REGULATING RISK: EXPLAINING DIVERGING LABELING POLICIES BETWEEN CANADA AND THE EUROPEAN UNION AND WHETHER THESE DIFFERENCES CAN BE RECONCILED

by

M. JULIA BOGNAR B.A., The University of Toronto, 2005

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES (European Studies)

THE UNIVERSITY OF BRITISH COLUMBIA (Vancouver)

April 2008

© M. Julia Bognar, 2008

Abstract

This paper deals with the causes behind policy divergence concerning non-product related production and process methods (nprPPMs), specifically Canada's preference for voluntary labeling regimes and the European Union's (EU) preference for mandatory labeling regimes. The causes behind this divergence are explored in three case studies: labels for genetically modified foods, animal welfare labels, and ecolabeling. Particular attention is paid to the differing approaches to risk analysis (RAF), namely that Canada employs a scientific-based approach to this framework, while the EU more often employs a social-based approach. While it has been common for many academics to attribute these diverging approaches to differences in consumer preferences and civic interests, this paper argues that these explanations do not fully account for these policy outcomes, as demonstrated by the similarities in consumer preferences and civic movements in these regions. Instead, diverging regulatory approaches are caused by systematic institutional differences.

This paper then focuses on reconciling trade barriers caused by diverging regulatory approaches using methods of policy coordination, specifically mutual recognition agreements as a bilateral approach and policy harmonization as a multilateral approach. In regards to policy harmonization, relevant international agreements and organizations pertaining to nprPPM labeling regulations are discussed, most notably relevant WTO rules. This paper concludes that bilateral efforts to reduce the negative trade effects caused by the three case studies will be extremely difficult to resolve due to the fact that Canada and the EU are engaged in a regulatory competition between global powers for the dominance of either a science-based, or social based approach to RAF. This competition has resulted in vague international rules, which are therefore incapable of facilitating policy harmonization at the multilateral level. This paper will conclude that Canada and the EU are unlikely able to reconcile trade barriers caused by at least of the two case studies discussed here, GM food labels and animal welfare labels. Recommendations are made for bilateral and multilateral efforts to prevent further trade barriers caused by future nprPPM regulations.

Table of Contents

Abstract	ii
Table of Contents	iii
List of Abbreviations	iv
Acknowledgments	v
Chapter One: Introduction	1
THESIS STATEMENT	2
Chapter Two: NPRPPM Labeling Regimes as Regulatory Barriers	5
Chapter Three: Theoretical Framework	9
RISK ANALYSIS FRAMEWORK: SOCIAL RATIONALITY VERSUS SCIENTIFIC RATIONALITY	15
Chapter Four: Policy Overview	27
GM FOOD LABELING LEGISLATION	32 34
Chapter Five: The Causes Behind Diverging Regulatory Approaches	42
THE EUROPEAN UNION'S REGULATORY SYSTEM	51 55 64
Chapter Six: Reconciling Regulatory Trade Barriers	75
BILATERAL APPROACHES TO POLICY COORDINATION: MUTUAL RECOGNITION	87 91
Chapter Seven: Conclusion and Recommendations	110
Bibliography	117
Annendix	136

List of Abbreviations

BSP Bio-safety Protocol

CAC Consumers Association of Canada CFIA Canadian Food Inspection Agency

Codex Codex Alimentarius
EC European Community
ECJ European Court of Justice
ECP Environmental Choice Program
EFSA European Food Safety Authority

EU European Union FoE Friends of the Earth

GEN Global Ecolabeling Network
GM Food Genetically Modified Food
GMO Genetically Modified Organism

IPPC International Plant Protection Convention
ISO International Standards Organization

MFN Most Favoured Nation

NGO Nongovernmental Organization

nprPPM non-product related Production and Process Method

OIE World Organization for Animal Health
PETA People for the Ethical Treatment of Animals

PMO Prime Minister's Office

PPM Production and Process Method

RSPCA Royal Society for the Prevention of Cruelty to Animals

SPCA Society for the Prevention of Cruelty to Animals

SPS Agreement Agreement on the Application of Sanitary and Phytosanitary

Measures

TBT Agreement Technical Barriers to Trade Agreement

WTO World Trade Organization

Acknowledgments

I would like express my gratitude to the faculty, staff and students at the Institute for European Studies at UBC. In particular, to Dr. Kurt Hübner for his invaluable guidance, advice and especially for the encouragement and confidence he has given, and to Dr. Yves Tiberghien for his indispensable and extensive knowledge he provided on this topic.

I dedicate this thesis to my family, especially Mum, Dad, and sister Sarah, for all the love and support they have lavished me with for the entirety of my life. I also dedicate this to Keith Smith, for without him I never would have reached the end of this endeavour. I Love you all so very much.

Chapter One: Introduction

Economic relations between the European Union (EU) and Canada are characterized by strong two-way trade flows as a result of a long tradition of economic cooperation and compatibility. The EU is Canada's second largest trading partner with trade in goods and services accounting for over \$83 billion CAD in 2007, as figures have been increasing every year. For years, Canada has attempted to diversify its trade portfolio, which relies heavily on the United States. In the past ten years, trade figures with Canada's other partners have increased significantly, while the United States' percentage share of trade has decreased. Dollar figures have remained steady between Canada and the EU, and tariff barriers have been drastically reduced since the inception of the international trading system. However, overall trade between the EU and Canada, as a percentage share of total trade, has not increased as quickly as trade with Canada's other trading partners.² Partial explanations for this stagnation have been attributed to regulatory trade barriers, which have been repeatedly stressed by both Canadian and European policy leaders as the main obstacles to a deepening trade relationship. This thesis will focus on the relevance of regulatory barriers in the EU-Canada trade relationship, in particular as to why they exist and if they can be reconciled.

During the 2003 Canada-EU summit, leaders committed to make strong efforts towards the coordination of future regulations and toward the development of a voluntary framework for Canada-EU regulatory cooperation. The Trade and Investment Enhancement Agreement (TIEA) framework provides development of a voluntary

¹ Please see Appendix: Chart 1

² Please see Appendix: Chart 2

mechanism for regulatory cooperation. This mechanism resulted in the adoption of the Framework for Regulatory Cooperation, which aims to facilitate exchanges between regulators trying to reduce bilateral barriers to trade. The two partners have continuously stressed the importance of resolving these barriers in both bilateral and a multilateral settings, particularly within WTO Doha Round negotiations. However, regulatory barriers are a unique type of non-tariff barrier in trade relations, which embody a political entity's values and moral preferences, political approaches, and economic objectives. Because of the highly politicized and localized nature of these types of regulations, they are much more difficult to resolve than traditional tariffs if regulatory approaches and objectives are in conflict with each other. Consumer interests rather than traditional producer protectionist interests are leading to new types of social and commercial regulations. My thesis will specifically focus on labeling regulations of production and process methods (PPMs), specifically non-product related process and production methods (nprPPMs), which have become an increasingly contentious trade barrier between Europe and North America.

Thesis Statement

My thesis will focus on why Canadian and EU have established different types of labeling schemes for certain nprPPMs, while the same type of labeling scheme for others, using GM food labels, farm animal welfare labels and ecolabels as case studies. I will argue that policy differences exist not because of fundamental differences between the preferences of consumers in the EU and Canada, as some scholars have argued, but because of their diverging policy approaches towards PPMs. Using regulatory theory, I will argue that these diverging approaches are caused by the differing institutional

structures in Canada and the EU. Regulatory outcomes in the EU are affected by the influence of civic interest groups, especially when these groups are able to capitalize consumer/voter demands, which in turn increases their lobbying power over the institutions of the EU. This influence can be attributed to the multi-level governing structure of the EU. Canada, however, has a more centralized governing structure, which is more closed off to the influence from civic interest groups and therefore economic concerns often take precedence over consumer/voter concerns. Because nprPPM labeling schemes affect market access for producers, thereby acting as trade barriers, my thesis will then focus on whether these diverging policy approaches can be reconciled either a bilaterally or multilaterally. Using policy coordination theory, I will argue that Canada and the EU's diverging regulatory approaches have caused these two partners to be engaged in a regulatory competition with each other. Because of this competition, trade barriers caused by these types of labeling schemes will be difficult to reconcile.

The next chapter will briefly define non-product related production and process methods and discuss how these types of regulations, particularly labeling regimes, act as trade barriers. Chapter three will lay the foundation for a theoretical framework, and explain the theories that will be used in my thesis, such as Risk Analysis Framework, regulatory theory, and policy convergence theory. Chapter four will provide an overview of labeling legislation in both Canada and the EU for GM foods, animal welfare and ecolabels as well as explain the motivations and objectives behind these types of regulations, in particular the motivations behind choosing a voluntary or mandatory label. Chapter five will then explore why Canada and the EU have diverging policy approaches to GM Foods and animal welfare by comparing the differences between the two

regulatory systems. To further prove that diverging policies are caused by systemic differences, rather than by consumers themselves, I will then compare civic interests and civic movements in both Canada and the EU to demonstrate the similarities between these interests and movements. Chapter five will then discuss whether or not these types of trade barriers can be reconciled either through mutual recognition agreements, or through multilateral harmonization. I will explore whether or not international agreements and organizations, which are relevant to the case studies discussed below, in particular WTO rules, are able to encourage policy coordination, and thus reduce trade barriers caused by regulation. In chapter seven, I will then conclude that current international rules are not equipped to handle these types of barriers and disagreements over current nprPPM labeling regimes, and because of this, I will recommend changes that need to be made to the international trade regime and towards bilateral efforts in order to avoid future regulatory barriers caused by newer nprPPM labeling regimes.

Chapter Two: NPRPPM Labeling Regimes as Regulatory Barriers

Production and Process Methods (PPMs) are the way in which products are manufactured, produced and processed and PPM standards regulate how goods must be produced. A PPM can affect the characteristics of a product so that the final product itself may have an impact when consumed or used. This impact could potentially affect the safety or health of humans, animals or plants when the product is consumed and is thus the impetus for regulation. Alternatively, a non-product related Production and Process Method (nprPPM) is a PPM that also has an impact during the production, harvesting or extracting stage but it does not have an impact on the final end use of the product. The impetus for the establishment of standards based on nprPPM comes primarily from consumer demand, based upon political and ethical grounds. These types of standards often reflect consumer concerns over the effects production processes might have on their personal health and safety, the well-being of animals, or negative effects on the environment, but only during the production process. Examples of such nprPPM standards that will be used as case studies are regulations for Genetically Modified³ food (GM foods), the environment, and animal welfare.

The EU and Canada have established either voluntary or mandatory regulations for producers to abide by that reflect the desires of consumers. However, concerns exist among producers with respect to additional costs that they will be burdened with, as a

_

³ It is ambiguous as to whether a GMO is a characteristic of the final product or of the production process. In some cases, the final processed food may not contain traces of GM traits even though the production process may have involved genetic modification, for example canola oil. However, consumers still object to the production process methods because it originated from a GM plant.

result of regulations that demand higher quality production processes forced upon them, either through government-mandated requirements or through the marketplace. This may make it difficult for domestic producers to compete on cost and price with third countries exporting products that are not required to abide by these types of production and process regulations. To compensate for these competitive pressures faced by producers in an increasingly globalized market, where regulatory obligations, or requirements, are extremely divergent, policymakers have a plethora of instruments at their disposal to help domestic producers stay competitive under higher standards of production, such as trade bans or restrictions, trade sanctions, countervailing duties and border tax adjustments. In recent years, it has become commonplace to use labeling as an instrument to communicate with consumers about the exact nature and characterization of the production process, which enables the consumer to make their own choice in full knowledge of the facts. Many economists have argued that labeling creates the fewest obstacles to trade, compared with the instruments mentioned above.

However, the major concern with an nprPPM labeling scheme for exporting countries is that it can have a discriminatory impact against foreign producers. Labeling regulations concerning nprPPMs could introduce distortions into international trade caused by market segmentation. This segmentation stems from the variation of national requirements, which may be incompatible with each other, and from the complex administrative import procedures that will be needed to verify compliance with such requirements. Both factors increase uncertainty and costs for trade. While labeling, per se, does not directly restrict trade, the indirect effect of regulatory requirements for labeling can be identified if it creates a burden on exporters. A labeling scheme, whether

mandatory or voluntary, is extremely burdensome for producers because meeting a mandatory technical regulation is required for market access, and failure to comply with a voluntary standard may effectively exclude a product from a market, or significantly reduce the exporter's ability to compete in a market if consumers insist that the standard should be met.

Several studies have devoted themselves to the in depth study and argument of nprPPM labeling schemes, whether voluntary or mandatory, as trade barriers in the transatlantic marketplace, most notably those done by Miranowski et. al (1999), Lapan 2001, Philips and Isaac (1998), Droge (2001) and Gruere (2006). All of these studies indicate that nprPPM labeling regimes act as trade barriers when exporters cannot meet the criteria stipulated by national rules and therefore cannot participate in the national labeling scheme. Consumers tend to shift their demand away from unlabeled goods and this will eventually lead to losses in market shares and to trade distortions. The OECD (1997) has investigated labeling programs and stated that there is a potential for a restriction of market access. Other studies have indicated that the scope of product labels is increasing and that this contributes to future effects on trade, especially if labels are used unilaterally or by an integrated trade block. (da Motta Veiga, 2000)

In particular, many scholars have focused on the conflict between states over the appropriate level of regulation towards nprPPMs. While Canada and the EU agree over the legitimate use of labeling nprPPMs to respond to consumer demand for information, major disagreements have occurred over whether mandatory or voluntary labeling is more appropriate. The EU has preferred mandatory labeling schemes for some nprPPM regulations, such as GM foods and farm animal welfare, arguing that it is necessary to

require producers to inform consumers the information they demand, and voluntary for others, such as ecolabels. Canadian regulators, however, have opted for voluntary nprPPM labeling schemes in all cases, arguing that they are the less trade restrictive. These diverging labeling regimes, although having similar objectives, can cause even greater market segmentation because their approaches to these regulations diverge and are therefore incompatible with each other. While a plethora of theoretical and empirical studies, such as the ones discussed above, have reiterated how nprPPM labeling schemes act as trade barriers, my thesis will instead focus on why Canadian and EU have established different types of labeling schemes for certain nprPPMs, for GM foods and animal welfare standards, and yet similar voluntary labeling scheme for ecolabels.

Chapter Three: Theoretical Framework

Risk Analysis Framework: Social Rationality versus Scientific Rationality

Risk Analysis Framework (RAF) has often been used often by academics to explain why North America and the EU have diverging regulatory *approaches*. Both Canada and the EU adhere to the RAF. This Framework "deals with products that are characterized by a substantial information gap (of the risks associated with the product in question) between producers and consumers ...(and) in these situations products need to be demonstrated (to consumers) as being safe." (Perdikis, 2005, p. 228) Therefore the risk for consumers using a product should be as minimized as much as possible. There are three elements of RAF:

Risk assessment, the first and most important step in risk analysis, is the process of identifying and estimating the risks associated with the use of a product and evaluating the consequences of taking those risks. Risk management, the second step, is the process of identification, documentation, and implementation of measures that can be applied to reduce the risks and their consequences. Risk communication, the third step, is the process of communicating the risk assessment results of the regulators to interested parties, such as industry and the public. (Caswell, 2000, p. 3)

In the case of PPMs, under the RAF, any risks associated with certain production methods must be identified and evaluated. How these risks are evaluated will be discussed below. Once risks are identified, regulators may choose mandatory regulations for producers in order to limit the negative effects of these risks and then communicate these types of regulations to those interested. Product labeling, as a policy choice, is noteworthy in that it can be used as a tool in both risk management and risk communication.

In assessing the risks associated with PPMs, many regulators have adhered to the belief that the risk assessment stage should be based solely upon scientific evidence. This is known as the 'scientific rationality' perspective:

The scientific rationality perspective views science as yielding innovations, which increases efficiency. These innovations enhance growth and development, which, in turn, increase consumer incomes and therefore their demand for social goods - among them better regulations regarding food safety and the environment. The policy objective of this perspective is enhancement and maximization of scientific advances, which, if necessary, are then subject to safety standards. (Perdikis, 2005, p. 230)

Therefore, as long as new and advancing PPMs are deemed to be scientifically safe and if a risk assessment, based entirely on scientific evidence, determines that the final product poses little, if no risk to consumers, then standards that are usually applied to satisfy consumer demands for social goods, such as voluntary labels, are left to the marketplace. A key role in this perspective is the principle of substantial equivalence, which stipulates that for a product to be approved, it should be grossly similar to its natural counterpart. Therefore, in the case of nprPPMs, if a product has been produced using a different production method, and is not inherently different from the final product of another production method, then there is no need for regulation. Substantial equivalence follows a scientific-based approach where any concern about human health and environmental impact has to be supported by rigorous and widely analytical procedures. (Lapan and Moschini, 2001)

However, social scientists have been questioning the scientific-based approach to risk regulation for almost thirty years. Some academics have argued that the prevailing paradigm of risk analysis has been driven by the hazards and risks associated with advances in science and technology. Under the scientific rationality perspective, these risks are largely "conceptualized in terms of economic costs and benefits to human life

and health." (Short, 1984, p. 712) Short argues that this perspective has largely ignored social scientific contributions to this paradigm. Specifically, by ignoring "how people live with risk and how living with risks affects their perceptions and behaviour." (Short, 1984, p. 712) Ulrich Beck furthers this perspective, by arguing "insofar as applied science and knowledge-driven economic innovations have guided social change, they have nonetheless been excluded from the possibility of democratic consultation, monitoring, and resistance." (Beck, 1992, p. 228) Therefore, regulations are based on a limited range of goals and interests, as decisions are based upon scientific opinion and criteria that does not necessarily acknowledge legitimate consumer concerns, such as economic efficiency and burdens of scientific proof of risk. (Goshorn, 1996)

Thus, this social perspective reveals the existing tension between policy makers' hopes for innovation via scientific methods that will yield positive economic benefits, and the demands for protection by the consumers at risk, who are exposed to these potential risks but can be limited in their ability to link their demands with scientifically acceptable differences. (Goshorn, 1996) These social scientists argue that there is an inherent tension between the traditional scientific rationality and the social rationality:

Scientific rationality emphasizes method in validity or truth status, which in applied situations, becomes a precondition for conscious action. In social rationality, practical outcomes and participation in decision-making enjoy higher priority than relative purity of method or certainty of causal proofs. It consists in achieving a socially and morally defensible proportionality in the weights given to experience, competing values, interests, and goals, as well as to truth claims. Thus over the past decades there have been increasing demands by public interest groups to have a say in public policy and the affairs of science and industry. (Goshorn, 1996, p. 298)

With the growing advent of consumers' ability to gain access to information, whether based on scientific or social concerns, there are expanding opportunities for public participation in the development stages of regulations. Activists, who are against certain production methods that may harm human health, animal well-being, or the environment,

are capitalizing on this by pressuring regulators for the incorporation of social values in risk assessments.

The social rationality perspective does not just view science as 'positive' activities that drive economic growth through product innovations, but also views them as 'normative' activities that influence and change the balance of consumer preferences and concerns (Perdikis, 2005) Risk assessments of PPMs therefore should, according to some social scientists, take these preferences and concerns into consideration, as well as the scientific evidence available. Thus, regulation should not be left to just the marketplace alone, where producers may be unwilling to provide information that may be costly or could jeopardize their success in the marketplace, and should acknowledge the processes used, than simply the characteristics of the final product itself. Therefore, because the social rationality perspective, in its risk assessment of production and process methods, allows regulators to consider consumer concerns of risk, in addition to the possibility of scientific risk, the social rationality perspective leads to more restrictive policy outcomes, such as mandatory labeling, in order to satisfy consumer demand.

In the same manner that the principle of substantial equivalence underlies the scientific rationality approach, the precautionary principle plays a fundamental role in the social rationality perspective. A basic understanding of the precautionary principle comes from the "idea that regulators should take steps to protect against potential harms, even if causal chains are unclear and even if it is not known whether those harms will come to fruition." (Sunstein, 2005, p. 12)

A weaker definition of the Precautionary Principle emphasizes that a lack of decisive evidence of harm should not be grounds for refusing to regulate...In Europe, the precautionary principle is sometimes understood in a stronger way, suggesting that it is important to build a margin of safety into all decision-making. Stronger definitions emphasize that action should be taken to correct a problem as soon as there is evidence that harm may occur, not after the harm has already occurred.

Moreover, the principle mandates when there is a risk of significant health or environmental damage to others or future generations, and when there is scientific uncertainty as to the nature of that damage or the likelihood of the risk, then decisions should be made so as to prevent such activities from being conducted unless and until scientific evidence shows that the damage will not occur. (Sunstein, 2005, p. 11)

While the precautionary principle is used as a tool in a scientific-based RAF in the risk assessment stage, it emphasizes that "only risk assessors with the relevant scientific background can determine when precaution should be utilized." (Perdikis, 2005, p. 230) However, the social rationality perspective makes use of the precautionary principle in both the risk assessment and risk management stages: "it can be used as a method of assessment, taking into consideration non-scientific perceptions and concerns." (Perdikis, 2005, p. 231) The basic idea is that if clear and unquestioned evidence on the safety of a product is lacking, and potential connected risks are potentially very high and irreversible, it is legitimate to discriminate products based on production methods and treat them with caution if consumers perceive risks associated with these methods. (Lapan and Moschini, 2001)

Therefore many scholars have concluded that these two perspectives have lead to different regulatory outcomes regarding the appropriate procedures for nprPPM policy approaches. The EU and Canada's diverging regulatory approaches to RAF are indicative of their risk perspectives associated with production and process methods. Many academics have attributed the EU's strict mandatory regulations, for foods containing GMOs and for animal welfare practices used during the production process, to recent food safety scares in European countries. EU consumers often associate certain production methods for foods, as being 'unnatural' and 'unhealthy', and therefore risky to consume. In the case of genetic modification these fears are compounded by the differing opinions among scientists over the risks associated with this type of production method.

Pro-biotechnology scientists espouse the many benefits of this technology, such as protecting plants with pesticides against infestation by insects or to make plants resistant to particular herbicides so that only the crop plant will survive when the field is sprayed, which will produce higher yields than conventional crops as well as the development of more nutritious crops that can grow in less favourable climates. (Kettnaker, 2001) However, other scientists have speculated that genetic modification could have unknown consequences on human health and the environment in the future. Particularly for human health is the concern that:

Randomly inserted genes can lead to unintended production of toxins and allergens or to a reduction of nutritional value. For technical reasons, many of the genetically modified plants also contain a gene for antibiotic-resistance that could be transferred to bacteria that are harmful to humans. This could make many illnesses harder to combat. Environmental dangers include unintended harm to beneficial insects, soil organisms, and non-target animals that feed on the plants...in addition, worrisome is that once released, genes from engineered plants cannot be recalled from the environment if later research should find negative effects... concerns about insufficient knowledge are increased by the fact that research into side effects are largely left to the biotechnology corporations. (Kettnaker, 2001, p. 206-207)

In the case of animal welfare, scientists do not necessarily disagree over whether better standards increase the safety of consuming a product, however, many animal scientists and veterinarians have emphasized that better standards do reduce the risk of disease among animals raised for human consumption. With the advent of food scares, such as mad cow disease, and foot and mouth disease, consumers have associated healthier animals as better for consumption and therefore higher animal welfare standards reduce the risks associated with consuming the product.

Therefore consumers in the EU demand that producers must be forced to label their products indicating what production methods have been used. Consumer's risk perceptions of certain production and process methods caused by these food scares, combined with the social rationality perspective of RAF which takes into consideration these types of concerns, can therefore explain why the EU has established mandatory labeling policies. However, Canada has not experienced these types of food scares, and thus its consumers often perceive less risk associated with certain PPMs. Thus, the scientific rationality perspective has lead regulators in Canada to consider only current and relevant scientific evidence in its risk assessment of PPMs, regardless of consumer demand for higher standards.

These differences in risk perceptions may also help explain why both Canada and the EU have established similar voluntary eco-labeling regimes. It is more difficult for consumers to perceive a *direct* relationship between the risk of consuming a product, in which the production methods are harmful to the environment and their safety and wellbeing. Therefore, many scholars have concluded that most ecolabeling schemes are voluntary, as opposed to mandatory, because of the low levels of consumer demand for standards and regulations associated with environmental change. Therefore, in applying RAF to ecolabeling policies, EU regulators do not have to take into consideration consumer concerns in regulating production and process methods that are harmful to the environment.

Regulatory Theory

However, the attribution of these differing perspectives due to public outrage of, or public trust in, regulatory policies, particularly because of recent food scares in the EU is a rather simplistic assumption. This is because consumer demand in Canada does not necessarily differ from consumer demand in European states, yet these food scares were not prevalent scandals in Canada as they were in Europe. In addition, these food scares occurred after consumers began demanding mandatory labeling for GM foods and animal

welfare standards. Although RAF theory itself can explain differing policy approaches, the question remains as to why the EU uses the social-based RAF approach and Canada uses a scientific-based RAF approach. Using regulatory theory, I will argue that the causal factors behind Canada's and the EU's regulatory perspectives, and therefore approaches, are much more complex because they cannot simply be explained by consumer differences. Instead, as regulatory theory will demonstrate, these differences are a result of differences in governing systems. There are three theories of regulation, which attempt to identify motivations that shape policies, or the systematic characteristics that influence and explain regulatory decisions and outcomes. These three theories fall into three categories: normative, economic and institutionalist.

Normative regulatory theory, or public interest theory, stipulates that regulation is a method of correcting market failures, whether they are perceived or real. Regulations are established because a free market economy does not always account for 'optimally the best outcomes' (Bernhauer & Meins, 2003) and therefore government intervention is necessary to repair these inadequacies. This is to protect consumers who could be exposed to harmful products if producers were allowed to regulate themselves. This theory assumes that governments have control over not only regulatory policies, but expenditures as well, because control in this area is required for states to supply public goods (Bernhauer and Meins, 2003).

In the 1970s, normative theory was disputed as a motivation driving regulation when George Stigler theorized a new model, known as economic theory. When Stigler presented this model, it demonstrated how regulation is a result of pressures coming from producers, rather than consumers, and provided by self-interested politicians, who are

concerned primarily with ensuring their own political survival, and desire for money and influence. This political survival is provided by monetary aid in election and re-election bids, ensured by powerful producers when their interests are fulfilled in regulations. Producers may gain advantages through either the establishment, or blocking, of a number of possible government policies that could affect their profitability. In this theory, both the causes and effects of regulation are the opposite of normative theory: regulations are constructed not in the public's interest but against it. (Bernhauer and Meins, 2003)

Institutionalist theory is a more recent model that is often used to explain regulatory outcomes in the EU. Regulators are not closed off from influencing factors whereby they can choose between civic and economic interests, but "operate in a complex political environment, which includes in addition to economic interests, political executives, legislators, rival agencies, political parties, judges, the media, public interest groups and supranational authorities." (Majone 1996, p. 35) Therefore regulators may engage in 'policy entrepreneurship', (Laffan, 1997) implementing regulations that do not fall under the motivations described in normative or economic theories.

The Commission's role and position in the policy process endow it with certain strengths as a 'policy entrepreneur'. It is intimately linked to its power of initiative and its capacity as a think-tank for the Union as a whole. The Commission is in the market for ideas as it strives for collective solutions at the European level. In its search for ideas, the Commission taps into expert groups, NGOs, industry, advisory bodies, establishes observatories, holds conferences and stimulates policy discussion. Its Directorates-General carry the institutional memory of past policy proposals, choices and responses from the Member States. If the circumstances are right, the Commission is in a position to propose packages that will carry the majority of the Member States. (Laffan, 1997, p. 424)

This theory also stipulates that it is unclear whether regulators have the ability to successfully implement their regulatory preferences – whether they favour consumers or industry. Institutionalist theorists, such as Majone (1993), Peterson (1995), Bernhauer & Meins (2003), and Laffan (1997), have argued that the structure of the EU leads to these

entrepreneurial outcomes. Therefore this theory can provide explanations as to why the EU's multi-level regulatory policymaking environment causes diverging policy outcomes from Canada's centralized regulatory policy-making environment.

I will discuss how regulatory outcomes for GMO and animal welfare labeling in the EU can be traced back the EU's institutional structure, combined with risk averse consumers, which caused regulators to be more susceptible to pressure from 'anti-GMO' and 'pro-animal welfare' interest groups. In comparison, the Canadian regulatory system is more centralized and closed off to these types of interest groups. While Canadian politicians have faced similar pressure from these types of interests group and consumers in the same manner as EU regulators, the Canadian institutional structure provides regulators with a stronger ability to weigh the costs and benefits of labeling policies, whether civic, scientific, or economic, and therefore have the choice as to whether they will consult with civic interest groups during the policymaking process. Therefore, institutional theory will explain how the institutional structures in Canada and the EU have caused them to develop diverging regulatory approaches when perceptions of risk and consumer demand become intervening factors.

Policy Convergence Theory

The second part of my theoretical framework will use policy convergence theory to answer the question of whether Canada and the EU can reconcile these types of barriers through policy coordination. Trade leaders have referred to coordination methods, such as mutual recognition and harmonization of regulations, to reduce trade barriers. Convergence is the process of regulations to become similar in their nature, process, and performance over time. (Drezner, 2005) Policy analysts have stressed that

regulations, which are traditionally created and implemented within the national domain, will eventually converge on the supranational level due to the advent of trade liberalization and economic globalization.

In policy convergence theory, strategies can be grouped into three categories: policy coordination; mutual recognition; and harmonization. The objective of harmonization, the strongest of the three strategies, is to standardize all regulations in particular industries on the multilateral level. Mutual recognition strategies accept that regulatory diversity can "still meet the common goals of facilitating freer trade" and protect the domestic industries by recognizing the regulations and standards of other states as equivalent (Hooker, 1999). The objectives of Mutual recognition agreements (MRAs) are to reduce the significant differences between national regulations of trade partners. The combination of these types of bilateral and multilateral efforts has been termed either "policy convergence" or more generally "policy coordination." (Hooker, 1999)

Many scholars emphasize the deficient study of policy convergence, and therefore the lack of theory in this area is attributed to the interdisciplinary nature of this topic, covering areas such as law, economics, political science, and sociology. (Drezner, 2001) This has led to an incohesive theoretical construction of policy convergence, as disciplinary boundaries often prevent ideas from being shared and used. (Drezner, 2001) The main question being asked by those who are constructing theories in this field is when does policy convergence occur? Scholars who attempt to ascend these disciplinary boundaries have managed to derive similar answers to these questions:

...recent comparative literature (identifies) a fourfold framework of processes through which convergence might arise: emulation, where national regulatory officials copy action taken elsewhere; elite networking, where convergence results from transnational policy communities;

harmonization through international regimes; and penetration by external actors and interests. (Bennet, 1991, p. 218)

This framework has been verified and used by several interdisciplinary scholars, including Katharina Holzinger and Christopher Knill (2005), Daniel Drezner (2001, 2005), and George Hoberg (1991, 2001). However, a well-used framework still has yet to be established. With the exception of Daniel Drezner, the scholars listed above only allude to theoretical conditions as to how convergence occurs. Drezner is one of the only academics to have identified interdisciplinary theoretical approaches in this area.

Drezner (2001) identifies two dimensions that separate theoretical approaches of policy convergence. The first dimension is the differences between structural and agent-centered approaches. Structural approaches, such as the framework outlined above by Bennet (1991), focus on the systematic conditions affecting politicians, whereby the pressures for convergence are external to states. Externalities determine national regulators' policymaking process by limiting their choices. (Drezner, 2001) Agent centered approaches do not dismiss the power of external influences, but emphasize that states do have the ability to choose different policies at their disposal. (Drezner, 2001)

A clear distinction between structural and agent-based theories is the language used to describe international regulatory regimes. Structure-based theories deal with convergence as the dependent variable and imply that different national policies are homogenized into one global policy. Agent-based theories prefer the term 'coordination', which is more expansive than convergence. Policy coordination implies some agreement on the acceptable bounds of regulatory policies, but it does not mean that all states implement identical rules or regulations. (Drezner 2001, p. 57)

Drezner (2001) identifies a second dimension that separates theoretical approaches focuses on the sources of pressure to converge policies. First, there is the economic pressure to modify regulatory policies. This comes from the "threat of mobile capital to exit, causing non-converging states to lose their competitiveness in the global economy." (Drezner 2001, p. 57) The other pressure to converge is 'ideational.' States

will change their regulations when a new set of ideas and opinions have become popular and commonly used, because regulators fear the repercussions, whether political or economic, if they do not adopt similar policies. (Drezner, 2001) Drezner (2001) uses the 'race to the bottom' hypothesis, as an example of an ideational theory. This theory assumes that the pressure for convergence comes from the increasing mobility of trade and capital flows, and the belief that states must act against capital flight, where producers will move production to states with weaker regulations. The more integrated a state is with global markets, the more likely its regulatory policies converge with other states and this convergence will be at the lowest level of regulation. (Drezner, 2001)

My thesis will focus on agent-based theories of convergence. NprPPM regulations appear to be diverging over certain issues, but converging with others, demonstrated by the labeling regimes outlined above. Since Canada and the EU have not implemented identical standards on these issues they are obviously not homogenizing into one policy, as structural-based theories argue. Agent-based theories help demonstrate whether or not these type of standards and regulations can be coordinated, especially if policy approaches diverge, as well as explain the reasons behind a diversity of policies and on what grounds an acceptable level of policy coordination takes place. (Drezner, 2005) I will also focus on ideational theories because there does not appear to be economic motivations to re-regulate nprPPM labeling policies to the lowest common denominator: nprPPM labeling regimes are established for the purpose of informing consumers about the production methods of a product, which are costly for producers, and as discussed above, can cause limits to the free flow of goods, rather than encourage it.

According to Drezner (2001), there are three agent-centered theoretical approaches to policy convergence; the 'world society' approach; the 'elite consensus' approach and neoliberal institutionalism. The world society approach emphasizes the spread of models and ideas through global exchanges of information, interactions and connections. (Drezner, 2001) Policy convergence is not driven by capital mobility, but instead through the development and expansion of ideas and the need for the states to conform to methods of regulation that help the state's bureaucracy function more effectively. (Drezner, 2001) Once a dominant idea becomes popular, and regulators view the new idea as a better alternative, old regulations and standards lose their validity. This leads to a "strong isomorphism." (Drezner, 2001, p. 61) States that fall behind in making these regulatory changes eventually emulate the practices of global leaders, causing policy convergence in the process. (Drezner, 2001) According to this approach, policy convergence takes place when there is more regulation, not less. This allows for expansion of the regulatory process at the national level because new bureaucracies will need to be created for new policies and with this expansion, global interactions increase, which in turn, leads to a "greater demand for world society integration." (Drezner, 2001, p. 61)

According to Drezner (2001), the 'elite consensus' approach also stresses the importance of ideational factors in causing policy convergence, but places more emphasis on the role of states and individuals, than the ideas themselves. In this approach, "epistemic communities" is the cause of policy changes. These 'communities' can influence policy when state leaders are unsure of the consequences of their policy

⁴ An epistemic community is defined as "a network of policy experts who share common principled beliefs over ends, causal beliefs over means, and common standards of accruing and testing new knowledge." (Drezner 2001, p. 63)

choices. In this approach, demands for coordination arise from the interdependence of states because transnational epistemic communities shape state choices in regulatory options, which leads to a harmonization of policies over time. (Drezner, 2001) This approach places importance on international organizations and agreements in the development of an epistemic community.

The neoliberal institutionalism approach asserts that states do not have total control over capital, but enough power to determine the course of their regulatory process. (Drezner, 2001) Even though regulations can raise costs for producers, they are inclined to accept these rules because of the potential profits that can be captured in a larger market with higher income levels. (Drezner, 2001) Developed countries, such the Member States of the EU and Canada, tend to have constituents with stable, but continuously growing, incomes. Many scholars have noted that as incomes grow, consumers demand stronger regulations from governments, such as those pertaining to production and process methods. Contrary to the 'race to the bottom' theory, states are able to respond to these types of demands because higher income consumers are more likely to pay higher prices for stronger regulations. Thus, the fear of a loss of competitiveness is less prevalent among regulators. The neoliberal approach also takes into account the costs of changing national regulations. National regulations are result of an institutional framework, which can limit the actions of political actors and changing this framework can be costly and might disrupt the national political and institutional systems. (Drezner, 2001) This approach also demonstrates a clear view of the internationalization of production, as there is the need to collaborate with each other to "create global public goods, or to reduce global public bads." (Drezner, 2001, p. 60)

Thus, neoliberal institutionalists argue that convergence comes from deliberate policy coordination between states and emphasize that coordination will more likely occur if there are less policy actors involved in the negotiation process, if the oversight of coordination is easy, and most importantly, if there are international institutions with enforcement capabilities to ensure coordination is carried out between states. (Drezner, 2001)

Neoliberal institutionalism is a collective action theory, and therefore the relationship between asymmetry of power and size of a state, and coordination with other states, plays a strong role these types of theories. (Drezner, 2005) The more powerful a state is, and the larger its market is, the more likely it is that coordination will take place between a powerful state and less powerful states. (Drezner, 2005) However, because cooperation is a more desired outcome than force or conflict, some accommodations are made by great powers to smaller states' concerns. (Drezner, 2001) Therefore, this approach envisions a compromised convergence outcome, between 'laissez-faire' and 'interventionist' states, with the preferences of more powerful states, who are the most important actors in determining the extent of policy convergence, overseeing coordination towards their own policies. (Drezner, 2001) This means that when great powers agree over appropriate regulatory approaches, there will be effective international policy coordination. However, when they fail to agree, Drezner (2005) argues that this will lead to regulatory competition between the great powers. Policy coordination will take place when these great powers compete for as many allies as possible, leading to strong convergence, but at "multiple policy nodes." (Drezner 2005, p. 842)

Therefore, using the neoliberal institutionalism argument, I will argue that Canada is simply aligning its nprPPM labeling policies with the United States, while regulatory competition takes place between the EU and the USA. The second part of my thesis will discuss this type of regulatory competition in nprPPM labeling between the two economic powers. As outlined above, Canada and the EU have diverged over their Risk Analysis Framework approaches to nprPPMs. I will explore how the United States' status as Canada's largest trading partner, has influenced Canada's RAF approach.

I will then discuss how this regulatory competition affects bilateral efforts to overcome these barriers, specifically whether or not all three labeling policies can be coordinated through a mutual recognition agreement (MRA). By examining the preconditions for mutual recognition agreements, I will argue that the regulatory competition between the United States and the EU prevents coordination at the bilateral level for GMO labeling standards and animal welfare standards. This competition between the great powers was not intentional, but rather it is a byproduct of their diverging domestic policy approaches. However, the conflict over which approach, social or scientific, is the most appropriate has been deliberately brought to the multilateral level. The case of eco-labeling will demonstrate that without the conflict of a social versus scientific-based RAF it may be possible to coordinate nprPPM labeling policies.

It has often been suggested that the best approach to reconciling trade barriers caused by nprPPM labeling schemes is through multilateral harmonization efforts, since not only Canada, or North America writ large, and the EU are affected by these regulations, but so too are a majority of trading partners in a globalizing economy. Most notably, it is implied that international rules should determine which policy takes

precedence. Once the appropriate approach is determined by international rules, regulatory harmonization, and ergo policy coordination, will take place. However, I will argue that a regulatory competition between the science-based versus social-based RAF approaches has been brought to the multilateral level. This transatlantic divergence of preferences has stymied efforts to develop common global PPM regulations, such as those for GMOs and animal welfare. International organizations and agreements, which provide enforcement capabilities for regulatory coordination, are being played against one another, in support of either the social or scientific rationality approach to RAF. I will argue that this has lead to vague international rules concerning nprPPM labeling, and therefore GMO and animal welfare labeling policies, currently, cannot be harmonized.

Chapter Four: Policy Overview

Before exploring why nprPPM labeling policies diverge and if they can be reconciled, a brief review of these types of policies, and the motivations behind them, will be provided. Specifically, nprPPM labeling legislation in both Canada and the EU, for each of the three case studies, will be discussed, as well as an overview of the policy objectives behind nprPPM regulations and why regulators prefer either mandatory or voluntary labeling regimes.

GM Food Labeling Legislation

The establishment of an EU-wide label for GM foods arose out of a contentious battle, both within and outside the EU, over the approval and use of GM crops to be used in and sold as food to be consumed by both animals and humans in Member States. When GM crops and foods first started to be approved in the EU in the early 1990s, Commission officials took a lenient and more positive approach towards the new technology. Directive 90/220 EEC regulated the 'Deliberate Release into the Environment' of GMOs, while the Regulation EC 258/97 'Concerning Novel Foods and Novel Food Ingredients' authorized foods derived from biotechnology. Both of these regulations contained provisions for the authorization of GM foods through a 'simplified procedure.' (Lieberman and Gray, 2006) However, this began to change as consumers and activists began to contest the use of biotechnology, and Member States' national regulations began to respond to these concerns. In February 1997, Austria became the first Member State to invoke the 'safeguard measure,' which eventually was incorporated

into Directive 90/220 EEC. This measure allowed Member states to impose bans on GM products that had already been approved by the EU. (Lieberman and Gray, 2006) According to Kettnaker (2001), restrictive EU-wide GMO legislation was a largely a response to national measures by Member States, first by Austria, which banned a GM maize variety that had already been approved, then followed by Luxembourg. In 1998, Greece and France banned GM oilseed rape varieties and in 1999 Austria banned two more varieties of maize. In 2000 Germany banned one variety of maize, while Italy banned four.

In 1998, Member State officials were asked to vote on a Commission Proposal asking Austria and Luxembourg to withdraw their bans. The vote was split, indicating a negative shift in national opinions of genetic engineering. In June 1999 a meeting of the Council of Ministers of Environment took place in Luxembourg, during which Greece and France put a proposal forth for a temporary moratorium until full mandatory labeling and traceability was put into in place.

The Council agreed to tighten-up several aspects of the original proposal: the ethical dimension and precautionary principle were taken into account, products containing GMOs would have to be clearly labeled and the possibility of exempting products with a GMO content below a certain threshold from the labeling obligation was added. A maximum validity of 10 years was set for the initial consent to place a product on the market, accompanied by provisions on monitoring, labeling and mandatory consultation of the public on the release and placing on the market of GMOs and products containing GMOs. (Lieberman and Gray, 2006, p. 598)

The Council also made the decision to stop authorizing the approval of new GMO events until a new and more stringent regulatory system was in place. This led to a de facto moratorium on new approvals until 2003.

During this Council meeting, there were two positions established by Member States: the first position being that of France, Greece, Denmark, Italy and Luxembourg, and the second position being that of Austria, Belgium, Finland, Germany, Netherlands,

Spain, and Sweden. (Kempf, 2003) The first position suspended new authorizations GMOs, which therefore acted as a moratorium. (Kempf, 2003) Ministers from the second position, however, issued a declaration emphasizing the need to take a more precautionary approach to new authorizations. (Kempf, 2003) Three Member States, the United Kingdom, Ireland, and Portugal abstained. Because the Council relies on a qualified majority voting system, the first position was sufficient in achieving a 'blocking minority' and therefore a de facto moratorium was put into place (Kempf, 2003). This de facto moratorium was vehemently opposed by Canada and the United States, and both countries brought their complaints to the World Trade Organization (WTO).

As mentioned above, this suspension of GMO approval, was pending until new legislation was enacted to reflect the agreed upon measures by the Council. Therefore, mandatory labeling legislation was established as a more permanent measure for GM food approval. Directive 2001/18 (On the Deliberate Release into the Environment of Genetically Modified Organisms) became the main piece of legislation governing experimental releases and entry into the market. This included considerable restrictions on the manner in which permission for commercial releases of transgenic organisms into the environment could be given, including a 0.9% threshold for a mandatory label. It also outlined an approval process on a case-by-case assessment of risks to human health and the environment. The European Commission indicated that the adoption of this new directive ensured that Member States would lift the de facto moratorium, however, Member States and EU officials could not agree to the approval of GMOs until a more comprehensive EU-level labeling scheme was in place. In 2002, the European Agriculture and Environment Councils reached agreement on traceability and labeling

proposals and Regulation 1829/2003⁵ and Regulation 1830/2003⁶ became the core regulations regarding approval of GMOs and labeling of products derived from GMOs.

Regulation 1829/2003 encompasses the labeling provisions to all genetically modified food or feed, which consist of, contain, or are produced from GMOs. This means that it does not matter whether modified DNA or protein can be detected in the final product, and the EU's GM food label is therefore both a nprPPM and a PPM labeling scheme. A 0.9% threshold for the accidental presence of GM material is allowed for which a label does not have to declare the presence of GMOs. A 0.5% threshold was established for the unavoidable presence of GM material not approved for use in the EU, provided it has received a favourable opinion from the EU Scientific Committee. The intentional use of GM ingredients at any level must also be labeled.

Regulation 1830/2003 established the procedures on traceability and labeling of GMOs and products produced from GMOs. The labeling legislation extends labeling requirements to all food and food ingredients regardless of the detectable presence of DNA or protein within the final product. It requires producers to transmit and retain information about products that contain or are produced from GMOs at all stages of being placed on the market. For pre-packaged products consisting of or containing GMOs, the words: "this product contains genetically modified organisms" or "this product contains genetically modified [name of organism(s)]" is required to appear on the label. In the case of a non-prepackaged product, the words must appear on, or in connection with, the display of the product to the final consumer.

_

⁵ On Genetically Modified Food and Feed

⁶ Concerning the Traceability and Labeling of Genetically Modified Organisms and the Traceability of Food and Feed Products Produced from Genetically Modified Food and Feed

Canadian regulators have taken a much different approach to GM crops and food approval, which is solely based in the product approach of GMOs, not the process approach. Canada's current rules on mandatory labeling of GM foods and feeds are treated exactly the same as other new products seeking entrance into the marketplace. Whenever a product involves a health or safety issue a mandatory label must be placed on the product. Under the *Consumer Packaging and Labeling Act*, labeling must be understandable, truthful and not misleading. However, for novel products that do not pose health and safety issues, unlike the EU, there are no mandatory requirements for labeling products that have been genetically modified. This is because Canada has not developed a widespread segmented system to grow, harvest, transport and process genetically modified and non-genetically modified crops and ingredients, which makes tracking of GM food difficult. (Mackenzie, 2000) Therefore the federal government has supported a voluntary labeling scheme as opposed to a mandatory one.

Until 2004, there was no government-issued voluntary label to indicate to consumers if a product has been genetically modified/engineered during its production process, nor if the end product contains modified DNA. If consumers wanted GM-free products they had to rely on either producer-based labels, for which there were no standards to abide by for labeling, or they had to rely on organic labels issued by third-party certification. The federal government has established a national organic standard, under which products that have been processed using biotechnology methods are not defined as 'organic.' But this standard is a guideline only, and legislation is still in process for a new Canada Organic label, which will be permitted for use only for products certified as meeting the standards for organic production and contains 95%

organic ingredients. Currently, organic certification is only provided by the private sector. In 2004, under a standards committee established by the Canadian General Standards Board, a Canadian standard for voluntary labeling of genetically modified foods, entitled Voluntary Labeling and Advertising of Foods that Are and Are Not Products of Genetic Engineering, was developed to address non-health and safety labeling for method of production whether a food has been produced through genetic engineering. The objectives of the national standard are to provide criteria for labeling, understandable messages for consumers, and a consistent policy to verify the truthfulness of labels. Under this standard claims that a single-food ingredient is, or is not, a product of genetic engineering can only be made when more than 95% of that product is, or is not, a product of genetic engineering.

Animal Welfare Labeling Legislation

Unlike the sudden switch from a more lenient policy approach to a much more restrictive approach in the case of GM food legislation, EU regulators have had a more consistent policy approach to high farm animal welfare standards and requirements, with legislation dating back to the early 1980s. However, farm animal welfare labeling was not considered as an official method of indication to consumers of the EU's minimum animal welfare requirements until the Community Action Plan on the Protection and Welfare of Animals 2006-2010 was established. This Action Plan's purpose was to upgrade existing minimum standards for animal protection and welfare and gave a high priority to promoting policy-oriented research on animal protection and welfare and the

application of the 'three R's principle'⁷. It introduced standardized animal welfare indicators to ensure that animal keepers as well as the general public are more involved and informed on current animal welfare standards and are aware of their role in promoting these standards. The Action Plan stressed that labeling policies would need to be developed to ensure that consumers are able to make more informed decisions in purchasing animal welfare-friendly products. Among the initiatives of this Action Plan is an EU animal welfare label for better promotion of chicken and eggs, which are both produced under mandatory requirements.

Previous to the *Action Plan*, the EU had introduced mandatory labeling schemes for more specific animal welfare regulations. Propositions for a mandatory labeling scheme for the production of eggs was first introduced in 2000 when the EC published a proposal (COM(2000) 522 Final) for table eggs to indicate the production methods used, which in effect, made a voluntary scheme mandatory. Eggs from third countries would not be required to carry this information so long as they indicate 'production method not known,' or 'non-EU' or the country of origin. In 2006, Council Regulation (EC) number 1028/2006 On Marketing Standards for Eggs, was developed for consumers to have the ability to distinguish between eggs of different quality and weight grades, as well as to identify the farming methods used in accordance with Commission Directive 2002/4/EC, which is in accordance with Council Directive 1999/74/EC, which lays down the minimum standards for the production of laying hens. This Directive stipulates minimum requirements for individual space, drinking space, nest space, adequate perches, litter

⁷ Defined in Directive 86/609/EEC as the obligation Of all industry sectors, including pharmaceuticals, chemicals, cosmetics, agrochemicals and foods manufacturers, to apply available methods to replace, reduce and refine animal use (Three Rs) in safety and efficacy evaluations under the existing animal protection legislation

space, floor support, free movement, head-room, and equal access to feed. These requirements were to be met by marking eggs and packaging.

Unlike the EU, Canada does not have a long history of a proactive approach to higher farm animal welfare standards. Canada does not have legislated requirements for the care and handling of farm animals. Instead, there is a Recommended National Voluntary Codes of Practice for the Care and Handling of Farm Animals. These Codes are a series of species-specific voluntary guidelines intended to encourage welfareoriented farm animal management and handling practices and to provide humane care for farm animals during all stages of life, from the place of origin to slaughter. The Codes are not intended to be used as production manuals, but rather as a guideline in the promotion of sound husbandry and welfare practices. The Codes contain recommendations, not requirements, to assist farmers and others in the agricultural and food sector to compare and improve their management practices. There are no animal welfare certification programs or labeling legislation provided by either the federal or provincial governments. All labeling schemes in Canada are either producer-based schemes with firms voluntarily providing information or third party-based certification provided by non-governmental animal rights organizations, such as the Humane Society and the Society for the Prevention of Cruelty to Animals (SPCA).

Ecolabeling Legislation

Unlike GM food labeling and animal welfare labeling, Canada and the EU have very similar ecolabeling schemes, both of which are voluntary-based. Both are Type I⁸

⁸ Type I labels are awarded as a license and are granted either by or both by a third party consisting of private institutions and/or state institutions.

ecolabels, as defined by the International Standards Organization (ISO), which producers have the choice to participate in and fulfill the program's objectives. The EU's ecolabel is called the 'European Flower.' The program's objectives are to encourage the design and manufacture of products with a reduced environmental impact and to provide consumers with better environmental information. The scheme defines the reduction of environmental impact as the "minimization of: the use of natural resources and energy resources; emissions to the air, water and soil; generation of waste and noise." (Gesser, 1998, p. 523) An assessment of environmental effects is carried out in the form of lifecycle analysis, which can then be applied to a range of products. This means that the label is awarded on a 'cradle-to-grave' (raw materials to disposal) basis, taking into account the product's environmental impact at each stage in its life-cycle. Therefore eco-labeling is based not only on the impact of using the final product, but also on the methods used during the production process.

Similar to the EU, Canada's ecolabel, which was established in 1990 by the federal government, is based on the 'cradle-to-grave' life-cycle analysis. The Canadian Environmental Choice Program (ECP) eco-label is referred to as the "Eco-Logo." The ECP differs from the European Flower because both the private sector and the Canadian federal government administer the program. Under a licensing agreement with the government, the label is co-managed by TerraChoice Environmental Services Inc. Independent environmental experts provide the service, while consulting interest groups, producers, universities, scientists, and government officials, keeping them involved in

-

⁹ It was North America's first environmental certification program and was the second eco-labeling program in the world. It is currently the most recognized environmental certification body in North America and the only North American standard accredited by the Global Eco-labeling Network as meeting the ISO 14024 standard for type I environmental labels.

developing standards. The Government provides policy direction and is ultimately accountable for Canadian eco-labeling activities and performance and retains broad ownership, control and management of the EcoLogo.

Policy Objectives

Neo-classical economic theory implies that consumers have perfect information about the products they consume, including the production and processing methods used, the attributes of the final product, and all of the immediate and long-term effects associated with consuming the product. (Golan, et al, 2001) As a result of this conclusion, consumers can make independent decisions to balance the price, utility and risks associated with consuming a product, without government intervention. (Isaac and Philips 1998) Therefore, consumers are said to be "sovereign" and "capable of making rational consumption decisions." (Hobbs 2001, p. 273) Therefore, with perfect information, there cannot be justifiable reasons to impose regulations on producers to reveal product information. (Hobbs, 2001) However, the reality is that consumers never have perfect information and this presence of imperfect asymmetric information causes market failure. (Isaac and Philips, 1998) The market therefore fails to provide all of the information demanded by consumers in order to make a rational consumption decision, and product labeling is proposed by many as one way to remedy this market failure because it involves a transfer of knowledge from the supply-side to the demand-side of the market. (Caswell 1997) Through the use of labels, the information gap between producers and consumers can be minimized. (Caswell, 1997)

Most demands for government-mandated nprPPM labeling regimes arise in two general economic situations: when producers do not supply enough information to allow consumers to make consumption choices based upon their individual preferences, which is referred to as 'asymmetric' or 'missing information'; and when consumer consumption choices affect community social welfare, more so than they affect the individual consumer's social welfare, which is referred to as externalities. (Golan, et al, 2001) For asymmetric information the objective of a government-mandated labeling scheme is not to alter consumption behaviour, but to increase informed consumption, (Isaac and Philips, 1998) even though the results of a mandatory scheme tend to crowd out products that do not conform to consumer demand. (Gruere, 2006) Where consumption patterns result in externalities, social welfare may be maximized by a labeling regime. (Golan et al, 2001) The social benefits of labeling may outweigh the social costs even though the private benefits do not outweigh the private costs and in externality cases where private firms do not supply relevant information, the government may decide to establish a labeling regime to try to maximize social benefits. (Golan, et al, 2001) Government-mandated labeling can be a useful tool for achieving social objectives because of the potential power of information to influence consumption decisions. (Magat and Viscusi 1992)

Rather than the traditional producer protectionist motivations behind trade barriers that are established to help domestic producers by putting certain industries at a competitive advantage in international markets, nprPPM labeling regimes are based on social motivations triggered by consumers demanding that their consumption of products should not harm themselves, animals, or the environment in any way. Therefore, social-based motivations behind labeling regimes reflect domestic consumers objections to production methods that conflict with their individual preferences, as well as to address social objectives beyond individual preferences.

For various ethical, environmental and food safety reasons, some consumers prefer not to consume GMOs (Hobbs and Plunkett, 1999). Consumer surveys suggest that among European consumers in particular, there is a strong mistrust of GM Food and a desire to see this type of food labeled (Perdikis 1999) A 'credence' good is one that may have harmful (or beneficial) effects that are not discernible at the point of consumption and in many cases the full impact is not known for a long period of time. (Caswell, 1996) There are credence factors that are possibly related to genetically modified products. As science progresses and knowledge of the causes of disease increases, unanticipated interactions that could result in harmful effects, either to the environment or human and animal health, might be discovered. Given the recent introduction of GMO products, there is no way to quantify either in terms of probability or impact the potential of new carcinogens or toxins resulting from consumption of GMOs. (Kettnaker, 2001) Policymakers often choose a labeling regime to address the asymmetrical information problem with GMOs because it leaves difficult choices to individuals who will suffer, or benefit, from the unknown risks.

Animal welfare labeling addresses concerns over the treatment and well-being of farm animals, an issue that addresses both externalities and individual consumer preferences in correcting asymmetrical information. (Blanford, et al, 2002) The issue of animal welfare is essentially one concerned with ethical beliefs over a social objective of the treatment of animals. In recent years, increasing levels of personal incomes in developed countries have led to a rising interest among some consumers regarding product attributes that have an ethical basis, rather than strictly utilitarian (Gaisford et al, 2001). Although consumers are concerned about farm animal welfare, this concern is not

only a priority in food choice. When consumers express concern, it is evident that it is multidimensional: consumers use animal welfare as an indicator of other, usually more important, product attributes such as food safety, quality and healthiness. (Harper and Henson, 2001) Consequently, consumers associate good animal welfare standards with good food standards and 'natural' production methods with safer food quality

Eco-labeling regimes address consumption externalities associated with environmental effects occurring in all of the stages of a product's life-cycle. This is meant to address the externalities caused when the production, consumption, or disposal of goods creates damage to the environment that is normally not included in the cost of a product. (OECD, 1997) Eco-labeling regimes addressing production externalities frequently take the form of restrictions or requirements on production methods, or that certain technologies be adopted, or excluded, at the production stage of a product life-cycle. (OECD, 1997) Examples of production externalities include transboundary pollution, pollution which affects air, water or land, processes affecting natural habitats or resources, effects on the conservation and management of transboundary living resources, depletion of living resources, depletion of the ozone layer, harm to biodiversity, effects on threatened or endangered species. (OECD, 1997) The EU and Canada have seemed to converge on this issue, as both partners have adopted voluntary eco-labeling regimes.

The appropriate level of government-mandated labeling regimes, whether establishing mandatory labeling laws, providing services to enhance voluntary labeling, or not intervening at all, depends on the type of information demanded by consumers and the distribution of costs and benefits for providing this information. (Jessup and Greene

2001) In general, mandatory schemes are best suited to alleviate problems of asymmetrical information. (Jessup and Greene, 2001) The costs and benefits of this type of labeling regime must be weighed with the often-conflicting demands of producers and consumers, public opinion and current events. Voluntary schemes could change decisions regarding a producer's decision to disclose information about production methods, by either reducing the costs or increasing the benefits of labeling. (Jessup and Greene 2001) If properly designed and implemented, voluntary labeling regimes could increase the reliability and credibility of a labeling claim because it reduces uncertainty for producers, and increases the likelihood that consumers will purchase products that best match their preferences. (Jessup and Greene, 2001) However, voluntary regimes can only work if producers are willing to provide information to consumers. A voluntary label cannot change a producer's fundamental reluctance to disclose information about undesirable production methods. If this is the case, mandatory regulations are usually employed to encourage the disclosure of what consumers perceive to be negative production methods. (Jessup and Greene, 2001)

Many scholars have argued that if political pressure from consumers becomes strong enough, governments will usually establish mandatory regulations in order to force producers to provide the information they demand. They conclude that the outcome of labeling regimes in different regions is caused by consumer demand. However, Canadian consumers have indicated that they are in favour of mandatory regulations regarding GMOs and animal welfare, yet the Canadian government has not responded to popular opinion. Therefore, I would argue that this explanation for diverging regulatory outcomes is simplistic. Consumer demand is one of the main contributing factors to regulators'

decisions, as I will discuss below, but the process is more complex than simply a direct relationship between consumers and policy outcomes.

Instead, I will use Bernhauer and Meins' (2003) version of the theory of "collective action capacity" of civic interests to demonstrate that those who were in favour of stronger regulation shaped the regulatory outcomes in the EU. It is through the use of civic action that NGOs are able to arouse consumers' perceptions of risk associated with consuming GM foods, and foods from lower animal welfare standards. This then leads to consumer pressures on regulatory officials for mandatory regulations over these issues. However, these civic actions did not only occur in Europe, as each of these issues have been discussed as "new social movements" in almost every industrialized country. I will demonstrate that civic action and consumer demand for regulation over these issues has been evident in both Canada and Europe.

Chapter Five: The Causes Behind Diverging Regulatory Approaches

Because the motivations for choosing a mandatory labeling scheme over a voluntary scheme are related to domestic consumer and civic demands, using Risk Assessment Framework, the different demands for labeling regimes can be explained by Canada's and the EU's diverging regulatory *approaches*, which is caused by varying conceptions of risk. As discussed above, Canadian and EU regulatory officials have different attitudes towards risk assessment in their political systems, and different acknowledgement of consumer concerns and the right to be informed. These conceptions often reflect a government's position on labeling. Canada perceives protection as damaging consumers via cost increases, whereas the EU sees these types of protection as a legitimate response to consumer concerns and fears.

Recent events in Europe, such as the massive BSE contamination of British beef and endemic salmonella and episodic e-coli poisonings in other European states have led many consumers and environmental groups to distrust both government and scientists. This fear varies by country and by product, but it is likely large and unmanageable as many consumers are sending messages of dissatisfaction for food safety regulators. These fears have also been attributed to European consumers correlation with higher quality of production processes and higher quality and safer foods and some economists have argued that this correlation has led to consumer demands for GMO and animal welfare mandatory labeling regimes in the European Union. (Bureau, et al 2002; Caswell 2000; Streiffer, 2003; Carter, 2003; Hobbs & Kerr, 2006; Jinji, 2003) However, I would argue

that this conclusion is underdeveloped because demand for stronger GM and animal welfare regulations from consumers began before these food crises occurred.¹⁰

Regulatory theory can help explain the causal factors behind regulatory perspectives that lead to diverging regulatory approaches. Specifically, this theory will help explain why the EU has a more social-based approach to RAF and why Canada has a more scientific approach to RAF. As explained above, these diverging approaches are often linked to consumer perceptions, in each state, of the relationship between consuming a product and the perceived risks associated with it - even if there is no direct scientific proof that consuming the product is harmful. According to institutionalist theory, the regulatory outcomes in Canada and the EU are dependent on the institutional environment in which regulation takes place. Several scholars, such as Bernhauer and Meins (2003), have used institutionalist theory and "collective action capacity" to explain the different regulatory outcomes for GMO policies in the United States and the EU. I will demonstrate that this theory can also explain the regulatory outcomes for other nprPPM regulations, such as animal welfare and ecolabeling, in Canada and the EU, by arguing that the regulatory system in the EU has lead to a more social-based RAF, while the Canadian regulatory system has lead to a more science-based RAF. The regulatory outcome in the EU can be traced to the ability of NGOs to capitalize on rising consumer concerns and fears over food safety, which increases their lobbying power and influence over EU regulators. This is known as "collective action capacity," which can result in stricter policies. As will be discussed below, interest groups in the EU are able to directly influence regulatory policy because of the multi-level governing structure of the EU.

-

 $^{^{10}}$ Anti-GMO actions date back to 1997, while the BSE crisis only started in 2000 in non-UK Europe (Tiberghien, 2006)

However, because of Canada's centralized governing structure economic concerns, ergo producer concerns, often take precedence over consumer concerns, depending on the issue at stake.

The European Union's Regulatory System

As mentioned above, public choice theory assumes that governments have competence over budgetary policies, which in Canada is shared between the federal and provincial levels of government. However, in the EU this tax and spending abilities is not yet available at the European level level. This limits the applicability of the normative approach in the EU. In economic regulation theory, industry is a powerful force that shapes regulatory outcomes, which is the case in both Canada and the EU. However, this model assumes that politicians have direct control over the final outcome of regulatory frameworks and therefore have the ability to shape and align regulations with industry preferences. (Stigler, 1971) But of the five EU branches of government, the European Parliament is the only branch of government directly elected to office and yet is the least influential. (Wallace and Young, 2000) Instead, regulation on the European level originates from the Commission. Therefore, unlike Canadian Members of Parliament (MPs), EU regulators are generally career civil servants who are less likely to be required to balance regulatory decisions between public, ergo voters, and private, ergo producer, preferences to increase their political power. (Wallace and Young, 2000)

Institutionalist theory does not argue whether it is either producers or consumers affecting regulatory policy outcomes, but rather it is the institutional structure of governance itself, and how policy actors (producers, consumers, politicians, bureaucrats etc) interact in this structure lead to policy outcomes. What many scholars have argued is

that 'civic'¹¹ interests seem to have a significant impact on EU policy outcomes because "the interaction between institutions, actors and ideas in the EU regulatory process facilitates, in a variety of ways, consideration of civic interests." (Wallace and Young, 2000, p. 2) Considering civic interests often places one set of producers against others, or between producers and groups in the general public, Wallace and Young (2000) argue that this policy dynamic emerges from the "open structure" of European institutions and the EU legal system, where there are several access points for civic interests to be considered. Within this process several policy actors are able to articulate these preferences. This does not mean that civic interests will always prevail, as will be discussed below.

The EU's acquis communitaire has had a large influence regulatory decision-making. The acquis is the EU's "inheritance of principles, rules, policies, norms and commitments." (Wallace and Young, 2000, p. 13) The acquis shapes the responsibilities of the different institutions and structures power relationships between them. The acquis also determines which institutions are responsible for developing regulations. Historically, this has lead to an emphasis on product regulations. (Bernhauer and Meins, 2003) This is attributed to the institutions of the EU, which play vital roles in regulatory decision-making, such as the Commission and the Parliament, and are inclined to focus on these types of regulations as a means to expand their policy influence and competence and to bolster their political legitimacy. (Wallace and Young, 2000) This is because the EU has a limited capacity in traditional welfare state redistributive regulatory measures,

_

Wallace and Young use the term 'civic' interests to describe the distinct interests that most members in a polity would prefer, however these preferences often differ and as a result can be diffuse and unorganized. I will argue that these civic interests are often represented by non-governmental organizations (NGOs) at the European level.

and therefore uses PPM regulations as a means of providing social benefits on the European level. EU regulations that govern production process methods (PPMs) are not so strongly supported by the *acquis*, but nevertheless have recently been drawn into its scope. (Wallace and Young, 2000)

The Single European Act (SEA) acknowledges civic interests and has impacted EU regulations on nprPPMs. Article 100a(3) of the SEA states that the "Commission, in its proposals...concerning, health, safety, environmental protection and consumer protection, will take as a base of high level protection." The SEA established a treaty basis for EU environmental policy for the first time and that EU regulations should be based on 'preventative actions' whenever possible, and that environmental damage should be stopped during the production process. (Wallace and Young, 2000) The Maastricht Treaty (TEU) further focused on environmental protection, using the precautionary principle as a means of which regulatory policies should be based upon. The Treaty also included a specific Title devoted to consumer protection in Article 129a, which allows Member States to "protect the health, safety and economic interests of consumers and to provide adequate information to consumers." (Micklitz and Weatherill, 2005, p. 298) Therefore Member States were left with a large role of determining which consumer interests to defend on the European level.

On the European level, Member States are sometimes reluctant to oppose the interests of other Member States, even when they are allowed to do so when policies are voted on in the Council, because they take into consideration that some day they too may be in the minority in the voting process when serious national interests are at stake and as a result, regulations tend to be developed by consensus between Member States. (Wallace

-

¹² It also emphasized that these types of regulations should be a component in other EU policies.

and Young, 2000) National levels of protection for civic interests differ among Members, which some will promote vehemently on the European level. The institutional framework of the EU gives Member States the means to influence regulations favourable to the civic interests within their own national level upon other Members.

While the preferences of Member States have considerable influence on policy considerations, it is on the supranational level, rather than the intergovernmental level, where the various policy options at regulators' disposal are debated. On this level, the supranational institutions – the Commission, the Parliament and the Court of Justice (ECJ) – all play a role in establishing the final EU-wide policy. (Wallace and Young, 2000) The Commission initiates regulatory proposals but does not always make decisions based on civic interests. However, the Commission does have an interest in advancing both the European economic integration process and consumer and environmental regulations in order to increase its legitimacy as a governing institution among European citizens. (Wallace and Young, 2000) Process-based regulations present the Commission with opportunities to be a different kind of regulator than national governments, and to expand its influence and raise its popularity through the preferences of consumers and civic interest groups. (Tiberghien, 2006) Several characteristics of the Commission make it more open to civic interest organizations than most other national governments:

When it ventures into new policy areas, the associated networks are not firmly established; it has the advantage of being the agenda-setter in drafting the negotiating texts; in order to enhance the acceptability and legitimacy of its policy proposals it engages in wide-ranging and extensive consultations...; and lastly, it has been acutely aware of the need to recover public support for the integration process. (Wallace and Young, 2000, p. 18)

The European Parliament, in gaining more extensive influence for involvement in the legislative process, closely reviews policy proposals. Several scholars argue that it has become more immersed in the details of regulation than most national parliaments, because it seeks democratic legitimacy among European citizens. This has been significant for civic-interest organizations at certain times in the regulation process on the European level, because the Parliament tends to be particularly receptive to civic interests for the same legitimacy-based motivations as the Commission, and has used both its formal powers and informal influence to advance the concerns of consumers and environmentalists. (Wallace and Young, 2000)

The ECJ has also promoted civic interests, in particular through its practice of overruling national regulations, which have protected certain producers' interests at the expense of consumers, both individual and corporate. The Cassis de Dijon and Dassonville cases have played a particularly important role in distinguishing between regulations for the sake of unnecessarily restricting the free movement of goods, services and people, and those that were established to correct market failures, such as the lack of information available to consumers. (Wallace and Young, 2000) Even in cases where the scientific validity of the regulation has been called into question, the ECJ has been willing to consider both consumer and environmental justifications as legitimate reasons for restricting the free movement of goods. (Wallace and Young, 2000)

However, it is in the Council of Ministers whereby civic interests can become politicized, and therefore the political entrepreneurship of NGOs can become heightened in such cases. The Council of Ministers, which represents the voice of Member States, has the final decision power upon all matters in EU policymaking. Article 145 of the Treaty of Rome gave the Council the final power of decision, and while there have been numerous revisions to the powers of the institutions over the years in various treaties, but these changes have had little effect on the political position of the Council. (Sherrington,

2000) Although the Council cannot initiate draft proposals, it can influence the initiation of policies by adopting opinions, resolutions and agreements and recommendations, which can carry political, but not legal, weight. When vital national interests are at stake, Member States are able to circumvent Commission ambitions through the framework of the Council. (Sherrington, 2000) Thus, civic interest groups, when they have the ability to pressure domestic governments, particularly if issues become electoral factors, can impact the opinions and therefore the position of the Council.

Civic interest organizations, in particular non-governmental organizations, have been quite active on the European level, but are widely dispersed and smaller in numbers than on national levels. Therefore, NGOs at the European level have fewer resources to lobby EU institutions for civic interests. Because of this, NGOs on the European level are more coordinated in their activities and strategies, which is most evident in the coordination of environmental and consumer NGOs. These groups have the ability to shape the EU agenda more than their organizational capacity would imply due to the institutional structure of the EU as outlined above. (Kettnaker, 2001) The Commission's willingness to address new issues and approaches has allowed these groups to play an influential role. "The way the agenda is shaped often puts established interests on the defensive and may structure issues in such a way as to disadvantage them." (Wallace and Young, 2000, p. 20) However, the economic regulatory view of the conflict between producers' and civic interest groups' influence on the EU regulations is misleading, because the regulatory process does not usually favour one over the other. Some producers will gain from regulation and others won't. Some civic organizations will be aligned with producers when their objectives are compatible and they will cooperate.

Overall, there is a balance between both producer and civic interests and how they influence EU regulations.

However, if there are more access points in the EU's institutional structure for NGOs to influence regulatory outcomes, then one might ask if there are mandatory labeling regimes for GMOs and animal welfare policies, why is the EU's ecolabeling regime voluntary? The theory of 'collective action capacity,' can help explain why some labeling policies for nprPPMs are more restrictive within the EU than others. Institutionalist theory concentrates on the collective action capacity of NGOs,13 consumer, and producer interests to explain why policy outcomes in the EU's multi-level system of regulatory governance have led to stronger regulations over certain issues. 'Collective action capacity' is defined as the concentrated interests that dominate over diffuse interests, and therefore, regulatory outcomes reflect the preferences of concentrated interests. (Olson, 1971) According to economic theory of regulation, NGOs and consumers that represent civic interests are considered to face debilitating collective action problems and it is harder for civic interests to prevail over producer interests. (Bernhauer and Meins, 2003) This is because it is more difficult to mobilize support and the financial resources necessary to effectively exert market and political pressure. (Stigler, 1971)

According to Bernhauer and Meins (2003), public outrage, or "public risk perceptions" and trust, or lack thereof, in regulatory authorities have helped environmental and consumer NGOs in overcoming these hurdles, which has increased their collective action capacity. The disintegration of a coalition of producer interests can

¹³ I will use Wallace and Young's (2000, p. 2) definition of these types of organizations as those that represent 'civic' interests, or those that represent "the interests other than those of producers that are relevant to regulation

be caused by public support for stronger regulations and NGOs pressuring some producers to support stricter regulations¹⁴, because consumer support will improve their competitive position, while other producers are left to defend less restrictive regulations. This process reduces the collective action capacity of producer interests, compared with civic interests. (Bernhauer and Meins, 2003) Therefore, the more restrictive policies in the EU for GMO and animal welfare are the result of concentrated, rather than diffuse interests, and are often attributed to the growing public outrage over food-related safety, which has led to a risk-averse environment more favourable to a social-based RAF.

Canada's Regulatory System

However, even though civic and consumer interests are parallel to those in the EU, Canada's regulatory approach to RAF seems to diverge with the EU's. This is because the "collective action capacity" theory cannot be applied to the Canadian regulatory institution. Instead, the centralized system of regulatory governance in Canada has led to a science-based approach of RAF. As a result of this regulatory process, social-based considerations are of secondary importance to Canadian regulators. In "Risk, Science, and Politics," George Hoberg and Kathryn Harrison (1990) provide an in depth examination of the use of RAF in Canadian regulatory politics using case studies of toxic substances regulation to analyze the Canadian approach to the interpretation of science in decision-making. They argue that the Canadian regulatory approach is more "paternalistic" than the European approach, entrusting the task of risk regulation to elected politicians and government experts in the bureaucracy, with far less input from the public or from NGOs. The regulatory process tends to be closed, informal, and

¹⁴ In this case mandatory labeling regimes over voluntary labeling regimes

consensual. However, this does not necessarily determine regulatory outcomes. At times the Canadian government creates very weak and liberal policies that favour producers, but at other times it can be aggressive and restrictive towards these same interests. (Hoberg and Harrison, 1990)

Political control over regulation occurs through ministerial supervision of departments, Cabinet-wide reviews of major regulatory proposals, and legislative oversight during Question Period, or in Parliamentary committees. Therefore, the Canadian executive branch has a greater degree of control than its European counterparts, which it can use to either implement stronger or more lenient policies at its own discretion. Regulatory decisions rely heavily on government scientists' professional judgment in weighing the available evidence and there is the flexibility to adapt quickly to changes in science. (Doern and Reed, 2000) One of the rudimentary divergences in the Canadian and European approach is in civic interest representation in the regulatory process. The Canadian system is closed and often unresponsive to these interests. There is simply much less NGO or partisan conflict over regulation. Civic participation has historically occurred through informal consultations between regulatory officials and those directly affected. (Hoberg and Harrison, 1990) In the EU there are multiple points of access for NGOs to express public opposition to policies. But in Canada, the executive departments control regulatory decisions. When the Prime Minister's Office (PMO), or the Cabinet, makes decisions regarding the safety of a production method, this is typically the end of the process and the decision is final. Opposition parties and Parliamentary committees simply do not have enough resources or expertise to perform and oversee scientific and social-based reviews of regulatory decisions aggressively.

(Hoberg and Harrison, 1990) Furthermore, because there is limited public dissemination of information, the general public has little basis on which to evaluate the regulatory decisions of policy makers. (Hoberg and Harrison, 1990) These factors of the regulatory system have fundamentally limited the 'collective action capacity' of civic interests in Canada.

Therefore, risk analysis of the science behind production and process methods has remained insulated from political conflict between producer and civic interests and has remained outside of public scrutiny. When the public does become concerned, Canadian regulators are more likely to assure the public that exposure to low level or uncertain risks are 'safe.' "Even when experts disagree about the risks (of a product or production method) at low doses, Canadian officials will offer reassurances of absolute safety in order to avoid public alarm." (Hoberg and Harrison, 1990, p. 289) This greater insulation of decision-makers gives officials the formal capacity to act on their own policy preferences. This allows for several non-institutional variables to influence the outcomes of regulatory policies. Hoberg and Harrison (1994), and other Canadian regulatory politics theorists, stress the importance of economic interests as a variable in Canadian policy decision-making. If the economic costs of regulations outweigh the benefits then regulators will often lean towards looser policies.

But it is not just the bureaucratic system in Canada that favours business interests over consumer interests, because Canada has an unusual political party system. There are two core parties that are elected as the government, the Liberals and Conservatives, both of which are centrist parties that subscribe to fiscally conservative policies. This is because both parties have strong support from, and therefore obligations towards business

Party members, who support mandatory labeling, successive governments have opted for more business-friendly voluntary labels. In other systems, however, if there is left/right balance, then the regulatory outcome could lead to more restrictive policies.

However, it should be noted that in the Canadian system, if there is enough public support for stronger regulations, and the issue becomes a political one that could change the balance of an electoral outcome, then the political equilibrium will change. The parliamentary tradition of 'good governance' places the responsibility on Members of Parliament and the Cabinet to defend the interests of the public, and if pressure is high enough then political parties are quick to change their policy position, even if it costs them support from business interest groups. The politicization of issues can affect the political equilibrium especially during periods of minority governments, where the governing party must negotiate with the left-leaning parties. In order to avoid losing their position, either the Liberals or Conservatives have often established more restrictive regulations and left-leaning policies. Therefore when issues become politicized, NGOs will play a stronger role in regulatory outcomes as both voters and politicians become aware of their policy demands.

As stated above, it was through the use of civic action that NGOs were able to arouse consumer concerns over the perceived risk factors associated with consuming GM and non-animal welfare foods. This leads to pressure from both consumers and NGOs on regulatory officials for mandatory regulations over these issues. These civic actions were not limited to the European regions and new global social movements have lobbied for regulations over each of the nprPPM issues discussed here in almost every industrialized

¹⁵ The Bloc Quebecois Party, The New Democratic Party, and The Green Party

country. Civic action and consumer concern over these issues has been evident in *both* the EU and Canada. I will demonstrate that even though the regulatory outcomes in the EU and Canada are not the same, the anti-GMO and pro-animal welfare movements and consumer preferences are similar. However, NGOs in Europe have the ability to successfully lobby EU regulatory officials for more restrictive policies if they are able to provoke consumer concerns over their risk perceptions of a production and process methods.

In the EU, this success is dependent on consumer support for these issues. This can explain why the regulatory outcomes for eco-labeling policies are similar in Canada and the EU. Because civic interest groups have been successful in shaping consumers' perceptions of the potential risks from consuming GM foods and foods produced with no animal welfare standards, this has enabled NGOs in the EU to have the collective action capacity to lobby for more restrictive policies. However, environmental civic interest groups have been less successful at convincing consumers of the potential risks associated with consuming products that are harmful to the environment, especially during the production process. Therefore, lobbying efforts for ecolabeling policies have been mostly elite driven, rather than consumer-driven, which has diminished the collective action capacity of these interest groups. This has resulted in a voluntary ecolabel in the EU, similar to Canada's voluntary ecolabeling program.

The Anti-GMO Movement in the EU and Canada

Several scholars have stressed the importance of civic interests in determining GMO policy outcomes in the EU (Tiberghien (2006); Kettnaker (2001); Bernhauer and Meins (2003)). In particular, Berhauer and Meins use GMO regulations as a case study to

demonstrate the collective action capacity of consumers, NGOs, and the divisive attitude towards biotechnology between producers, combined with the institutional structure of the EU, that lead to more restrictive policy outcomes. Specifically, they focus on the division between producers over the use of biotechnology, and discuss how some producers responded to consumer concerns and began producing and marketing GMO-free products, while others supported the use of biotechnology. The importance of this split is critical, causing the lobbying power, or action capacity, of producers to be diminished and therefore strengthening the position of the preferences expressed by consumers and NGOs. The same type of split between producers is evident over animal welfare standards, as some producers have responded to consumer concerns and NGO actions against lower standards and have begun to market animal welfare-friendly products, while others continue their practices that are considered by consumers to be harmful to the welfare of animals.

However, producers are also divided over consumer concerns about environmentally harmful products and some have taken the initiative to market environmentally friendly products to consumers, even before government labeling programs were established. Therefore, a split between producers in the European market does not necessarily lead to more restrictive labeling policies in the EU than it does in Canada. Instead, I will focus on how anti-GMO and pro-animal welfare NGO campaigns in the EU have been able to influence consumer concerns over the risk factors of consuming products that are not required to adhere to higher standards. This has led to consumer demand for more restrictive policies, which increased the collective action capacity of civic interests over producer interests and eventually led to more restrictive

labeling policies in the EU. Because of lower consumer concerns over the risk factors of consuming environmentally harmful products, NGO campaigns have been less successful in lobbying for more restrictive regulations, in particular a mandatory ecolabeling program.

Global NGO campaigns against GMOs began in the mid-1990s. GMOs became a negative symbol of globalization and economic liberalism. Initially, groups like Greenpeace saw GMOs as the wrong battle against aspects of globalization because it was too narrow of an issue and too complicated for the general public to understand, but "this changed with the success of Arnaud Apoteker's anti-GMO campaign", leader of French Greenpeace, who was able to arouse consumer concerns over the use of biotechnology. (Tiberghien, 2006, p. 25) After this success, the global anti-GMO coalition grew beyond Greenpeace, to include farmers' unions and anti-globalization groups. Protest intensity against GMOs peaked at different times in different countries in the EU. (Kettnaker, 2001) The first wave was in Central Europe. Austria was the first to have a public referendum on a 5-year moratorium on the import, use and cultivation of GMOs, where over 20% of the electorate voted, and was the second highest turnout in the history of national petitions, and the highest ever grassroots initiative. (Kettnaker, 2001) This move was followed shortly thereafter by Luxembourg, Italy and many Scandinavian countries. (Kettnaker, 2001) Protest activity also peaked in Germany in 1996, and was among the strongest in Europe. (Kettnaker, 2001)

In 1998, a second wave of protest began in France and Britain. By this point many UK supermarket chains had gone 'GM-free', but many scholars have attributed the change in public attitudes to a 1998 advertising campaign launched by Monsanto, a GM

seed producer, in which newspapers responded with critical articles on genetic engineering resulting in broader public awareness. (Kettnaker, 2001) France at first was a proponent of GM-products, becoming the sole European country to authorize Novartis GM corn, however, after a change in government in 1997, cultivation and processing of genetically modified plants was restricted and a moratorium on several plants was put into effect. (Tiberghien, 2006)

European-wide NGO campaigns peaked in 1997 around the same time the first imports of GM corn and soybeans arrived in Europe. (Kettnaker, 2001) Grassroots campaigns took place against biotechnology companies' experimental fields. 'Global Days of Action' against genetic engineering took place for two weeks in 1997, with Greenpeace and other environmental groups usually accounting for the largest share of campaigns. (Kettnaker, 2001) However, initiatives for public referenda or for the establishment of GM-free labels usually came from broad coalitions of social movement organizations, political parties, and churches, and a few professional associations entered the debate as well, including chefs and physicians. (Tiberghien, 2006)

These types of campaigns targeted food producers and food retailers and heavily involved consumer participation. Boycotts were employed against grocers who sold products containing GM ingredients, which indirectly affected grain mills, farmers of GMOs, and ultimately biotechnology corporations. This pressured retailers and producers to guarantee that they would not produce or sell GM ingredients and major retailers agreed so as to avoid bad publicity. (Kettnaker, 2001) Eurocommerce, which represents the retail sector in 20 European states, began to speak on behalf of consumer interests and extensively lobbied the agricultural industry for crop segregation. (Kettnaker, 2001)

Intense brand name protests were directed at the four largest producers of GM foods with headquarters in Europe: Unilever, Nestle, Kraft and Danone and each made selective concessions in countries with higher consumer pressure. (Kettnaker, 2001) Supermarkets and food chains became targets of picketing. Across Europe, food retailers, in order to avoid boycotts, joined in with consumers in demanding alternatives to GMOs. Eventually, NGOs were able to find non-GM crop suppliers and in the absence of legislation, established labeling regimes of their own to demonstrate that consumers cared about the issue and were willing to purchase GM-free foods. (Tiberghien, 2006)

By the late 1990s European-wide consumer support behind NGO campaigns had grown to immense proportions, indicated by a 1997 Eurobarometer poll where 74% of respondents replied that they wanted labeling requirements for GM food. (Kettnaker, 2001) Much of this growing consumer support was due to the perception of the potential risks that could result from the consumption of GMOs. (Tiberghien, 2006) Some of the risks that both the media and NGOs have stressed include:

...inadequate controls by regulatory authorities given the vast asymmetry in the information available (developing corporations have a much greater knowledge about new products than do governments and the involvement of most scientists is in the private sector). Other risks involve the potential transfer of allergens from one species to another without open disclosure, the unpredictability of GMOs over the long-term and the possibility of mutations, environmental hazards, and the detrimental impact on global biodiversity. In addition, massively adopting superior GM crops may lead to an unhealthy reliance on only a few crops, which could have catastrophic consequences. GM genes could also be transferred into native plants and affect the native environment in an irreversible way. Finally, GMOs have a huge economic impact and lead to new power relations between farmers and seed companies, between seed companies and actors in the food chain, and between consumers and food. (Tiberghien, 2006, p. 7)

Despite these wide range of risks that GMOs present, consumer support for anti-GMO campaigns can be directly linked to concerns over the safety of food. By portraying GMOs as 'frankenfoods' with unknown long-term risks, NGOs were successful in changing consumers' perceptions of GM foods as possibly harmful and therefore unsafe

to consume. Therefore the collective action capacity of NGOs was strengthened by consumer support and some producers eventually responded to these demands, which strengthened this capacity even further.

In the case of GMOs, however, the strength of the voice of NGOs was furthered by the politicization of the issue in the Council of Ministers. Civic interest groups were able to successfully pressure some Member State governments through by influencing consumer perceptions, and in some cases this elevated GMOs as an electoral issue, particularly in France. These pressures on Member States were brought into the Council, which eventually led to the de facto moratorium as discussed above. In the Council, opinions of Member States must be taken according to Qualified Majority Voting, which gave the Member States an opportunity to voice objections to the Commission's original position on GMOs, which was more lenient at the time. (Lieberman and Gray, 2006) However, voting in the Council failed to achieve a majority for or against GMO authorizations. Therefore the responsibility of reconciling this dispute was passed to the Commission. The Commission, in order to affirm its leadership but not its preference, complied with civic and consumer demands for more restrictive policies. Therefore the case of GMOs is a more unique situation in that the collective action capacity of NGOs was further heightened by the politicization of the issue in the Council of Ministers. This gave these groups an opportunity to capitalize its influence over the Commission, who itself was divided over the appropriate response to this politicization.

However, the anti-GMO movement has not been a strictly European experience.

NGO actions against GMOs have been very similar in other states, and the movement has been largely transnational and is not limited to north-western European states.

Transnational actors have invested much of their efforts in pressuring both government and producer targets at any level in any country, and Canada has not been an exception. Greenpeace Canada, the Sierra Club, and the Council of Canadians, along with other environmental and consumer groups, have formed a large coalition opposed to the use of GMOs in food. These groups have demanded the Canadian federal government, and provincial governments, to implement a mandatory labeling system similar to the EU's. However, it is interesting to note that the Consumers' Association of Canada (CAC), the leading national consumer group, has taken the same position on GMO labeling as the federal government and the food industry by advocating for a voluntary labeling program, even publishing a booklet titled A Growing Appetite for Information: Food Biotechnology in Canada, that reiterates the safety of consuming GM food. The anti-GMO coalition in Canada has criticized this booklet as being 'propagandic material' because it was written by the Food Biotechnology Communications Network, which is largely funded by major biotechnology companies like Monsanto, Aventis and Ag-West Biotech, and advises the federal government on policy issues associated with biotechnology. The pamphlet has created a split within the CAC, with the BC Chapter refusing to distribute it and many members openly criticizing the organization's association with this Network.

The anti-GMO coalition has used similar tactics to European NGOs, including protests at major grocery stores in Canada, such as Loblaws, Sobeys, and the Canadian Superstore as well as targeting crop producers, such as Greenpeace activists drawing a question mark on GM crop fields. These tactics have purposefully gained media attention, which has led to consumer awareness and concerns over the consumption of

GM foods. The anti-GMO movement even has a Canadian symbol and an unofficial spokesperson creating consumer awareness and sympathy for the movement. Percy Schmeiser, a small farmer from Saskatchewan, has battled the large GM seed company Monsanto in Canadian courts for patent infringement. Monsanto has accused Schmeiser of using their 'Roundup ready Canola' seeds in his own canola oil. Schmeiser has counter-claimed that Monsanto's seeds unknowingly blew into his canola, thus contaminating his crop of un-genetically modified canola. This case has been portrayed by the media as a typical David versus Goliath tale, with Monsanto repeatedly being referred to by journalists as 'Monsatan.' Schmeiser has easily won the sympathy of the Canadian public and he has raised awareness for the anti-GMO coalition, as hundreds of thousands of dollars have been raised to help his case.

Consumer response to these campaigns in Canada has not differed much from European consumers. Although surveys have shown varying results, all have indicated a large majority of Canadian consumers desire government requirements for mandatory labeling. An Environics survey indicated that 80% of Canadians desired a mandatory labeling scheme, while Greenpeace claims the number is closer to 95%. An academic survey carried out by Veeman, et al (2003) indicates that around 89% of Canadians want mandatory labeling. In response to consumer concerns, several producers have committed to supplying GM-free food, most notably McCain Foods Limited, the world's largest producer of French fries, has decided to not purchase GM potatoes, declaring "we are in the business of giving our customers what they want, not what we think they should have." (Pollack and Shaffer, 2001, p. 49) Some supermarkets, such as Loblaws, have even pressured both the federal and provincial governments to label GM food because

too many producers are making the claim that their products are 'GM-free' without going through any proper certification processes.

Canadian regulators have not completely ignored these pressures from consumers, NGOs and producers. Provincial legislators in both Quebec and Prince Edward Island have considered implementing mandatory labeling regimes. But these efforts have largely failed because product labeling is considered to be a federal issue. Federal politicians have also responded to consumer concerns, with the NDP, Bloc Quebecois, Green parties, and some members of the Liberal Party, supporting mandatory labeling, most notably in 2001, when Liberal MP, Charles Caccia, introduced a private members bill for mandatory labeling. But despite the support from then Health Minister Allan Rock, the bill was defeated in Parliament by a vote of 126 to 91.¹⁶

Therefore, despite the efforts of NGOs, concerns of consumers, and even a split between producers over the use of GMOs, the federal government continues to reiterate its position that a voluntary labeling regime is preferable. This is because, as argued above, the Canadian federal government, unlike the EU, has the ability to use a more scientific-based RAF, without being pressured by social considerations in policy-making. This means that the government is able to assess the risks associated with consuming GM foods solely based on scientific evidence, without being influenced by consumers and NGOs. As long as the benefits of allowing less restrictive regulations for GM foods outweigh the costs, ¹⁷ the Canadian government is likely to maintain this position.

http://www.cbc.ca/canada/story/2001/10/17/gmfood labels011017.html

¹⁷ For example, scientists could prove that there are unhealthy risks associated with consuming GM foods or the issue affects electoral outcomes

The Animal Welfare Movement in the EU and Canada

The pro-animal welfare movement in the EU, similar to the anti-GMO movement, also followed a bottom-up lobbying pattern. However, unlike the anti-GMO movement and the environmental movement, the issue was not politicized in the Council of Ministers and the political attention of European Commission was unresponsive until the late 1990s. (Hilson, 2002) Hilson and Kohler-Koch (1997) have attributed the lack of response to the style of lobbying the animal welfare movement used, which varied from the typical means of lobbying at the Community level and was considered by some EU officials to be "nerve wrecking." (Kohler-Koch, 1997) The animal welfare movement, which focuses on the well-being of animals, stems from the animal rights movement, which focuses on the moral status of animals. 18 The animal rights movement has used a wide variety of tactics to bring attention to their issues, ranging from 'unfriendly' letter writing, to acts of vandalism, to outright acts of violence. These types of political actions were not the kind of 'friendly' relations EU regulators entertained with other civic interest groups and therefore it was unsurprising that key regulators in the Commission preferred to deal with representatives from the environmental movement and from consumer protection groups. (Kohler-Koch, 1997)

Because of this lack of success on the European level, the animal welfare movement began to use alternative strategies that were less radical than the animal rights movement. (Hilson, 2002) Activists began to aim for stricter treatment of farm animals at both the Member State and EU level. Their activities took two forms:

¹⁸ The difference between these two movements should be emphasized in that the animal rights movement is radically different. Rather than focusing on the treatment of animals and their overall well-being, the movement believes that animals possess certain fundamental and inalienable rights, and therefore should be treated as moral equals. Many advocates of animal rights oppose all ways in which animals are confined and utilized by humans.

1)Individuals have taken direct action to prevent practices they consider cruel. Examples include protests against live animal exports, picketing at supermarkets, and pressuring farmers and producers to create animal welfare food schemes 2) Animal welfare groups began to lobby government in a traditional manner at both the Member State and EU levels. Within the EU, national animal welfare groups are represented by the Eurogroup for Animal Welfare, which is officially recognized by the Commission as a lobbying organization and meets regularly with EU officials and is also active in broader European institutions. National and pan-national lobbying groups are now well-organized and highly influential in the debate on animal welfare policy. (Blanford, et al, 2002, p. 85)

The beginning of the animal welfare movement's tactical restructuring began with the campaign against the exports of live animals. First, two major ferry companies, which shipped the animals, were successfully pressured into stopping this practice. However, animal exporters countered by chartering their own ships. Interest groups then organized mass protests at ferry departure points, which created intense media attention to their issue, which in turn led to an overwhelming public response in support of animal welfare groups. (Kohler-Koch, 1997)

Using the same grassroots methods as the anti-GMO movement, by gaining public support and pressuring the private sector, which then increased the collective action capacity of animal welfare interest groups, and then working together to lobby EU regulators eventually led to more restrictive animal welfare policies. In order to gain the support of consumers, animal welfare groups have been creative in using emotive propaganda, such as celebrity endorsements, to raise awareness of the treatment of farm animals in mass production facilities, or dressing like animals to raise awareness among children, or advertising campaigns, such as the comparison of the treatment of pigs to the Holocaust. But the movement has also used visual evidence, such as documentaries and photographic proof of the mistreatment of farm animals to demonstrate to consumers what happens during the production process in the worst cases. Successful video campaigns focused on the treatment of broiler chickens and veal, which have influenced

consumer perceptions about how safe the food they consume is if animals have been harmed or mistreated during the production process.

With the success of these types of campaigns, the private sector began to respond to the combined pressures from interest groups' campaigns against them and consumer concerns. The first animal welfare certification program began in the UK when the Royal Society for the Prevention of Cruelty to Animals (RSPCA) established Freedom Food, in which members are required to comply with farm animal welfare standards established by the RSPCA and are inspected to ensure they maintain compliance with these standards. Similar third-party certification programs were also established in Germany (Neuland), and in France (Label Rouge). Several other producer groups across the EU have established animal welfare certification schemes under which standards are set regarding animal health and welfare. The objective of these certificates is to assure the quality of the product and production process to the consumer. Some of these programs go significantly beyond the commercial standards already in place. "Farmers who participate in such schemes receive a higher rate of return, as some consumers are willing to pay a premium price for high welfare produce." (Wilkins, 2005, p. 634) Supermarkets have also been pressured to respond to consumer concerns, such as the decision by Marks & Spencer to only stock free-range eggs in its stores. The success of these programs have led interest groups, producers and consumers to pressure regulators for stricter regulations and a European-wide animal welfare labeling scheme to keep standards and label recognition consistent.

While animal rights issues tend to be more important in north western Europe, survey results have shown that concern for animal welfare is comparable across EU

Member States among consumers. (Blanford et al, 2002) These same surveys indicate that consumers are concerned with the welfare of animals in the context of food production, specifically for their own safety and health. (Blanford et al, 2002) Although some consumers support the ethical issues of animal rights, they are more likely to perceive products as being of higher quality and therefore less risky to consume if higher animal welfare standards have been applied. (Blanford, et al, 2002)

...animal welfare is used as an indicator of credence characteristics associated with the end product. Consumers seem to assess animal welfare in terms of their own well-being. They put themselves in the animals' place in judging the acceptability of production practices. References were made by consumers in surveys to the concepts of 'natural' or 'humane.' Consumers may deem certain practices unacceptable that scientists do not consider as posing a major threat to the health of animals or consumers. (Blanford, et al, 2002, p. 82)

I would argue that the major reason why animal welfare interest groups at the European-level were able to successfully lobby for a mandatory labeling policy, as opposed to a voluntary scheme, is because their strengthened collective action capacity through the support of consumers. This support was not caused by consumers moral concerns for the well-being of animals, but by the perception of risk to the health and well-being of consumers in connection with the mistreatment of animals during the production process. Therefore, EU regulators included these social-based concerns in their Risk Analysis Framework and interest groups, with the support of consumers, had the power to lobby for stricter regulations, even though scientific evidence does not necessarily support their claims.

The Canadian animal welfare movement is not as organized as their European counterpart, nor has the media paid as much attention to the propagandic nature of the animal rights movement. However, this does not diminish the fact that the movement has used similar tactics to raise awareness for the well-being of farm animals among consumers. Nor do the perspectives of Canadian consumers greatly differ from European

consumers. The Canadian animal welfare movement, led by NGOs such as PETA (People for the Ethical Treatment of Animals) and the SPCA, have taken considerable action, such as organizing protests and boycotts Safeway supermarkets after members of PETA caught screaming pigs on videotape, which were being mistreated in supplier facilities. Other actions have been targeted at major fast food corporations such as McDonald's and Burger King, who were successfully pressured into performing more auditing at beef and pork plants. One of the most notable campaigns organized by PETA was the five-year "Kentucky Fried Cruelty" boycott against KFC Canada. Recently, KFC Canada promised to improve welfare conditions for the chickens that it buys for its fast-food outlets, in exchange for an end to the campaign. The deal also obliges KFC Canada to begin buying from suppliers who use gas to kill chickens painlessly, considered the least cruel method of slaughter. Major meat producers, such as Maple Leafs Food Inc., have started phasing out sow stalls in their operations.

Therefore, consumer pressure to improve animal welfare standards is being generated by animal advocacy groups in Canada. Academic studies have also demonstrated that Canadian consumers are willing to pay a price premium for higher animal welfare standards, even more so than American consumers, such as Dickinson (2003). Primary and secondary research by Agricultural Canada indicates that there is considerable demand among consumers for free-range chickens and eggs. Similar to European countries, third party animal welfare certification schemes are being established in some provinces, such as the British Columbia SPCA's version of the UK's Freedom Food program. This program is Canada's first government approved SPCA

Certified labeling system. The Winnipeg Humane Society has also introduced its own certification program based on organic standards.

Canadian consumer demand for higher animal welfare standards are similar to European demands because the root causes are the same as well:

The rapid urbanization of human populations and growing affluence have created consumers (in industrialized countries) further removed from animal food production. These consumers desire food products which are not only safe but also have quality characteristics, and their purchasing decisions are not made on price alone. (Thiermann, 2005, p. 747)

Consumers in industrialized countries are perceiving links between welfare standards and higher quality of food, which is not completely baseless: scientific research indicates that animals which are treated better and allowed to behave naturally are overall healthier, and higher welfare standards also help to prevent and control epizootic diseases. (Thiermann, 2005) However, unlike the EU, Canadian regulators have the ability to determine whether or not people are significantly harmed by the way animals are raised for human consumption. If so, then the government is compelled to provide mandatory regulations to protect the public from harm. Since the Canadian regulatory system has the freedom to rely completely on scientific evidence to assess the risks of consuming non-animal welfare friendly products, rather than considering interest group pressure or consumer concerns, regulators usually conclude that it is not necessary to have mandatory requirements for animal welfare standards. In this case, the Canadian government has been able to conclude that the economic costs outweigh the social benefits of regulating animal welfare.

The Environmental Movement in the EU and Canada

If interest groups have the ability to influence EU policy-makers to enact more restrictive regulations, even though the scientific evidence may be unclear, then given the

powerful influence on both the private sector and regulators environmental NGOs already have, they should have the ability to pressure for a mandatory ecolabeling policy. In fact, the influence of transnational environmental group networks and their targeting of the private sector to abide by environmentally sustainable production methods led to the emergence of a European-level ecolabeling scheme (Gulbrandsen, 2006) However, even though environmental networks have lobbied for a mandatory scheme, there is currently only a voluntary scheme in the EU, similar to the Canadian scheme. This is because, unlike the anti-GMO movement and the pro-animal welfare movements in the EU, lobbying efforts for mandatory ecolabeling has not been a grassroots process.

This does not mean that there is a lack of protest for environmentally sustainable regulations at the European level. Environmentalists are very active in terms of both protest and lobbying, and groups such as Greenpeace, Friends of the Earth (FoE), and members of green parties have all taken such actions at the European level to bring awareness to consumers. They have been using such tactics long before the anti-GMO and animal rights movements to influence policy makers, consumers and producers in EU Member States. However, Rucht (2001) argues that this movement has been more 'power-oriented' rather than 'action-oriented,' than the other two movements examined above. The environmental movement has been institutionalized in the European Union, especially within DG Environment (Rootes, 2003):

Issues have been taken up by the Parliament, and have been pressed, with varying degrees of success, upon the other Directorates. In Member States, environmental issues have moved up the policy agenda, sometimes as a result of pressure from the Commission, and usually with the aim of raising and harmonizing standards of environmental protection. Environmental protection agencies have been established and have been accorded increasing powers. There has also been progressive popularity of green parties, which are now represented in national, regional, and European levels of government. (Rootes, 2003, p. 1)

Many authors have attributed this institutionalization of the environmental movement to the rising power of environmental NGOs and movement organizations. Organizations, such as Greenpeace and FoE, have set up branches in almost all Member States and have dramatic numbers of memberships. Many of these organizations are substantial in size with large budgets and many employees, which have enjoyed regular access to EU policy-makers. (Rootes, 2003)

However, the environmental movement "has become so institutionalized that it now fails to capture the imagination or command support of any large part of the public." (Rootes, 2003, p. 2) Both Rootes (2003) and Rucht (2001) argue that the institutionalization of this movement has led to a 'demobilization' of grassroots campaigns, which have been essential in arousing consumer concerns in the cases of the anti-GMO and pro-animal welfare movements. "Because the influence of the environmental movement depends ultimately on its ability to mobilize consumers to pressure business corporations and government regulators, any loss of this mobilizing capacity diminishes its influence [on consumers]" (Rootes, 2003, p. 2) In summation, environmental civic interest groups have been transformed into an elite movement, and thus consumer support within this movement is weaker and therefore less able to pressure EU regulators for a mandatory ecolabeling scheme.

Compounded with the problem of being perceived as an 'elite' movement, as opposed to being a grassroots movement, many consumers do not understand the complex scientific relationship between the products they buy and the environmental consequences of the production process and the end use of the product. (Hale, 1996) Even though European consumers are concerned about the relationship between their

individual health and well-being and the consequences of environmental change, it is much more difficult for consumers to understand the risks of consuming a product and the potential harm that it could cause the environment, and therefore themselves. (Erskine, 1997) The perception of risk is much easier for consumers to conclude when it comes to the consumption of GM foods or non-animal welfare friendly products.

Although the environmental movement has tried to change consumer behaviour and attitudes and convince them of the risks inherent in consuming environmentally harmful products, studies have indicated that despite European citizens ranking environmental factors as more important than economic or social issues for their quality of life (Jordan, 2005), European consumers, as a whole, are seldom willing to pay a higher premium price for certified environmentally-friendly products. (Gulbrandsen, 2006) Gulbrandsen's study of fishery and timber ecolabeling in the EU indicates that the ecolabeling scheme has not come from consumer demand, in the same manner as the GMO label and animal welfare labels:

These types of certifications were invented by environmental organizations. Their spread has been driven by advocacy groups targeting companies and supply chains and less by consumers and companies themselves. Consumer demand for these labels has actually been quite low as has readiness to pay a premium. It is not actual buying power that matters but the fact that retailers were aware of the power of environmental organizations to name and shame companies and industries. Essentially participation in ecolabeling schemes is a response to environmental group targeting, rather than consumer demand. (Gulbrandsen, 2006, p. 486)

Therefore, the fact that the EU has established a voluntary ecolabeling scheme can be explained by the diminished collective action capacity of the environmental movement caused by a lack of consumer concern and support for this type of labeling scheme.

Similar to EU consumers, Canadian consumers have demonstrated concern over the effects of environmental change to their personal health and well-being. According to an Environics survey, environmental change is now second to health care, as the most important issue facing the country for Canadian voters. (Spencer, 2008) Over the last twenty years, there has also been a marked increase in interest group activity and demands for more sustainable policies, similar to the EU. Canadian environmental groups have also played a key role in pushing the federal government to legislate regulations for environmental protection. Similar to the EU, interest groups have become more involved in multi-stakeholder consultations in the Canadian environmental policy framework. (VanNijnatten, 1999) As a result, Environment Canada began to experiment with new forms of participatory decision-making involving these interest groups: one of the major results of these policy reforms was the EcoLogo labeling program. Yet similar to their European counterparts, but for different reasons, Canadian regulators have established a voluntary ecolabeling regime, despite the concerns of Canadian consumers and the influence of environmental interest groups.

Once again, as has been demonstrated in the other case studies discussed above, the Canadian regulatory process is rooted in elitist origins, which provides an institutional framework with a high degree of concentration of policymaking capacity in the executive. The Canadian federation is also more fragmented vertically, with jurisdictional environmental policymaking divisions between provinces more intense because of differences in language, culture, and geography. (VanNijnatten, 1999) This framework limits the access of environmental interest groups and their capacity to influence the government, even when consumers support the movement. Environmental policy has tended to emerge from a relatively closed network of relations between high-level department officials, Cabinet ministers, and particular societal interests. (VanNijatten, 1999)

Similar to the cases of GM foods and animal welfare, Canadian regulators have the power to assess scientific risk, without having to consider consumer and interest group preferences. If an environmental policy is deemed to be more beneficial¹⁹ than its economic or social costs, then the government has usually been willing to employ restrictive regulations in the private sector. However, if the private sector is able to make a convincing case that these regulations will cause Canadian industry to be less competitive, then environmental protection responsibilities are left to the private sector, rather than regulated in the public sector. Therefore, most environmental policies in Canada have been "transferred from the public to private institutions under the rubric of what has become known as 'voluntary prevention initiatives." (VanNijatten, 1999, p. 278) Even though the federal government establishes the standards for the EcoLogo, it is the private sector that enforces these rules, should producers be willing to voluntarily participate.

¹⁹ It should be noted that the benefits and costs of policies are usually considered in the short term than in the long term

Chapter Six: Reconciling Regulatory Trade Barriers

As outlined in the theoretical framework, neoliberal institutionalism, as a policy coordination theory, will help determine whether or not Canada and the EU can reconcile the trade barriers caused by nprPPM labeling schemes. Neoliberal institutionalism emphasizes the importance of the power and size of a state when it comes to policy coordination. When great powers agree, regulatory harmonization between most states is likely to take place. When great powers do not agree, policy coordination still takes place but in the form of regulatory competition. Great powers will compete in two different ways: for policy influence over smaller states and for policy influence in international institutions and agreements. (Drezner, 2005) This regulatory competition will result in strong policy coordination between those states that cooperate with one of the great powers, however, policies will still diverge between states, divided by the diverging policy approaches of great powers. (Drezner, 2005)

In a post-hegemonic international system, many scholars have begun to describe the rise of a new multi-polar system, with the United States, the European Union, and newer rising powers such as China, Brasil and India all vying for influence over smaller states through political and economic coordination. While these newer powers are gaining economic strength, empirically, the Unites States and the European Union are currently considered to be *great* economic powers by most scholars. "These are the only two entities that combine relatively large markets with low vulnerability." (Drezner, 2005, p. 843) Therefore, in applying this theory it is rational to conclude that there is

regulatory competition taking place over a science-based versus a social-based Risk Analysis Framework between the United States and the EU. This competition has pressured smaller states into using one type of RAF over the other by these two superpowers. The outcome has been a division over risk-based issues, such as GMOs and animal welfare, with some states establishing more restrictive regulations in response to consumer demands, similar to the EU, and some less restrictive because it is based upon available scientific evidence, similar to the United States.

The United States is Canada's closest and largest trading partner, and been a major influence on policy decisions by Canadian regulators. Thus, if regulatory competition between the USA and the EU is taking place, then it is logical for Canadian regulators to align its RAF approach with the United States, and therefore use a similar science-based approach. Scholars, such as Hoberg (1991), have emphasized that the US is an international source of domestic regulation in Canada. The United States often influences Canadian domestic policy through the export of costs and knowledge. The most frequent patterns of policy coordination is through emulation, where US leadership has led to Canadian borrowing of policy innovations, and through the imposition of externalities, such as US economic or environmental effects on Canada. (Hoberg, 1991) In this situation, the US is not imposing costs by explicit actions or transnational physical processes, but through dependencies caused by Canada's reliance on such a large economy: "depending on the situation, economies of scale, factor mobility, and price differentials can render Canada highly vulnerable to forces emanating from the south." (Hoberg, 1991)

The economic influence of the US goes beyond market dominance because of its great power status, to include a significant amount of American ownership of and investment in Canadian business. However, the most common pattern of influence is not where Canada is forced to coordinate because of US dominance but because it is easy to borrow US policies in areas where Canadian regulators think it is appropriate, especially when the particular industry is highly integrated. This process is driven by politicians who approve of the American experience, by producers, who emphasize that similar regulations are necessary for external trade with the United States, and by activists, who pressure regulators for policies that are at least on par with the United States, if not even more restrictive. (Hoberg, 1991) In particular, Canada tends to emulate the United States' GMO and animal welfare policies because the two agricultural systems are highly integrated and therefore require similar regulations to function effectively.

This pattern of emulation is especially apparent in the dominance of US scientific-based use of the Risk Analysis Framework, of which Canada is often a 'free rider.' (Hoberg, 1991) This scientific dependence is often a result of transnational policy communities, linking the two countries: information and common concerns are shared because of the strong bilateral organizational links among regulators; regulators, scientists, producers, and activists all share ideas; industry officials frequently interact, either because Canadian firms are subsidiaries of American parent companies or through participation in related trade organizations. (Hoberg, 1991) This creates common scientific knowledge between the two partners over the hazards of certain production processes, such as genetic modification or the welfare of farm animals, and their overall health and well-being. Studies have indicated that American consumers are less

concerned about the effects of GMOs and animal welfare standards. (Dickinson, 2003; Zerbe, 2007) Therefore, despite large differences between the Canadian and American regulatory institutions and processes, and despite any differences of demand between Canadian and American consumers, there has been a significant amount of convergence on GMO and animal welfare regulatory outcomes between Canada and the United States.

However, historically much of Canada's regulatory policies have been aimed at resisting these types of externalities from the American economy. (Hoberg, 1991) Because the Canadian regulatory framework has provided the executive a great amount of decision-making independence from outside influences, Canadian regulators have the ability to chose between similar regulations, or more restrictive or less restrictive regulations than the United States, depending on the possible costs and benefits of such policy outcomes. Despite substantial interaction between Canadian and American scientists and regulators, they have often reached divergent policy conclusions. (Hoberg, 1991) In certain situations, the same scientific evidence can be interpreted in dramatically different regulatory conclusions. Uncertainties in risk analysis can be sufficiently large, which leads scientists to disagree often, and these disagreements can affect regulatory outcomes. Given the wide range of acceptable scientific opinions on production and process methods and the safety of consuming products made from genetic modification, or animal welfare, or are harmful to the environment, it is unsurprising that different states often reach different regulatory outcomes. In the case studies above, Canada has very similar policy approaches to the United States' over the issues of GMOs, animal welfare, and ecolabeling. Hoberg (1990) argues that different outcomes are more so explained by institutional frameworks than by similar scientific conclusions. Therefore, the external influence of the United States is not the only cost/benefit factor in explaining why Canada has a more scientific-based approach to RAF, which differs from the EU. However, it is an essential factor in explaining why it will be difficult for Canada and the EU to reconcile their differences either bilaterally or multilaterally.

Bilateral Approaches to Policy Coordination: Mutual Recognition

As a policy approaches, mutual recognition agreements (MRAs) at the bilateral level, and harmonization agreements at the multilateral level, for PPMs have been suggested in the transatlantic relationship as methods of reconciling regulatory barriers, particularly in the drafted version of the Trade and Investment Enhancement Agreement (TIEA). Using policy coordination theory, the possibility of resolving trade barriers, caused by nprPPM labels through the use of these policies, will be explored.

Mutual recognition is a conflicts rule, which depends on mutual trust and recognizes the diversity of regulations between partners, but its success also depends on a common identity. (Maduro, 2007) Canada and the EU currently have an MRA for manufacturing practices for pharmaceuticals and mandatory conformity procedures in the following sectors: medical devices, telecommunications equipment, information technology equipment and radio transmitters, electrical safety, electromagnetic compatibility and recreational craft. Therefore, these two trade partners have a shared history of using mutual recognition to reduce regulatory barriers, and many scholars have even suggested this particular approach as a solution to the GMO debate between North American and the EU.

Mutual recognition is defined as a "contractual norm between governments whereby they agree to the transfer of regulatory authority from the host country, where a

transaction takes place (importer), to the home country, from which a product, person, or a service originate (exporter)." (Nicolaodis, 1997, p. 1) This means that if a product is sold lawfully in Canada, it can be sold freely in the EU's 27 Member States without having to comply with the EU's regulations. Recognition involves the compatibility, or at least the acceptance of another's regulatory system, while mutuality involves reciprocal reallocation of regulatory authority by trusting authorities in outside your own scope. (Nicolaodis, 1997) Process rules are generally mutually recognized because a general rule of these agreements is that a state cannot impose on the product its own production rules. (Maduro, 2007) Therefore, if two parties share similar policy goals, then the production methods are irrelevant. But a nprPPM labeling regimes negates this principle of mutual recognition since the policy goals are not associated with the end product but with the production method itself. Thus, the parties involved in such an agreement would have to share similar objectives in their production methods as well.

The problem of establishing a MRA for GM food labels and animal welfare labels is that the policy goals of regulators in Canada and the EU differ. The EU's goal is precaution of new technologies and consideration of consumer and interest group demands, despite the costs to producers, while Canada's goal is the acceptance and promotion of new technologies and consideration of producer costs, despite consumer and interest group demands. But the fact remains that some producers in each region share the same objectives, and there are labeling regimes in both Canada and the EU that reflect similar objectives. Currently, even though some producers in Canada use similar production methods that are mandatory in the EU, they must still go through two different certification processes to indicate the same objectives, of GM-free or animal

welfare-friendly products, to consumers in both regions. The same would be required of EU producers if they wish to certify their products in Canada. Product characteristics related to a specific nprPPM cannot be easily verified through product inspection or would require highly sophisticated testing procedures. Such products may need to be accompanied by a certificate indicating what process was used. In practice, this responsibility is usually placed on the exporting country and places an onerous burden on producers trying to export their products. (OECD, 1997) A MRA has the effect of cutting the costs and resources for certification, because it eliminates the requirement of complying with two different regimes with similar objectives.

Mutually recognizing labeling regulations for genetically modified foods would possibly involve the following situations: Canadian requirements for its voluntary label would have to be recognized by EU officials. Therefore, if a producer is exporting what is considered by Canadian authorities to be a GM-free product, then European authorities must accept these requirements and apply its own GM-free label. The same would hold for Canadian authorities accepting European requirements for its mandatory label of GM-free. Both parties must accept the differences in fulfilling the requirements. Further complicating the mutual recognition process is the differing schemes – mandatory versus voluntary. In the EU, all products must indicate if they have been genetically modified. If the traditional approach of mutual recognition is to be accepted by both parties, then the EU must mutually recognize Canadian standards and accept genetic modification as a legitimate and safe production process, and therefore do not have adhere to the same requirements that products in the EU have to. Similarly, Canada must mutually recognize EU standards and accept that EU products legitimately adhere to different regulations and

are labeled as being either 'GM-free' or 'contains food that has been genetically modified,' and therefore accept that these labels do not discriminate against unlabeled products from Canada. Convincing both parties to agree to these concessions may be extremely difficult, in particular, when the variable of external pressure from the United States is taken into consideration.

Mutual recognition of animal welfare labels is even more problematic than GM labels because in Canada there is no government mandated animal welfare certification scheme. All animal welfare labels in Canada are administered either by independent third parties, such as the Humane Society and the SPCA, or by producers. Therefore, mutually recognizing each other's labeling schemes would be impossible because one party does not have a labeling scheme. In addition, any mutual recognition agreement would require the EU to make larger concessions than Canada would have to. In a MRA, the EU would have to recognize Canadian animal welfare standards as equivalent, even though Canadian standards are much less restrictive and are only guidelines for producers rather than mandatory rules. In Canada's case, while it would not have to abide by EU animal welfare regulations, it would have to accept that the EU has higher standards. Canadian producers would not have their products labeled, but therefore, would have to accept the possibility of consumer discrimination because of this.

Given that there is regulatory heterogeneity between Canada and the EU, to what extent should mutual recognition be introduced? The answer lies in how governments, producers, and interest groups assess what constitutes legitimate or acceptable differences. (Nicolaodis and Schaffer, 2005) In negotiating MRAs, regulators face a fundamental choice regarding which standards to apply – those of the home state (where

the product is exported to) or of the host state (the state which imports the product). (Nicolaodis and Schaffer, 2005) An evaluation process can determine whether their regulatory systems are comparable and their standards are functionally equivalent - if so, they may recognize each other's standards as equivalent. (Nicolaodis and Schaffer, 2005) Home state standards would thus apply to both products consumed within it and products exported to the host state. (Nicolaodis and Schaffer, 2005) An alternative to this would be that states could agree to that each system will recognize its own standards and certification, monitoring, and enforcement will take place in the home state, but the home is also responsible for assessing conformity with the host state's standards. (Nicolaodis and Shaffer, 2005) Both of these processes require a 'reconstruction of national regulations.' (Nicolaodis and Schaffer, 2005) This reconstruction would lead national regulators to identify similar policies hidden behind different national rules and when this occurs, a framework of trust is established by the identification of coincidental objectives, which then leads to the adoption of mutual recognition. (Nicolaodis and Schaffer, 2005) Therefore, the process of negotiating a MRA itself sometimes facilitates policy coordination.

There is no doubt that the size and economic power of the EU indicates negotiation of a MRA with Canada, the smaller of the two partners, would be the partner to concede its regulatory approach towards animal welfare and GMOs. Adjustments to Canada's RAF approach would have to take place in order to successfully negotiate such an agreement. The problem is that some of the greatest tensions in implementing MRAs arise from differences in risk thresholds demanded by the public. "The negotiation of MRAs [associated with RAF] are bound to be a source of tension and even conflict

between states as differences of view arise on their desirable characteristics and boundaries, and the best ways in which they can accommodate disparate regulatory traditions." (Nicolaidis, 1997, p. 1) However, Canada presents a unique situation because consumer and interest group demand is similar to the EU. Because of the regulatory institutional framework of the Canadian government, it has the ability to respond to these demands, should it choose to do so, and even change its RAF approach. Thus, Canadian regulators have the power to employ either a social-based or science-based RAF at their own discretion. Therefore regulatory change caused by mutual recognition can be a key variable in reconciling trade barriers caused by nprPPM labeling. "Home regulations are bound to change as a function of participating actors, prevailing beliefs, and technical developments." (Nicolaidis and Shaffer, 2005, p. 294). Therefore regulatory compatibility is possible between the two partners.

But mutual recognition negotiations sometimes cannot reconcile differences, because of the structure of power relationships between external trade and regulatory agencies. (Nicolaodis and Schaffer, 2005) Therefore, the external influence of the United States affects the process of negotiations between Canada and the EU. For Canada, there is the ability to change policy should the government feel it is necessary. However, the United States indirectly exerts its influence over Canada's relationship with the EU, through its status as a superpower and as Canada and the EU's largest trading partner. The economic fate of Canada is invariably intertwined with that of the United States. Any international negotiations that Canada partakes in, either bilaterally or multilaterally, policy makers must take into consideration the effects that their decisions will have on this relationship. If Canada alters its RAF, this would have severe repercussions for its

trade relationship with the United States. Alternatively, the EU also must take into consideration this power relationship between Canada and the United States. These two superpowers are embroiled in an international regulatory competition with each other over the use of a science-based versus social-based RAF. Thus, EU negotiators must consider that any concessions made to Canada in a mutual recognition agreement sets a precedent, and similar concessions would be demanded by the United States. Because Canada is a much smaller trade partner than the United States, these concessions would have larger repercussions in the transatlantic trade relationship.

This regulatory competition has caused the EU and the United States to vie for support from as many allies as possible to bring them in line with their position and numerous states have positioned themselves on either side. (Drezner, 2005) Because Canada is aligned with the United States, the only possible way to bilaterally reconcile the trade barriers caused by nprPPM labeling regimes between them is if the United States and the EU reconcile their differing approaches. Many scholars have argued that because this conflict over RAF is far-reaching and has caused regulatory divisions between several states, it now requires supranational and transnational institutional solutions to develop mutual trust and commitment, between those who support a science-based RAF and those who support a social-based RAF, to overcome these differences. (Nicolaidis and Shaffer, 2005)

Trade liberalization is facilitated if the states involved operate within a common institutional framework for trade oriented regulatory cooperation and dispute resolution....since agreements over standardization and recognition are vulnerable to conflicts of interpretation and changes in domestic circumstances, they need to be designed to minimize risks of disruptive conflicts, and possibly involve third-party dispute settlement mechanisms. (Nicolaidis and Schaffer, 2005, p. 287)

Therefore, reconciliation of trade barriers caused by animal welfare and GM food labels is better suited for the multilateral level, where policy harmonization takes place in international institutions and agreements and there are dispute-resolution mechanisms to resolve conflicts between states, including superpowers.

However, a hypothetical mutual recognition agreement for ecolabeling standards would not be subject to the same hurdles the other labeling regimes present. Producers face the same problem in the area of ecolabeling as they do with GM labels and animal welfare labels: different certification processes in different regions for the same production and process methods can lead to significant extra costs and resources for producers. But, unlike the cases of GMOs and animal welfare, both regimes present similar policy objectives, albeit with different rules. Both regimes address multiple sectors with a variation of environmental attributes, they are both defined by the ISO as Type I environmental labels, which means that both involve third-party verification, and most importantly they both administer labels to products based on its entire life-cycle, not just the end product, and therefore the policy objectives include certain production and process methods. International environmental organizations have been encouraging and lobbying for enhanced cooperation among environmental labeling programs, with the desired outcome of mutual recognition leading to eventual harmonization of standards. "The experience gained and the structures developed in formulating bilateral arrangements could be invaluable in the subsequent development of a multilateral system." (Commission for Environmental Cooperation, 2004)

Various mutual recognition efforts have been initiated in this area, led by the Global Ecolabeling Network²⁰ (GEN). GEN fosters an information exchange among its members and long-term harmonization of ecolabeling programs. One of the major activity areas for GEN has been the preparation and adoption of a framework for potential mutual recognition and a corresponding implementation strategy for the framework. While no official mutual recognition agreement exists between ecolabeling schemes, the Canadian Environmental Choice Program and the American Green Seal program have implemented an 'enhanced cooperation' program, whereby a panel of experts has been established to determine acceptable levels of similarities and differences between each product to determine whether mutual recognition of an ecolabel can be awarded. (Commission for Environmental Cooperation, 2004) While Canada and the EU have yet to establish a similar agreement, the efforts of an international organization, combined with similar policy objectives of each ecolabeling regime, demonstrate that mutual recognition agreements are a possibility for nprPPM labeling regimes. However, mutual recognition may require prior international agreement on procedures for criteria labels. Therefore, the possibility of mutually recognizing ecolabeling standards may depend on a certain degree of harmonization on the multilateral level.

Multilateral Approaches to Policy Coordination: Harmonization

Multilateral regulatory harmonization appears to be the most straightforward solution to trade impediments caused by regulatory competition over approaches to Risk Analysis Framework. The ISO defines harmonization of regulations as "standards on the same subject approved by different standardizing bodies, that establish interchangeability

²⁰ GEN is a non-profit association of ecolabeling organizations from around the world

of products and processes." (ISO/IEC, 1996) Harmonization negotiations have the intention of eliminating the need for producers to comply with different sets of regulations and the associated costs, by having all states follow the same substantive regulations. (Syskes, 1999) Unlike mutual recognition, regulatory harmonization assures all importing nations that goods and services produced abroad meet the mutually agreed upon objectives. (Malkonen, 2005) Multilateral harmonization is facilitated by international bodies and agreements that act as arbiters, resolving whether regulations are legitimate or constitute unjustified non-tariff barriers to trade. (Caswell, 1995) Harmonization implies policy convergence, but it may be one-sided, meaning that in a multilateral agreement, one side must adopt another's policy. (Syskes, 1999) Harmonization is based on the notion that national standards and regulations should adopt, reference, or be based upon relevant international standards accepted by international organizations and agreements, such as the ISO, the WTO, the UN, and the OECD, but also upon the standards of great economic powers, such as the United States and the EU. (Courville and Crucifix, 2004)

Regulatory competition between the United States and the European Union has indirectly caused regulatory harmonization because of the competition for as many followers as possible.

Great powers can influence coordination through economic coercion. A state that prefers to retain its own standards will impose economic sanctions if the other state refuses to switch its standards. Market power and coercive power shift the contours of coordination in a way that favours large markets. When two states are great powers, neither actor possesses a distinct bargaining advantage. Great powers are less vulnerable to economic coercion. The dynamics of the regulatory competition are such that each actor has an incentive to maximize the size of the market that conforms to its preferred regulatory arrangements. Therefore the obvious strategy is to try and amass as many allies as possible to its preferred set of regulatory standards. (Drezner, 2005, p. 850)

Therefore partial harmonization takes place through this competition. The rest of the non-great powers in the international trading system will either willingly choose, or will be forced to choose, which set of standards they will apply. Regulatory 'blocs' are then created, and the EU and USA will try to enlarge these blocs as much as they can negotiate. Drezner (2005) uses the differing GMO policies between the EU and the USA as his case study to demonstrate how this competition has led to strong policy convergence. Unsurprisingly, the first two countries to adopt American standards were Canada and Mexico. Argentina has also taken a lenient approach to the approval and use of biotechnology. However, Brazil, China, Australia, Japan, Korea, Saudi Arabia, Thailand, and Taiwan all have adopted mandatory labeling regimes for GM foods, while India has one pending. Developing countries have already been split between the two positions. This regulatory conflict has been brought into international organizations, such as the WTO, the Codex Alimentarius.²¹

However, this competition is not limited to GM food policies, but rather applies to a competition over the application of RAF policies as a whole. Other policies associated with the EU's social-based RAF have also caused a regulatory competition with the United States, including animal welfare practices. The EU has begun the practice of including animal welfare measures, similar to its own regulations, in preferential trade agreements. One of the most notable examples is the EU's Association Agreement with Chile, in 2002, which contains comprehensive annexes covering sanitary and phytosanitary (SPS) measures applicable to trade in animals and animal products, plants,

²¹ Codex is a collection of internationally recognized standards, codes of practice, guidelines and other recommendations relating to foods, food production and food safety for consumer protection, which are developed and maintained by the Codex Alimentarius Commission. The Commission was established by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO).

plant products and other goods, along with animal welfare. At the second special session of the Committee on Agriculture in 2000, the EU submitted a proposal on Animal Welfare and Trade in Agriculture, calling for the issue of animal welfare standards to be addressed by the WTO and has repeatedly emphasized the importance of addressing animal welfare standards in the WTO during the Doha Round negotiations. (Hobbs et al, 2002) Additionally, the EU has also pressured the World Organization for Animal Health (OIE) to establish an international animal welfare standards agreement. The United States has opposed these efforts, claiming that these standards are purposefully established to impose non-tariff barriers to trade.

Drezner (2005) focuses his argument on the GMO regulatory competition within international institutions and agreements. He argues that the United States has used the WTO's authority to de-legitimize EU policies restricting trade in GMOs, particularly because the USA holds sway over Codex. This is particularly important in regards to the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), because this Agreement defers to Codex standards to determine what level of sanitary measures are appropriate. He argues that WTO panel rulings consistently support the American position, which claims that efforts to restrict imports without credible scientific evidence of harm violate international trade rules. Therefore, because the EU is unable to adjust the rules of the WTO and Codex, the EU focused on another UN institution to advance its preferences. The Cartagena Protocol on Biosafety (BSP) endorses the precautionary principle in the treatment of large modified organisms. This principle, which the EU has adopted in its use of RAF, endorses the restriction or prohibition of potentially dangerous activities or processes before they are scientifically proven to cause

serious damage. Drezner (2005) argues that these two regimes are therefore in direct conflict with each other, which has resulted in a legal stalemate.

However, I would argue this legal stalemate over international rules regarding nprPPM regulations is more complex than a clear-cut division of pitting one international organization or agreement against another. In 2003, the United States challenged a number of EU laws restricting the importation of GMOs, arguing they were 'unjustifiable' and illegal under the SPS agreement. In May 2006, the WTO's dispute resolution panel issued a complex ruling, which took issue with some aspects of the EU's regulation of GMOs, but dismissed many of the claims made by the US. The international trade body found that by suspending the approval of all GMO products between 1999 and 2003, the EU had applied a "de facto moratorium" resulting in "undue delay" and thereby breaking trade rules. (EurActiv, 2006) Nevertheless, the WTO ruling is unlikely to settle transatlantic regulatory competition GMO imports and exports, as it rejected claims that the strict regulations currently applied by the EU on GM food and crops were illegal and refused to rule on the overarching issue of whether GM foods are safe for consumption. (EurActiv, 2006) International trade rules therefore do not clearly favour the United States' scientific-based approach to RAF over the EU's social-based approach. Instead, the regulatory competition between these two superpowers has resulted in vague international rules.

International Organizations and Agreements Relevant to nprPPM Labeling

Because the conflict over nprPPM regulations is now far-reaching and involves most states participating in the global trading regime, any conflicts that arise from differences in national regulations would be best resolved at the multilateral level.

Harmonization reconciles these differences by establishing rules that have been agreed-upon by all its signatories and members. There are indeed international standards regarding GMOs, animal welfare, and environmental change, which labelling regimes could arguably be based upon: the Biosafety Protocol (BSP), the OIE, and Agenda 21.

The Biosafety Protocol is a multilateral environmental agreement (MEA) that has provided a comprehensive regulatory approach to the protection of biodiversity. It has established a set of rules to manage the environmental risks of transboundary movement of GMOs and contains provisions for potential implications to trade of GMOs. For living GMOs, exporters are required to obtain approval from importing countries. When a brand new GM seed is exported, the exporter must notify the importing states. The importing country therefore has the right over whether it can approve or decline the shipment because of the risks identified through a risk assessment. Concerning the use of risk assessment, Annex III stipulates that a "lack of scientific knowledge or scientific consensus should not necessarily be interpreted as indicating a level of risk, nor an absence of risk, or an acceptable risk." Most importantly, the Agreement includes the 'precautionary principle,' whereby if a state does not have complete scientific certainty after a risk assessment is performed, it has the ability to block imports of a GMO they fear could be harmful to biological diversity.

In addition to the establishment of the precautionary principle concerning GM approval, Article 18 stipulates mandatory labelling of GM products, which are not destined for agronomic production, including for food, feed, and processing. It specifies requirements for identification of GMOs by clarifying what information must be provided in documentation that accompanies transboundary shipments of GMOs. It also

leaves room for possible future development of standards for handling, packaging, transport and identification of GMOs by the meeting of the Parties to the Protocol. This Agreement therefore provides a basis for policy harmonization of GMO policies, and even stipulates minimum requirements for the labelling of such products. However, problems of policy harmonization arise from not only differing interpretations of the agreement, but also because certain states have not signed the Agreement, most importantly the United States, due to concerns over intellectual property rights, technology transfer, and finance provisions. In addition, some states such as Canada, have signed but not ratified the Agreement because they are concerned that abiding by the principles and rules of the Agreement could have negative repercussions to their trade relationship with the United States and also how the Agreement may affect a state's ability to compete with other countries who have not ratified the Agreement in the biotechnology sector.

Regarding animal welfare standards, the OIE is a major contributor to standards at the international level, via its role in epizootic disease control. The OIE animal health code includes a chapter on minimum animal welfare standards for trade and standard-setting rules have also been established for the treatment of animals during transportation. In 1994, the publication *Animal Welfare and Veterinary Services* was included in the OIE Scientific and Technical Review Series. It provides a valuable State Veterinary Service perspective on animal welfare capability and addresses specific animal welfare issues. In drawing up its strategic plan for the period 2001 to 2005, animal welfare and food safety were identified as two areas for future OIE involvement and they were formally accepted as strategic initiatives at the 2001 OIE General Assembly meeting. An international

expert group was established to provide specific recommendations on the nature and scope of the OIE's animal welfare role. The recommendations were adopted as Resolution XIV at the 2002 OIE General Assembly meeting.

Therefore, there has been much progress to date in developing an OIE animal welfare guiding principles and policies, and an agreed modus operandi, upon which states can base animal welfare standards upon. The EU has been pressuring the OIE to finalize an animal welfare agreement, which reflects the policies the EU has already put into place. Other industrialized states have supported this idea, including Australia and New Zealand. However, many members have opposed the establishment of a far-reaching agreement, in particular developing states, which argue that these types of standards hinder international trade. Therefore, animal welfare policy harmonization has been prevented due to these disagreements.

Regarding standards to prevent environmental change is Agenda 21, a program run by the UN related to sustainable development. Agenda 21 is a comprehensive blueprint of action that is to be taken globally, nationally and locally by organizations of the UN, all levels of governments, and major groups in every area in which humans impact on the environment. "Unsustainable patterns of production and consumption are identified as requiring further attention because existing patterns are considered a major cause of environmental degradation, particularly in industrialized states." (Erksine, 1997, p. 126) The Agenda recommends that national policies are developed to reduce unsustainable consumption and to promote efficient production processes and methods. Ecolabeling is one of the measures proposed to achieve these goals because it is thought to have the potential to harness both consumer awareness about the environment and the

growing interest in producing environmentally sound products among producers. Agenda 21 recommends that criteria and methodologies should be developed to examine the entire life-cycle of products and processes, and that the results of these assessments should be converted into clear indicators to inform consumers and decision makers. Such programs are intended to be third-party, government run schemes and to operate in cooperation with industry and other relevant groups.

Therefore, Agenda 21 has established a justification for ecolabeling schemes and has been successful in influencing industrialized countries to adopt such schemes with standards that are very similar and could thus potentially be harmonized. However, the Agenda did not stipulate specific requirements for life-cycle analysis, and thus standards differ from country to country, which potentially creates trade barriers. Although efforts have been made by non-governmental organizations, such as GEN, to harmonize ecolabeling schemes, there is no agreement upon which to base standards for life-cycle processes for the variety of products that could fall under these schemes.

WTO Rules Relevant to nprPPM Labeling

To a certain extent, each of these agreements justifies the establishment of nprPPM standards and indirectly encourages the process of converging these policies. However, at the same time they have the potential to, and often do, create conflicts between states over the interpretation of these agreements and their compatibility with international trade rules, resulting standards that differ because of domestic circumstances. When international agreements and organizations create such conflicts, this often necessitates the intervention by a 'third party dispute settlement mechanism', whereby differences can be resolved and international rules can be clarified. Once

international rules and standards are clarified, harmonization of policies can potentially occur. The issue of diverging national standards and regulations, and the prospect of harmonizing them in connection with the world's international trade regime, appear to have become the central motif of the WTO. The WTO can, and does, play a significant role in the global harmonization of national laws and several agreements under the auspices of the WTO explicitly mention policy harmonization as one of its major objectives.

Current trading rules do not contain specific provisions for making a distinction between traded products based on the criteria, which are not physically embodied in the product.²² NprPPM labeling initiatives have given rise to debates on the extent to which they are subject to WTO provisions and whether they are in direct violation of these rules. Many economists have argued that the desire for regulating trade based upon PPMs is a consequence of the success of multilateral trade liberalization in eliminating traditional protectionist policies to aid producers, such as tariffs. This success has led to a focus on issues relating to consumer choice, with respect to methods of production as opposed to traditional issues of availability and prices of products. However, there are concerns that WTO rules are out of date because they are biased towards producer-based protectionist measures, rather than consumer-based measures, and towards products in their final state as opposed to ways of producing goods. Issues, such as GMOs, animal welfare, and environmental change, are part of a broader debate regarding linkages between consumer demand and trade, and the flexibility of the multilateral trading system to accommodate non-tariff barriers to trade (NTBs). (Victor and Weiner, 2002)

 $^{^{22}}$ With exception of GATT article XX (e) on the products of prison labour

Thus, WTO rules are currently ill-equipped to deal with the regulatory competition between the United States and the EU, and the smaller states involved in this conflict of regulatory approach. Because of this, there is currently a legal stalemate over labeling regimes based on nprPPM standards. This stalemate further aggravates the conflict, as the USA and EU argue over which rules justify their positions. It is evident that WTO rules need to be reformed in order to deal with nprPPM labeling schemes, as they become a more common approach in dealing with consumer demands. However, because of the competition between the two economic superpowers, these types of reforms have yet to take place.

The rules of the WTO are based upon the Principle of Non-Discrimination, which includes three concepts: national treatment in internal taxation and regulation between imported and domestic products; most-favoured nation (MFN) status is applied to all states; and equal treatment of all 'like' products. Article III of the GATT stipulates the national treatment between imported and domestic 'like' products so as not to allocate protection to domestic production. The United States and Canada have argued that the EU's mandatory labeling regimes for GM foods and animal welfare standards are designed in such a way so as to position imports from North America at a competitive disadvantage, not for legitimate purposes, but to protect domestic industries in the EU from advancements in biotechnology that could put their own products at a disadvantage. However, even if nprPPM standards have neither protectionist intentions nor effect, they still can be trade impeding, which violates Article III. Article I of the GATT stipulates the MFN principle, stating that "any advantage, favour, privilege, or immunity granted by any contracting party to any other country shall be accorded immediately and

unconditionally to the 'like' product originating in or destined for the territories of all other contracting parties." Therefore, trade must be conducted on the basis of non-discrimination between countries and 'like' products must be treated the same way as local products and placed under similar market entry conditions as products coming from other states.

Therefore, the MFN principle of non-discrimination leads to the most important rule regarding the treatment of nprPPM standards: the equal treatment of 'like' products. There is the argument that regardless of production 'like products,' differing treatment may be accorded to dissimilar products, however, the GATT gives no definition of like products. Its interpretations are based on a case-by-case approach, which takes into account the objective of the measures. Some criteria that has been suggested in the past include: the product's properties, nature and quality; the varying nature of inputs of a product; the product's end uses; the tariff classification of the products; and consumers' tastes and habits. (Bernasconi-Osterwalder et al, 2006) Certain states, such as the United States, therefore argue that regardless of production and process methods, if the physical qualities of the final product are the same, then they are 'like' products. However, the EU counter-argues that differing nprPPMs can affect consumers' tastes and habits, and they may perceive and treat the product differently in order to satisfy a particular want or demand.

However, there are GATT rules that allow states to deviate from the principle of non-discrimination as long as they are fulfilling 'legitimate' policy objectives, which are specifically laid out in Article XX, entitled 'General Exceptions.' There are three questions that must be asked when applying Article XX: is the measure inconsistent with

WTO rules?; does the measure qualify for one of the exceptions?; and does it pass the 'chapeau' test? The 'chapeau' test requires that there is no arbitrary discrimination caused by the measure, that the measure is not a disguised restriction on international trade, and that it is not an unjustified discrimination. (Bernasconi-Osterwalder et al, 2006)

The 'General Exceptions' in Article XX that are relevant to the case studies discussed here are: a) those that are necessary to protect public morals and b) those necessary to protect human, animal, or plant life or health. (Bernasconi-Osterwalder et al, 2006) Regulations regarding animal welfare, genetically modified products, and environmental change could all be justified as protecting the morals of consumers who are against non-regulated production methods. However, this argument has rarely been used as it does not specify what type of protection is acceptable, nor has any case brought to the GATT or WTO set a precedent regarding the use of this exception. A more acceptable argument would be that GM food labels are established to protect the health of humans, animal welfare standards are in place to protect the health of animals and ecolabeling regimes are established to protect the environment, which, in turn, protects humans, animals and plants. However there are two problems that arise from the use of Article XX: the first problem being that GATT panels have ruled that Article XX does not apply to environmental protection and second being that even though nprPPM measures can be found GATT consistent, the major problem is that there is a limitation of policies that can fall under these exceptions. (Bernasconi-Osterwalder et al, 2006) Therefore, several scholars have argued that the SPS Agreement and the Technical Barriers to Trade Agreement (TBT) are more appropriate WTO agreements for determining the legitimacy of general PPM labeling schemes because they specifically

cover both labeling and PPM measures. These agreements do not mandate a list of specific exceptions, such as those stipulated in Article XX, but address PPM regulations in general²³, such as product labeling, as legitimate policy measures.

The SPS Agreement deals with food labels, as one of many measures, designed to protect the life or health of people, animals or plants.

There are four categories of SPS measures: 1) measures that are adopted to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, or disease-carrying organisms; 2) measures taken to protect human or animal life or health within the territory of a Member from risks arising from additives, contaminants, toxins, or disease causing organisms found in food, beverages, or feedstuffs; 3) measures applied to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof; and 4) measures established to 'prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests. (Bernasconi-Osterwalder, et. al, 2006, p. 213)

The second of the four categories covers PPMs, while the coverage of the other categories is less clear. (Bernasconi-Osterwalder et al, 2006) Therefore, if the EU, and other states which implement more restrictive policies for GMOs and animal welfare, justify these labeling schemes on the basis of protecting human and animal health²⁴, then the regulations must abide by the rules under the SPS Agreement. In the past, the SPS Agreement has ruled upon PPM measures, such as EU regulations on the use of hormones in beef. Many scholars and trade experts have argued that GM food labeling, in particular, falls under the rules of the SPS Agreement and has been a contentiously debated as to whether or not these regulations are legitimate measures that can be defended, or refuted, under these rules.

Under Article 2.2, an SPS measure can be applied as long as it is *necessary* to protect human, animal or plant life or health; the measure cannot be more trade restrictive

²³ Annex A of the SPS Agreement specifies that SPS measures include all relevant laws, decrees, regulations, requirements, and procedures, including PPMs.

The SPS Agreement was established to protect human, animal and plant life from risks that arise from additives, contaminants, toxins, or disease-causing organisms in their food, beverages, feedstuffs, as well as from animal carried diseases, or pest or disease causing organisms.

than required to achieve the appropriate level of protection (SPS Agreement, Article 5.6); and they must be applied in a manner that is consistent with WTO principles and not constitute a 'disguised' restriction on trade (SPS Agreement, Article 2.3). Many trade policy analysts have argued that nprPPM measures are qualitative measures that may lack scientific justification, because it is infeasible to determine the traceability of traits in the final product that could present risks to human or animal health. (Read, 2005) This could give rise to the potential of fraud, or 'disguised' trade barriers. (Read, 2005) Therefore, several scholars and trade policy experts have stressed that it is crucial for these measures to be based on scientific principles and cannot be maintained without sufficient scientific evidence. To be legitimately justified, measures must be based on relevant international standards, guidelines or recommendations. (SPS Agreement, Article 5.8) Relevant international standards, guidelines or recommendations usually refer to those stipulated by relevant international institutions: for food safety, the relevant institution is Codex, for animal safety it is the OIE, and for plant safety it is the International Plant Protection Convention (IPPC). (SPS Agreement, Article 5.1)

Therefore, if these institutions stipulate specific standards and guidelines for GM foods or animal welfare, then these labeling regimes would be considered 'legitimate' measures. However, as discussed above, although the OIE refers to animal welfare as one of its objectives, it has yet to identify specific minimum standards for which members must abide by. While priority areas have been identified, and expertise and resources are being used to develop minimum standards, relevant agreements have yet to be established that could justify animal welfare standards, nor has the OIE even stipulated mandatory animal welfare regulations that could justify a mandatory label. Another

problem for mandatory animal welfare standards is that the OIE has not specified a direct contribution between animal welfare standards and the overall health of animals. Therefore, while the EU maintains that their animal welfare regulations have been established to protect the overall health of animals, this cannot be justified under current OIE standards or guidelines. The same problem applies to GM regulations under Codex, where no such references have been made to the potential dangers these products pose to human, animal or plant health. In regards to the use of biotechnology, Codex has only maintained, in its draft on the use of risk analysis for food safety, that a risk assessment be performed before product approval. Therefore, animal welfare or GM food labeling schemes, whether voluntary or mandatory, cannot be considered 'justifiable' under current international regulations or standards, because no such rules exist as of yet.

However, more restrictive regulations, such as mandatory labeling, are allowed under the SPS Agreement. While a national standard that provides a greater level of protection than the relevant international organizations is considered to be a trade barrier, the WTO can determine that the stricter national regulation is based upon a proper risk assessment that demonstrates how current international standards, guidelines or recommendations, do not provide sufficient protection or that the country maintaining the stricter national standard has a reasonable scientific justification for the regulation. (Bernasconi-Osterwalder et al, 2006) Thus according to Article 5, measures must be based upon a risk assessment, and the risk assessment shall take into account any available scientific evidence of risk. In Annex A, a risk assessment is defined as:

"the evaluation of the likelihood of entry, establishment, or spread of a pest or disease within the territory of an importing member according to the (SPS) measures which might be applied, and of the associated potential biological consequences, or the evaluation of the potential for adverse effects on human or animal health arising from the presence of additives, contaminants, toxins or disease causing organisms in food, beverages, or feedstuffs." (SPS Agreement)

In the assessment of risks, members must take into account available scientific evidence, relevant processes and production methods, relevant inspection, sampling and testing methods, the prevalence of specific diseases or pests, or relevant ecological and environmental conditions. (SPS Agreement, Article 5.2) Therefore, those who are against mandatory GM labeling regimes assume that only available scientific evidence can be considered and therefore they argue that sufficient scientific information exists to make a risk assessment that GM foods are indeed safe for human consumption.

In the case of animal welfare, although there is a compelling argument of how higher animal welfare standards contribute to the overall health of animals, it would be difficult for the EU to provide scientific evidence that these measures are necessary to protect animal health. However, in the case of the GM foods, there is not sufficient information available to perform a risk assessment for the long-term health effects of GM food consumption. (Kerr and Philips, 2000) The EU maintains that it has implemented a labeling regime for GM foods, not because of the current risks that they pose to human health, but because of the unknown risks for long-term health. Therefore, the EU applies the 'precautionary principle,' as stipulated by the BSP, to defend its GM regulations. Canada and the United States argue against such a restrictive use of the precautionary principle in the risk assessment and risk management stages of RAF. They argue that the WTO rules require proof of such harm to human health before trade can be restricted, rather than proof of absolutely no harm. They reference the WTO case EC Hormones case that was brought to the WTO as an example of how the precautionary principle cannot be applied to PPM-based measures. (Kerr and Philips, 2000)

In this case, a WTO panel found the EU's ban on the use of hormones in beef products violated WTO food safety rules because the EU had not definitively demonstrated that the hormones would cause harm to consumers, even though the long-term effects of the use of hormones are uncertain. Some scholars have argued that the WTO panel eviscerated the use of the precautionary principle because it had ruled that the EC had not provided sufficient scientific evidence that hormones can cause cancer or other adverse health effects. (Bernasconi-Osterwalder et al, 2006) Canada and the United States also refute the use of the precautionary principle under the SPS Agreement because Codex rules do not refer to the principle and the Codex Committee on General Principles has foiled three attempts by the EU to insert the precautionary principle into Codex's draft risk analysis standards for food safety. (Post, 2006)

However, the text is still at an intermediate stage of the Codex procedure and changes can still be made if there are further attempts to include this principle. (Post, 2006) In addition, regarding the *EC Hormones* case, the Appellate Body avoided taking a position as to the question of whether or not the precautionary principle was a norm of international law - instead it held that the principle is reflected in certain provisions of the SPS Agreement, but it cannot override specific SPS provisions. (Bernasconi-Osterwalder et al, 2006) Thus, it did not rule in Canada and the United States' favour because the precautionary principle was not a legitimate part of a risk assessment, but because the EC failed to perform a proper risk assessment of the risks arising from the use of hormones for growth promotion purposes and that the ban was not based on a risk assessment that fell within the meaning of Article 5.1 of the SPS Agreement. (Bernasconi-Osterwalder et al, 2006) Therefore, this case combined with the recent GMO case discussed above,

demonstrates a developing pattern in the WTO dispute panel of avoiding, in their rulings, favouring either superpower's regulatory approach.

While Drezner (2005) argues that the SPS Agreement favours the US' science-based approach to RAF because it focuses heavily on scientific evidence for legitimate justification, other scholars, such as Isaac (2004) and Reid (2004), have argued that the agreement also ambiguously refers to precaution as a legitimate justification for PPM policy measures, which is a fundamental objective of the EU's social-based approach to RAF. Under the SPS Agreement, members may establish provisional measures based on precaution, in the event that there is insufficient scientific evidence to conduct an appropriate risk assessment:

In cases where the relevant scientific evidence is insufficient, a Member may provisionally adopt (SPS) measures on the basis of available pertinent information, including that from SPS measures applied by other Members. In such circumstances Members shall seek to obtain additional information necessary for a more objective risk assessment and review the SPS measure accordingly within a reasonable amount of time. (SPS Agreement, Article 5.7)

These measures can remain in place until sufficient evidence has been compiled, although the Agreement has not stipulated on how to revoke the provision once it is triggered. (Isaac, 2004)

In addition, measures are not obliged to rely on the majority of scientific opinions, but may base measures that protect human health on respected sources of divergent scientific opinion. (Isaac, 2004) Therefore, if the EU can prove that there is insufficient scientific evidence regarding the long-term health effects of GM food consumption or can provide diverging scientific evidence from the position of Canada and the United States, then its use of the precautionary principle might be defensible under the SPS Agreement.

While the SPS Agreement takes precedence of determining the legitimacy of a labeling scheme if it is established for the purpose of protecting human, animal, or plant

life or health, if health risks are not the reason for justification then WTO rules under the TBT Agreement will apply instead. (Bernasconi-Osterwalder et al, 2006) Under the TBT, both technical regulations (mandatory measures) and standards (voluntary measures) are documents that may include labeling requirements as they apply to a final product or a PPM. So far the only WTO case regarding mandatory labeling, EC Sardines, was dealt with under the TBT Agreement, rather than the SPS Agreement. In addition, the TBT Agreement appears to be the only agreement that applies to voluntary labeling schemes.²⁵ (Bernasconi-Osterwalder et al, 2006) Therefore, all three case studies, including ecolabeling, could be reviewed under TBT rules.

Often, the EU justifies its labeling measures not on safety grounds but on the need to inform and provide their consumers with the information they are demanding (Kogan, 2003), and many scholars have argued that the TBT Agreement allows measures for the purposes of consumer information. The preamble to the TBT stipulates:

That no country should be prevented from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade, and are otherwise in accordance with the provisions of this Agreement. (TBT Agreement)

For measures to be in accordance with the TBT Agreement, which include both mandatory and voluntary labeling, they must abide by the GATT principle of non-discrimination (TBT Agreement, Article 2.1) and must be necessary and proportional to fulfill a 'legitimate' objective (TBT Agreement, Article 2.2). To be proportional, the measure must be the least trade restrictive measure available and the costs associated with technical barriers should be proportional to the benefits received by consumers by

²⁵ In fact, it is the only WTO Agreement that explicitly covers documents with which compliance is not mandatory.

the imposition of barriers. (Kerr and Phillips, 2000) As far as what qualifies a 'legitimate' objective under the TBT Agreement, the coverage is far more expansive than GATT Article XX, since it does not provide an exhaustive list but rather provides a wide spectrum of values, including: national security requirements; the prevention of deceptive practices; protection of the life or health of humans, animals, and plants; and protection of the environment. (Bernasconi-Osterwalder et al, 2006) Therefore the WTO panel, when using the TBT Agreement, will weigh the importance of the values that the regulation at issue is trying to protect. Another relevant difference between the SPS and the TBT Agreements, is that the TBT does not explicitly require risk assessment as a justification for regulations. (Post, 2006)

Even though all three labeling regimes, whether voluntary or mandatory, could possibly be justified under this Agreement, the main problem in determining the legitimacy of the labeling regimes in both the EU and Canada is whether or not nprPPM regulations and standards can be justified under this agreement. While PPM measures have been ruled upon by the WTO under the SPS Agreement, no nprPPM-based measures have been examined to date. (Bernasconi-Osterwalder et al, 2006) Under the TBT Agreement, neither PPM measures nor nprPPM measures have yet to be tested. (Bernasconi-Osterwalder et al, 2006) A superficial reading of the definition of 'technical regulation' in Annex 1.1 may indicate that all PPMs are covered by the TBT Agreement, as it includes "documents that lay down product characteristics" and also "their related production and process methods." (Du, 2007) Some WTO members believe that the words 'their related' intentionally qualifies only PPMs related to their physical characteristics and if it is not detectable in the final product then the TBT is not

applicable. (Du, 2007) Therefore, they argue, nprPPMs can only be scrutinized under the GATT.

However, some scholars and policy analysts have suggested that there is no legal basis for suggesting that measures addressing nprPPMs should be treated any differently from PPMs. (Du, 2007) Further complicating this issue is that when it comes to labeling schemes, which differentiate products based on PPMs, the definition of technical regulation includes "symbols, packaging, marking or labeling as they apply to a product, process or production methods." (Du, 2007, p. 19) Some hold the view that all labeling schemes fall under the scope of the TBT, regardless of whether the criteria by which labels are awarded is on the basis of the PPM because the second sentence does not include "their related." (Du, 2007) This has created ambiguity as to whether or not WTO rules even apply to nprPPM labeling schemes at all. In practice, some members, such as Canada, have notified certain nprPPMs to the TBT committee, specifically for ecolabeling schemes. In a submission to the WTO in 1996, Canada pressed for discussions of the application of the TBT Agreement to ecolabeling programs, arguing:

eco-labeling programs, whether mandatory or voluntary, are clearly within the scope of the Agreement to the extent that they are based on standards that relate to product characteristics or their related processes and production methods (PPMs)... bodies that develop and run eco-labeling programs should be considered as standardizing bodies... that the scope of the TBT Agreement should be interpreted to cover the use of certain standards based on non-product-related PPMs by eco-labeling programs, provided that these standards strictly adhere to multilaterally-agreed eco-labeling guidelines. (WTO Secretariat, 1996)

Therefore, both partners want nprPPM regulations to be recognized under the TBT Agreement, in order to ease the process of policy harmonization.

However, the WTO has avoided this issue so as not to set a precedent of allowing regulations and standards based on nprPPMs to be legitimized. This is because the EU and USA are two equal superpowers vying for control of international standards and

organizations to further their regulatory preferences. As discussed above, when the EU and US regulatory approaches converge, regulatory harmonization on the multilateral level occurs relatively quickly and with ease. However, when these two superpowers are in competition with each other, efforts to resolve these types of conflicts through policy harmonization becomes an extremely difficult process, as both entities have the means and resources to argue that international rules favour their own approach. This type of regulatory conflict results in international rules that do not favour either the science-based approach, or the social-based approach to RAF, and therefore international institutions are unable to reconcile these differences. Therefore, WTO rules and other multilateral agreements are too vague and unclear in their scope to end the conflict between diverging regulatory approaches. Trade barriers caused by nprPPM labeling regimes thus remain unresolved, even when regulatory approaches converge, as the case of ecolabel schemes demonstrates.

Chapter Seven: Conclusion and Recommendations

An important trend that needs to be emphasized is that many states, in particular developed states such as the Member States of the EU and Canada, do not necessarily disagree over the legitimacy of regulations for PPMs, or even nprPPMs. As my argument has demonstrated, conflicts between North America and European states over these types of regulations do not stem from objections to policy responses to consumer demands, but more so from the objections over what is appropriate level of regulation that should be applied to these demands — namely whether voluntary guidelines or mandatory requirements are more appropriate measures. The tendency of North American regulations to be voluntary is rooted in the scientific rationality perspective of Risk Analysis Framework, which relies solely on scientific evidence of risk in establishing mandatory regulations. The tendency of EU regulations to be mandatory is rooted in the social rationality perspective, which incorporates consumer concerns over perceived risks, in addition to scientific evidence of risk, for establishing mandatory regulations.

These diverging approaches are caused not by differences in consumer demand, but instead because of different regulatory institutional structures. The institutional structure of the EU allows civic interest groups who support stronger regulations a large degree of influence. However as the case of ecolabeling demonstrates, this influence is limited without consumer demand for stronger regulations. When consumers perceive risks associated with specific PPMs, they are more likely to support civic interest groups' pressures for stronger regulations, as the cases of GM food and animal welfare labeling schemes demonstrate. With combined pressure from interest groups and consumers, EU

regulators are inclined to establish more restrictive regulations, such as mandatory labels. Regulators in the EU are quick to respond to these types of consumer demand because many EU citizens perceive that the EU suffers from a democratic deficit. As discussed above, the EU is attempting to legitimize itself as a democratic institution through non-traditional regulations, such as PPM measures.

However, Canadian regulators are less susceptible to the pressures of collective action capacity. Even when Canadian consumers support civic interest groups' calls for stronger regulatory measures, regulators may still choose to rely solely on scientific evidence of proof of risks to human, animal and plant health rather than consumer perceptions of risk. The Canadian institutional structure allows regulators to weigh the costs and benefits of voluntary versus mandatory regulations, whether they are scientific, economic, political or cultural. While regulators have the ability to utilize a more social-based approach to RAF, the voluntary nature of nprPPM labeling regulations indicate that Canada tends to align its regulatory approach with the United States. Despite comparable preferences between Canadian and European consumers over nprPPM labeling regimes, Canadian regulators have established similar regulations to their American counterparts. Whether these decisions are based on scientific evidence from transnational scientific communities in North America, or on the potential trade and political conflicts that could arise from establishing diverging policies, is unclear.

The external influence of the United States also greatly affects efforts made by Canadian and EU officials to reconcile trade barriers caused by these regulations. Because of the United States' and the EU's differing approaches to Risk Analysis Framework, the two superpowers are engaged in an international regulatory competition.

This competition is reflected in the division between states who ally their regulatory approaches, whether socially-based or scientifically-based, with either the USA or the EU. Because Canada uses the US' approach to RAF, any concessions that either partner makes in negotiating a bilateral agreement, such as a mutual recognition agreement, to reconcile regulatory trade barriers caused by nprPPM labeling schemes, must be taken into consideration in the larger context of the transatlantic relationship and how this will affect EU-US relations. Therefore, because this regulatory conflict between the two economic superpowers now involves several countries within the international tradition system, policy reconciliation is more likely to take place on the multilateral level.

However, both superpowers are vying for policy coordination with their own regulatory preferences, in order to eliminate regulatory barriers between themselves and their trading partners. Both superpowers have the economic resources and power to influence and pressure individual states and international institutions to adopt their regulatory preferences. The repercussions of this competition are evident in international rules, guidelines, and agreements, which would be used, or considered, by international institutions with adjudication instruments and authority to resolve such conflicts, such as the WTO. Current rules and agreements are ambiguous as to whether nprPPM regulations are legitimate, yet alone what degree of regulation, in this case mandatory or voluntary, is more appropriate on a case-by-case basis. International institutions, such as the WTO, have avoided ruling in favour of either approach to RAF, as it would set a precedent of invalidating the regulatory approaches of several countries. Any efforts towards reforming rules that would address the trade barriers caused by nprPPM labeling schemes have been impeded by this regulatory competition.

However, as stated above, both the EU and North America have validated regulations for nprPPMs through the establishment of labeling schemes at the governing level, rather than acquiescing total responsibility of providing such information to the private sector. NprPPM labeling schemes are a relatively new type of regulation, which are established for consumer protection rather than traditional protectionist measures for producers. However, in the same manner as producer protectionist measures, nprPPM labels can potentially create barriers, which hinder international trade. Unfortunately, current international institutions and rules are ill-equipped to resolve these barriers and many scholars have stressed that these institutions need immediate reform in order to deal with these new types of regulations, specifically renegotiation of WTO rules. The EU has suggested that the rules under the SPS Agreement should be reformed to permit trade restrictions based on consumer preferences. Similar suggestions have been made for the TBT Agreement, in particular to change the definition of 'legitimate measures' to include both non-product related and product-related PPMs. However, the United States has come out against this suggestion because it fears the possibility that measures to protect consumers could be used to disguise regulations that instead protect producers.

I would argue that ignoring consumer preferences as a legitimate justification, and the subsequent rise of the social rationality perspective of Risk Analysis Framework that incorporates these preferences, does not resolve the conflicts or trade barriers that arise from these types of regulations. The EU, as demonstrated by the case of GM food regulations, has not changed its regulatory approach to nprPPMs despite being pressured by its largest trading partner to change its approach, and despite the WTO ruling that its de facto moratorium on the importation of GM products broke international trade rules.

This indicates that even if the WTO rules against consumer-related regulations, Members are likely to disregard such rulings if consumer demand is strong enough. Therefore, I would argue that if the WTO is to remain relevant it must adapt its structure and rules to the rising popularity of consumer-based protectionist measures, such as nprPPM labeling regimes.

Perdikis, et al (2001) have suggested that states should be allowed to impose trade barriers on the basis of consumer concern without having to provide a justification, but instead of traditional retaliatory measures, compensation would have to automatically be given to the industries that have been damaged in the complaining countries. This forces the regulating state to make an expenditure, which would have to be justified to voters by regulators. (Perdikis et al, 2001) They argue that this might limit manipulation of consumer justification. However, I would argue that this is more of a temporary solution to a long-term problem. This type of reform still does not legitimize consumer-based regulations, nor does it recognize that these types of regulations are rising. If compensation must be applied every time a political entity establishes consumer-based regulations, then compensation could be swapped between countries for the same regulations. Nor does this enhance policy coordination, which has been emphasized as the best measure to eliminate regulatory trade barriers. Therefore, I would argue that a clear framework of rules for Members to abide by when it comes to consumer-based regulations, in the same manner that rules have been laid out in the SPS Agreement and TBT Agreement for science-based regulations, which encourage policy harmonization, is a better long-term solution to a rising problem.

In order to develop such rules, a policy forum needs be established for negotiation. This forum should focus on discussions and debates over basic issues of social regulations, such as the protection of domestic regulatory policymaking in the international system, or the relationship between trade and international agreements outside the scope of the WTO, or trade rules and consumer preferences. While such negotiations will help push for policy coordination of regulations, a problem of consensus is most likely to arise immediately. Unlike the dispute settlements under the SPS Agreement, in which judgments rely on consensus within the scientific community, new rules will have to rely on social scientific judgments, which are much more difficult for social scientists to measure and for the majority of social scientists to agree upon. (Perdikis et al, 2001) Thus, a new type of agreement is unlikely to function effectively without an increase in the research capabilities of the WTO. Analysis is needed on key issues in order to launch serious discussions on new types of trade barriers. Like the SPS Agreement, which relies on standards and guidelines based in Codex, the OIE, and the IPPC, the WTO will need to rely on outside information and guidelines agreed upon on the international level. Therefore, several academics have emphasized that a social scientific research network linked to other institutions needs to be established. This social scientific networking should include academic, environmental, business, labour and intergovernmental organizations, consumer associations, and environmental institutions.

However, such a process is most likely to be long and arduous. In the meantime, states will continue to respond to both civic and consumer demands in establishing regulations, and those that may have negative trade consequences will continue to be erected without coordination. Once these regulations have been established and become

entrenched policy approaches, it is much more difficult for policy coordination to take place, as has been demonstrated by the case studies discussed here. Even when policy approaches are similar, as the case of ecolabeling demonstrates, negotiating bilateral or multilateral frameworks for coordination is still very complex. Therefore, I would argue that bilateral efforts should be made to enhance dialogue concerning new regulations, rather than more established regulations, such as GM food labels, animal welfare labels, and ecolabels.

Therefore, the EU and Canada must avoid diverging regulatory practices at an early stage of the regulatory process. Mechanisms of informing each other at the early stages of policymaking must be established, where regulators can consult each other, data and information can be exchanged, and approaches can be discussed. Because the United States remains an overarching influence in this relationship, any regulatory dialogue must be coherent and cooperate with the regulatory dialogue between the EU and United States. By increasing discussion and cooperation at the bilateral level, these efforts will help progress the negotiation of reforms to international trade rules in the WTO, which will eventually facilitate policy coordination of regulation, such as nprPPM labeling schemes, at the multilateral level. Although, as GM food labels and animal welfare labels cases have demonstrated, policy approaches to nprPPMs may diverge and may never be reconciled at the bilateral or multilateral level, any nprPPM regulations that do share common objectives, such as ecolabels, must be recognized as early as possible so as to reduce any trade barriers, while maintaining the sovereign authority of regulators, who are safeguarding consumer preferences for their constituents.

Bibliography

- Agriculture and Agri-Food Canada. "Exporting Processed Foods Containing GM Ingredients to Europe." 1-83. Ottawa: Ontario Ministry of Agroculture, Food and Rural Affairs, 2006.
- 2004. New GM Rules in the EU. In, http://atn-riae.agr.ca/europe/3670_e.htm. (accessed October 30, 2007).
- Agri-Food Trade Service. "Situation Update on Regulations, Market Access and the Food Safety Authority in the European Union." edited by Department of Agriculture: Agri-Food Canada, 2005.
- Ahearn, Raymond. "Trade Conflict and the US-EU Economic Relationship." 1-42. Washington, DC: Congressional Research Service, 2007.
- Appleton, Arthur. "The Labeling of GMO Products Pursuant to International Trade Rules." New York University Environmental Law Journal 8, no. 3 (2000): 566-78.
- Atik, Jeffery. "Science and International Regulatory Convergence." Northwestern Journal of International Law and Business 17, no. 2/3 (1996/1997): 736-58.
- Baldwin, Robert and Martin Cave. *Understanding Regulation: Theory, Strategy, and Practice*. New York: Oxford University Press, 1999.
- Beck, Ulrich, Scott Lash and Mark Ritter. Risk Society: Towards a New Modernity. London: Sage Publications, Inc, 1992.
- Bennet, Colin. "What Is Policy Convergence and What Causes It?" *British Journal of Political Science* 21, no. 2 (1991): 215-33.
- Berg, Peter and Gerald Schmitz. "Beyond NAFTA to a Canada-Europe Transatlantic Marketplace: Issues and Prospects." edited by Department of Foreign Affairs: Government of Canada, 1998.
- Bernasconi-Osterwalder, Nathalie, Daniel Magraw, Maria Julia Olivia, Marcos Orellana and Elisabeth Tuerk. *Environment and Trade: A Guide to WTO Jurisprudence*. Sterling, VA: Earthscan, 2006.
- Bernhauer, Thomas and Erika Meins. "Technological Revolution Meets Policy and the Market: Explaining Cross-National Differences in Agricultural Biotechnology Regulation." *European Journal of Political Research* 42, no. 5 (2003): 643-83.

- Bernues A., A. Olaizola, K. Corcoran. "Labeling Information Demanded by European Consumers and Relationships with Purchasing Motives, Quality and Safety of Meat." *Meat Science* 65 (2003): 1095-106.
- Blanford, David, Jean-Christophe Bureau, Linda Fulponi, and Spencer Henson. Potential Implications of Animal Welfare Concerns and Public Policies in Industrialized Countries for International Trade. Edited by Mary Bonham Barry Krissoff, Julie Caswell, Global Food Trade and Consumer Demand for Quality. New York: Kluwer Academic/Plenum Publishers, 2002.
- Bone, Paula FitzGerald and Karen Russo France. "International Harmonization of Food and Nutrition Regulation: The Good and the Bad." *Journal of Public Policy and Marketing* 22, no. 1 (2003): 102-10.
- Borkey, Peter and Francois Leveque. "Voluntary Approaches for Environmental Protection in the European Union a Survey." *European Environment* 10, no. 1 (2000): 35-54.
- Braml, Joseph and Claudia Schmucker. "Barriers in the Atlantic Economic Area." *Internationale Politik* (2007): 44-47.
- Brans, Hilde and Gerda Vandercammen. "EU25 Food and Agricultural Import Regulations and Standards: European Union Report 2006." edited by United States Department of Agriculture: Global Agriculture Information Network, 2006.
- Bureau, Jean-Christophe, Stephan Marette and Alessandra Schiavina. "Non-Tariff Trade Barriers and Consumers' Information: The Case of the EU-US Trade Dispute over Beef." *European Review of Agricultural Economics* 25, no. 4 (1998): 437-62.
- Bureau, Jean-Christophe, Stephan Marette, Wayne Jones, and Estelle Gozlan. *Issues in Demand for Quality and Trade*. Edited by Mary Bonham Barry Krissoff, Julie Caswell, *Global Food Trade and Consumer Demand for Quality*. New York: Kluwer Academic/Plenum Publishers, 2002.
- Buzby, Jean C. "International Trade and Food Safety: Economic Theory and Case Studies." edited by United States Department of Agriculture: Economic Research Service, 2003.
- Cafruny, Alan. "Transatlantic Trade and Monetary Relations: The Nature and Limits of Conflict." *The International Spector* 3 (2002).
- Cai, Wenguo and Daniel Lemaire. "Lost over the Atlantic? The Canada-EU Trade and Investment Relationship." 1-44. Ottawa: Conference Board of Canada, 2005.

- Canada Europe Round Table for Business. "Creating Opportunities: A Roadmap for Action in Canada and the EU." Toronto: Canada Europe Round Table, 2002.
- ——. "Canada-European Union Business Prospective on Regulatory Cooperation, Mutual Recognition and Competition." Brussels: Canada-EU Round Table, 2003.
- Canadian Federation of Humane Societies. "Animal Welfare Certification." Review of Reviewed Item (2004), http://cfhs.ca/farm/humane labelling+print.
- Caporale, V, B Alessandrini, P Dalla Villa and S Del Papa. "Global Perspectives on Animal Welfare: Europe." *Rev Sci Tech* 24, no. 2 (2005): 567-77.
- Carr, Susan, Les Levidow and David Wield. "European Biotechnology Regulation: Contested Boundaries of Environmental Risk." *BioSafety Journal* 3, no. 1 (1997).
- ——. "Genetically Modified Crops in the European Union: Regulatory Conflicts as Precautionary Opportunities." *Journal of Risk Research* 3, no. 3 (2000): 189-208.
- Carter, Lee. "GM Debate Fails to Ignite Canada." Review of Reviewed Item. *BBC News*, (2004), http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/3498524.stm.
- Carter, Colin and Guillaume Gruere. 2005. International Approval and Labeling Regulations of Genetically Modified Food in Major Trading Countries. In, The Economics of Regulation of Agricultural Biotechnology, http://xiguai.tripod.com/carter_and_gruere-current.pdf. (accessed November 28, 2007).
- ——. "Mandatory Labeling of Genetically Modified Foods: Does It Really Provide Consumer Choice?" *AgBioForum* 6, no. 1 (2003): 68-70.
- Caswell, Julie. "An Evaluation of Risk Analysis as Applied to Agricultural Biotechnology (with a Case Study of GMO Labeling)." *Agribusiness* 16, no. 1 (2000): 115-23.
- ——. "How Labeling of Safety and Process Attributes Affects Markets for Food." Agricultural and Resource Economics Review 27, no. 2 (1998): 151-58.
- Caswell, Julie and Neil Hooker. "Regulatory Targets and Regimes for Food Safety: A Comparison of North American and European Approaches." Paper presented at The Economics of Reducing Health Risk from Food, Washington, DC 1995.
- Caswell, Julie and Eliza Mojduszka. "Using Informational Labeling to Influence the Market for Quality in Food Products." *American Journal of Agricultural Economics* 78, no. 5 (1996): 1248-53.

- CBC News. "Indepth: Genetic Modification. Genetically Modified Foods: A Primer." Review of Reviewed Item. CBC News Online, (2004).
- Center for International Development at Harvard University. 2004. Sanitary and Phytosanitary Measures and Technical Barriers to Trade Summary. In, http://cid.harvard.edu/cidtrade/issues/spstbt.html. (accessed November 28, 2007).
- CEO Quarterly Newsletter. "Favourable Winds for Transatlantic Free Trade?" *Corporate Europe Observer*, no. 1 (1998).
- Chaitoo, Ramesh and Michael Hart. "Labeling of GMO Products: Strategic Trade Policy Considerations for Canada." 1-48. Ottawa: Canadian Biotechnology Advisory Committee Project Steering Comittee on the Regulation of Genetically Modified Foods, 2000.
- Chase, Steven. "Canadians Want GM Foods Labeled, Poll Finds." *Globe & Mail*, December 4, 2003 2003.
- Chaturvedi, Sachin and Gunjan Nagpal. "WTO and Product-Related Environmental Standards: Emerging Issues and Policy Options." *Economic and Political Weekly* (2003): 66-74.
- Collins, Lyndhurst and Camilla Erskine. "Eco-Labeling: Success or Failure?" *The Environmentalist* 17, no. 2 (1997): 125-33.
- Commission of the European Communities. "Attitudes of Consumers Towards the Welfare of Farmed Animals." 1-71. Brussels: Europarometer, 2005.
- ———. "Question and Answers on the Regulation of GMOs in the EU." edited by DG Health and Consumer Protection, 2003.
- ——. "The European Eco-Label Scheme: Part of a Wider Strategy on Sustainable Production and Consumption." edited by DG Environment, 2007.
- ———. 2004. Cooperative Framework to Boost Business between Canada and EU. In, ed. Delegation of the European Commission to Canada.

 www.delcan.ec.europa.eu/press_and_information/press_releases/2004/04PR038.s

 html. (accessed November 5, 2007).
- ——. "Communication from the Commission on EU-Canada Relations." edited by DG Relex, 2003.
- ——. "Communication from the Commission to the European Parliament and the Council on a Community Action Plan on the Protection and Welfare of Animals 2006-2010." edited by DG Sanco, 2006.

- "Implementing Policy for External Trade in the Fields of Standards and Conformity Assessment: A Tool Box of Instruments." edited by DG Trade, 2001.
 . Commission Decision of 10 November 2000 Establishing the European Union Eco-Labelling Board and Its Rules of Procedure. 2007/730/EC.
 . "Communication from the Commission to the European Parliament and Council on a Community Action Plan on the Protection and Welfare of Animals 2006-2010." edited by Commission of the European Communities, 2006.
- Commission of the European Communities and the Canadian Mission to the European Union. "Canada-EU Regulatory Cooperation Seminar." Paper presented at the Enhancing Cooperation and Dialogue, Charlamagne Building, Brussels 2003.
- Commission for Environmental Cooperation and TerraChoice Environmental Services, Inc. "Environmental Labeling and Other Labeling of Coffee." Winnipeg: International Institute for Sustainable Development, 2004.
- Consumers Association of Canada. "A Growing Appetite for Information." Ottawa:

 Consumers Association of Canada and the Food Biotechnology Communications
 Networks, 1999.
- Courville, Sasha and David Crucefix. "Existing and Potential Models and Mechanisms for Harmonization, Equivalency and Mutual Recognition." International Task Force on Harmonization and Equivalence in Organic Agriculture, 2004.
- Crespi, John and Stephan Marette. "Some Economic Implications of Public Labeling." Journal of Food Distribution Research 34, no. 3 (2003): 83-94.
- ——. "'Does Contain' Vs. 'Does Not Contain': Does It Matter Which GMO Label Is Used?" European Journal of Law and Economics 16, no. 3 (2003): 327-44.
- da Motta Veiga, P. Ecolabeling and the Iso 14000 Series. Edited by D. Tussie, The Environment and International Trade Negotiation: Developing Countries Stakes. Hampshire: MacMillan, 2000.
- De Simone, F and J. Serratosa. "Biotechnology, Animal Health and Animal Welfare within the Framework of European Union Legislation." *Rev Sci Tech* 24, no. 1 (2005): 89-99.
- Delegation of the European Commission to Canada. "EU Business Survey on Conditions to Access to the Canadian Market, December 2, 2002." Review of Reviewed Item (2002),

- http://www.delcan.cec.eu.int/en/eu_and_canada/official_documents/documents/eu-ca_od_bscacm_2002-12-02.shtml.
- Department of Foreign Affairs and International Trade. 2005. Canada-European Union Trade and Investment Enhancement Agreement. In, http://www.dfait-maeci.gc.ca/tna-nac/EU-en.asp. (accessed November 5, 2007).
- ———. "Framework on Regulatory Cooperation and Transparency." edited by Department of Foreign Affairs and International Trade: Government of Canada European Commission, 2004.
- ——. "Opening Doors to the World: Canada's International Market Access Priorities 2003." Review of Reviewed Item (2003), www.dfait-maeci.gc.ca/tna-nac/2003/5-en.asp#Opening1.
- DG Relex. "Canada-European Union Trade and Investment Enhancement Agreement: Framework for the Agreement." (2005), http://ec.europa.eu/trade/issues/bilateral/countries/canada/tiea.htm.
- ------. "WTO Dispute Settlement. EU-US: EU Requests WTO to Confirm That There Is No Justification for US/Canada to Continue to Apply Sanctions." Review of Reviewed Item (2004), http://ec.europa.eu/trade/issues/respectrules/dispute/pr081104.
- Dickinson, David, Jill Hobbs and DeeVon Bailey. "A Comparison of US and Canadian Consumers' Willingness to Pay for Red-Meat Traceability." Montreal: American Agricultural Economics Association, 2003.
- Dobbin, Murray and Ellen Gould. "Food Fight: Canada Vs. Europe." Review of Reviewed Item. *The Tyee*, (2008), http://thetyee.ca/Views/2008/01/28/FoodFight/print.html.
- Doern, G. Bruce and Ted Reed. Canada's Changing Science-Based Policy and Regulatory Regime: Issues an Framework. Edited by G. Bruce Doern and Ted Reed, Risky Business: Canada's Changing Science-Based Policy and Regulatory Regime. Toronto: University of Toronto Press, 2000.
- Drezner, Daniel. "Globalization and Policy Convergence." *The International Studies Review* 3, no. 1 (2001): 53-78.

- ——. "Globalization, Harmonization, and Competition: The Different Pathways to Policy Convergence." *Journal of European Public Policy* 12, no. 5 (2005): 841-59.
- Droge, Susanne. "Ecological Labeling and the World Trade Organization." Berlin: Deutsches Institut für Wirtschaftsforschung, Berlin, 2001.
- Du, Michael Ming. "Domestic Regulatory Autonomy under the TBT Agreement: From Non-Discrimination to Harmonization." *Chinese Journal of International Law* 6, no. 2 (2007): 269-306.
- EcoLogo. "Ecologo Certification Process." (2003), www.ecologo.org/en/getcertified/certificationprocess/.
- ——. "Ecologo Program." (2003), <u>www.ecologo.org/en/abouttheprogram</u>
- Ekanem, E, F Tegegne, S Singh, Safdar Muhammad, and Mary Mafuyai-Ekanem.

 "Economic Risks of Genetically Engineered Foods in International Trade." Paper presented at the International Food and Agribusiness Management Association World Food and Agribusiness Symposium, Sydney, Australia 2001.
- Esposti, Roberto and Alessandro Sorrentino. "Policy and Regulatory Options on Genetically Modified Crops: Why USA and EU Have Different Approaches and How WTO Negotiations Can Be Involved?" Paper presented at the 6th International ICABR Conference, Ravello, Italy 2002.
- EurActiv. "EU Animal Welfare Label for Food Underway." Review of Reviewed Item. *EurActiv*,(2006), <u>www.euractiv.com/en/health/eu-animal-welfare-label-food-underway.html</u>.
- Eurogroup for Animal Welfare. "Farm Animal Welfare and the WTO." Paper presented at the EC Consultation Meeting on Agriculture, Brussels, November 6 2000.
- European Parliament and the Council of the European Union. Regulation (EC) No 1980/2000 of the European Parliament and of the Council of 17 July 2000 on a Revised Community Eco-Label Award Scheme. L 237.
- Ferguson, Shon and Simon Weseen. "The Economic Effect of Canada Making or Missing the EU 3rd Country List." 1-9. Saskatoon: University of Saskatechewan, 2004.
- Frans Oosterhuis, Harro van Asselt, Simon Clement, Christopher Erdmenger. "European Policies for Greener Public Procurement: A Summary of Policy Recommendations." 1-12. Amsterdam: Institute for Environmental Studies, 2003.
- Fricker, Peter. "Animal Welfare: The Writing's on the Cage." *Globe and Mail*, April 2 2007.

- Gallastegui, Ibon Galarraga. "The Use of Eco-Labels: A Review of the Literature." European Environment 12, no. 6 (2002).
- Gemma Harper, Spencer Henson. "Consumer Concerns About Animal Welfare and the Impact on Food Choice." 1-38. Reading, UK: Department of Agricultural and Food Economics The University of Reading, 2001.
- Gesser, Avi. "Canada's Environmental Choice Program: A Model for A "Trade-Friendly" Eco-Labeling Scheme." *Harvard International Law Journal* 39, no. 3 (1998): 501-43.
- Godard, Ellen. "Consumer Purchases of Specialty Eggs in Canada." Edmonton: Poultry Research Centre, Department of Agricultural, Food and Nutritional Science, University of Alberta, 2007.
- Golan, Elise and Fred Kuchler, Lorraine Mitchell. "Economics of Food Labeling." Journal of Consumer Policy 24, no. 2 (2001): 117-84.
- ——. Labeling Biotech Foods: Implications for Consumer Welfare and Trade. Edited by Mary Bonham Barry Krissoff, Julie Caswell, Global Food Trade and Consumer Demand for Quality. New York: Kluwer Academic/Plenum Publishers, 2002.
- Goshorn, Kent. "Social Rationality, Risk, and the Right to Know: Information Leveraging with the Toxics Release Inventory." *Public Understanding of Science* 5 (1996): 297-320.
- Grote, Ulrike. "Environmental and Food Safety Standards and International Trade: Concerns and Challenges for Developing Countries." Paper presented at the Sustaining Food Security and Managing Natural Resources in Southeast Asia-Challenges for the 21st Century, Chiang Mai, Thailand 2002.
- Gruere, Guillaume. "A Preliminary Comparison of the Retail Level Effects of Genetically Modified Food Labeling Policies in Canada and France." *Food Policy* 31, no. 2 (2006): 148-61.
- ——. "International Trade-Related Regulations of GM Food: What Policies for Developing Countries." International Food Policy Research Institute, 2007.
- Gruere, Guillaume, Colin Carter, and Hossein Farzin. "Mandatory Versus Voluntary Labeling of Genetically Modified Food." (2003), http://xiguai.tripod.com/ms.pdf.
- Gulbrandsen, Lars. "Creating Markets for Eco-Labeling: Are Consumers Insignificant?" International Journal of Consumer Studies 30, no. 5 (2006): 477-89.

- Hale, Monica. "Ecolabeling and Cleaner Production: Principles, Problems, Education and Training in Relation to the Adoption of Environmentally Sound Production Processes." *Journal of Cleaner Production* 4, no. 2 (1996): 85-95.
- Herrick, Clare. "Cultures of GM: Discourses of Risk and Labeling of GMOs in the UK and EU." *Area* 37, no. 3 (2005): 286-94.
- Hildebrand, Phillip M. The European Community's Environmental Policy, 1957-1992:

 From Incidental Measures to an International Regime? Edited by Andrew Jordan.

 Second ed, Environmental Policy in the European Union: Actors, Institutions and Processes. Sterling, VA: Earthscan, 2005.
- Hobbs, A.L, J. Hobbs, G.E. Isaac, and W. Kerr. "Ethics, Domestic Food Policy and Trade Law: Assessing the EU Animal Welfare Proposal to the WTO." *Food Policy* 27, no. 5-6 (2002): 437-54.
- Hobbs, Jill. Labeling and Consumer Issues in International Trade. Edited by James Rude Hans Michaelmann, Jack Stabler, Gary Story, Globalization and Agricultural Trade Policy. Boulder, CO: Lynne Rienner Publishers, 2001.
- "Traceability and Country of Origin Labeling." Paper presented at the Policy Dispute Information Consortium 9th Agricultural and Food Policy Information Workshop: Farm Policy Development and Tensions with NAFTA, Montreal, Canada 2003.
- Hobbs, Jill and Marni Plunkett. "Genetically Modified Foods: Consumer Issues and the Role of Information Asymmetry." *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie* 47, no. 4 (1999): 445-55.
- Hobbs, Jill and William Kerr. "Consumer Information, Labeling and International Trade in Agri-Food Products." *Food Policy* 31 (2006).
- Hoberg, George. "Risk, Science and Politics: Alachor Regulation in Canada and the United States." *Canadian Journal of Political Science* 23, no. 2 (1990): 257-77.
- ——. "Sleeping with an Elephant: The American Influence on Canadian Environmental Regulation." *Journal of Public Policy* 11, no. 1 (1991): 107-31.
- ——. "Trade, Harmonization, and Domestic Autonomy in Environmental Policy." Journal of Comparative Policy Analysis: Research and Practice 3, no. 2 (2001): 191-217.
- Hoberg, George and Kathryn Harrison. Risk, Science, and Politics: Regulating Toxic Substances in Canada and the United States. Montreal: McGill-Queen's University Press, 1994.

- Hollingsworth, Wendy. "Eco-Labeling and International Trade." Trade Hot Topics 21.
- Holmes, Peter and Alasdair Young. "Emerging Regulatory Challenges to the EU's External Economic Relations." Sussex: Sussex European Institute.
- Holzinger, Katharina and Christoph Knill. "Causes and Conditions of Cross-National Policy Convergence." *Journal of European Public Policy* 12, no. 5 (2005): 775-96.
- Hooker, Neil. "Food Safety Regulation and Trade in Food Products." *Food Policy* 24, no. 6 (1999): 653-68.
- Horgan, R and A Gavinelli. "The Expanding Role of Animal Welfare within EU Legislation and Beyond." *Livestock Science* 103, no. 3 (2006): 303-07.
- Horton, LR. "Risk Analysis and the Law: International Law, the World Trade Organization, Codex Alimentarius and National Legislation." *Food Additives and Contaminants* 18, no. 12 (2001): 1057-67.
- Howlett, Michael. "The Judicialization of Canadian Environmental Policy, 1980-1990: A Test of the Canada-United States Convergence Thesis." *Canadian Journal of Political Science* 27, no. 1 (1994): 99-127.
- Howse, Robert. "Democracy, Science, and Free Trade: Risk Regulation on Trial at the World Trade Organization." *Michigan Law Review* 98, no. 7 (2000): 2329-57.
- Hubbs, Marie. "Transatlantic Economic Community in Disarray and Needs Urgent Repairs, New Study Says." Toronto: C.D. Howe Institute, 2003.
- Hufbauer, Gary Clyde. "US-EU Trade and Investment: An American Perspective." Paper presented at the Transatlantic Persectives on the US and European Economies: Convergence, Conflict and Cooperation, Harvard University, April 11 2002.
- Huff, Bruce and Jane Owen. "The Canadian Food Regulatory System: Responding to Pressures for Change." Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie 47, no. 4 (1999): 387-96.
- ICTSD. "WTO Environment Committees Stuck on Role of Mea Secretariats, Eco-Labeling." *Bridges: Weekly Trade News Digest* 7, no. 25 (2003).
- Industry Canada. "Corporate Social Responsibility Eco-Labeling." edited by Industry Canada, 2001.
- ——. "The Convergence or Harmonization of Regulations and Standards." Ottawa: Industry Canada, 1998.

- Isaac, Grant and William Kerr. "Genetically Modified Organisms and Trade Rules: Identifying Important Challenges for the WTO." *The World Economy* 26, no. 1 (2003): 29-42.
- Isaac, Grant, William Kerr, and Martin Phillipson. "International Regulation of Trade in the Products of Biotechnology." 1-20. Saskatoon: Estey Centre for Law and Economics in International Trade, 2001.
- Isaac, Grant. "The SPS Agreement and Agri-Food Trade Disputes: The Final Frontier." The Estey Centre Journal of International Law & Trade Policy 5, no. 1 (2004): 43-55.
- Irving, Sarah, Rob Harrison and Mary Rayner. "Ethical Consumerism Democracy through the Wallet." *Journal of Research for Consumers*, no. 3 (2002).
- Jackson, Lee Ann. Who Benefits from Quality Labeling? Segregation Costs, International Trade and Producer Outcomes. Adelaide: Centre for International Economic Studies, 2002.
- Jessop, Bob. "The Regulation Approach, Governance and Post-Fordism: Alternative Perspectives on Economic and Political Change." *Economy and Society* 24, no. 3 (1995): 307-33.
- Jinji, Naoto. "International Trade in Biotechnology Products and Strategic Mandatory Labeling." Review of Reviewed Item (2003), http://www.econ.hit-u.ac.jp/~kenkyu/jpn/pub/DP/jinji-DP2003-1.pdf.
- Jordan, Andrew. Introduction: European Environmental Policy Actors, Institutions and Policy Processes. Edited by Andrew Jordan. Second ed, Environmental Policy in the European Union: Actors, Institutions and Processes. Sterling, VA: Earthscan, 2005.
- Joshi, Manoj. "Are Eco-Labels Consistent with World Trade Organization Agreements?" Journal of World Trade 38, no. 1 (2004): 69-92.
- Josling, Tim. "Who's Afraid of the GMOs? EU-US Trade Disputes over Food Safety and Biotechnology." Center for International Studies and the European Center of California, University of Southern California, 1999.
- Karl, Helmut and Carsten Orwat. "Environmental Labeling in Europe: European and National Tasks." *European Environment* 9, no. 5 (1999): 212-20.
- Kempf, Herve. La Guerre Secrete Des Ogm. Paris: Le Seuil, 2003.

- Kerr, William. "Who Should Make the Rules of Trade? the Complex Issue of Multilateral Environmental Agreements." *The Estey Centre Journal of International Law & Trade Policy* 3, no. 2 (2002): 163-75.
- Kerr, William and Jill Hobbs. Consumers, Cows and Carousels: Why the Dispute over Beef Hormones Is Far More Important Than Its Commercial Value. Edited by Nicholas Perdikis and Robert Read, The WTO and the Regulation of International Trade. Northampton, MA: Edward Elgar, 2005.
- Kettnaker, Vera. The European Conflict over Genetically Engineered Crops, 1995-1997. Edited by Doug Imig and Sidney Tarrow, Contentious Europeans: Protest and Politics in an Emerging Polity. Lanham, Maryland: Rowman and Littlefield Publishers, Inc., 2001.
- Knill, Christoph. "Introduction: Cross-National Policy Convergence: Concepts, Approaches, and Explanatory Factors." *Journal of European Public Policy* 12, no. 5 (2005): 764-74.
- Knill, Christopher and Duncan Liefferink. Environmental Politics in the European Union. Manchester: Manchester University Press, 2007.
- Kogan, Lawrence. "Looking Behind the Curtain: The Growth of Trade Barriers That Ignore Sound Science." 1-23. Washington, DC: National Foreign Trade Council, Inc., 2003.
- Kolodinsky, Jane. "Biotechnology and Provision of Consumer Information through Labeling." *Consumer Interests Annual* 46 (2000).
- Kratz, Stefan and Ralph Piotrowski. Eco-Labelling in the Globalised Economy. Edited by Alfred Pfaller and Marika Lerch, Challenges of Globalization: New Trends in International Politics and Society. London: Transaction Publishers, 2005.
- Kym Anderson, Chantal Pohl Nielsen. "GMOs, Food Safety and the Environment: What Role for Trade Policy and the WTO?" 1-22. Adelaide: Centre for International Economic Studies Adelaide University, 2000.
- Laffan, Brigid. "From Policy Entrpreneur to Policy Manager; the Challenge Facing the European Commission." *Journal of European Public Policy* 4, no. 3 (1997): 422-38.
- Lapan, Harvey and GianCarlo Moschini. "GMO Labeling and Trade: Consumer Protection or (Just) Protectionism?" In *Globalization, Biotechnology and Trade*. Tuscon, AZ: International Agricultural Trade Research Consortium, 2001.
- LaRocque, Jacqueline. "Cooperative Framework to Boost Business between Canada and EU." edited by Department of Foreign Affairs and International Trade, 2004.

- Lieberman, Sarah and Tim Gray. "The So-Called 'Moratorium' on the Licensing of New Genetically Modified (GM) Products by the European Union 1998-2004: A Study in Ambiguity." *Environmental Politics* 15, no. 4 (2006): 592-609.
- Lopez-Hurtado, Carlos. "Social Labeling and WTO Law." Journal of International Economic Law 5, no. 3 (2002): 719-46.
- Lupien, John. "The Precautionary Principle and Oter Non-Tariff Barriers to Free and Fair International Food Trade." *Critical Reviews in Food Science and Nutrition* 42, no. 4 (2002): 403-15.
- MacKenzie, Donald. "International Comparison of Regulatory Frameworks for Food Products of Biotechnology." 1-65. Ottawa: The Canadian Biotechnology Advisory Committee Project Steering Committee on the Regulation of Genetically Modified Foods, 2000.
- Maduro, Miguel Poiares. "So Close and yet So Far: The Paradoxes of Mutual Recognition." *Journal of European Public Policy* 14, no. 5 (2007): 814-25.
- Magnette, Paul. The Politics of Regulation in the European Union. Edited by Rodolphe Munoz Damien Geradin, and Nicolas Petit, Regulation through Agencies in the EU: A New Paradigm of European Governance. Northampton, MA: Edward Elgar, 2005.
- Majone, G. "De-Regulation or Re-Regulation? Policymaking in the European Community since the Single Act." *EUI Working Papers* 93, no. 2 (1993).
- Majone, G. *Theories of Regulation*. Edited by G. Majone, *Regulating Europe*. New York: Routledge, 1996.
- ------. The European Commission as Regulator. Edited by G. Majone, Regulating Europe. New York: Routledge, 1996.
- Malkonen, Ville. "Harmonization Versus Mutual Recognition of National Eco-Labels." University of Helsinki, VATT and HECER, 2005.
- Marius Brulhart, Alan Matthews. *EU External Policy*. Edited by Ali El-Agraa. 8 vols. Vol. 8, *The European Union: Economics and Policies*. Cambridge University Press, 2008.
- Mazey, Sonia and Jeremy Richardson. Environmental Groups and the Ec: Challenges and Opportunities. Edited by Andrew Jordan. Second ed, Environmental Policy in the European Union. Sterling, Va: Earthscan, 2005.

- Micklitz, HW and S Weatherill. "Consumer Policy in the European Community: Before and after Maastricht." *Journal of Consumer Policy* 16, no. 3-4 (2003): 285-321.
- Modl, Albert. "Common Structures in International Environmental Labeling Programs." 36-40. Augsburg: AT&T Global Information Solutions, 1995.
- Morth, Ulrika. "The EU as a Normative Power in the WTO?" Stockholms Centrum For Forskning om Offentlig Sektor, 2004.
- ———. "The EU as an Ethical Power in the WTO." Paper presented at the CIDEL Workshop: From Military to Civilian Power: the European Union at a Crossroads, Oslo, Norway 2004.
- Moynagh, James. "EU Regulation and Consumer Demand for Animal Welfare." AgBioForum 3, no. 2 and 3 (2000): 107-14.
- Nicolaodis, Kalypso. "Mutual Recognition of Regulatory Regimes: Some Lessons and Prospects." Jean Monnet Chair, 1997.
- Nicolaodis, Kalypso and Gregory Shaffer. "Transnational Mutual Recognition Regimes: Governance without Global Government." *Law and Contemporary Problems* 68, no. 2 (2005): 263-317.
- Nippon Keidanren Japan Business Federation. "Basic Positions on Trade and Eco-Labeling." (2003), http://www.keidanren.or.jp/english/policy/2003/027.html.
- Nunn, Jim. "Consumers' Association Stance on GM Food Raises Eyebrows." Review of Reviewed Item. CBC Marketplace (2002).
- Organization for Economic Co-Operation and Development. "Processes and Production Methods (Ppms): Conceptual Framework and Considerations on Use of Ppm-Based Trade Measures ", 1-52. Paris: OECD, 1997.
- Peck, Jamie and Adam Tickell. "Social Regulation after Fordism: Regulation Theory, Neoliberalism and the Global-Local Nexus." *Economy and Society* 24, no. 3 (1995): 357-86.
- Peltzman, Sam. "The Economic Theory of Regulation after a Decade of Deregulation." Brookings Papers on Economic Activity. Microeconomics (1989): 1-59.
- -----. "Toward a More General Theory of Regulation." *Journal of Law and Economics* 19, no. 2 (1976): 211-40.
- Perdikis, Nicholas. EU-US Trade in Genetically Modified Goods: A Trade Dispute in the Making. Edited by Nicholas Perdikis and Robert Read, The WTO and the Regulation of International Trade. Northampton, MA: Edward Elgar, 2005.

- Perdikis, Nicholas and Robert Read. The Political Economy of Protection and the Regulation of International Trade: Recent Disputes between the Eu and the United States. Edited by Nicholas Perdikis and Robert Read, The WTO and the Regulation of International Trade. Northampton, MA: Edward Elgar, 2005.
- Perdikis, Nicholas, William Kerr and Jill Hobbs. "Reforming the WTO to Defuse Potential Trade Conflicts in Genetically Modified Goods." *The World Economy* 24, no. 3 (2001): 379-98.
- Perdikis, Nick and William Kerr. "Can Consumer-Based Demands for Protection Be Incorporated in the WTO? The Case of Genetically Modified Foods." *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie* 47 (1999): 457-65.
- Peterson, J. "Decision-Making in the European Union: Towards a Framework for Analysis." *Journal of European Public Policy* 2, no. 1 (1995): 69-93.
- Philips, Peter and William Kerr. "Alternative Paradigms: The WTO Versus the Biosafety Protocol for Trade in Genetically Modified Organisms." *Journal of World Trade* 34, no. 4 (2000): 63-75.
- -----. "GMO Labeling: Threat or Opportunity?" AgBioForum 1, no. 1 (1998): 25-30.
- Pollack, Mark and Gregory Shaffer. "Biotechnology: The Next Transatlantic Trade War?" *The Washington Quarterly* 23, no. 4 (2000): 41-54.
- Posner, Richard. "Theories of Economic Regulation." *The Bell Journal of Economics and Management Science* 5, no. 2 (1974): 335-58.
- Post, Diahanna L. "The Precautionary Principle and Risk Assessment in International Food Safety: How the World Trade Organization Influences Standards." *Risk Analysis* 25, no. 5 (2006): 1260-73.
- Potter, Stephen and Mark Hinnells. "Analysis of the Development of Eco-Labeling and Energy Labeling in the European Union." *Technology Analysis & Strategic Management* 6, no. 3 (1994): 317-28.
- Prakash, Aseem and Kelly Kollman. "Biopolitics in the EU and the US: A Race to the Bottom or Convergence to the Top?" *International Studies Quarterly* 47, no. 4 (2003): 617-41.
- Przyrembel, H. "Food Labeling Legislation in the EU and Consumers Information." Trends in Food Science and Technology 15 (2004): 360-65.

- Quinlan, Joseph. "Drifting Apart or Growing Together? The Primacy of the Transatlantic Economy." 1-35. Washington, D.C: Center for Transatlantic Relations, 2003.
- Read, Robert. Process and Production Methods and the Regulation of International Trade. Edited by Nicholas Perdikis and Robert Read, The WTO and the Regulation of International Trade. Northampton, MA: Edward Elgar, 2005.
- -----. "Process and Production Methods and the Regulation of International Trade." The Estey Centre Journal of International Law & Trade Policy 5, no. 2 (2004): 123-46.
- Roberts, Donna. The WTO Agreement on the Application of Sanitary and Phytosanitary Measures: A Catalyst for Regulatory Reform? Edited by James Rude Hans Michaelmann, Jack Stabler, Gary Storey, Globalization and Agricultural Trade Policy. Boulder, CO: Lynne Rienner, 2001.
- Robinson, Peter. "Eco-Labels and Free Riding." 1-38: School of Economics, University of New South Wales, Sydney, 2003.
- Rootes, Christopher. The Transformation of Environmental Activism: An Introduction.

 Edited by Christopher Rootes, Environmental Protest in Western Europe. Oxford:
 Oxford Scholarship Online Monographs, 2003.
- Rucht, Dieter, ed. Lobbying or Protest? Strategies to Influence EU Environmental Policies. Edited by Doug Imig and Sidney Tarrow, Contentious Europeans: Protest and Politics in an Emerging Polity. Lanham, Maryland: Rowman and Littlefield Publishers, Inc., 2001.
- Runge, Ford and Lee Ann Jackson. "Labeling, Trade and Genetically Modified Organisms: A Proposed Solution." *Journal of World Trade* 34, no. 1 (2000): 111-22.
- Sammer, Katherina and Rolf Wustenhagen. "The Influence of Eco-Labeling on Consumer Behaviour Results of a Discrete Choice Analysis." 1-28: Institute for Economy and the Environment, University of St. Gallen, Switzerland, 2005.
- Schmidt, Susanne K. "Mutual Recognition as a New Mode of Governance." *Journal of European Public Policy* 14, no. 5 (2007): 667-81.
- Segerson, Katherine. "Mandatory Versus Voluntary Approaches to Food Safety." *Agribusiness* 15, no. 1 (1999): 53-70.
- Sheldon, Ian. "Regulation of Biotechnology: Will We Ever 'Freely' Trade GMOs?" European Review of Agricultural Economics 29, no. 1 (2001): 155-76.

- Sherrington, Phillippa. The Council of Ministers: Political Authority in the European Union. New York: Continuum International Publishing Group, 2000.
- Short, James. "The Social Fabric at Risk: Toward the Social Transformation of Risk Analysis." *American Sociological Review* 49, no. 6 (1984): 711-25.
- Skogstad, Grace. "Legitimacy and/or Policy Effectiveness?: Network Governance and GMO Regulation in the European Union." *Journal of European Public Policy* 10, no. 3 (2003): 321-38.
- Smyth, Stuart and Peter Philips. "Labeling to Manage Marketing of GM Foods." *Trends in Biotechnology* 21, no. 9 (2003): 389-93.
- Standing Committee on Foreign Affairs and International Trade. "Crossing the Atlantic: Expanding the Economic Relationship between Canada and Europe." edited by Department of Foreign Affairs and International Trade, 2001.
- Stigler, George. "The Theory of Economic Regulation." *The Bell Journal of Economics and Management Science* 2, no. 1 (1971): 3-21.
- Stilwell, Matthew and Brennan Van Dyke. "An Activist's Handbook on Genetically Modified Organisms and the WTO." 1-17. Geneva: Centre for International Environmental Law, 1999.
- ———. "Codex, Substantial Equivalence and WTO Threats to National GMO Labeling Schemes." Washington, DC: Center for International Environmental Law, 1998.
- Streiffer, Robert and Alan Rubel. "Choice Versus Autonomy in the GM Food Labeling Debate." *AgBioForum* 6, no. 3 (2003): 141-42.
- Strick, John. The Economics of Government Regulation: Theory and Canadian Practice.

 Toronto: Thompson Educational Publishing, Inc, 1994.
- Sunstein, Cass. Laws of Fear: Beyond the Precautionary Principle. New York: Cambridge University Press, 2005.
- Syskes, Alan O. "Regulatory Competition or Regulatory Harmonization? A Silly Question?" *Journal of International Economic Law* 3, no. 2 (2000): 257-64.
- -----. "The (Limited) Role of Regulatory Harmonization in International Goods and Services Markets." *Journal of International Economic Law* 2, no. 1 (1999): 49-70.
- Thiermann, A.B. and S. Babcock. "Animal Welfare and International Trade." Rev. sci. tech. Off. int. Epiz 24, no. 2 (2005): 747-55.

- Thorpe, Andy and Catherine Robinson. "When Goliaths Clash: US and EU Differences over the Labeling of Food Products Derived from Genetically Modified Organisms." *Agriculture and Human Values* 21, no. 4 (2004): 287-98.
- Tiberghien, Yves. "The Battle for the Global Governance of Genetically Modified Organisms: The Roles of the European Union, Japan, Korea, and China in a Comparative Context." 1-49: Les Etudes du CERI, 2006.
- Tothova, Monika and James Oehmke. "Genetically Modified Food Standards as Trade Barriers: Harmonization, Compromise, and Sub-Global Agreements." *Journal of Agricultural and Food Industrial Organization* 2, no. 2 (2004).
- Van Nijatten, D. (2005). Participation and Environmental Policy in Canada and the United States: Trends Over Time. *Policy Studies Journal*, 27(2), 261-285.
- Veeman, Michele. "Changing Consumer Demand for Food Regulations." Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie 47, no. 4 (1999): 401–09.
- Veeman, Michele, Wictor Adamowicz, Wuyang Hu and Anne Huennemeyer. "Canadian Consumer Perceptions and Choice Behaviour for GM Food." Paper presented at the Food Safety: Consumer, Trade, and Regulation Issues, Hangzhou, Zheijiang, PR China, October 10-11 2003.
- Victor, David and Rebecca Weiner. A Great Transformation in World Trade Law: Can the WTO Stay Afloat? Edited by Mary Bonham Barry Krissoff, Julie Caswell, Global Food Trade and Consumer Demand for Quality. New York: Kluwer Academic/Plenum Publishers, 2002.
- Wallace, Helen and Alasdair Young. Regulatory Politics in the Enlarging European Union. Manchester: Manchester University Press, 2000.
- Webster, A. "Farm Animal Welfare: The Five Freedoms and the Free Market." *The Veterinary Journal* 161, no. 3 (2001): 229-37.
- Weyerbrock, Silvia and Tian Xia. "Technical Barriers in US/Europe Agricultural Trade." *Agribusiness* 16, no. 2 (2000): 235-51.
- Whiting, Terry. "Legislation for Animal Welfare." 1-13. Winnipeg: Office of the Chief Veterinarian, Manitoba Agriculture Food and Rural Initiatives, 2005.
- Wilkins, DB, C. Houseman, R. Allan, MC Appleby, D. Peeling and P. Stevenson.

 "Animal Welfare: The Role of Non-Governmental Organizations." *Rev Sci Tech*24, no. 2 (2005): 625-39.

- World Trade Organization Secretariat. "Information Relevant to the Consideration of the Market Access Effects of Ecolabeling Schemes." 2000.
- World Trade Organization Secretariat. "Elements of a Possible Understanding to the TBT Agreement on Ecolabeling." 1996.
- Wouters, Jan and Sten Verhoeven, ed. Regulation and Globalization: Interactions between International Standard-Setting Agencies and the European Union. Edited by Rodolphe Munoz Damien Geradin, and Nicolas Petit, Regulation through the Agencies in the EU: A New Paradigm of European Goverance. Northampton, MA: Edward Elgar, 2005.
- Zago, Angelo and Daniel Pick. "The Welfare Effects of the Public Provision of Information: Labelling Typical Products in the European Union." 1-21: University of Verona and ERS-USDA, 2002.
- Zerbe, Noah. "Risking Regulation, Regulating Risk: Lessons from the Transatlantic Biotech Dispute." *Review of Policy Research* 24, no. 5 (2007): 407-23.

Appendix

Chart 1:

Canada: Total Trade in Goods and Services (\$)

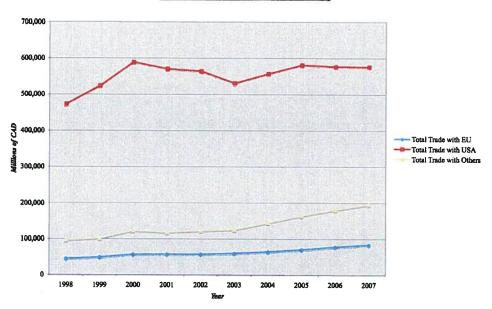
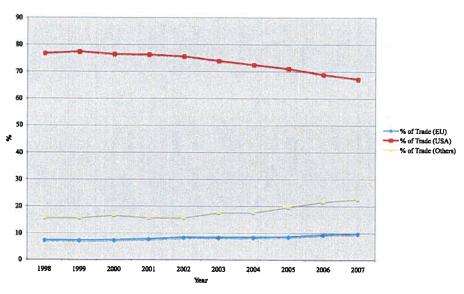


Chart 2:

Canada: Total Trade in Goods and Services (%)



Source of Data: Statistics Canada