. The basic objectives of the Agreement are not new to GATT as the General Agreement has long included two provisions related to this subject. In particular, section III states:

> ... laws, regulations and requirements affecting the... use of products, and internal quantitative regulations requiring the mixture, processing or use of products in specified amounts or proportions, should not be applied to imported or domestic products so as to afford protection to domestic production.

However, section XX exempts those regulations which are adopted for legitimate reasons despite their protectionist impact.

> Subject to the requirement that such measures are not applied in a manner which could constitute a means of arbitrary or injustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:

(a) ...
(b) necessary to protect human, animal or plant life or health.

The difficulty, as Bernier has stated,[14] has been that since "the difference between what is in truth a health or safety measure and what amounts in practice to a protectionist device is rarely obvious, these two provisions have not proved very useful as a means of preventing the erection of barriers to trade in the form of standards or technical regulations."

The Agreement reached as a result of the Tokyo Round attempts to give greater content and specificity to the GATT provisions in this area. It deals explicitly with the substantive problems concerning technical regulations and standards, the particular problems of developing countries, the provision of a dispute settlement mechanism, and the preparation, adoption and application of standards. Bernier has summarized the obligations assumed under the Agreement as follows:

> The fundamental obligations assumed by the Parties under the Agreement turn around four areas of activities which are, first, the preparation, adoption and application of technical regulations and standards, second, the testing methods, third, the certification systems and, fourth, information. Notwithstanding the fact that specific problems are considered in each of those four areas, there is a certain similitude in the legal approach used in order to resolve such problems... the common pattern is to start by banning voluntary discrimination, which amounts to an obligation not to do, and then pass on to a positive obligation to adopt measures designed to eliminate involuntary obstacles to international trade.[15]

While the Agreement represents an increase in the constraints on the use of technical standards as NTB's its terms are less than comprehensive and invite subsitution effects to circumvent its terms. The "leakage" under the Agreement will likely occur as a result of the

exemption of both provincial governments and private standard setting organizations from its scope.[16c] That is, the Agreement binds only the federal government and obliges it to use only its "best endeavours" to secure the compliance of other levels of government and private organizations with standard setting powers. However, given the constitutional division of authority in Canada and the federal government's inability to bind the provinces to international obligations to the extent that the obligations relate to matters falling within provincial powers, it is inevitable that there will be an incentive on provincial governments to erect NTB's through standard setting. Unconstrained by the Agreement, provincial standard setting may be substituted for federal activity. Thus Canada's position as a federal state offers the possibility of appearing to accept international standards without in reality being bound to them.

(c) Customs Valuation Procedures

Customs valuation procedures are a necessary complemement to any scheme of tariffs since inherent in the concept of a tariff is a value against which to apply it. Furthermore, any reduction in a tariff can be nullified by a corresponding increase in the valuation attributed to the dutiable article. Similarly, while holding tariffs constant, any procedure under which relatively higher valuations are reached will lead to higher effective protection for domestic producers.

As a result, standards and procedures of customs valuation may be used as a form of NTB in situations of both decreasing and constant tariffs. By employing inflated valuations, arbitrary valuation rules, lengthy procedures, onerous documentation requirements and other devices, governments are able to erect disincentives for importers while remaining nominally committed to a set of international tariffs. The systematic tariff reductions produced by the Kennedy Round focussed added attention on customs valuation procedures resulting in the Custom Valuation Code.

In order to reduce the use of customs valuation procedures as an NTB, the Code concentrates on establishing universal, non-discriminatory principles for arriving at valuations. In particular, it establishes the "transaction value" as the preferred valuation method, permitting resort to other standards only in certain narrowly circumscribed situations.[17] In addition, Article 7 of the Code expressly prohibits certain specific valuation methods which are deemed unreasonable regardless of the circumstances. These include virtually all the valuation methods currently used by Canadian and American customs officials.[18] In addition to specifying valuation methods, the Code also structures various dispute resolution mechanism.

The Valuation Code does not offer the same opportunities for substitution identified with respect to government procurement and technical standard since the Code governs the importation of all goods to Canada. There can be no "leakage" through the substitution of other levels of government or other entities since customs valuation is an exclusive responsibility of the federal government.

The Code does permit a different kind of substitution which makes it possible to utilize the customs valuation procedures for protectionist purposes. As Slayton and Quinn have argued,[19] by manipulating procedural rules, rules of standing, burdens of proof and importers' access to information, and at the same time providing only skeletal reasons for decisions, the valuation process can be structured so as to produce relatively high valuations while discouraging importers from appealing unduly high valuation decisions, thus increasing the effective protection for domestic producers. This form of substitution is unavoidable in a procedurally-oriented system in the absence of a detailed code of internationally binding procedural rules. The specification of only principles of valuation in the new Code and not the details of the procedural provisions permits the creation of a new form of NTB, filling the role of the now banned arbitrary valuation principles themselves.[20] Finally, it should be noted that as in the case of technical standards, these procedural rules while serving as NTBs may be disguised as being used pursuant to a legitimate domestic interest, in this case decisional accuracy in the valuation process. The divining of the real purpose and intent of any particular procedural rule is, of course, far from a modest task.

(d) Export Subsidies and Countervailing Duties[21]

Another form of NTB is the provision of a subsidy to domestic producers in order to increase their competitiveness abroad. These subsidies may apply exclusively to goods produced for export purposes ("export subsidies") or to all domestic producers regardless of the final destination of the finished product ("domestic subsidies").

In either case, by subsidizing the price of the exported product, the subsidy distorts the relative prices of products in international trade, biasing the market shares in favour of the subsidized product. However, in the case of domestic subsidies the rationale for the subsidies is more ambiguous than in the case of export subsidies.

Countervailing duties refer to the imposition of duties by the importing country sufficient to counteract the effect of a subsidy. In its pure form, the imposition of countervailing duties is consistent with the general objectives of trade liberalization inherent in GATT since the subsidies would otherwise distort normal trade patterns based on genuine comparative advantage. However, the decision to impose countervailing duties can also be manipulated by domestic governments and producers in order to use countervail to accomplish protectionist goals beyond merely nullifying the effect of subsidies. For example, by modifying the requisite "material injury" test which triggers countervailing duties under GATT, a domestic government may substantially enhance a domestic producer's ability to activate the countervail procedures thus impeding competing imports. Barcelo has argued that the United States in enacting the Trade Agreement Act of 1979 has done just that, defining "material injury" as "harm which is not inconsequential, immaterial or unimportant".[22] Similarly, by defining "subsidies" sufficiently broadly, a countervailing duty law can encompass almost any domestic economic policy since any such policy arguably has some effect, either direct or indirect, on the cost of production. The effect of such a expansive definition is to increase the scope for taking countervailing actions.

The substitution effects encouraged in the context of subsidies and countervailing duties are two-fold. On the one hand, governments willing to give domestic producers advantages in export markets will adopt economic policies which provide effective subsidies without running afoul of foreign definitions of subsidies. Thus industrial strategies which disguise or cloud the true purposes of particular policies (e.g. maintaining energy prices at half world levels) will be substituted for those which are more obviously direct export subsides. At the same time, in order to increase the level of effective protection for domestic producers selling in domestic markets, governments will be under pressure to manipulate the definitions and procedural rules governing the imposition of countervailing duties so as to maximize the likelihood that they will be imposed.

The new Subsidies and Countervailing Duties Code arrived at as a result of the Tokyo Round would not appear likely to substantially diminish either of these substitution effects. The potential for manipulating definitions and rules remains; indeed, Barcelo maintains the United States has already taken advantage of the potential, increasing the protectionist posture with regard to the triggering of countervailing duties.[23] Similarly, the incentives for substituting one form of subsidy may have been enhanced by the Code's distinction between export subsidies (which are prohibited) and domestic subsidies (which are merely subject to complaint and negotiation procedures). This distinction creates a clear incentive to utilize domestic

subsidies since they have the same effect on export prices while circumventing the prohibition attached to export subsidies. At the same time, it must be acknowledged that substituting domestic for export subsidies is not costless for domestic governments since a domestic subsidy is a less efficient and more costly instrument for subsidizing export prices.

(e) Anti-Dumping Measures

The last form of NTB to be examined is the use of anti-dumping measures as an instrument for increasing the effective protection for domestic producers. Dumping refers to the sale of products in export markets at prices below the sale price in domestic markets. Article VI of GATT provides that if the effect of dumping "is such as to cause or threaten material injury to an established domestic industry or is such as to retard materially the establishment of a domestic industry", the injured country is permitted to levy an anti-dumping duty equal to the difference between the export price and the price at which the goods are normally sold in the country of export.

The anti-dumping provisions have often been criticized as being inconsistent with the goal of trade liberalization and the principle of comparative advantage since they turn exclusively on "material injury" to domestic producers.[24] As such, and lacking a theoretical foundation based on either subsidies or anti-competitive predatory practices (both sound reasons for prohibiting certain conduct), anti-dumping measures are generally viewed as a protectionist device designed to insulate domestic producers from aggressive international competition.

Unless restricted in scope to responding to predatory practices, anti-dumping measures can be readily utilized to benefit domestic producers at the expense of domestic consumers and foreign producers.

The Tokyo Round of the MTN led to the adoption of the Amended Anti-Dumping Code, a document nominally directed towards restricting the protectionist uses of anti-dumping measures. The Code was motivated in part by the experience under the Kennedy Round Anti-Dumping Code. The Code was not "self-executing" in the sense that it required domestic implementing legislation to give it legal effect. It was noted by many parties to GATT that the implementing legislation, while superficially complying with GATT, in many cases permitted the imposition of anti-dumping measures in circumstances beyond those contemplated by the Code. The American and Canadian legislation was particularly offensive in this regard.

In the Tokyo Round, however, no substantial progress was in fact made in restricting the use of anti-dumping measures. Indeed some observers such as Professors Meltzer and Barceló believe the "accomplishments" of the Amended Anti-Dumping Code are regressive. Barceló writes "from a liberal trade view, the Tokyo Round Anti-dumping Code...amends the original 1967 Kennedy Round Code in the wrong direction."[25] In a similar vein, Meltzer writes: "for whatever the verdict may be as to the rest of the MTN's results--if indeed any verdict will ever be made--the Amended Anti-dumping Code and its implementation must be judged as a major backward step toward the very protectionism which the MTN was designed to guard against".[26]

The reason for this pessimism concerning the prospects for the Amended Code is, once again, the substitutability of instruments. As in the cases of customs valuation and countervailing duties procedures, the Code leaves sufficient flexibility to permit the substitution of protectionist definitions and procedural rules within the general framework of the Code's Principles. For example, although pursuant to the Amended Code the American Legislation did adopt the term "material injury" as opposed to simple "injury", it defined "material injury" as an injury "which is not inconsequential, immaterial or unimportant" [27], thus negating any advances achieved by adding the word material.

IV. Commentary

As was stated in the introduction to this case study, the regulation of international trade displays the same phenomenon of the substitutability of instruments as that seen in domestic regulatory settings. The evolution of trade barriers, from the emphasis on tariffs in pre-Kennedy Round days to the current concern with non-tariff barriers during and following the Tokyo Round represents a classic case of instrument substitution.

The substitution effects have been of three kinds. First, there was the substitution between two classes of instruments--tariffs and NTB's--following the Kennedy Round's limitations on the use of tariffs with the result that there was a substantial increase in the frequency of resort to NTB's. Secondly, there are substitution effects among the different types of NTB's. For example, to the extent that the GATT

substantially restricts the opportunities for protectionist utilization of anti-dumping measures, governments may resort to other related instruments such as countervailing duties. Thirdly, there are substitution effects within each type of NTB. That is, while the interpretive codes limit and constrain certain aspects of each NTB, none of them is so comprehensive as to prohibit substitution effects. These effects are accomplished through either "substantive" or "procedural" substitutions. For example, in the area of government procurement a "substantive" substitution can be achieved by undertaking procurement through either an entity not bound by the Code (e.g. a Crown corporation or a provincial government) or in a form not covered by the Code (e.g. below the minimum purchase value). Similarly with respect to technical barriers, standards set by provincial government and private organizations can be substituted for federal standards. A "procedural" substitution effect is achieved by using procedural rules, burdens of proof, statutory definitions, etc. to apply a protectionist shield in favour of domestic producers in the guise of compliance with the GATT and the interpretive codes. The American resort to defining "material injury" as harm which is "not inconsequential, immaterial or unimportant" is a good example of this phenomenon.

The reason for the persistency of these substitution effects lies in two constants: the incentive structure facing domestic governments and the inherent ambiguity of legal language. With respect to the former, so long as domestic government maintain the dual objectives of

maximizing export opportunities while minimizing access to domestic markets, they will be engaged in a search for protectionist measures they can invoke without violating the GATT. Furthermore, their governments are unlikely to return from their searches empty-handed. One should never underestimate the creativity of politicians and their advisors in finding substitutes which will permit them to circumvent the constraining effects of the international rules. This is not a cynical view of government and politicians. It is simply an assumption that politicians striving to maximize the welfare of their nation (and their own welfare) will try to benefit domestic voters while imposing costs on foreigners if they can do so without breaching their international obligations.

With respect to the ambiguity of legal language, the experience with the growth of NTB's within the pre-Tokyo Round GATT context suggests that NTB's will continue to be used despite the new interpretive codes. So long as the prohibitions are contained in mere legal orders and commands and the GATT remains largely devoid of an effective enforcement authority, the Codes will be prey to the substitution effects described above. In the absence of completely comprehensive and enforceable obligations, the opportunity to dissipate the effects of the Codes by domestic resort to new variations in the NTBs remain.

A recognition of the phenomenon of substitutability counsels modesty when estimating the likely effects of reforms in the regulation of international trade. One must anticipate that the gains which would accrue to the elimination of various forms of trade barriers will be

diminished by the substitution of new protectionist devices. The introduction of these new devices will, over time, lead to calls for new constraints leading to new negotiations and new codes designed to prohibit the emerging trade barriers. But the process will be repeated with the substitution effects once again diminishing the benefits.

This is not, however, a counsel of despair. While the substitution effects will lead to the replacement of lower cost trade barriers by more costly ones and more efficient protectionist measures with less efficient ones,[28] they will also make the substitute barriers progressively less accessible to governments. This should raise the relative "prices" of the barriers to governments, leading to some reduction in the frequency of use. To the extent that this occurs, there should be a net reduction in the barriers to trade. To the extent that this reduction exposes domestic producer interests to unacceptable distributive effects warranting political redress, domestic government will be forced to respond with policies which do not impose the costs on foreign interests.

V. An Analogy : Inter-Provincial Barriers to Trade

The current Canadian constitutional controversy concerning inter-provincial barriers to trade is in many ways a microcosm of the international attempts to regulate trade barriers. The analogy consists of viewing the Canadian market as the international market, the provinces as nation states and the Canadian constitution as the GATT. The theory of international comparative advantage which holds that global welfare can be

increased by lowering barriers to trade and allowing each country to adopt production patterns reflecting its comparative productive advantage applies equally to the Canadian market. As a result, Canadian economic output should be maximized when barriers to inter-provincial trade are minimized.

Despite this general proposition concerning maximizing Canadian economic output, there remains an incentive on each province within Canada (as there is on each member nation of GATT) to attempt to maximize the interests of the province even if that imposes costs on other parts of Canada. That is, to extent it is permitted under the Constitution, a province will adopt policies which generate benefits for residents of that province while imposing some of the costs of such policies on residents of other provinces. In particular, policies which restrict access by extra-provincial producers to provincial markets without generating any reciprocal restraints on provincial producers' access to extra-provincial markets are likely to be adopted.

The drafters of the British North America Act did not ignore the advantages of a Canadian common market with restrictions on inter-provincial barriers. However, the prohibition on the inter-provincial barriers was, in restrospect, too narrowly drafted. Section 121 provides that:

> All articles of the Growth, Produce and Manufacture of any one of the Provinces shall, from and after the Union, be admitted free into each of the other Provinces.

Court interpretations of this section have limited its effect to prohibiting customs duties on the movement of goods between provinces. As a result section 121 does not prohibit other forms of trade barriers.

In light of an understanding of the substitutability phenomenon, it should not be a matter of surprise that section 121 has led to the implementation by provinces of a wide range of non-tariff barriers to trade between the provinces. Just as the Kennedy Round of the MTN restricted the use of tariffs as a trade barrier causing the substitution of NTB's, section 121 by prohibiting tariff barriers has forced the provinces to resort to domestic equivalents of NTB's which are virtually unconstrained by the Canadian constitution. As a result we can now observe within Canada non-tariff trade barriers caused by provincial procurement policies, technical standards, export restrictions, processing allowances, local hiring restrictions, professional licensing restrictions, restrictions on takeover bids, industrial location subsidies and numerous other policies.[29]

As these barriers to trade have grown there has been increasing recognition of both the costs of these policies and the possibility of improving Canadian output by imposing restraints on these NTBs. The current constitutional debate has generated three possible responses: increased centralization with respect to all powers necessary for securing full economic integration of the Canadian market, expanding the scope of Section 121 in order to encompass and prohibit all forms of

NTB's; or entrenching in the constitution the mobility rights of citizens, as well as their right to gain a livelihood and acquire property in any province regardless of their province of residence. The first response - substantial centralization does not appear to be a viable option in the current constitutional climate since it would involve a substantial change in the relative powers of the federal and provincial government.

While it would be inappropriate in the context of this case study to embark on a full-scale evaluation of the other two options - an expanded section 121 and/or entrenched mobility rights - it is important to recognize the relevance of the substitutability phenomenon to an assessment of the likely gains to be achieved by these measures. Just as the GATT and its new interpretive codes have and will generate substitution effects, it would be naive to believe that similar effects would not occur as a result of these proposals. The potential for substitutability associated with both of these proposals derives from the ambiguity of the real purposes of provincial policies and the multitude of schemes, both direct and indirect, that can be used to benefit local interests at the expense of extraprovincial interests. The ambiguity permits provinces to adopt policies nominally designed to have a legitimate effect while in reality they will have another or at least a subsidiary effect which will erect an inter-provincial barrier or reduce mobility. The multitude of instruments permits the provinces to continue to adopt policies which indirectly create barriers even if through litigation certain instruments are deemed to be unconstitutional. By a process of substitution of the indirect for the direct and the subtle for the obvious, provinces should be

able to adopt substitute NTB's just as nation states have done and are likely to continue to do under GATT. To the extent that this occurs, the anticipated benefits from the new constraints will be similarily dissipated.

Footnotes

* The primary research for this case study was done by John Gibson, a third year law student at the Faculty of Law. In addition, he wrote a first draft of a substantial portion of the study. The case study also draws on two other written comments by the authors: Trebilcock, "Comment on The Need for Adjustment and the Search for Security: The Barriers to Change" in Ontario Economic Council, Developments Abroad and the Domestic Economy (1980) at p. 119; Prichard, "The Very Deep Structures of Non-tariff Barriers: A Comment on the GATT and the Deep Structure of Customs Administration", (mimeograph, 1980).

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1) Trebilcock, Kaiser & Prichard, "Restrictions on the Interprovincial Mobility of Resources: Goods, Capital and Labour" in Ontario Economic Council, Intergovernmental Relations (1977) at p. 101.

2) Safarian, "Ten Markets or One? Regional Barriers to Economic Activity in Canada", Law and Economics Workshop Paper Number WSII-18, University of Toronto (1980); Government of Canada, Securing the Canadian Economic Union in the Constitution (1980).

3) Grey, "The General Agreement After the Tokyo Round", (mimeograph, 1980) at p.9.

4) Migue, "Regulation, Bureaucratic Supply, and Standardization under Representative Government", Laval University and School of Public Administration Working Paper (1980), at p. 26.

5) Arguably import quotas are also a major type of non-tariff barrier. However, they are traditionally thought of as distinct from the other types of NTB's and have been subject to substantial regulation prior to the Tokyo Round. As a result, the discussion below does not canvass quotas although the analysis is equally applicable to them.

6) de Mestral, "The Impact of the GATT Agreement on Government Procurement in Canada" (mimeograph, 1980) at p. 2.

7) Ibid.

8) Ibid.

9) Ibid.

10) See generally, Bernier, "Product Standards and Non-Tariff Distortions: The GATT Code on Technical Barriers to Trade", (mimeograph, 1980).

11) Ibid., p.3.

12) Ibid., p. 2.

13) Ibid., p. 2.

14) Ibid., p. 5.

15) Ibid., p. 14.

16) Articles 3 and 4, Agreement on Technical Barriers to Trade.

17) Slayton & Quinn, "The Gatt and the Deep Structure of Customs Administration", (mimeograph, 1980); see also Akin, "The Customs Valuation Agreement in the New GATT and its Effect on Valuation of Imports in Canada", (1979), 4 Can. Bus. L. J. 316.

18) Slayton & Quinn, supra n. 17, p. 16.

19) Ibid., p. 33 ff.

20) Ibid.

21) See generally, Barceló, "Subsidies, Countervailing Duties and Anti-dumping After the Tokyo Round", (mimeograph, 1980).

22) Ibid., p. 17.

23) Ibid.

24) Trebilcock & Quinn, "The Canadian Anti-Dumping Act: A Reaction to Professor Slayton", (1979) 2 Canada-United States Law Journal 101; for a general reference, see Grey, The Development of the Canadian Anti-Dumping System (1973); for a comment on the American implementation of the Anti-Dumping Code, see Meltzer, "The Anti-Dumping System and the Trade Agreements Act of 1979", (mimeograph, 1980).

25) Barceló, supra n. 21 at p. 37.

26) Meltzer, supra n. 24 at p.

27) This is the same definition as that used for purposes of triggering countervailing duties.

28) See Stegemann, "The Efficiency Rationale of Contingency Protection", (mimeograph, 1980).

29) For a catalogue of these restrictions, see Trebilcock et al., supra n.1; Safarian, supra n.2; Government of Canada, supra n.2, Annex A.