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Occupational health and safety standards and the potential outcomes of privatized regulation.

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Occupational Health and Safety Standards and the Potential Outcomes of
Privatized Regulation

by

Liam McCarthy

A Thesis

Submitted to the Faculty of Graduate Studies and Research
Through Political Science

In Partial Fulfillment of the Requirements for
The Degree of Master of Arts at the
University of Windsor

Windsor, Ontario, Canada

2003

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Abstract

This Masters thesis in political science examines the recent introduction of voluntary compliance mechanisms (e.g. third party verification, experience rating, etc...) into the field of occupational health and safety. It analyses these policies from a historic and economic perspective and examines the Canadian experience to predict likely outcomes of these mechanisms. The thesis concludes that these mechanisms have the potential to be complementary mechanisms to government regulation but are unlikely to act as appropriate substitutes for government action. This is due to the inherent failings of the market's ability to regulate occupational health and safety even with its modern permutations.

In loving memory of my great uncle

Fred H. Goette Jr.

Who died of mesothelioma in February 2000,

After having been exposed to asbestos in the workplace

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Table of Contents

ABSTRACT		iii
DEDICATION		iv
ACKNOWLEDGEMENTS		v
LIST OF TABLES		vii
LIST OF FIGURES		viii
CHAPTER		
1	LITERATURE REVIEW AND METHODOLOGY	1
2	HISTORY OF OCCUPATIONAL HEALTH AND SAFETY LEGISLATION IN CANADA	26
3	OCCUPATIONAL HEALTH AND SAFETY REGULATORY MODELS: PRIVATE AND STATE BASED MODELS	64
4	CURRENT TRENDS IN OCCUPATIONAL HEALTH AND SAFETY LEGISLATION	95
5	CONCLUSION	115
	BIBLIOGRAPHY	128
	VITA AUCTORIS	140

List of Tables

Tables		Page
3.1	Comparisons of Occupational Health and Safety Management Systems	91
4.1	Provincial Occupational Health and Safety Legislation: Policy Approach Indicators	99
4.2	Number of Accepted Time-Loss Injuries, by Province 1990-2001	104
4.3	Number of Employed Persons 1990-2001 (thousands)	105
4.4	Accepted Time Loss Injuries Per 1000 Workers 1990-2001	106
4.5	% Change in Number of Claims Reported 1991-2001	107

List of Figures

Figure		Page
1.1	Actors employed by the various models at various stages in the legislative process	24
1.2	Regulatory Paradigms in Occupational Health and Safety Legislation	25
3.1	Labour Market Policy Cycle	68
3.2	Accident Costs, Prevention Costs, and Safety Levels	72
3.3	"Prisoner's Dilemma" and Market Regulation of Occupational Health and Safety	73
3.4	"Conceptual savings from reduced enforcement costs through an ISO-harmonized third-party registration policy"	78
3.5	Elements of the self-regulation model under a management system (e.g. ISO)	85
4.1	Policy Mechanisms Employed in Canada to Prevent Occupational Health and Safety Injuries and Diseases	97
4.2	Occupational Distribution of Employment	110

Chapter 1

Literature review and methodology:

The International Labour Organization has estimated that there are over 250 million occupational injuries and 300,000 fatal accidents per year throughout the world.¹ In Canada, there are over 373,000 cases of occupational injuries per year (2001), and somewhere between 77,900 and 112,000 new cases of occupational disease per year (1994).² In order to address these problems, occupational health and safety legislation has become increasingly common in the industrialized nations of the world. Accordingly, debates have been sparked over the need for more effective health and safety legislation and what constitutes the best approach to reducing occupational disease, injuries and fatalities.

Occupational diseases are one of the more difficult forms of occupational fatalities to reduce due to the relatively ambiguous cause and effect relationship and the latency factor. This renders the proper course of action over occupational disease to be more difficult to ascertain. Elling summarizes this difficulty:

Problems of establishing standards and adequate enforcement procedures when trained inspection and other personnel and resources are lacking are monumental. Furthermore, the increasing complexity and "high" technology of modern industry has led to the recognition of many new hazards, some of which (e.g. vinyl chloride) may even be more dangerous than most previously known health and safety risks. and others, such as asbestos,

¹ Based on 1998 statistics.

International Labour Organization, *New Methodologies for collecting Occupational Injury Data*, <http://www.ilo.org/public/english/bureau/stat/download/ktisi.pdf>, as cited on February 6, 2003. For methods see:

<http://www.ilo.org/public/english/bureau/stat/techmeet/16thicis/report3.htm>.

² Association of Workers Compensation Boards of Canada, *Key Statistical Measures-2001*, February 2003.

Allen Kraut, "Estimates of the Extent of Morbidity and Mortality Due to Occupational Diseases in Canada," *American Journal of Industrial Medicine*, Vol.25, 1994, p.267.

(have)... a 20-35 year latency period between exposure and appearance of lung cancer and mesotheliomas.³

The increasing rate of technological development and its plethora of new chemicals, therefore, creates a particular problem with recognizing and assessing risk.

Due to this uncertainty in this area of public policy, it is important to review various strategies as they pertain to occupational health and safety. It is also necessary to specify the appropriateness of these strategies being employed by various levels of governance, whether it be in the workplace, the state, or at the supra national level. With the ever increasing rate of technological change and economic liberalization, a combination of supra national and plant level regulation of occupational health and safety may be the best deterrent against occupational injuries and disease.

The appropriate roles of various actors at the supra national, state and workplace levels in occupational health and safety continue to be an area of concern in the academic and legislative communities. As Linda Rosenstock et al. have demonstrated, there has been a recent emphasis on occupational health and safety research in the United States, the United Kingdom, and the Netherlands.⁴ An example of the growing interest in occupational health and safety research in Canada was the establishment in 1996 of the British Columbia Ministry of Labour's *Royal Commission on Worker's Compensation*.⁵

³ Ray H. Elling, "Industrialization and Occupational Health in Underdeveloped Countries", in Navarro, *Imperialism, Health and Medicine: Politics Health and Medicine Series*, (New York: Baywood Publishing Company 1974), p.209.

⁴ Linda Rosenstock, Olenec, Christopher and Gregory R. Wagner, "Public Health Policy Forum: The National Occupational Research Agenda: A Model of Broad Stakeholder Input into Priority Setting", *American Journal of Public Health*, Vol.88, no.2, February 1998, p.356.

⁵ John Cashore, January 19, 1998 Letter, as cited on BC Ministry of Labour: Ministry of

Then minister of Labour, John Cashore, cited B.C.'s second "highest workplace injury rate in Canada (twice as high as Ontario and Alberta)" which amounted to 758 injury claims a day and 3 fatalities a week.⁶ Cashore concluded that "these human costs (are) completely unacceptable" and that improvement was needed to British Columbia's laws.⁷

Focusing on improvement at the workplace level, as part of the B.C. Royal Commission, John O'Grady released a study in May 1998 entitled *The Role of Joint Committees in Workplace Health and Safety*. Among his findings were that the employment structure could not "account for BC having the highest accepted time loss injury rate of all Canadian jurisdictions."⁸ O'Grady outlines the three basic strategies for reduction of injury rates as being "the administrative and regulatory model, the market incentive/disincentive model, and the internal responsibility system."⁹

The administrative and regulatory model relies on "timely and appropriate" standards and effective enforcement. The market model is based on performance indicators that are used for private sector workers compensation premiums. The difficulty with this model is its lack of applicability to small employers (performance varies dramatically).¹⁰ Also, the

Labour Activities, *Royal Commission on Workers Compensation: Letters to Stakeholders*, <http://www.labour.gov.bc.ca/rcwb/unions.htm>, as cited on Oct.20, 1999, p.1.

⁶ International Labour Organization, *Occupational Safety and Health: Current Work*, <http://www.ilo.org/public/english/90travai/sechyg/current1.htm>, as cited on Oct.20, 1999, p.1.

⁷ Ibid, p.1.

⁸ John O'Grady, *The Role of Joint Committees in Workplace Health and Safety: A Review of the Legislation and Previous Studies*, May, 1998, as cited in *Royal Commission on Workers' Compensation in BC*, <http://www.qp.gov.bc.ca/rcwc/research/index.htm>, as cited on October 20, 1999, p.2.

⁹ Ibid, p.3.

¹⁰ Ibid, p.3.

possibility of premiums being shifted onto the employee, which in a "no fault" model is the case in most of Canada, removes the disincentive for employers to endanger employees by having higher costs result from dangerous work conditions.¹¹

The internal responsibility system is based on union practices developed in the 1950s and 1960s in the mining sector and to some degree in the manufacturing sector.¹² The internal responsibility system is Canada's main approach to occupational health safety, and was first introduced in Saskatchewan in 1972.¹³ The internal responsibility system is based on three central principles; joint health and safety committees, the right to refuse unsafe work, and the right to be informed of unsafe work.¹⁴

Norman A. Keith has also outlined central "theories or models of occupational regulation and compliance".¹⁵ Keith states that the four key models are the collective bargaining model, the tax model, the criminal sanctions model, and the regulatory partnering model. The collective bargaining model involves the employer directly negotiating workplace conditions with employee representation (union). The tax model is based on the assumption that the firm is only concerned with profit maximization and therefore the most effective way to enforce health and safety is through affecting the firm's "bottom line". The criminal sanctions model views workplace accidents and injuries as a criminal matter in which those who are

¹¹ Ibid, p.2.

¹² Ibid, p.3

¹³ Government of Saskatchewan: *Health and Safety*, <http://www.labour.gov.sk.ca/safety/fast/general.htm>, as cited on Oct.19, 1999, p.1.

¹⁴ O'Grady, p.3.

¹⁵ Norman A. Keith, *A Practical Guide to Occupational Health and Safety Compliance in Ontario*, (Aurora: Aurora Professional Press, 2000), p.3.

deemed liable ought to be punished and that the said punishment will serve as a deterrent.¹⁶

Unlike the criminal sanctions model, the "regulatory partnering" model is essentially a voluntary compliance model where business and government work together towards consensus standards and regulatory consistency between jurisdictions with a reduced emphasis on establishment of fault. This model also seeks to incorporate a more holistic view of the costs associated with workplace accidents (e.g. property damage and lost productivity), essentially shifting the focus towards the cost to the firm rather than the cost to the injured individual.¹⁷

Included in O'Grady's submission was an examination of firm level responses to reducing injury rates. The review focused on primarily "empirical work on the effectiveness of joint committees in reducing injury rates in Canada, the US and abroad...., contributing [factors] to the effectiveness or ineffectiveness of joint committees and [ascertaining what] joint committees can reasonably be expected to address."¹⁸ O'Grady notes that the inclusion of physicians as non-voting members of joint committees has been correlated with Quebec's recent decline in occupational injury rates.¹⁹ While O'Grady comments that the physician factor warrants "serious consideration" when developing strategies around joint committees, he was unable to draw many other conclusions based on statistics. O'Grady's overall empirical assessment was that "similar policies respecting internal responsibility can be associated

¹⁶ Keith, p.3,4.

¹⁷ Keith, p.4.

¹⁸ O'Grady, p.5.

¹⁹ Ibid, p.16.

with strikingly different results, if the principles of regulation and administration differ significantly or if there are marked differences in the extent of cross-subsidization in the structuring of WCB premiums."²⁰

Other studies into the effectiveness of joint committees included Reschenthaler's 1979 study on occupational disease in Alberta, Saskatchewan and B.C., which concluded that the joint committee system is "less effective in dealing with occupational health issues than with safety issues."²¹ Cooke and Gautschi concluded in a 1980 Maine manufacturing study, that plant specific initiatives were more effective in reducing workplace injuries than were outside regulatory activities.²² A 1984 Massachusetts study by Boden et al. concluded that effective joint committees could serve as a substitute for Occupational Safety and Health Administration enforcement.²³

Speaking on the issue of effective joint committees, the 1986 study by the Advisory Council Health and Occupational Safety claimed that there was a lack of training and information on the joint committees. The Advisory Council stated that "unless fully developed through careful legislation and implementation, through training and education, and unless fully integrated with the workplace, the joint health and safety committee leads not to self

²⁰ Cross-subsidization refers to multiple sources of funding for workers compensation. Some US states have the premiums fully paid for by the employee while on the other extreme some governments such as Sweden fully subsidize their respective system. Many systems also include the employer.

Ibid, p.19.

²¹ Reschenthaler, *Occupational Health and Safety in Canada: The Economics and Three Case Studies*, 1979, as cited in O'Grady, p.32.

²² Cooke et al., "OSHA, Plant Safety Programs, And Injury Reduction," as cited in O'Grady, p.33.

²³ Boden et al., "The Impact of Health and Safety Committees: A Study Based on Survey Interview and Occupational Safety and Health Administration Data", as cited in O'Grady, p.33.

regulation, but rather self deception.²⁴

More recently, the 1991 Havlovic study concluded that BC's relatively rapid decline (compared to California, Oregon and Washington) in accident and fatality rates in the BC logging industry from 1940 to 1989 was partially related to BC's Health and Safety legislation.²⁵ The 1996 Lewchuk, Robb and Walters study of Ontario's Bill 70's concluded that since joint committees were established in the manufacturing sector and not in the retail sector, that the relatively larger drop in injury rate in the manufacturing sector implied that the committees were effective.²⁶

There is been a fair amount of empirical research on the effects of the adversarial relationships on workplace health and safety. In 1977, Kochan et al. conducted a US study which concluded that "major safety improvements appear to be less a function of union participation in a safety committee than on the direct pressure of OSHA (Occupational Safety and Health Administration) regulations."²⁷ A 1990 Walters and Denton study concluded that unionized workers were more likely to be aware of their right to refuse work, and by logical extension this may be a factor in reducing injury rates.²⁸

²⁴ Advisory Council on occupational Health and Occupational Safety, 1986, as cited in O'Grady, p.30,36.

²⁵ Havlovic, "Safety Committees and Safety Education in Reducing Risk of Death: The Experience of the British Columbia Logging Industry (1940-1989)" as cited in O'Grady, p.29. While the accident rate in the logging industry may have been reduced B.C.'s health and safety legislation, it is important to note that B.C. has a relatively poor track record in reducing occupational health injuries. O'Grady, p.2.

²⁶ Lewchuk et al., "The Effectiveness of Bill 70 and joint Health and safety Committees in reducing Injuries in the Workplace: The case of Ontario", as cited in O'Grady, p.19-20.

²⁷ Kochan et al., *The Effectiveness of Union -Management Safety and Health Committees*, as cited in O'Grady, p.34.

²⁸ Walters and Denton, "Workers' Knowledge of their Legal Rights and Resistance to Hazardous Work", 1990, as cited in O'Grady, p.29.

Pragnell's 1994 Australian study concluded that only 9% of non-union workplaces had safety committees and that committee establishment was less likely where there was a higher proportion of part time employees.²⁹

Levesque's 1995 study on the use coercive bargaining tactics of 71 unionized Quebec manufacturing firms lends support to the argument that workplace health and safety cannot be divorced from the broader context of conflicting priorities between labour and management.³⁰ The 1995 Reilly et al. United Kingdom study correlated joint committees, in which employee's representatives were selected by the union, with reduced injuries.³¹ Judging by the conclusions of these studies the impact of the adversarial relationship is somewhat inconclusive.

Regardless of the impact of the adversarial system, the International Labour Organization acknowledges a global change in emphasis in Health and Safety Policy from an adversarial framework towards "collaboration";

Adversarial enforcement activities (are changing over to) the development of collaborative partnerships for the management of safety and health at the workplace. Reports of public inquiries into major industrial accidents and fires attach considerable importance to the establishment of safety culture ...in which emphasis is placed on sound managerial systems and voluntary action.³²

This quotation signals a global trend towards voluntary compliance models.

The move in the United States towards voluntary compliance has been cited

²⁹ Pragnell, *Occupational & Health Committees in NSW: An Analysis* for the AWIRS Data, 1994, as cited in O'Grady, p.35-36.

³⁰ Only 18 % of joint committees were both parties confined to persuasive tactics. Levesque, "State Intervention in occupational Health and Safety: Labour Market Committees Revisited", 1995, as cited in O'Grady, p.20.

³¹ Reilly et al., "Unions, Safety Committees and Workplace Injuries", as cited in O'Grady, p.34.

³² International Labour Organization, p2-4.

by David Rosner and Gerald Markowitz as being related the industry lobbies' powerful influence over government.³³

This voluntary approach is the primary focus of the United States Occupational Safety and Health Association. While their research indicates only a 30 per cent compliance rate with their program, OSHA cites that within this "voluntarily compliant" sector, workday injury rates are 60 per cent below industry averages.³⁴ This approach is summarized by the secretary of the Occupational Safety and Health Administration as favoring "performance standards over specification standards" and will "rely on a systems approach" to "address problems in a practical framework."³⁵ Due to the successes within the compliant sector, OSHA is emphasizing a flexible approach by allowing companies to have greater control over how they will meet performance standards and relying primarily on persuasion rather than coercion to meet these goals.

The voluntary approach has been criticized by a recent New Jersey study on OSHA reform entitled "Safety and Health Conditions, Practices, and Priorities for OSHA Reform: A Comparison of Views of New Jersey Union Members and Safety and Health Professionals."³⁶ Michele Ochsner concluded in this case study that voluntary compliance has rendered OSHA "largely

³³ David Rosner and Markowitz, Gerald, "Battle for Breath: Industry Lobbyists, Government Watchdogs, and the Silicosis Crisis, *Dissent*, Spring 1998, p.44-48.

³⁴ Gregory R. Watchman, "The Voluntary Protection Programs", speech before the Voluntary Protection Program Participants' Association Conference, New Orleans, September 9, 1997, as cited on OSHA Speeches, p.1.

³⁵ Charles N. Jeffress, "OSHA: A View of Today and Tomorrow", speech at the Risk Management Forum, Chicago, October 12, 1999, as cited in OSHA speeches, p.1.

³⁶ Michele Ochsner, "Safety and Health Conditions, Practices, and Priorities for OSHA Reform: A Comparison of Views of New Jersey Union Members and Safety and Health Professionals", *New Solutions*, Vol. 9 (1), 1999, p.61.

irrelevant" in the opinion of the majority of union members and a large minority of health and safety professionals surveyed.³⁷ Ochsner also concludes that "worker involvement" is a necessary but not a sufficient condition for effective occupational health and safety programs.³⁸

Dr. Charlene Gannage has also analyzed the effectiveness of "flexible" labour market approaches such as voluntary compliance models in a 1999 study on *The Health and Safety Concerns of Immigrant Women Workers in the Toronto Sportswear Industry*. In this study Gannage argued that free trade induced "flexible" labour markets that worsened occupational health and safety. Gannage argues that this occurs because a weakened union results in a weakened advocacy position and that health and safety legislation becomes a secondary concern to the pressures of globalized competition.³⁹

The pressures of globalized competition and its new trade regimes on individual governments regulating hazardous substances has been analyzed by the Physicians for a Smoke Free Canada in conjunction with the Commonwealth Medical Society. These two organizations raised the concern that under GATT "a country may be challenged to prove both that its measures are "necessary" to protect life, health or the environment and that

³⁷Ibid, p.61.

³⁸Ibid, p.62.

³⁹ The specific example referring to unions is that worker fear of jobs being contracted out will lead to reduced reporting of health and safety problems or violations. The central example of liberalized market forces leading to worsened health and safety is the argument about "speed up" (pressure to increase productivity) induced injuries. Charlene M. Gannage, "The Health and Safety Concerns of Immigrant Women Workers in the Toronto Sportswear Industry", *International Journal of Health Services*, Vol. 29 No.2, 1999, p.409-429.

there is no less trade-restrictive option".⁴⁰ These groups go on to cite "Canada's appeal in Autumn 2000 of the WTO ruling upholding France's ban on asbestos" and "U.S. objections to European Commission proposals to block entry of genetically modified organisms" as examples of the tremendous power that is granted to the World Trade Organization.⁴¹ The implicit argument to be made here is whether or not the voluntary compliance model is being instituted through multilateral trade agreements.

Another broad based analysis involved a comparison of these various approaches to health and safety by consulting firm Perrin, Thorau & Associates which prepared a *Comparative Review of Workers' Compensation Systems and Governance Models* for the *Royal Commission on Workers Compensation in B.C.*⁴² Within this study a comparison on occupational health safety legislation was done between all the Canadian and Australian provinces, the American states of Michigan, Oregon, Texas, Washington and the national systems of Germany, New Zealand, and Sweden.⁴³ Health and Safety and Workers Compensation legislation was treated as a combination because health and safety occupation usually arises out of the desire to reduce expenditures on compensation claims.⁴⁴ According to this study, the

⁴⁰ Cynthia Collard, Collishaw, Neil, and Michelle Swenarchuk, *An Introduction to International Trade Agreements and their impact on Public Measures to Reduce Tobacco Use*, (Ottawa: Bird Dog Design 2001) , p.8.

⁴¹ Collard, p.8.

The United States case against the European Union on its de facto GMO ban is ongoing and Canada lost its appeal at the WTO. The main criticism though has less to do with the outcomes of this process than it does with the WTO having jurisdiction over health and environmental policies.

⁴² Perrin, Thorau & Associates Ltd., *Comparative Review of Workers' Compensation Systems and Governance Models*, January 12, 1998, as cited in *Royal Commission on Workers' Compensation in BC*, <http://www.qp.gov.bc.ca/rcwc/research/index.htm>, as cited on Oct.20, 1999, p.5.

⁴³ Ibid, p.5 (of the index).

⁴⁴ Ibid, p.14.

major difficulty with making a performance based comparison of occupational health and safety legislation is "the lack of standardized information."

Part of the difficulty with data collection lies with the fact that jurisdictions have introduced a wide variety of legislation from the "statutory imposition of workplace health and safety committees, to financial incentives."⁴⁵ Categorizing types of legislation is also difficult as "no jurisdiction in Canada, or abroad, relies wholly on one strategy."⁴⁶ As a consequence, the International Association of Industrial Accident Boards and Commissions is currently attempting to "develop a list of data elements that are essential to creating a comprehensive and standardized data set... to help identify the causes of workplace injuries and illnesses....(and) evaluate the impact of legislative and regulatory changes, and facilitate inter-jurisdictional comparisons."⁴⁷

The particular difficulty in ascertaining causation or liability in cases of occupational disease has led some theorists to argue that occupational diseases ought to be regulated in the same manner as environmental regulation. Hashimoto et al. in discussing asbestos removal from schools, have argued that occupational legislation focuses on "the identification of specific injuries to workers" and environmental regulation employs cost-

⁴⁵ Ibid, p.21.

⁴⁶ O'Grady, p.3.

The strategies referred to here are IRS, incentive/disincentive model and the regulatory model. O'Grady clarifies this point by stating that these strategies should not be viewed in terms of substitutes but rather as an issue of appropriate balance.

⁴⁷ Perrin et al. , p.17.

benefit analysis and seeks to reduce aggregate pollution in geographical regions.⁴⁸ The difference is therefore that environmental regulation is focused upon the industry or regional level and occupational health regulation is more focused at the firm level by setting limits of hazard exposure for individual firms. They argue that a hybrid approach is appropriate to counteract occupational disease. The spreading of liability implicit to the environmental approach could reduce hazard exposure evenly without reference to a particular region or firms' wealth or lack thereof and would also help ensure compensation for those affected.⁴⁹

As part of the debate on whether or not health and safety ought to be treated in a similar fashion to environmental regulation, Beth J. Rosenberg et al. have attempted to create an analogous assessment process. They argue that current health and safety legislation information gathering does not properly incorporate all the relevant effects of a given regulation or lack thereof. Accordingly, they have proposed that a "Work Environmental Impact Assessment ... analogous to the Environmental Impact Assessment be established (in the United States)."⁵⁰ Within this assessment they have argued that there ought to be consideration made for the employment effects, community and public health effects, the international effects (e.g.

⁴⁸ Dean M. Hashimoto, Brennan, Troyen A., and David C. Christian, "Should Asbestos Be Regulated on an Environmental or Occupational Basis," in Landrigan, *The Third Wave of Asbestos Disease: Exposure to Asbestos in Place*, (New York: The New York Academy of Sciences, 1991), p.610.

⁴⁹ Hashimoto et al. p.609-611.

⁵⁰ Beth J. Rosenberg, Barbeau, Elizabeth. Rafael Moure-Eraso, and Levenstein, Charles, "The Work Environment Impact Assessment: A Methodological Framework for Evaluating Health-Based Interventions," *American Journal of Industrial Medicine*, vol. 39, 2001, p.218.

trade regulations), economic effects and other miscellaneous effects.⁵¹ This approach is suggested to reduce unintended outcomes from health and safety legislation.

Leslie Stayner has criticized the risk assessment process as it applies to occupational disease:

The requirement for risk assessments has become a mathematical straightjacket for regulatory agencies who increasingly appear to be in a state of "paralysis by analysis." What makes the risk assessment process so difficult for regulatory agencies? The problem is that all stages of the risk assessment process (hazard identification, dose-response analysis, exposure assessment, and risk characterization) are fraught with uncertainty, which frequently leads to acrimonious debates among scientists and others about how best to quantify it.⁵²

Uncertainty might, therefore, according to Stayner, render risk assessment for occupational health and safety a futile exercise as it pertains to occupational disease.

Conversely, both Samuel Epstein and Robert N. Proctor have argued that the central problem is not a lack of knowledge but rather a lack of political will power to act to reduce occupational and environmental cancers.⁵³ To quote Epstein, "much is known about the science of cancer, its prevention depends largely, if not exclusively, on political action."⁵⁴ Epstein focuses on

⁵¹ Rosenberg et al., p.224.

⁵² Leslie Stayner, "Protecting Public Health in the Face of Uncertain Risks: The Example of Diesel Exhaust," *American Journal of Public Health*, Vol.89, No.7, (1999), p.991.

⁵³ Samuel S. Epstein, *The Politics of Cancer Revisited*, (Fremont center: East Ridge Press, 1998), p.501.

⁵⁴ Samuel Epstein, in Proctor, *Cancer Wars: How Politics Shapes What We Know And Don't Know About Cancer*, (New York: Harpers Collins Publishers, 1995), p.249.

the educating the public about carcinogens as being the most effective tool at reducing cancer, and argues that from this education will come the political will power to reduce exposures to carcinogens.⁵⁵ Proctor also cites "public apathy and regulatory impotence" in addition to inappropriate divisions of power in the bureaucracy as being key problems in reducing occupational cancer.⁵⁶ An American example of the inappropriate division of power is the Atomic Energy Commission's complete governance of radioactive materials even in matters that would normally pertain to the Occupational Health and Safety Administration.⁵⁷

In Canada, the government also engaged in compartmentalizing health and safety decision making throughout the 1970s and 1980s. During this period many Canadian provincial governments took away the responsibility for occupational health and safety from Workers Compensation Boards, as it was viewed as a conflict of interest for this agency to have this dual purpose (Quebec and BC being the exceptions to this division).⁵⁸ Perrin and Associates noted a recent trend towards reintegration of these two roles (New Brunswick, Yukon, North West Territories and PEI). Within this comparative study, Perrin and Associates noted that several jurisdictions have recently enhanced maximum penalties under health and safety legislation. Very few jurisdictions have a legislated or mandated review process for Occupational Health and Safety Legislation, however, several jurisdictions have "recently reformed their OHS legislation, or are currently in the process of undertaking

⁵⁵ Epstein , p.507.

⁵⁶ Proctor, p.209.

⁵⁷ Procter, 210, 211.

⁵⁸ The conflict of interest would be that the workers compensation board would have increased costs associated with newly recognized compensable injuries.

a comprehensive review of their legislation.⁵⁹

Statistics on occupational injury and fatality rates have become increasingly available which enables accurate comparisons to be made across industrialized jurisdictions. The Health and Safety Executive in Great Britain released statistics on workplace injuries and fatalities in the context of a comparative study with the United States and Europe. The key conclusions are that the "rates of fatality and injury in Great Britain are one of the lowest in Europe and lower than the USA...(and that) the British rate of workplace fatal injury for all industries combined is lower than in other EU member states, and lower than in the USA."⁶⁰

Graham Stevens, on behalf of the operations unit of the Health and Safety Executive, further added to the evidence that small firms have higher incidences of occupational injuries and fatalities. His study showed that based on data from 1994 to 1996 "the rates of fatal injury and of amputation injury in small manufacturing workplaces (fewer than 50 employees) are double those in large workplaces (greater than 200 employees)."⁶¹ In the United States this argument was made by Andrea Okun et al. who stated that "prevention of occupational injury and illness is often difficult in small establishments because they generally have few safety and health resources, cannot hire staff devoted to health and safety activities, and often lack the

⁵⁹Ibid, p.19-21.

⁶⁰ Health and Safety Executive: Hse Statistics, <http://www.open.gov.k/hse/hsestats.htm>, as cited on Oct.18,1999, p1-4.

⁶¹ Graham Stevens, "Workplace injuries in small and large manufacturing workplaces 1994/5- 1995/6", <http://www.open.gov.uk.hse/hsestats/workinj.htm>, as cited on Oct.18, 1999, p.1.

ability to identify occupational hazards and conduct surveillance".⁶²

The Occupational Safety & Health Administration of the US Department of Labor has compiled extensive health and safety statistics. These statistics indicate a large decline in workplace injury and illness rates from the years 1973 to 1997.⁶³ Former Assistant Secretary of Labor for Occupational Safety and Health, Joseph A. Dear claimed that the "OSHA has had huge success," observing that "the death rate for American workers has been cut in half, and (has) made remarkable progress on many old hazards."⁶⁴

Occupational health and safety statistic collection has become a priority and statistical methods are becoming more uniform in order that accurate legislative comparisons might be made beyond the simple comparisons of injury statistics.⁶⁵ As such, legislative approaches can be more accurately assessed according to their respective outcomes. When such research is conducted at the national level by a government agency with a simple comparison between nations, it seems to be evident that there may be an inclination towards national "self congratulation," rather than a focused comparison to achieve legislative improvement.⁶⁶

Inaccuracies aside, one of the interesting arguments that is presented is

⁶² Andrea Okun, Lentz, Thomas J., Paul Schulte, and Stayner, Leslie, "Identifying High-Risk Small Business for Occupational Safety and Health Interventions," *American Journal of Industrial Medicine*, Vol. 39, (2001), p.302.

⁶³ Occupational Safety & Health Administration, "Injury and Illness Rate Chart 1973-1977", <http://www.osha.gov/oshstas/chart.html>, as cited on Oct.17, 1999, p.1.

⁶⁴ Joseph A. Dear, "Building a new OSHA For a Changing America", speech before the American Industrial Hygiene Conference and Exposition, Washington D.C., May 22, 1996, as cited on OSHA speeches, p.1.

⁶⁵ Perrin et al., p.17.

⁶⁶ Health and Safety Executive, p.1.

the contention that plant specific initiatives are better at reducing specific injuries (safety) and were less successful at reducing the less tangible aspects of occupational health (e.g. disease).⁶⁷ This implies that there is an inherent problem with reliance on firm based initiatives to improve occupational health. An analysis of the actors involved may reveal why this discrepancy exists between the voluntary compliance model's possible applicability to reducing workplace accidents while not being effective in reducing occupational disease rates.

Voluntary and "economic incentive" approaches to Health and Safety are relatively new approaches to health and safety legislation and, as such, there has not been as much research assessing their impact. This research is the focus of the many new research studies being conducted by various health and safety organizations.⁶⁸ The preliminary statistical evidence provided by political economists Mark Brenner, David Fairris and John Ruser suggests that there is reason to be concerned with the introduction of ISO style quality circles in the workplace. Their research showed a positive and statistically significant association between quality circles and cumulative trauma disorders across various types of establishments along with a sizeable quantitative impact.⁶⁹

While research on total quality management approaches on health and safety is in its infancy, there have been many exhaustive studies on the joint

⁶⁷ Reschenthaler, as cited in O'Grady, p.32.

⁶⁸ International Labour Organization, p.1.

⁶⁹ Mark D. Brenner, Fairris, David and John Ruser, "'Flexible' Work Practices and Occupational Safety and Health; Exploring the Relationship Between Cumulative Trauma Disorders and Workplace Transformation," *Working Paper Series Number 30*, (Amherst: Political Economy Research Institute, University of Massachusetts, 2002), p.22-23.

committee approach and its effectiveness as a health and safety initiative. Regulatory approaches in terms of clearly delineating specifications appear to be fading into insignificance in North America as various jurisdictions focus on the other two methods, with the exception of the debate surrounding mandatory versus voluntary compliance with regulations and the internal responsibility system. Specification appears to be fading as a policy option as governments attempt to increase labour market flexibility.⁷⁰

As the voluntary compliance model appears to be the model that is increasingly employed to reduce occupational injuries and fatalities, it is important to ascertain whether this model is the preferable approach for occupational disease. The voluntary compliance model is fundamentally based on firm-based initiatives, and as such, the likelihood of timely effective firm or industry-based action to reduce occupational injuries and fatalities should be assessed.

With the passage of Bill 99 in 1999, Ontario's legislative approach to occupational health and safety has moved towards firm and industry based solutions and away from the regulatory model.⁷¹ This raises important questions about occupational disease, as the cause and effect relationship is more ambiguous than in other parts of occupational health and safety legislation. Occupational disease, cancer in particular, has a latency factor

⁷⁰ Ibid, p.1.

⁷¹ Ontario Ministry of Labour, *Preventing Illness and Injury: A better Health and Safety System for Ontario Workplaces*, <http://www.gov.on.ca/LAB/ohs/wsibmole.htm>, as cited on 12/15/99.

that enables industry to endanger employees in the workforce today without seeing an outcome for decades.⁷² Due to the latency and ambiguity surrounding carcinogens, the voluntary compliance model might be an inadequate public health policy approach towards reducing occupational disease.

Under a voluntary compliance model, one of the disincentives to endangering the workforce is personal injury (tort) litigation.⁷³ In many jurisdictions, the workers compensation system is designed as a "no fault" insurance system.⁷⁴ There is therefore a far less litigious system in terms of occupational health and safety enforcement. This lack of litigation may result in a decreased potential to reduce occupational disease in Ontario.

The relationship of the internal responsibility system to the voluntary compliance model dictates the outcome of potential actions to reduce occupational disease in Ontario. The effectiveness of the various mechanisms to reduce occupational disease is fundamentally rooted in this relationship. The ambiguous causal relationships and latency problems inherent to

⁷² Bryan Langholz, Duncan, Thomas, Anny Xiang, and Stram Daniel, "Latency Analysis in Epidemiological Studies of Occupational Exposures: Application to the Colorado Plateau Uranium Miners Cohort", *American Journal of Industrial Medicine*, Vol. 35, (1999), p.246,247.

⁷³ Dale L. Flesher, Nichols, Dave L., "CFO's guide to environmental audits, *Journal of Corporate Accounting and Finance*, 11 (1), Autumn 1999, p.15-33.

⁷⁴ While administered provincially, all of the Canadian provinces have a no fault structure to their respective insurance systems.

occupational disease create a particular set of challenges in which the voluntary compliance model might be ill equipped to remedy.

In order to assess the appropriate model for the workplace, sub-national, national and supra national levels it is important to look at the relative power and the roles of each actor. Specifically, various models at all four levels of governance involve a combination of government, business and worker representatives. When examining Occupational health and safety models, deciphering who is at the table might be as important as what is being served. Therefore it is important to analyze these models against the strengths and weaknesses of individual actors in different facets of occupational health and safety. It is also important to delineate various constraints on regulation or service delivery such as unionization and trade agreements.

Essentially, there are three important stages for occupational health and safety policy; the use of indicators or criteria for decision-making, the established practice or method of regulation, and enforcement. As with any new model of regulation, quantitative assessment is difficult due to the preliminary nature of the evidence available. Therefore in order to develop a qualitative assessment of the appropriate models for these three stages,

Perrin, Thoreau and associates, "Comparative Review of Worker's Compensation Systems and Governance Models", as cited from *Royal Commission on Worker's Compensation in B.C.*,

theoretical models will be used to predict potential outcomes for occupational health and safety regulation that relies on industry and firm level regulation as opposed to the traditional tripartite or bipartite structures to regulation. The inter-jurisdictional comparisons between provinces will also aid in this endeavor by illustrating which models various governments are employing in their respective jurisdictions and what, if any, legislative trend is occurring. An examination of occupational health and safety theory along with an inter-jurisdictional comparison will hopefully shed some light on the potential outcomes associated with privatized regulation of occupational health and safety and where the outcomes are likely to be experienced.

Figure 1.1

Actors employed by the various models at various stages in the legislative process

	Information gathering	Decision (regulation or practice)	Enforcement
Voluntary compliance model	Firm, industry and /or government	Firm and/or industry or government and industry ⁷⁵	Firm or industry
Regulatory model	Government or government and industry ⁷⁶	Government	Government or government and judiciary
Litigation model	Firm, industry and /or government	Government and/or judiciary ⁷⁷	Judiciary

⁷⁵ Industry self- regulation refers to industry determined regulation enforced through an industrial organization (e.g. ISO).

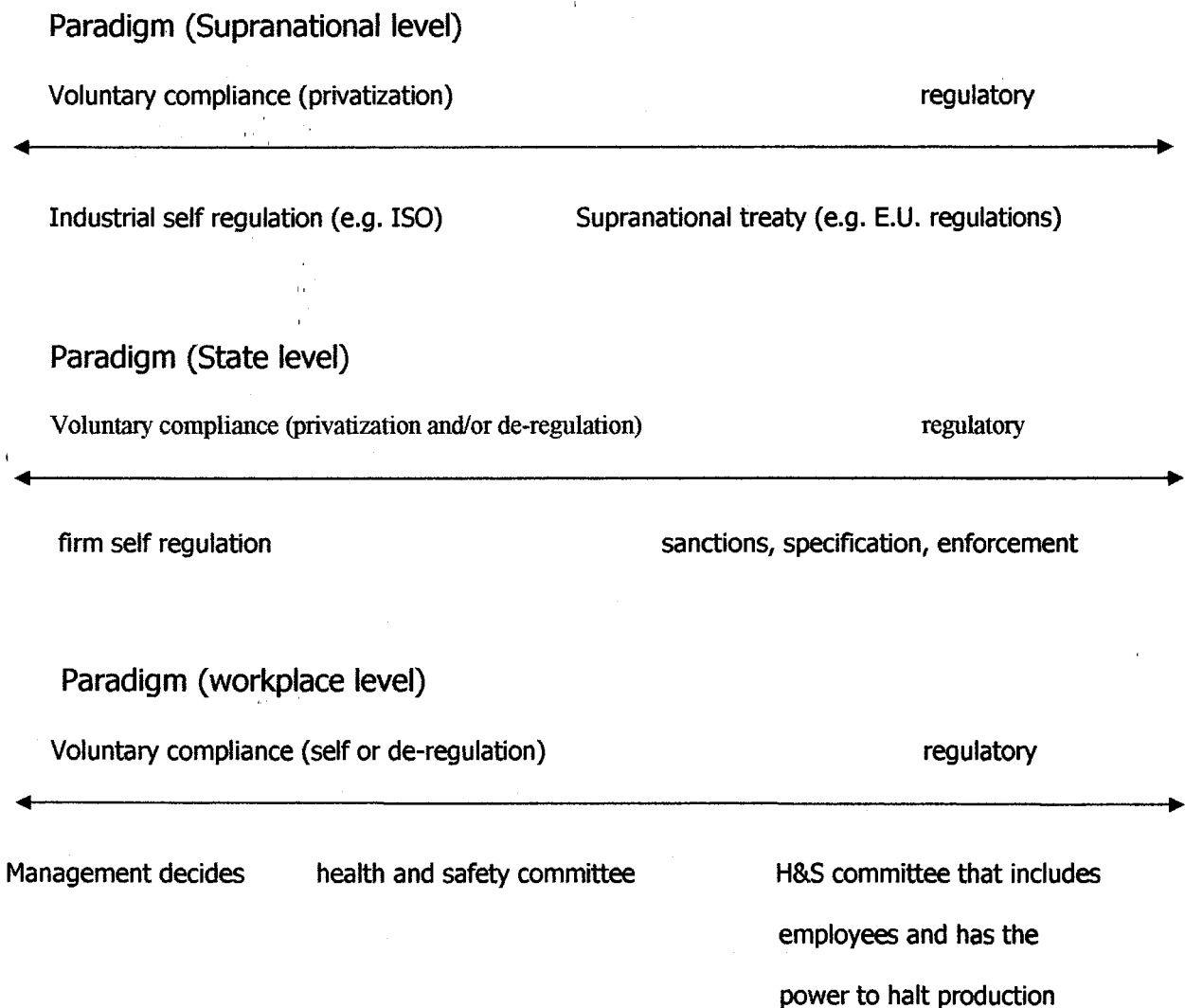
⁷⁶ Government refers to its legislative body and its corresponding bureaucracy.

⁷⁷ Depending on jurisdiction.

Figure 1.2

Regulatory Paradigms in Occupational Health and Safety

Legislation⁷⁸



⁷⁸ The key distinction between privatization and de-regulation with respect to occupational health and safety regulation is that privatization refers to the transfer of regulatory power from a public sector regulator to a private sector regulator. De-regulation refers to a reduction of regulations.

Chapter 2

History of occupational health and safety legislation in Canada

Collections of laws and political systems might..., presumably, be most useful if we are capable of studying them and of judging what is done finely or in the contrary way, and what sorts of (elements) fit with what.

Aristotle¹

In order to appreciate institutional innovations "and what sorts of elements fit with what" in occupational health and safety it is important to analyze the structure of existing legislation.² An important facet of this analysis is the history of the legislative framework. The current rationale behind the structure of occupational health and safety legislation is rooted in the historical developments behind reporting, prohibition and regulation of hazardous industrial processes, and workers compensation.³

These four central types of activity closely depend on each other and are currently administered through the internal responsibility system, which focuses on employers and employees working co-operatively to reduce workplace injuries and disease. A number of movements and changes in political culture have resulted in a transition from free reign capitalism in which occupational injuries and deaths were rampant to a period where occupational hazards were increasingly regulated or prohibited due to government intervention. With the global trend towards economic

¹ Aristotle, *Nicomachean Ethics*, in Michael L. Morgan, *Classics of Moral and Political Philosophy*, (Indianapolis: Hackett Publishing Company, 1992), p.381.

² Aristotle, p.381.

liberalization, the incidence of occupational injuries and deaths is likely to rise once again while being partially mitigated through the internal responsibility system.⁴

The earliest common law example of employers having some responsibility over injury or death suffered by their employees is the Henry I (1068-1135) law that stated that the master was responsible for the injury or death of a servant while they were performing a service. The exception to this rule being when a third party was deemed responsible. This changed at the beginning of the thirteenth century when the master assumed liability for the acts of his own servant in addition to his own negligence. By the end of the thirteenth century the master was no longer criminally liable for his servants' actions but continued to be civilly liable to varying degrees.⁵

The first example of government moving beyond the judiciary towards directly regulating workplace conditions was the *Elizabethan Poor Laws* of 1601. While impacting working conditions, the prime motivation behind *the Elizabethan Poor laws* was to prevent "idleness" rather than to protect

³ John R. Commons, and Andrews, John, B. *The Principles of Labor Legislation*, (New York : Augustus M. Kelley Publishers 1967), p.160.

⁴ By stating reduced government intervention, the actor referred to is the state notwithstanding state interventions to reduce future state interventions (e.g. trade agreements).

⁵ Stephen A. Bokart and Thompson III, Horace A., *Occupational Safety and Health Law*, (Washington: Bureau of National Affairs 1988), p.4.

workers. The Law largely resulted in the apprenticing and subsequent indentured servitude of orphans and other destitute children.⁶

With the rise of the industrial revolution, the "master/servant" relationship began to undergo a dramatic transformation towards a "boss/worker" relationship.⁷ This transformation's effect on workplace health and safety was profound. Prior to the late eighteenth century, "industry was chiefly, or carried on about the family hearth with tools relatively few and simple, (and) the laborer might control the physical conditions under which he worked."⁸ In addition to the employer controlling the working conditions, worker health was also adversely impacted by working with larger numbers of people whose mistakes could impact his health. Human error coupled with introduction to new, rapidly changing and dangerous technology resulted in an increasingly hazardous work environment.⁹

With industrialization, the enlightenment and the subsequent rise of liberalism, liability was focused away from the paternalism that was evident in the Henry 1 law and the Elizabethan Poor Laws. Immanuel Kant for example,

⁶ Hutchins, p.2-3.

⁷ The Industrial Revolution deals with the period of roughly 1760 to 1830, in which machinery was introduced into the process of production, the development of the exchange of commodities and commerce and a change towards the modern division of labour. Donald Hunter, *The Diseases of the Occupation*, Sixth Ed., (London: Hodder and Stoughton, 1978) , p.62.

⁸ John R. Commons, and Andrews, John B. *The Principles of Labor Legislation*, (New York: Augustus M. Kelley 1967) , P.158.

⁹ Commons, p.158.

spoke of "the universal equality of human beings as subjects of a state".¹⁰ Voltaire had earlier argued that that this principle was embedded in the English constitution by stating that equality before the law was attached "to everyone who sets his foot on English ground."¹¹ Jeremy Bentham epitomized this new egalitarian focus on the individual in the *Principles of Legislation* by stating that legislation ought to "leave to individuals the greatest possible latitude in every case where they can only injure themselves, for they are the best judges of their own interests."¹² Accordingly the rise of liberal thought contributed to a move away from the paternalistic master/servant structure in which the master was responsible for the "well being" of the servant towards a structure in which the employee was largely responsible for themselves.

Partly due to this ideological shift, the employer in this "laissez faire" period in the rise of capitalism approached the employee with this different outlook on those that they employed. Robert Asher has claimed that the development of capitalism "was accompanied by the erosion of paternalistic legislation and by a decline in paternalistic social practices by many

¹⁰ Immanuel Kant, *On the Relationship of Theory to Practice in Political Right* (1792), in Laqueur, *The Human Rights Reader*, (New York: Penguin Books 1989), p.84.

¹¹ Voltaire, *Philosophical Dictionary* (1769), in Laqueur, *The Human Rights Reader*, (New York: Penguin Books 1989), p.79.

¹² Jeremy Bentham, *Principles of Legislation* (1802), in Laqueur, *The Human Rights Reader*, (New York: Penguin Books 1989), p.86.

employers of labor."¹³ Alexis De Tocqueville described the state of the early factory system as:

The manufacturer asks nothing of the workman but his labor; the workman expects nothing from him but his wages.... The territorial aristocracy of former ages was either bound by law, or thought itself bound by usage, to come to the relief of its servingmen, and to succor their distress.¹⁴

With the rise of factories, the moral obligation of succoring the distress of workers was viewed by both employee and employer as less of an expectation.

Partly facilitated by these diminished expectations, civil suits regarding the "servant's right of recovery for work injuries" began to be restricted towards the end of the eighteenth century for economic reasons as well.¹⁵ Bokar and Thompson have argued that these restrictions came about due to the judges being concerned with protecting the rapidly expanding industries during the industrial revolution:

The Industrial Revolution (transformed) England into a commercially dominant nation of teeming cities and mechanized factories, this economic upheaval had its impact on the courts.... Technically, masters were still under an imposing set of common law duties that included the obligation to provide employees with a safe working environment; to employ servants of sufficient care and skill to make it probable that injury would not be caused to others; to provide sound and safe materials; and to avoid exposing servants to extraordinary risks they could not anticipate. (But the

¹³ Robert Asher, "The Limits of Big Business Paternalism: Relief for Injured Workers in the Years before Workmen's Compensation", in Rosner, *Dying For Work: Workers' Safety and Health in Twentieth-Century America*, (Bloomington: Indiana University Press 1987), p.19.

¹⁴ Asher, p.19.

¹⁵ Bokar, p.5.

master did not warrant the competency of a servant to the other servants, and was required to use only ordinary care in selecting tools and materials)... Despite these duties, however, at the onset of Industrial Revolution an employee could seldom recover from his employer for bodily injury or for diseases caused by workplace exposures.¹⁶

While there were laws on the books to defend employees from an unsafe working environment, in practice the employee had very little legal recourse against their employer.

The claimant would generally lose civil cases due to three common successful defenses that originated from these restrictions in common law. These three defenses were the fellow servant defense, assumption of risk and contributory negligence.¹⁷ The "fellow servant" rule absolved companies of fault if another employee was partly to blame.

"Assumption of risk" focused on the employee's knowledge of workplace hazards while employed and essentially ruled that the employee willingly accepts these risks in return for wages. An example of assumption of risk was a decision by Chief Justice Richards in a case involving an eleven year old who had been caught in a threshing machine in 1871. Justice Richards cited precedent in stating that

... at common law servants had no right to complain of the want of the fencing of machinery. If they chose to engage themselves to

¹⁶ Bokar, p.5.

¹⁷ Anne Trampusch, *Avoiding the Cracks: A Guide to the Workers Compensation System*, (New York: Praeger 1991), p.15-16.

work at a machine, the work itself of a dangerous character, that was part of the bargain, and the servant, if injured in doing the work which he engaged to do, and the mode of doing it and the machine by which it was done was such as he and the master both understood to be the case, then he cannot, in case of injury, recover damages from the master, in case he sustained injury in doing this dangerous work.¹⁸

This logic also applied to occupational disease as outlined by Lord Herschell in

Smith vs. Baker in 1891:

One who has agreed to take part in an operation necessitating the production of fumes injurious to health would have no cause of action in respect of bodily suffering or inconvenience resulting therefrom...¹⁹

In short, voluntary assumption of risk resulted in the market regulation of occupational of health and safety.²⁰ It did this by focusing on the money received by the employee to compensate for the risk associated with a given occupation. By agreeing to do "dangerous" work for a said amount of money, the worker would assume responsibility for any negative outcome associated with this danger.

A problem that has been associated with this form of market regulation is that it is conceivable that the employee may not fully appreciate the dangers involved with a given occupation and as such are not fully compensated for the risk that they incur. In economic jargon this is referred

¹⁸ Eric Tucker, *Administering Danger in the Workplace: The Law and Politics of Occupational Health and Safety Regulation in Ontario 1850-1914*, (Toronto: University of Toronto Press 1990), p.3-4.

¹⁹ Bokar, p.5.

to as "factor service imperfection in competition."²¹ This is often also referred to as market failure due to a lack of information.

The third way in which the courts traditionally denied workers claims was through a "Contributory negligence" ruling, which absolved the company of responsibility if the employee was deemed to be partly responsible.²² As one might imagine, there was also a considerable difficulty of getting fellow employees to testify against their mutual employer.²³ Essentially, "laissez faire" doctrine was embodied both in the executive and in the judiciary throughout the industrial revolution.

"Laissez faire" doctrine gradually gave way in the nineteenth century to other "inventions in social organization."²⁴ While the first example of government attempting to directly regulate workplace conditions was under the *Elizabethan Poor Laws* of 1601, workplace regulation did not begin to take its modern form until the 1800s.²⁵ The differences between the Elizabethan Act and the new nineteenth century acts were rooted in their motivation. Elizabethan Poor Laws were designed to free England of the "idleness" of the lower class and the factory acts of the nineteenth century

²⁰ Tucker, p.4.

²¹ J.C. Strick, *Canadian Public Finance*, (Toronto: Harcourt Brace & Company, 1992), p.5.

²² Tramposh, p.16.

²³ Bokar, p.6.

²⁴ Sidney Webb, in Hutchins, *A History of Factory Legislation*, (Westminster: P.S. King & Son, Orchard House 1903),p.v.

were designed to cure specific market "imperfections." Webb referred to this approach as "English practical empiricism," claiming that these factory acts were not related to "abstract theories of social justice or the rights of man," unlike the Elizabethan laws which were largely attempting to reduce crime by legislating the Protestant work ethic.²⁶ The "imperfections" according to Webb were "the diversion of the nation's industry into unprofitable channels (e.g. charity)," a lack of safeguards to maintain "a healthy minimum standard of life, and... person(s) being employed under conditions inimical to social health."²⁷

The response to the rise of the "laissez faire" element of liberalism took many forms throughout the 19th century. There were a number of nineteenth century protest movements which advocated for improved working conditions. One of the first protest movements against the ill effects of industrialization on workers was the Luddite movement, which was active in England between 1811 and 1816.²⁸ This group of infamous "machine-breakers" enjoyed some success at destroying the technological advancement that would put them out work, until 1816 when a number of Luddites were convicted and hung or were sent to Australia.²⁹

²⁵ B.L. Hutchins and Harrison A., *A History of Factory Legislation*, (Westminster: P.S. King & Son, Orchard House 1903), p.1-2.

²⁶ Webb, in Hutchins, p.v-xiv.

²⁷ Webb, in Hutchins, p.xiii.

²⁸ Robert Sass, "A Feminist Conception of Injurious Working Conditions: A History of Occupational Health and Safety Legislation," *SPR Occasional Papers*, No.10, 1998, p.1.

²⁹ Hunter, p.103.

The movement towards rectifying the ill effects of industrialization shifted away from protecting workers from the displacement effect of new technology towards a focus on reducing workplace injuries and disease.³⁰ By the 1830s, this movement was part of a broader movement for improved public health and hygiene.³¹ Population explosions coupled with poor urban infrastructure led to a climate of disease, intolerable odours, and smoky coal filled skies for both the wealthy and the poor.³² Charles Dickens, in his satire on utilitarianism, described this period in *Hard Times* (1854):

It was a town of red brick, or of brick that would have been red if the smoke and ashes had allowed it; but as matters stood it was a town of unnatural red and black like the painted face of a savage. It was a town of machinery and tall chimneys, out of which interminable serpents of smoke trailed themselves for ever and ever, and never got uncoiled. It had a black canal in it, and a river that ran purple with ill-smelling dye, and vast piles of building full of windows where there was a rattling and a trembling all day long, and where the piston of the steam-engine worked monotonously up and down, like the head of an elephant in a state of melancholy madness.³³

These conditions contributed to the severity of the cholera epidemic of 1832, which in turn resulted in a public focus on the realities of town life. This focus led to the creation of the *Poor Law Commission* which concluded through the *Report on the Sanitary Conditions of the Labouring Population of Great Britain*

³⁰ Although it should be noted that "Luddite style" activities continued into the 1830s. For example, farm labourers rallied against threshing machines in 1831, which resulted in 3 dead and an additional 420 Australian citizens.

³¹ Hunter, p.92.

³² Hunter, p.91-96.

(1842) that; "such is the absence of civic economy in some of our towns that their condition in respect to cleanliness is almost as bad as that of an encamped horde, or an undisciplined soldiery".³⁴

The primary challenge to "laissez faire" industrialized capitalism and the state of public hygiene in the mid-nineteenth century was the Chartist movement that existed from roughly 1834 to 1848.³⁵ In addition to being a suffrage movement, Chartism sought government intervention to ensure better working conditions and higher wages.³⁶ In particular, Chartism concerned itself with "long hours of work, child labour and unhealthy and dangerous working conditions."³⁷ While Chartism ceased to exist as a formal political movement by the late 1840s, Chartism succeeded in drawing attention to the issue of poor working conditions and arguably influenced the government to introduce early factory reforms.³⁸

While the factory legislation was first introduced in England in 1802, legislation that held employers accountable for their actions came to fruition

³³ Charles Dickens, *Hard Times*, in Hunter, p.92.

³⁴ Hunter, p.93, 96.

³⁵ Sass, p.1.

³⁶ Chartists also argued for the abolition of property qualifications for members of parliament and a *People's Charter* which would enumerate the rights of citizens.

Sass, p.1.

³⁷ Sass, p.1

³⁸ The Chartist movement was also responsible for a significant number of reforms to the British Parliamentary system (e.g. removal of property requirements for members of parliament, paying members of parliament, vote by ballot etc...). Hunter, p. 102-107.

during the period in which the Chartist movement was active. The *Health and Morals of Apprentices Act of 1802* and the *Factory Acts of 1819 and 1825* relied upon voluntary inspection and were limited to hours of work, rudimentary sanitation and ventilation, and the latter legislation focused on hours of work for children.³⁹ The *Factory Act of 1833* served as the first "effective" piece of factory legislation in that it introduced a factory inspectorate that would inspect factories, inspect factory schools and have the power to prosecute owners who failed the inspections.⁴⁰ The *Factory Act of 1844* further limited work hours for children, required the fencing in of dangerous machinery, and prohibited the cleaning of machinery while in motion.⁴¹

An example of Canadian legislation that addressed the central concerns of Chartism was the Ontario Factory Act of 1884. This legislation only pertained to factory workers and did not apply to those who repaired machinery. In addition to stipulations on child and women labour, the Act in Section 14 stated employers were not to "keep a factory so that the health and safety of any person therein is endangered, or so that the health of any person employed therein is likely to be permanently injured."⁴² This duty was

³⁹ Hunter, p.114-116.

⁴⁰ Hunter, p.127.

⁴¹ Hunter, p.127-128.

⁴² Eric Tucker, , "Making The Workplace Safe In Capitalism: The Enforcement of Factory Legislation in Nineteenth Century Ontario," *Labour/Le Travail*, Vol.21, 1988, p.50.

to be enforced "with a fine of up to \$500 or imprisonment of up to one year."⁴³

While the Ontario Factory Act resulted in a significant number of prosecutions on child and women labour, the health and safety portion of the act was barely enforced. In the first twelve years of the act only two charges were laid and neither resulted in prosecution.⁴⁴ There was this lack of enforcement despite the reporting of 207 fatal accidents and 2,632 accidents causing serious injury during the same twelve years.⁴⁵

It has been argued that this lack of enforcement was related to the relative clout of the middle class reformers versus the clout of workers' "movements" in that period. The Ontario Factory Act was largely the result of responding to the pressures from these two groups. Labour was beginning to be better organized by the 1880s and child and women labour offended the Victorian "family and femininity" sensibilities of the middle class reformers. Reformers feared that the children's physical and mental development (education) would be stunted and accordingly would become a danger to the community. The major opposition to these workplace reforms was the Canadian Manufacturers Association who actively worked to delay and minimize the impact of the factory legislation, paying particular attention to

⁴³ Tucker, p.50.

⁴⁴ Tucker, p.58-59.

the powers conferred upon factory inspectors for fear that they would pro-labour appointees.⁴⁶

The Ontario Factory Act of 1884 also defined the constitutional division of power of labour legislation as being primarily a provincial responsibility.⁴⁷ This is related to the Supreme Courts' de-centralized view of the British North America Act during that time period.⁴⁸ This eventually developed into a major identifiable structural similarity between Canadian and American occupational health regulation. In the United States, individual States have the option of enacting and enforcing their own legislation if it is "at least as effective" as federal statutes in a cost sharing arrangement or the federal government can assume the entire responsibility of legislating and enforcement.⁴⁹

Despite the defining of occupational health and safety as being a largely provincial matter, the Canadian Federal government studied working conditions in two reports in 1882 and 1885.⁵⁰ Historian Greg Kealey summarized these reports:

(The commissioners) reported shock and indignation at child

⁴⁵ Tucker, p.59.

⁴⁶ Tucker, p.48.

⁴⁷ Tucker, p.46.

⁴⁸ Tucker, p.49.

⁴⁹ Frank J. Thompson and Scicchitano, Michael, J., "State Implementation Effort and Federal Regulatory Policy: The case of Occupational Safety and Health", *Journal of Politics*, Vol.47(2) 1985 p. 697-689.

⁵⁰ Sass, p.11.

labour, the employment of women, and inadequate sanitary and safety facilities... factory acts were introduced at every session of the Federal Parliament in the 80's (1880s) to control the worst excesses of modern industry, but no legislation was enacted.⁵¹

As this summary indicates there was considerable attention paid to the issue of industrial hygiene at both the federal and provincial levels, with both levels of government inevitably concurring that the province was the appropriate actor to intervene on behalf of workers. Accordingly, occupational health and safety regulation in Canada is generally a provincial responsibility as part of the labour portion of the division of powers. The Federal government has over time, however, gained labour jurisdiction over industries that have an "extra provincial or international character (e.g. longshoring), ... works that benefit more than one province (e.g. grain elevators), banks, federal crown corporations and agencies..." in addition to the territories.⁵²

Historically in the United States of America, individual states first enacted health and safety regulations long before the federal government became a regulatory actor. Massachusetts set up the first State Labor Bureau in the U.S. in 1869.⁵³ Massachusetts also became the first state to directly regulate manufacturing in the United States by passing a factory inspection

⁵¹ Sass, p.11.

⁵² Human Resources Development Canada, *Jurisdiction of the Federal Government, the Provinces and the Territories in the Field of Occupational Health and Safety*, <http://labour-travail.hrdc-drhc.gc.ca/doc/spp-psp/cli-rttc/osh/pdf/oshjur.pdf> as cited on Feb.12.2001, p.1.

⁵³ Hunter, 229.

act in 1877 and by the turn of the century 22 other states had followed suit.⁵⁴ Prior to factory inspection, there had been a few acts pertaining to coal mining, which had been experiencing a large of fatalities that appeared to be increasing exponentially with the advent of steam engine and explosives technology.⁵⁵ In 1869, Pennsylvania passed the Schuylkill Ventilation Act, which called for ventilation and inspection in that states' coal mines.⁵⁶

Shortly after this act came into effect a major accident occurred in Luzern County (Pennsylvania) that resulted in the suffocation deaths of 179 miners. This accident was of a large enough scale that it attracted a large amount of public attention and government response to "the increasingly hazardous conditions in coal mines."⁵⁷ This event was used by labour groups such as the Workingman's Benevolent Association to organize workers against those that they characterized as treating miners "like rats in a trap."⁵⁸ This controversy not only contributed to the strengthening of

⁵⁴ Rosner, p.65.

⁵⁵ Jacqueline Corn, "Protective Legislation for Coal Miners, 1870-1900: Response to Safety and Health Hazards, in Rosner, p.68-71.

⁵⁶ The act was named after Schuylkill county which was the main coal mining area in Pennsylvania and had sustained a multitude of coal mining accidents throughout the 1850s and 60s.

Corn, p.71

⁵⁷ Corn,,p.71-72.

⁵⁸ The Workingmen's Benevolent Association was incorporated in 1868 as miners union in southern and western Pennsylvania.

Corn,,p.72-76.

Pennsylvania's mining act but also partially led to the Illinois State Legislature passing similar legislation in 1872 and Ohio in 1874.⁵⁹

In addition to the labour movement, mining and manufacturing "rat traps" were also beginning to be criticized by the new Social Work movement in the late nineteenth century. The Social Work movement challenged economic law based on its abstract nature by exposing the gap between "experiment" and "experience" in addition questioning the neutrality of "facts." There was also a concerted attempt to introduce an ethical dimension to the production process. The major successes of this movement were playing "a prominent role in shaping the political agenda of the Progressive Party in 1912 (and according to Robert Sass) more than any other organization or group, brought reforms to the day-to-day working conditions of ordinary workers."⁶⁰

Interestingly, the late nineteenth century also had some manufacturers pressure the government for health and safety regulation. Match manufacturers testified before Congress in the United States that they wished for a regulation that would force them to replace a poison in their production process with a harmless but more expensive alternative. The manufacturers argued that while they represented 95 per cent of the manufacturers, the competition would have a competitive advantage if they were to switch to a

⁵⁹ Corn, p.73.

⁶⁰ Sass p.4

less harmful process. After three years *The Poisonous Phosphorous Prohibition Act* was enacted, forcing the "recalcitrant" competitors to adopt less harmful methods of production.⁶¹

In addition to more thorough factory inspection, the late nineteenth and early twentieth centuries also saw the beginnings of a workers compensation scheme. Prior to the existence of state-based workers compensation schemes there were a number of companies and unions that provided some form of financial relief for injury or death to their employees or members respectively. American mining unions "contained provisions for relief of injured members and for the care of widows and orphans of miners killed in mine accidents" from as early as the 1860s.⁶² The railway worker unions also adopted similar schemes in the 1870s, such as a \$1000 death benefit for members of the Brotherhood of Locomotive Firemen.⁶³

While there are variations, modern day workers compensation is essentially "a state-based system that compensates employees for the economic consequences of work-related injury, illness and disease without regard to the fault of the employer or employee."⁶⁴ The late nineteenth century and early twentieth century saw this transition from a largely

⁶¹ Commons, p.159.

⁶² Corn, in Rosner, p.76.

⁶³ Asher, in Rosner, p.21.

employee fault system to a "no fault" system of compensation.⁶⁵ "No fault" state-based worker compensation was first introduced in Germany in 1884 and was followed by Britain in 1897.⁶⁶ In 1902 Maryland was the first American jurisdiction to attempt to implement workers compensation, however the law was "struck down as unconstitutional."⁶⁷

The first "constitutional" federal workers compensation law was in 1908 (federal employees), and the first state to enact workers compensation was Wisconsin in 1911.⁶⁸ Ontario followed as the first Canadian jurisdiction to introduce workers compensation in 1913.⁶⁹ By 1920, the vast majority of provinces and states had a limited workers compensation system and the last state to enact this legislation was Mississippi in 1949.⁷⁰

⁶⁴ Orin Kramer and Richard Briffault, *Workers Compensation: Strengthening the Social Compact*, (New York: Insurance Information Institute Press 1991), P.1.

⁶⁵ James C. Foster, "The Western Dilemma: Miners, Silicosis, and Compensation," *Labour History*, Vol.26(2), 1985, p. 277.

⁶⁶ Carl Gersuny, *Work Hazards and Industrial Conflict*, (Hanover: University Press of New England 1981), p.99.

⁶⁷ There are conflicting accounts on the facts of this matter. Tramposh claims that the first attempt to pass a compensation law occurred in 1910 in New York and that the first workers compensation law to be passed in the United States was in Wisconsin in 1911. Conversely, Gersuny claims that the first successful statute was in 1908. The assumption has therefore been made that both authors were correct in their dates but Gersuny correctly identified which legislation came first.

Tramposh, p.16.

Gersuny, p.99.

⁶⁸ Gersuny, p.99

Tramposh, p.16

⁶⁹ Sullivan p.3.

⁷⁰ Tramposh, p.16

While these states and provinces enacted legislation to improve the reporting regulation and compensation of work related hazards, associated injuries and fatalities, a significant sector of the workforce was largely left unregulated. The immigrant workforce faced significantly worse working conditions and lacked protection and compensation from the state.⁷¹

An example of callous employers and lax legislation leading dangerous working conditions for immigrants in the early twentieth century was the 1911 Triangle Shirtwaist Company fire. This tragic incident in New York City caused 145 women to die.⁷² The factory occupied the top three floors of a ten-story building and there were no fire escapes, the factory doors were blocked, locked or opened inward, which caused the women to be trapped inside.⁷³

Partly due to the controversy following this tragedy, the New York State Factory Investigating Commission was formed.⁷⁴ Prior to this point men, engaged in factory inspection were poorly trained, and in New York in particular, only one Medical Inspector of Factories had been appointed, which was better than most states who had none.⁷⁵

⁷¹ Hunter, p.230.

⁷² Daniel M. Berman, *Death On The Job: Occupational Health and Safety Struggles in the United States*, (New York: Monthly Review Press 1978), p.9.

⁷³ Berman, p.9

⁷⁴ Berman, p.9.

⁷⁵ Hunter, p.229.

Coupled with poor inspection was a weak documentation of the working conditions in the United States. For example, the United States Bureau of Labor only began engaging in documenting the working conditions of women and children in 1910. This was quite a late addition to the literature as the United Kingdom had conducted similar surveys in the mid-nineteenth century and Canada had followed suit with *The Royal Commission on the Relations of labour and Capital* in 1889.⁷⁶

Workplace disease and its effect on poverty rates were also beginning to be documented in the early twentieth century. A 1915 unemployment survey of a million workers conducted by the Metropolitan Life Insurance Company and the US Department of Labour found that "eleven percent of the unemployed was caused by sickness or accident disability."⁷⁷ These figures coupled with the 1913 US statistic of 25,000 workplace fatalities, led to acknowledgment that "occupational accident hazards were more hazardous than the occupations of a soldier."⁷⁸

Following World War 1 where being a soldier regained its status as a particularly dangerous occupation, the International Labour Organization was created in 1919. The preamble to the ILO Constitution lists essential tasks of

⁷⁶ Sass, p.11.

⁷⁷ Sass, p.9.

the organization including "the protection of the worker against sickness, disease and injury arising out of his employment."⁷⁹ Despite the Organization's lofty goals it has largely been resigned to an advisory role where it has been somewhat successful in lobbying governments to reduce workplace exposures to hazardous chemicals (e.g. white lead paint).⁸⁰

Despite advisement and existing documentation, occupational disease did not command the same degree of attention in the United States, as tragedies like the Triangle Shirtwaist Company fire. As such, Occupational disease was recognized later in workers compensation schemes, than injuries or accident related fatalities. Mining related lung disease was the first occupational disease to be recognized. The problem had reached epidemic proportions by the early twentieth century. For example, a Cripple Creek and Victor, Colorado survey conducted in 1911 found that 56% of the areas' miner mortality was attributable to lung disease.⁸¹ In 1918, England was the first jurisdiction to pass national compensation legislation that applied to occupational disease.⁸² Ontario began compensating victims of occupational disease in 1924 and throughout the twenties Australia and South Africa began disease compensation as well.⁸³

⁷⁸ Sass, p.9.

⁷⁹ G.A. Johnston, *The International Labour Organization: Its Work for Social and Economic Progress*, (London: Europa Publications 1970), p.208.

⁸⁰ Johnston, p.208-219.

⁸¹ Foster, p.270.

⁸² Foster, p.287.

⁸³ Foster, p.282.

The United States was the slowest of the industrialized nations to recognize occupational disease as compensable.⁸⁴ Silicosis was only recognized in 1943 as being eligible for compensation. In 1943, Arizona became the first American state to compensate the occupational disease in which had been recognized as a mining related disease as early as 50AD when Pliny wrote of illnesses suffered by asbestos mining slaves in Greece.⁸⁵ The United States and Canadian governments were also well behind the life insurance companies who by 1918, routinely denied asbestos workers insurance.⁸⁶

The relative slowness on the part of the United States on developing its workers compensation system to include occupational disease has been attributed to a relative lack of media attention and a weak public health bureaucracy.⁸⁷ The American public health bureaucracy was so weak in fact that the Ontario Department of Health would have had a larger budget in the early thirties than would the American National Public Health Service.⁸⁸ Media attention in the commonwealth had been fixated on the silicosis issue due to England's John Scott Haldane's "crusade" against silicosis.⁸⁹ While the

⁸⁴ Foster, p.268.

⁸⁵ Elling, p.217.

⁸⁶ Elling, p.217.

⁸⁷ Foster, p.283.

⁸⁸ Foster, p.283.

⁸⁹ Haldane's research linked silica dust to a large majority of mining disease cases in a 1910 Cornish mining study.

American Public Health Services were certainly interested in Haldane's studies on, and advocacy on behalf of Cornish miners, the U.S. Congress and the media were not.⁹⁰

Recognition of health and safety as an important budgetary item for the United States Federal Government developed in the great depression as part of the *Social Security Act of 1935 (The Wagner Act)*.⁹¹ This is partially attributed to the worsening labour conditions in the United States during the Great Depression. Specifically, occupational health and safety norms were harmed by "management's efforts to rationalize and get more out of the capital input (labour)."⁹² An example of this phenomenon was provided by a report from the United Textile Workers (United States) in 1932,

Even when unskilled workers are brought in to displace experienced weavers there is no decrease, but a tremendous increase in the weaver energy that goes into each yard of cloth. For example: A weaver running 72 looms must ceaselessly patrol a beat 75 yards long. In the course of an eight-hour day, he must walk between 15 and 18 miles. He does this in addition to performing the variety of tasks connected with the weaving process. And he grinds out his 18-mile patrol in a shop with windows and skylights bolted shut, in order that no breath of fresh air may clear the intensely humid fog-like atmosphere, or reduce the 85 percent temperature at which the weave room is kept. These conditions mean more than complete exhaustion at the end of every day of labor. They mean permanent loss of weight,

Foster, p.274.

⁹⁰ Foster, p.274-283.

⁹¹ Hunter, p.231.

⁹² Ray H. Elling, "Industrialization and Occupational Health in Underdeveloped Countries," in Vicente Navarro, *Imperialism, Health and Medicine*, (Farmingdale, New York: Baywood Publishing 1979), p.208.

anemia, broken feet, varicose veins and finally, a complete physical breakdown.⁹³

This "speed up" process was recognized as a problem by then Secretary of Labour Frances Perkins of the Roosevelt administration who included improved occupational health and safety through factory reforms, reduced work hours, and child labour laws as an integral part of the New Deal.⁹⁴

The major change that New Deal legislation brought to the field of occupational hygiene was a reinterpretation of the division of powers between the federal government and individual states. Prior to the Roosevelt Administration, employers had successfully argued that the 14th amendment excluded hours of work being regulated by federal statute. The 14th amendment had a provision on public health that could override property rights and accordingly, the Roosevelt Administration successfully had the statute re-interpreted to include work hours as a public health issue by threatening to add members to the Supreme Court.⁹⁵

Workers compensation also began to expand its purview in the United States from a system that was narrowly focused on hazardous occupations to a more comprehensive system. A large portion of the expansion of this program arose out of the 1972 national commission that established national

⁹³ Elling, p.208

⁹⁴ Sass, p.12.

⁹⁵ Sass, p.11.

guidelines for workers compensation. The recommendations included mandatory coverage of employees. It also recommended that the employee right to choose the state in which to file the claim (where the injury occurred or the principle location of employment). In addition, the commission stated that occupational disease coverage should exist even when specific "Accidents" could not be identified (lowered the threshold of causation), and that benefits should not be limited by a maximum per beneficiary.⁹⁶

The evolution of workers compensation has essentially led to three central features of the plan. Workers compensation provides prompt medical and disability benefits.⁹⁷ The system is generally an employer pay compensation system which results in an incorporation of the costs associated with work related injury and illness in the production process. This internalization of costs theoretically reduces or eliminates market failure.⁹⁸ An example of this phenomenon would be a Canadian steel mill without workers compensation. Without workers compensation premiums, the costs of treating diseases associated with the production of steel might not be borne by the producer. The full costs of production are therefore not included in the price of steel and this is referred to as market failure due to "external diseconomies," which in this particular scenario would have the costs of

⁹⁶ Tramposh, p.16-17.

⁹⁷ Kramer, p.2.

⁹⁸ Audrey Freedman , "Industry Reponse to Health Risk," *The Conference Board*, no.811, 1981, p.1.

treating the disease subsidized by the taxpayer and/or other private insurance clients. "No fault" benefits are also a central part of workers compensation plans which serves to reduce litigation by literally resolving the claim without reference to the fault of either the employer or the employee, which in turn reduces administrative costs associated with the process of establishing blame.⁹⁹

In addition to updating workers compensation schemes a global trend of updating antiquated health and safety legislation occurred in many developed nations throughout the 1970s by re-examining their respective occupational health and safety legislation or lack thereof. The Australian governments' *Woodhouse Committee Report*, for example, concluded that not only were its regulations too lax but that its occupational health statistics underreported the problem.¹⁰⁰

In the United States, *The Occupational Health and Safety Act of 1970* exemplified this trend by moving legislation beyond compensation to include injury and illness prevention.¹⁰¹ Occupational Safety and Health Administration's safety rules were largely "based on the voluntary job safety

⁹⁹ Orin, p.2.

¹⁰⁰ Neil Gunningham, *Safeguarding the Worker*, (Sydney: The Law Book Company 1984), p.1.

¹⁰¹ Frank Dobbin and Sutton, John R., "The Strength of a Weak State: The Rights Revolution and the Rise of Human Resources Management Divisions", *American Journal of Sociology*, Vol.104(2) 1998, p.448.

standards adopted by industry known as consensus standards."¹⁰² In addition to the creation of the Administration the act gave the organization the power to "codify safety and health regulations as they emerged in legislation, case law, and administrative law."¹⁰³ Initially this codification process resulted in a cumbersome number of complex specifications as Dobbin outlines:

Administrative health and safety guidelines outlawed specific workplace conditions in excruciating detail rather than prescribing how to prevent those conditions, in part because the Constitution checked Congress's capacity to dictate private enterprises. OSHA wrote countless guidelines that made particular conditions illegal but left local engineers to figure out how to comply.¹⁰⁴

Accordingly, many of these guidelines have been subsequently removed due to OSHA's perception that they were "unsuited for governmental administration."¹⁰⁵

What remains is an underlying system that developed in the 1970's and continues to be the core foundation of occupational health and safety legislation. In North America it is the internal responsibility system. The internal responsibility system legislation in Canada was modeled after the American Occupational Health and Safety Act with the major difference being that employees would have the right to participate in joint health and safety committees. This system was devised as a way to improve the effectiveness

¹⁰² Monroe Berkowitz, "Occupational Safety and Health," *Annals of the American Academy of Political and Social Science*, Vol. 443, 1979, p. 52.

¹⁰³ Dobbin, p.448.

¹⁰⁴ Dobbin, p.448.

of health and safety administration by directly involving stakeholders in the legislative process. As part of a follow up to the Ham and Burkett mining reports, the Ontario Government recently summarized the nature of this approach in *The Internal Responsibility System in Ontario Mines*:

The IRS is a system, within an organization, where everyone has direct responsibility for health and safety as an essential part of his or her job. It does not matter who or where the person is in the organization they achieve health and safety in a way that suits the kind of work they do. Each person takes initiative on health and safety issues and works to solve problems and make improvements on an on-going basis. They do this both singly and cooperatively with others... Successful implementation of the IRS should result in progressively longer intervals between accidents or work-related illnesses.¹⁰⁶

In order to achieve this end, the internal responsibility system is based on four central principles; joint health and safety committees, the right of joint committees to participate in workplace hazard inspection evaluation, and reduction strategies. As well as the right to refuse unsafe work, and the right to be informed of unsafe work.¹⁰⁷ With a few minor variations these four principles are legislated in every province and territory in Canada.¹⁰⁸

¹⁰⁵ Berkowitz, p.52.

¹⁰⁶ Ian M. Plummer, Strahledorf, Peter W, and Michael G. Holliday, "The Internal Responsibility System in Ontario Mines Final Report: The Trial Audit & Recommendations," <http://www.gov.on.ca/LAB/ohs/irs-syne.htm> as cited on Feb. 15/2001.

¹⁰⁷ John O'Grady, "Joint Health and Safety Committees: Finding a Balance" as cited in Terrence Sullivan, *Injury and the New World of Work*, (Vancouver: UBC Press 2000) p.163-165.

¹⁰⁸ O'Grady, p.165.

Saskatchewan under a New Democratic Party government was the first province to introduce the internal responsibility system in 1972.¹⁰⁹ In Ontario the internal responsibility system was introduced in 1977 (Bill 139).¹¹⁰ Under this system occupational health and safety is enforced in Canada through the right to refuse unsafe work and the right to be informed of unsafe work. Unsafe work is determined across Canada through the Workplace Hazardous Materials Information System (WHMIS). If a worker refuses to work based on this information, or any other indication that the work is unsafe, a government health and safety inspector determines the safety of that work or workplace.¹¹¹

As an attempt to improve the flow of information regarding unsafe work, joint health and safety committees were established. These committees were modeled after the long established British and Swedish occupational health and safety approach of having workers and management cooperate at the firm level to reduce workplace hazards.¹¹² Joint committees were largely established as a measure to counteract the perceived inadequacy of the adversarial system in dealing with health and safety. Health and safety

¹⁰⁹ Sass, p.1.

¹¹⁰ Vivienne Walters, "Occupational health and safety legislation in Ontario: an analysis of its origins and content", *Canadian Review of Anthropology and Sociology*, Vol.20, 2001, p.415

¹¹¹ This right is limited for certain occupations and workplaces. These exemptions largely pertain to public protection occupations (e.g. police officers).

O'Grady, p.165.

¹¹² James M. Ham, *Report of the Royal Commission on the Health and Safety of Workers in Mines*, (Toronto: Ministry of the Attorney General 1976), p.250.

activists such as Ralph Nader argued as early as 1972 that "both labor unions and insurance companies (were) failing to make any significant headway on (this) major problem."¹¹³ Nader cited that "job hazards (were) only rarely a major issue in labor -management negotiations."¹¹⁴ As such, Nader contended that health and safety legislation is necessary to protect workers.

The 1976 Ontario *Report of the Royal Commission on the Health and Safety of Workers in Mines* (The Ham commission) also outlined the need for a sustainable balance of interests. Accordingly, Ham stated that "confrontation can and must be set aside within respect both to accidents and to health impairing environmental exposure... (and therefore) there is emphatically no place for the adversarial system of collective bargaining in dealing with matters of Health and Safety."¹¹⁵ As such, collective bargaining continues to play an important yet contentious part of the development of health and safety norms, laws, enforcement and compensation.

In summary, the adversarial system of collective bargaining partly arose out of poor conditions for employees in which the worker had very little recourse. It also developed as a structural response to the change in relationship between employer and employee. The paternalism evident in the

¹¹³ Ralph Nader, in Joseph A. Page, *Bitter Wages: Ralph Nader's Study Group Report on Disease and Injury on the Job*, (New York: Grossman Publishers, 1973), p.xii.

¹¹⁴ *Ibid*, p.xv.

¹¹⁵ Ham report, as cited in O'Grady, p.10.

old forms of legislation were replaced by a system in which the employer's responsibility was absolved in exchange for a monetary sum. The forms of production in the industrial revolution also created a condition where an employer would communicate to treat their employees as a group and naturally they began to respond as a group as well.

This group response met liberalism and "laissez faire" capitalism in the nineteenth century in the form of communism and social reformation. This transition in "consciousness" is summarized by E.P. Thompson in *The Makings of the English Working Class*:

These years reveal a passing beyond the characteristic outlook of the artisan, with his desire for an independent livelihood "by the sweat of his brow," to a newer outlook, more reconciled to the new means of production, but seeking to exert the collective power of the class to humanize the environment: - by this community or that co-operative society, by this check on the blind operation of the market economy, this legal enactment, that measure of relief for the poor. And implicit, if not always explicit, in their outlook was the dangerous tenet: production must be, not for profit, but for use. ¹¹⁶

The refinement of liberalism in the nineteenth century, therefore, was part of the dynamic tension between socialism of various varieties and laissez faire capitalism. Accordingly, the appeasement of social reformers took the form of government intervention to restrict child and women labour, work

¹¹⁶ E. P. Thompson, *The Making of the English Working Class*, London: Penguin Books, 1981). p,913.

hours and led to the introduction of industrial hygiene and compensation for injuries.

While the Americans were arguably the slowest industrialized nation to introduce industrial hygiene the American system might be the leading nation in "reforming" its existing legislation. The American system might face a greater impetus for change as higher direct costs to workers compensation may result due to the higher direct cost to the employer of American healthcare. Whereas Canadian compensation schemes generally involve income replacement, American compensation schemes pay higher benefits by paying for health and legal services in addition to income replacement.¹¹⁷

In addition to our compensation schemes, the Canadian and American health and safety legislation both resemble the model developed in England and as such, bear remarkable similarity despite the lack of Canadian federal enforcement of legislative standards.¹¹⁸ While the legislation may begin to diverge due to higher structural pressures on the American system, the basic social objectives of spreading liability and reducing harms associated with

¹¹⁷ Because Universal healthcare places much of the cost on the tax payer rather than the employer. The direct costs of compensating injured workers results in less compensation costs to the employer and may have the effect of being partly "hidden" within our universal healthcare. It should be mentioned, however that Ontario's recent reforms to workers compensation have placed the onus on specific firms to pay for the injuries that occur on their sites.

¹¹⁸ Sullivan, p.19.

occupational diseases and accidents are still the goals legislators are attempting to achieve.¹¹⁹

The internal responsibility system is an example of legislative creativity to reduce occupational accidents and disease by promoting a cooperative environment and including input from those directly affected by the industrial process. This system serves as the logical extension of the workers compensation system which was designed as a co-operative compromise, in which the employer agrees to pay into a fund to mitigate worker injury and the employee agrees not to sue for the injury. "Consensus standard" regulations serve in this framework to prevent a scenario in which a given employer may endanger employees because the true economic cost is spread throughout the employer community.

Workers compensation will continue to provide a particular challenge to twenty first century policy making. As Terrence Sullivan outlines:

Workers' compensation is an important area of historic compromise largely neglected in social policy studies in Canada. After nearly ninety years of history, it remains an interesting test case of the robustness of the instruments of the modern welfare state. It is perhaps not surprising then that this interesting institutional innovation should constitute a unique window on the cautious process of state sector reform in an era of liberalized trade.¹²⁰

¹¹⁹ Sullivan, p.20.

¹²⁰ Terrence Sullivan and Frank, John, "Restating Disability or Disabling the State: Four Challenges," as cited in Terrence Sullivan, *Injury and the new World of Work*, (Vancouver: UBC Press 2000), p.20.

The state sector reform process, which is under significant pressure to reduce payroll costs and workplace regulations, may place workers compensation schemes in jeopardy.¹²¹

In the mid nineties, the prospect for reduced state intervention in occupational health and safety was more likely due to the signing of the 1994 World Trade Agreement.¹²² In that agreement, member nations were obliged to adopt international standards where feasible. These standards included ISO standards meaning that a foreign business could claim that they have met conditions of trade through adherence to ISO standards. This effective trump on state level jurisdiction was expected to extend to occupational health and safety standards, however, in 1997 and again in April 2000, ISO decided against developing a workplace health and safety management standard.¹²³

While these motions were narrowly defeated, it is important to note ISO like management standards have been developed in the United Kingdom and the United States. The key shift in these standards from previous forms of occupational health and safety regulation would be a move towards

¹²¹ Sullivan, p.20.

¹²² Dave Bennett, ISO and the WTO: A Report to the International Confederation of Free Trade Unions (ICFTU) Working Party on Health, Safety, and Environment, Canadian Labour Congress, July, 2000.

employer developed standards and away from government and worker input. The International Labour Organization (ILO) has recently responded to this criticism of the ISO styled approach to occupational health and safety by introducing an occupational safety and health management system that involves equal representation from governments, labour, and business.¹²⁴ Whether this inclusive approach begins to form a supra national guideline for occupational safety and health remains to be seen.

In summary, in the climate of returning to a liberal trade paradigm, state intervention in the economy is being challenged. Emphasis is largely being shifted from the failings of the market to the failings of the state. With this scrutiny, occupational health and safety legislation may be viewed as a barrier to trade or a hindrance on productivity. Accordingly, some may debate that we are returning to an earlier stage in history in terms of occupational health and safety legislation.

The earliest stage in western culture of recognition of occupational dangers was the early Greeks who noticed the effects of mining on their slaves.¹²⁵ Initially common law and then law based on the Protestant work ethic (*Elizabethan Poor Law of 1602*) developed some obligation on the part

¹²³ Bennett.

¹²⁴ International Labour Organization, *Guidelines on Occupational Safety and Health Management Systems: ILO OSH 2001*, International Labour Office, Geneva, 2001.

¹²⁵ Elling, p.217.

of the employer or master. With rise of "laissez faire" capitalism prohibitions and regulations of employee health and safety were either non-existent or very lax. The regulations and prohibitions were eventually adopted due to various pressures from the ideological shift towards socialism and due to the rise of the chartist, social work and labour movements.

Workers compensation also developed in the context of the welfare state to ensure that employers would be protected against large civil suits through sharing liability and that employees would be ensured some protection against workplace "accidents" or "negligence" on the part of the employer. While this aspect of the welfare state is one of its longest established and perhaps most entrenched, like all other forms of government involvement in the economy it has come under scrutiny. Occupational health and safety truly does provide a window, therefore, on how far the neo-liberal agenda is willing to go in order to liberalize markets.¹²⁶

¹²⁶ Sullivan, p.20.

Chapter 3
Occupational Health and Safety Regulatory Models: Private and State Based Models

Regulation (is)... state activity and as such is contentious, most especially because it is at the heart of debates about the extent to which governments should adopt a "laissez faire" approach to markets and the extent to which they should intervene to protect certain groups.¹

Bridget M. Hutter

As Hutter claims, government is a contentious actor with regards to restricting market activities. The regulation of occupational health and safety has traditionally been a service that has been viewed as being more appropriately provided by a state actor. In many jurisdictions such as Canada, this command and control regulatory model was modified in the seventies and eighties. This was done in order to include worker involvement through joint committees in the workplace, augmenting state regulations with job and site specific regulation of occupational health and safety. Throughout the nineties, state intervention in the economy came under attack and occupational health and safety regulation was no exception.

Part of the diminished role for the state and workplace joint committees is attributable to the move towards management systems. Management systems such as ISO 9000 and 14000 are designed in such a way that they do not include or make reference to worker input and only make reference to the state to the extent that the enterprise be lawful. Not wishing "to throw the baby out with the bath water," the International Labour Organization has constructed an occupational health and safety management system that

¹ Bridget M. Hutter, *Compliance: Regulation and the Environment*, (Oxford: Clarendon Press

includes elements of the ISO model but also provides an equal role for worker representatives and the state. "Who's at the table" has therefore become a key point of contention in developing occupational health and safety regulations, with the two main factions being a tripartite camp and a unilateral corporate camp. Accordingly, this chapter examines the arguments made by proponents of voluntary compliance and the arguments made by proponents of state involvement in occupational health and safety regulation will be analyzed. Additionally, this chapter will provide a comparative analysis of various management systems. Whether these systems can provide an adequate substitute for government regulation or should simply augment government regulation, or whether their imposition would be complementary to government efforts at reducing occupational health and safety hazards are issues that will be examined.

As noted in the first chapter, the efficacy of worker involvement in occupational health and safety has been exhaustively researched elsewhere and as such will only be minor facet of this research. Interestingly, workplace health and safety committees are not unique to either voluntary compliance or regulatory models of health and safety in the workplace. In order to distinguish between a system that uses workplace health and safety committees in a regulatory fashion versus a system that is more steeped in the voluntary compliance model, one looks at whether these committees

1997), p.4.

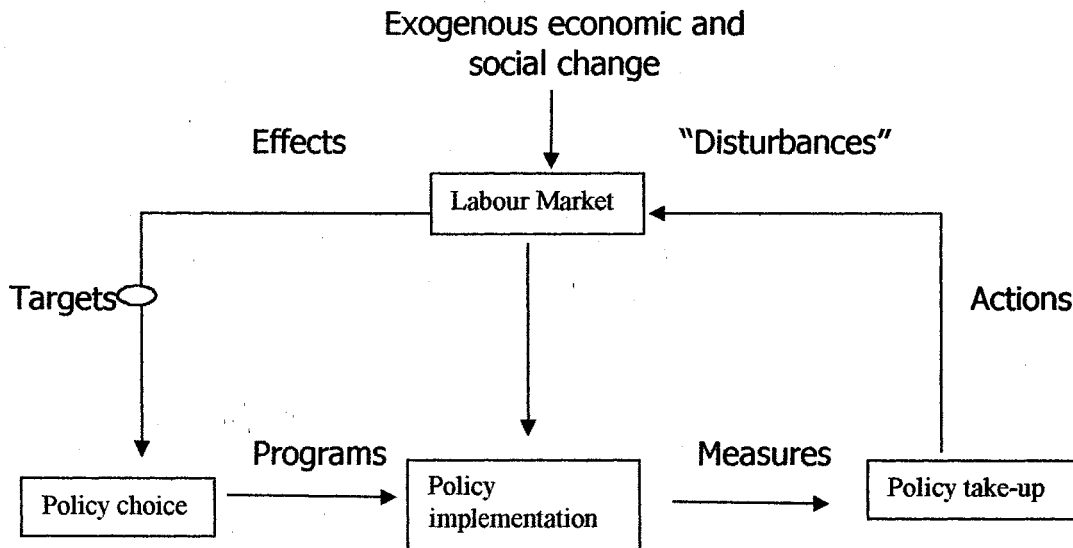
primarily serve in an advisory function or whether they have the power to halt production in the workplace. For example, in the early 1990s in Spain, "Health and Safety committees (had) the right to suspend production when faced with an imminent risk of accident (and) such action must be upheld or cancelled by the local authority within twenty four hours."² Conversely, in the same period, workplace health and safety committees in Belgium did not have the right to halt production in the workplace.³ Therefore The Belgian workplace health and safety committee is an example of a voluntary compliance model operating at the workplace level as there is no legislation to enforce work stoppages. Accordingly, the Spanish legislation would be an example of a command and control model at the workplace level (See Figure 1.2).

As outlined in chapter 2, command and control models have been developed to address the perceived poor performance of unfettered market economies in protecting workers against occupational injuries and disease. The following chart illustrates the way in which government actors relate to the labour market in order to correct perceived deficiencies.

² Mike Allen, and Mather, Celia, *Protecting the Community: A Worker's Guide to Health and Safety in Europe*, (London: London Hazards Centre Trust Limited, 1992), p.101.

³ Allen, p. 101.

Figure 3.1
Labour Market Policy Cycle⁴



The measures adopted in the command and control model generally fall under the industrial hygiene approach, which focuses on “the elimination or reduction of hazardous exposures to workers.”⁵ This approach can be essentially broken down into three parts; “engineering controls, personal protection, and administrative measures.”⁶ Engineering controls are related to the technological processes employed by the firm, personal protection refers to the employee’s safeguards against that technology (e.g. a hard hat), and administrative measures are related to management practices that could reduce occupational hazards such as “job rotation and worker education.”⁷

⁴ Schmid, p.206.

⁵ Charles Levenstein and Dominick J. Tuminaro, “The Political Economy of Occupational Disease,” in Levenstein, *Work, Health and the Environment: Old Problems, New Solutions*, (New York: Guilford Press 1997), p.12.

⁶ Levenstein, p.12.

⁷ Levenstein, p.12.

A new command and control regulatory approach that is resulting in stricter controls on hazardous and potentially hazardous substances in many jurisdictions, is the precautionary principle. While it is normally discussed in the context of regulation of the broader environment, this approach also has serious implications for the work environment. As its name implies, the precautionary principle is simply a move away from solely regulating that is proven to be harmful to also regulating that which is potentially harmful but where evidence is not necessarily conclusive. For example, the Canadian government enshrined the precautionary principle in its own environmental legislation in its *1990 Green Plan*.

Respect for nature also implies an attitude of prudence. Human can wreak serious irreversible damage on the environment. Yet in deciding on an action, we rarely know all its environmental ramifications. Caution is therefore appropriate: we must be prepared to give nature the benefit of the doubt. We should err on the side of protecting the environment.⁸

As this example illustrates, the burden of evidence switches from the onus of evidence being a demonstration of a product being hazardous before regulating to demonstrating that something is safe prior to its being used.

Command and control models focus on reducing market failure. Market failure is a broad term used to describe a number of negative possible

⁸ Environment Canada, *Reviewing CEPA and the Precautionary Principle/Approach*, 1994, p.11.

outcomes in the provision of a good or service by the private sector. The logical extension of market failure is that there may be some areas in which the state is a more appropriate actor than is the private sector in delivering a good or service.

There are four types of market failure; market power, incomplete information, externalities, and public goods.⁹ Market power refers to distortions in the market that are caused by producers or suppliers of factor inputs having sufficient power to shape the price of a good or service through controlling levels of supply. Market power actually has the potential to have a positive effect on occupational health and safety in an indirect manner in the cases where firms with monopsony power (one buyer) force their suppliers to adopt a certain standard. For example, the US automobile industry has forced small suppliers to adopt ISO 9000 standards.¹⁰ Therefore, if a management system that is effective at reducing occupational hazards in the workplace is introduced by virtue of conditions set by the monopsony buyer, then the exercise of market power results in improved health and safety in the workplace.

⁹ Robert S. Pindyck, Rubinfeld, Daniel L., *Microeconomics Second Edition*, (Don Mills: Maxwell Macmillan Canada Inc., 1992), p.603-605.

¹⁰ Diane Scott Docking, and Dowen, Richard J., "Market Interpretation of ISO 9000 Registration", *Journal of Financial Research*, VOL. XXII, No.2, Summer 1999, p.147.

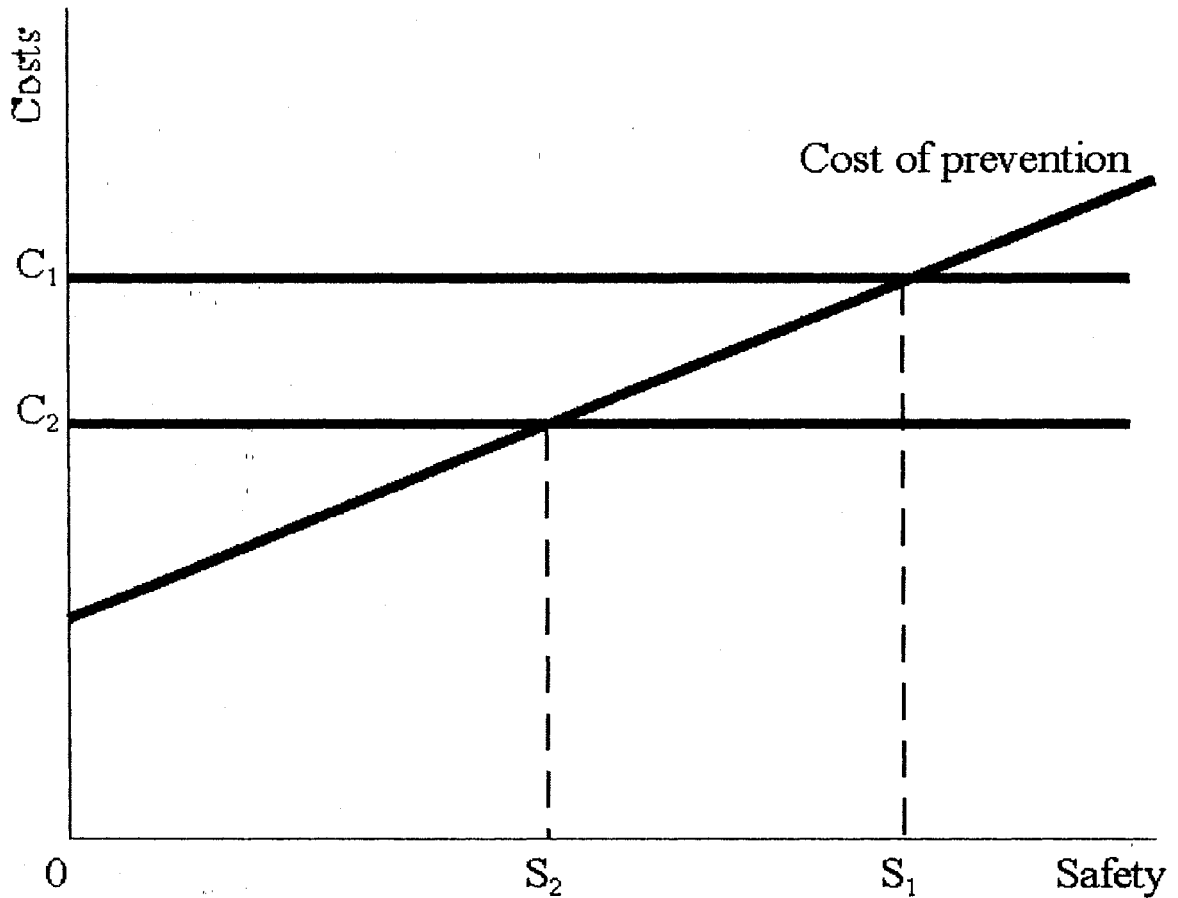
The second form of market failure is incomplete information about product quality and market prices.¹¹ In the context of occupational health and safety a lack of information can lead to increased incidences of occupational health and safety injury and disease rates through a lack of recognition of hazards in the workplace and the consumer lacking sufficient information on the firms' occupational health and safety performance in order to be able to choose products made by companies with superior performance records. It is the latter concern that is part of the impetus behind companies wishing to have some form of certification of their occupational health and safety performance. It is certainly possible, however, that even if certification reflecting superior performance occurs, that consumers will not base their purchasing decisions on OH&S performance or at least not to the extent that it offsets the costs associated with compliance.

Because the costs associated with poor occupational health and safety are arguably not fully captured in the costs of good and services, there is evidence of an externality form of market failure. In other words, externalities refer to costs of production that are not borne out in the price. Economist Peter Dorman has recently provided an illustration of this phenomenon in occupational health and safety:¹²

¹¹ Pindyck, p.604.

¹² Dorman as cited on April 13, 2003.

Figure 3.2
Accident Costs, Prevention Costs, and Safety Levels



C₁= Total cost of disease and injuries
 C₂= Cost of disease and injuries that are borne by the firm

As this chart illustrates, occupational disease and injury rates result when the market is left to its own devices because the firm will only address the part of the health and safety cost that effects its bottom line. Accordingly, government intervention and third party verification systems are advocated as means to compel firms to increase safety provisions in the workplace

beyond what it would view as financially optimal.

The fourth form of market failure is the phenomena of public goods. Public goods are goods that many consumers value but the market does not adequately supply.¹³ In the case of occupational safety, this principle applies in that the public wants safe workplaces but the market left to its own devices does not supply healthy workplaces due to a "prisoner's dilemma" of unsafe workplaces enjoying a competitive advantage when compared to safe workplaces. The following table by economist Peter Dorman demonstrates how this situation arises:¹⁴

Figure 3.3

"Prisoner's Dilemma" and Market Regulation of Occupational Health and Safety

		Firm 2	
		Safe	Unsafe
Firm 1	safe	both firms are safe and have equal competitive prospects	firm 1 is safe but at a competitive disadvantage; firm 2 is unsafe but has a competitive advantage
	unsafe	firm 1 is unsafe but has a competitive advantage; firm 2 is safe but is at a competitive disadvantage	both firms are unsafe and have equal competitive prospects

As this table illustrates, the prisoner's dilemma in this case is that the firm will

¹³ Pindyck, p.605.

¹⁴ Dorman as cited on April 13, 2003.

opt for an undesirable outcome to hedge against a more undesirable outcome. The most positive outcome is only achieved when all parties uniformly agree or are coerced to adopt a safe course of action. Accordingly, without some intervening third party creating a homogenous norm, companies may have unsafe workplaces rather than be at a competitive disadvantage.

Unlike command and control methods, voluntary compliance models focus on industry to be the primary actor in reducing occupational injury and disease rates. Voluntary compliance advocates Stephen P. Levine and David T. Dyjack outline the underlying ideology beneath this movement:¹⁵

By promoting the use of an industry-driven (environmental health and safety management system), this policy reaffirms the belief that industry is the main engine of sustained economic growth that should be unfettered by specification standards.

As this quote implies, the theoretical construct for a voluntary industry based approach to reducing occupational disease and injury is based on the argument that individual firms and industries are better at specifying hazards than is a government actor. This is essentially rooted in the premise that the private sector is better at delivering goods and services than is the public

¹⁵ Stephen P. Levine, and Dyjack, David T., "Development of an ISO 9000-Compatible Occupational Health Standard-II: Defining the Potential Issues," in Redinger, *New Frontiers in Occupational Health and Safety: A Management Systems Approach and the ISO Model*, (Fairfax: American Industrial Hygiene Association, 1996), p.116.

sector. Essentially the argument is based on a number of types of "government failures" in the provision of goods and services.

"Government failure" is the common characterization of the problems of paradox in voting, rent seeking behavior, and the principle agent phenomenon.¹⁶ Paradox in voting refers to the gap that can potentially exist between what the voter's preference is and what the actual outcome might be from the elected representatives.¹⁷

Rent seeking behavior refers to the power that given interests might have over a given government action. This means that a group might retain a disproportionate amount of resources or attention than might otherwise objectively warranted. Hence inefficiency might occur because one group is advantaged over another.¹⁸ For example, one might argue that forgone trade with Cuba is a greater harm to the American consumer than is the current political benefit they enjoy due to the embargo. The rent seeking behavior (influence) of the Cuban American lobby could be viewed as a group that is enjoying a benefit whereas the American public as a whole might be receiving a reduced comparative benefit or even be suffering harm. While the efficient

¹⁶ Charles F. Redinger, "A Paradigm Shift at OSHA: ISO-Harmonized Third-Party Registration of Occupational Health and Safety Management Systems," in Redinger, *New Frontiers in Occupational Health and Safety: A Management Systems Approach and the ISO Model*, (Fairfax: American Industrial Hygiene Association, 1996), p.60.

¹⁷ Redinger, p.60.

¹⁸ Redinger, p.60.

decision in terms of economic benefit to the American public might be a removal of the embargo, the Cuban American lobby through its electoral importance in the key electoral state of Florida, is able to influence the government to continue with an embargo.

The principle-agent phenomenon refers to the problems that arise due to bureaucracy. Essentially the phenomenon is that agents of the government often develop an independence from the government.¹⁹ This can result in inefficiency through bureaucracy potentially acting counter to the interest of the legislature and the public. Furthermore, it has also been claimed that these bureaucracies operate in an inefficient manner due to the fact that they are not confined to the market forces of profit and price signals which the private sector relies upon to reduce inefficiency.²⁰

Pursuant to the arguments on government failure, some economists argue "that command/control regulations (regulatory model) are not necessarily the best way to address statutory mandates to improve ecological and human health."²¹ The implicit argument put forth is that government specification is flawed in terms of quantity and quality due to government's inherent failings. Corporate based health and safety organizations such as the American Industrial Hygiene Association argue that a system that has a larger root in

¹⁹ Redinger, p.60.

²⁰ Redinger, p.60.

the private sector would provide a better outcome for less money.²²

Essentially the argument goes that the greater the role of the private sector in determining the standards and enforcing them, the greater the efficiency and applicability of the standards and the costs associated with them.

Additionally under the rubric of a voluntary compliance system, verified by a third party organization, government is able to be more efficient through being able to focus their regulatory capacity towards those firms which do not comply voluntarily to third party regulation.

Redinger provides an illustration of the theory that private sector involvement improves both the efficiency of government health and safety regulation and improves the overall health and safety outcomes at a reduced cost:

²¹ Redinger, p.67.

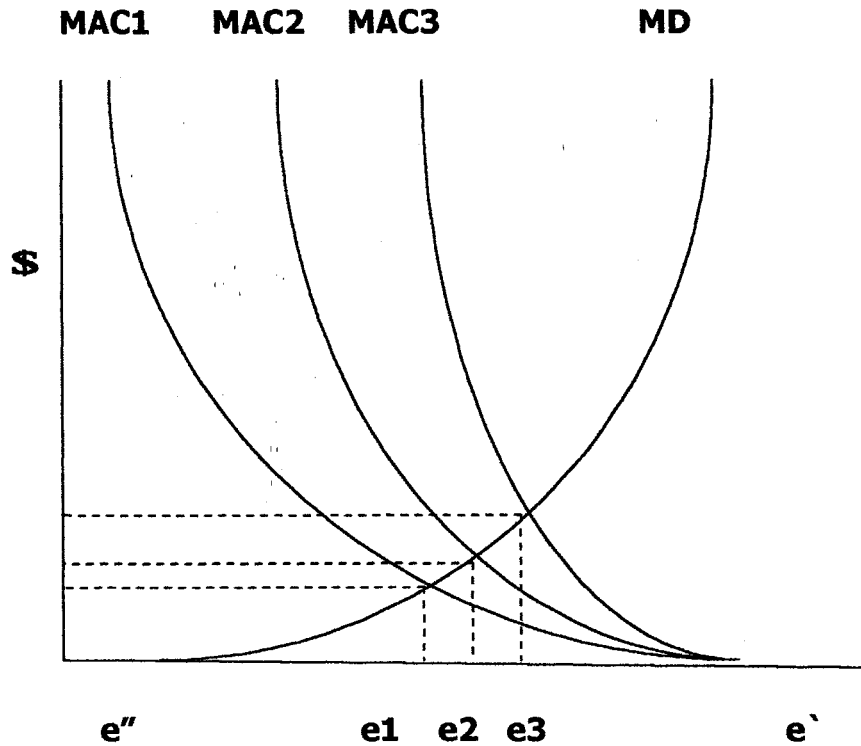
²² Redinger, p.67

While the stated objective of the American Industrial Hygiene Association does not specifically mention being a corporate lobby group, its executive is overwhelmingly comprised of corporate executives and their support for voluntary compliance measures adds some congruency to their organization with outright corporate lobby groups. For a list of the Board of Directors :

<http://www.aiha.org>

Figure 3.4

"Conceptual savings from reduced enforcement costs through an ISO-harmonized third-party registration policy".²³



MAC = Marginal Abatement Costs

MD = Marginal Damage

e'' = a point in which a hazard is completely controlled with the lowest possible associated rate of occupational illness and injury

e' = a point of an uncontrolled hazard that leads to high levels of occupational illness and injury

MAC1 = An ISO-harmonized third-party registration policy

MAC2 = A third-party certification policy that is not ISO-harmonized

MAC3 = Current regulatory model employed in most industrialized countries

²³ Redinger notes that this chart might overstate the relationship between marginal abatement costs and marginal damage. While he admits that logic is "somewhat counterintuitive" he contends that it forms the basis behind the conventional economic arguments about environmental and occupational safety. Redinger, p.65-67.

This model simply argues that government regulatory resources are finite and therefore a third party could act as a surrogate regulatory mechanism for those firms who voluntarily submit to that program. This in turn frees up government resources to focus its resources on the firms who do not enter into this program which could theoretically lead to reduced "marginal damage."

For this formula to be accurate it requires that the third party verification system be an adequate substitute for government regulation. While quantifiable objectives to measure performance may be set for workplace injuries, such as reduced number of hours lost due to workplace injuries, it might be very difficult to monitor third party performance in abating occupational disease rates.

A state actor, on the other hand, facing political pressure from citizens, being responsible for health costs and/or reduced tax revenues related to occupational disease might be more inclined to act reduce employee exposure to hazardous substances in the workplace. Accordingly, the private sector might be less inclined to act when compared to a state actor to reduce occupational disease if causation is not firmly established and/or if the disease does not manifest itself over the short term in a manner which would result in increased costs to the firm. Additionally, these diseases may not be

captured in key performance indicator type of system, whereas a state actor might be in a greater position to view related hazards in a more holistic and qualitative manner.

While the private sector might be predisposed to having a cynical view of regulations imposed upon them, the globalization of markets creates a paradox. Because "globalization expands the production and marketing of goods and services from the nation state to the international arena," corporations are faced with a myriad of national laws in an international system.²⁴ International trade agreements are partly an attempt to harmonize and/or reduce the number of regulations that corporations face at the supranational level.

International trade agreements such as GATT benefit the corporate sector to some degree through limiting policies such as "tariffs, import substitution, and foreign exchange controls."²⁵ Occupational health and safety and to a large degree environmental regulation, however, is not included within these agreements and is still subject to national laws.²⁶ This creates a paradoxical drive for industry to create its own regulations to improve "the efficient production of goods and services" through reducing the role of local

²⁴ Ellen Wall and Beardwood, Barbara, "Standardizing Globally Responding Locally: The New Infrastructure, ISO 14001, and Canadian Agriculture," *Studies in Political Economy*, vol. 64, Spring 2001, p.36.

²⁵ Wall, p.36.

regional and national governments and replacing them with harmonized standards and by utilizing "third party verification" to enforce them (e.g. ISO 14001).²⁷ So while regulation is generally viewed as a "barrier to international trade," international private sector originated standardization and "third party verification" are viewed as being complimentary with the trade liberalization agenda.²⁸

A structural reason to implement third party verification and international standardization has arisen out of the Uruguay round of the General Agreement on Trade and Tariffs (GATT). GATT requires that national regulations or standards not become trade barriers except for in rare exceptions such as national defense.²⁹ Not unlike other areas of public policy, a major impetus for international standardization has been the concern over national health and safety regulation as being a non-tariff barrier to trade. Germany in particular has been accused of using technical safety specifications of machinery as a way sheltering a domestic market for its machinery industry.³⁰ A more popular example of this problem in a broader

²⁶ Wall, p.36.

²⁷ Wall, p.34-37.

²⁸ Daniel S. Markey, and Levine, Steven P., "Conformance of ISO OHSMS Standards in Public Sector Procurement Specifications to GATT/WTO Requirements," in Redinger, *New Frontiers in Occupational Health and Safety: A Management Systems Approach and the ISO Model*, (Fairfax, American Industrial Hygiene Association 1996), p.89.

²⁹ S. Zack Mansdorf, "The ISO Man Cometh: Moving to Global Standards," in Redinger, *New Frontiers in Occupational Health and Safety: A Management Systems Approach and the ISO Model*, (Fairfax: American Industrial Hygiene Association, 1996), p.2.

³⁰ Gunther Schmid, O'Reilly, Jacqueline and Klaus Schomann, *International Handbook of Labour Market Policy and Evaluation*, (Cheltenham: Edward Elgar, 1996), p.880-881.

policy context is the United States "country of origin labels" on their food. It is often criticized as a measure to favor domestic over foreign producers, while the United States government argues that it is a food safety measure.³¹

A major emerging facet of the voluntary compliance model is industrial self-regulation. ISO- International Organization for Standardization has been the leading organization in developing industry-based initiatives.³² ISO, headquartered in Geneva, Switzerland, was founded in 1946 as an attempt to eliminate technical barriers to trade by creating uniformity within industry with regards to management.³³ At the International Organization for Standardization conference on the Environment 1994 (ISO 14000), it was proposed that ISO expand its purview to include occupational health and safety.³⁴ While ISO has suspended its process to develop an Occupational Health and Safety system other management systems such as the Occupational Health and Safety Assessment Series (OHSAS 18001-18002)

³¹ Wall, p.36.

³² ISO is not an acronym. The Organization provides the following explanation for its choice of the word ISO as the short form abbreviation International Organization for Standardization: "ISO" is a word, derived from the Greek isos, meaning "equal", that occurs in a host of terms, such as "isometric" (of equal measure or dimensions) and "isonomy" (equality of laws, or of people before the law). From "equal" to "standard", the line of thinking that led to the choice of "ISO" as the name of the organization is easy to follow. In addition, the name ISO is used around the world to denote the organization, thus avoiding the plethora of acronyms resulting from the translation of "International Organization for Standardization" into the different national languages of members, e.g. IOS in English, OIN in French (from Organisation internationale de normalisation). Whatever the country, the short form of the Organization's name is always ISO.

<http://www.iso.ch/iso/en/aboutiso/introduction/whatisISO.html> as cited on April 8, 2003.

"have been developed in response to urgent customer demand for a recognizable occupational health and safety management system standard against which their management systems can be assessed and certified, and for guidance on such a standard."³⁵ In other words, industry is looking for a "stamp of approval" on their respective occupational health and safety practices and ISO is establishing certain business standards to attempt to meet that end.

The international standardized self regulatory occupational health and safety management systems is becoming an increasingly more popular alternative to government specification, particularly in Britain, the United States and the Far East.³⁶ For example, the British government is now taking its lead in determining its respective occupational health and safety legislation from the industry developed standards.³⁷

A major impetus for international standardization in general has been the concern over national health and safety regulation as being a non-tariff barrier to trade. Germany in particular has been accused of using technical

³³ Yoichi Nishijima, "Standardization of Occupational Health and Safety Management Systems: Globalization of the Economy and Improvement of Workers Welfare," in Schober, *Labor Market issues in Japan and Germany*, (Berlin: Duncker & Humblot, 1998), p.166, 169.

³⁴ Nishijima, p.166.

³⁵ British Standards Institution, "Occupational health and safety management systems-Guidelines for the implementation of OHSAS 18001, (2000), p.ii.

³⁶ Nishijima, p.161.

³⁷ Health and Environment Sector Board, *BS 8800* (British Standards Institution 1996).

safety specifications of machinery as a way sheltering a domestic market for its machinery industry.³⁸

Of course there is more than one way to harmonize the different national regulations. These policies are being harmonized by both private and public regulatory agencies. For example, while performing the same function of harmonizing health and safety policy, the key difference between ISO and the European standards is its relationship to an elected body.³⁹ The European standards are a result of a legislative process derived from an elected body (i.e. The European Union). Conversely, ISO is an organization that is comprised of member nations that all have one vote each and the voters are from industrial associations (e.g. American National Standards Institute in the United States) rather than national government.⁴⁰

As the following chart demonstrates the ISO model is based on quantifying and assessing occupational health and safety in the workplace:

³⁸ Gunther Schmid, O'Reilly, Jacqueline and Klaus Schomann, *International Handbook of Labour Market Policy and Evaluation*, (Cheltenham: Edward Elgar, 1996), p.880-881.

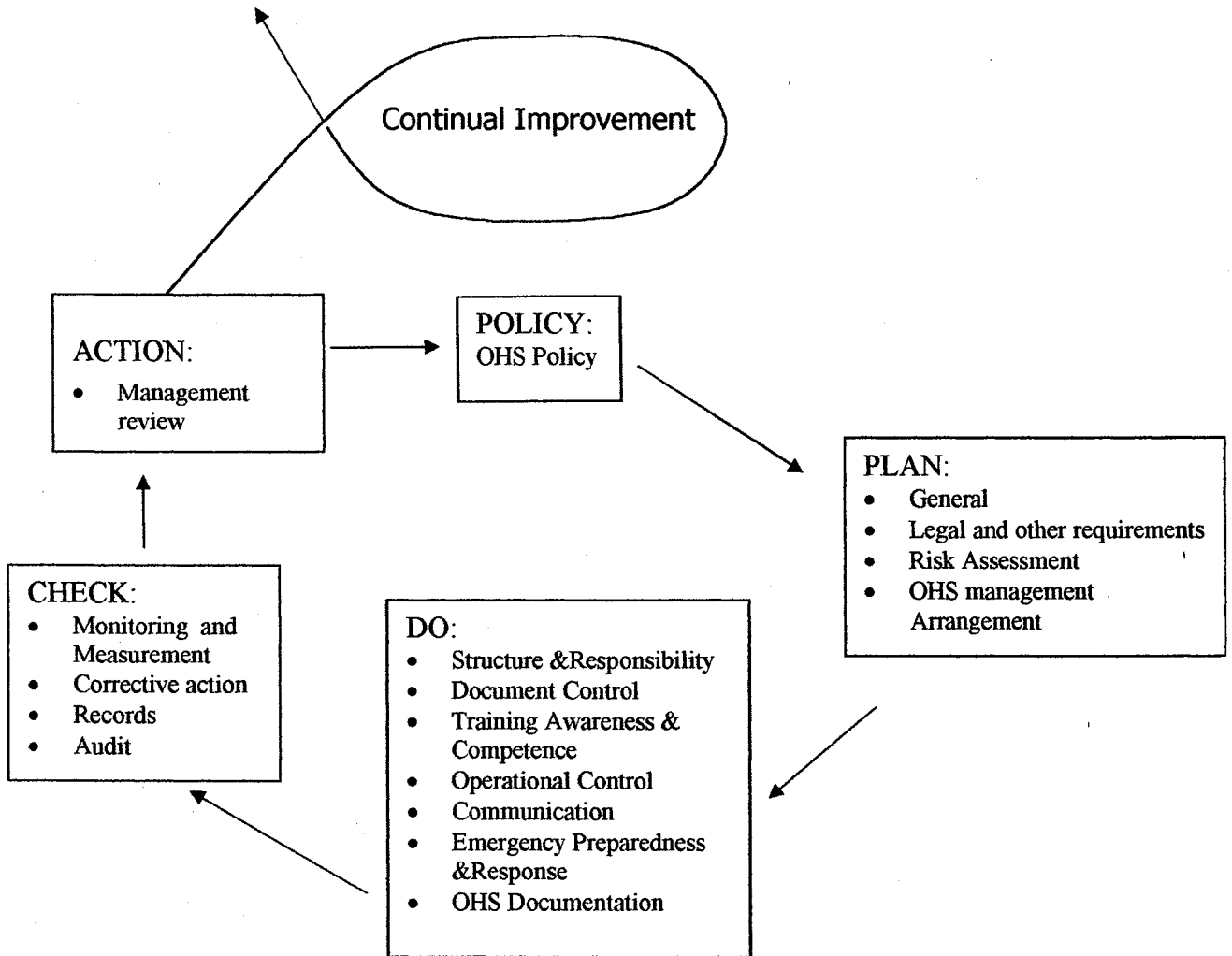
³⁹ Mansdorf, in Redinger, p.1.

⁴⁰ American National Standards Institute, www.ansi.org, as cited on June 5, 2002.

Figure 3.5

Elements of the self-regulation model under a management system

(e.g. ISO).⁴¹



⁴¹ Nishijima, p.165.

Put simply, the ISO system like other management systems basically operate on three basic steps; "say what you do, do what you say and prove it."⁴² As the chart illustrates, organizations that are members of ISO are required to fully document employee actions that follow from the organizations plan to improve X. This documentation is then verified by an outside auditor who then in conjunction with the management of the firm makes recommendations to improve the plan (internal and external audits).⁴³ In theory this results in continual improvement of the performance of a given firm on towards goal X.

There have been a number of concerns that have been raised about ISO's role as a regulator for the environment or health and safety. The first criticism is that ISO does not actually have specification standards and therefore objectives and targets can vary widely from firm to firm.⁴⁴ Hypothetically, a firm could set very low standards for itself and could receive a glowing audit from ISO so long as the goal set by the firm is reached and all of the measures used by the firm are well documented. So while there is a requirement to meet all legal requirement from all levels of government, there is a concern that third world nations, in particular, where very few (if

⁴² Wall, p.43.

⁴³ Wall, p.43.

⁴⁴ Wall, p.43.

any) legal requirements exist may be viewed as equal in terms of ISO registration while in fact performing at a much lower standard.⁴⁵

A second major criticism is the arguably vague and generic nature of ISO jargon and standards. In order for ISO to be universally applicable, the standards have been written in a very general way. The possible result of this lack of precision and variability is that ISO style standards might be interpreted very differently from one auditor to the next. Therefore, decisions by auditors in one firm or country may not be the same as those from another yet both would be qualified through ISO to register compliant organizations".⁴⁶

In addition to honest mistakes in interpretation, some have raised the specter of possible corruption in the ISO system.⁴⁷ A key structural issue that may lead to corruption is that ISO auditors do not actually work directly for ISO. ISO provides the auditor training but the supervision of ISO auditors is done by "independent organizations working within their own countries and /or regions." Accordingly, Wall and Beardwood argue that ISO certification may be subject to "differences in cultural acceptability of bribes and/or

⁴⁵ Wall, p.44.

⁴⁶ Wall, p.44.

⁴⁷ Wall, p.44.

favours paid to secure contracts (which may lead to) ... the substance of the system in one firm (having) little relationship to that of another firm."⁴⁸

In addition to a lack of relationship of standards between firms within the ISO framework, it is also argued that there is a counter productive relationship between ISO's stated environmental and health and safety mandate, and its role as an actor in the broader achievement of those goals. ISO 14001 in particular has been accused of "forestalling the development of international environmental laws (and also creating) the appearance of enforcing greater international control."⁴⁹ It is argued that ISO creates the illusion that it is solving problem X while they might in fact be weakening the resolve for national and international laws to address these problems.

Another way in which ISO potentially obfuscates the firm's performance is by stating that a firm is compliant to ISO environmental or health and safety standards creating a public perception that the firm is performing well in terms of health and safety and/or the environment.⁵⁰ For example, a firm that makes brakes in India might use asbestos in its production therefore subjecting its workforce to significant risk of contracting mesothelioma and/or asbestosis. A firm in France making brakes would not use asbestos in production due to a government ban on that substance. It is

⁴⁸ Wall, p.44.

⁴⁹ Wall, P.44.

fully possible for the firm in India to be ISO compliant while the French firm is non-compliant. This means that the French firm, while having a superior record in terms of occupational disease rates might be ranked as poorer than the Indian firm with its inferior health and safety performance. In other words, ISO may be an accurate and effective test on the proper functioning of private sector bureaucracy, however, that is not necessarily equal to testing for a better work environment for its employees. After all it is logically possible that a firm's poor performance in health and safety might not be related to having a poorly run bureaucracy.

Occupational disease may indeed be the true short coming of a third party verification system such as ISO acting as a surrogate for government enforcement and regulation. One central problem is related to the reactionary nature of these management systems. They rely upon finding a problem, then quantifying the effect and then introducing changes to address the root cause of the problem and improve performance on the indicator. This is fine if the problem arises quickly and the cause and effect relationship is clear (the disease is not multi-factorial). If on the other hand, the industrial process results in a injury or disease that does not materialize for a long period of time and/or the injury or disease could be related to factors outside of the workplace as well as factors inside the workplace (e.g. cancer), the management system would be ill equipped to manage the hazard as it would

⁵⁰ Wall, p.44-45.

be difficult to quantify the performance of the firm in a timely or meaningful fashion.⁵¹

The following table was created by the International Occupational Hygiene Association to compare the various management systems that exist or are under development in the world:

⁵¹ Peter Dorman, *Three Preliminary Papers on the Economics of Occupational Health and Safety*, Geneva, April 2002, <http://www.ilo.org/public/english/protection/safework/papers/ecoanal/index.htm>, as cited on April 13, 2003.

Table 3.1

Comparisons of Occupational Health and Safety Management Systems⁵²

Table No. 2 - Analysis Summary

Management System Variable	Australia/New Zealand	Australia, SafetyMap	Brazil	EU - EMAS	India	EGP Forum	ISO 14001	ISO TC 67	Ireland	Jamaica	Japan	Korea	The Netherlands	Norway	South Africa, NIOSH	Spain	UK, BS6800	UK, CIA	US, AIHA	US, CMA	US, VPP	US, 1910.700	US, Cal OSHA
1.0 Management Commitment and Resources	X	X		X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X
1.1 Regulatory Compliance and OHSMS Conformance	X	X		X	X		X	X	X	X			X	X		X	X	X					
1.2 Accountability, Responsibility, and Authority	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2.0 Employee Participation	X	X	X		X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.0 Occupational Health and Safety Policy	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
4.0 Goals and Objectives	X		X	X		X	X	X	X	X			X	X		X	X	X	X			X	X
5.0 Performance Measures	X		X		X	X	X	X	X				X	X		X	X	X	X			X	
6.0 System Planning and Development	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6.1 Baseline Evaluation and Hazard/Risk Assessment	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
7.0 OHSMS Manual and Procedures	X	X		X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
8.0 Training System	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
8.1 Technical Expertise and Personnel Qualifications	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
9.0 Hazard Control System	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
9.1 Process Design	X	X		X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X
9.2 Emergency Response	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
9.3 Hazardous Agent Management	X	X		X	X					X	X	X	X		X		X	X					
10.0 Preventive and Corrective Actions	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11.0 Procurement and Contractor Selection	X	X		X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X
12.0 Communication System	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
12.1 Document and Record Management System	X	X		X		X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
13.0 Evaluation System	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13.1 Auditing and Self-Inspection	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13.2 Incident Investigation and Root Cause Analysis	X	X		X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
13.3 Health/Medical Program and Surveillance	X	X		X					X	X	X		X	X				X	X	X			
14.0 Continual Improvement	X			X		X	X	X	X	X			X	X		X	X	X	X	X	X	X	
15.0 Integration	X	X		X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	
16.0 Management Review	X	X		X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	

x = variable present
 = variable not present

Source: International Occupational Hygiene Association, *IOHA Report to ILO on an International OHSMS*, August 31, 1998.

⁵² ISO TC 67 which was slated to become an international health and safety standard, as mentioned previously has been suspended for the moment by the International Organization for Standardization. This chart was also created prior to the introduction of the ILO OSH in 2001.

International Occupational Hygiene Association, *IOHA Report to ILO on an International OHSMS*, August 31, 1998, http://www.ilo.org/public/english/protection/safework/cis/managmnt/ioha/chp_2.htm, as cited on April 12, 2003.

Based on this analysis conducted by the International Occupational Hygiene Association, the occupational health and safety management systems that have been developed do not necessarily include worker participation and they do not necessarily include employee participation or regulatory compliance. It is important, however, to note that evidence of employee participation as a variable in this analysis can have very different qualitative meanings based on whether or not the employees represented in the process are reflective of democratic selection process.⁵³ For example, employee participation can refer to union involvement but can also refer to employees who have been selected by management as part of a "grooming" process. A lack of expert worker and government involvement raises the concern that some of these systems might result in poorer health and safety outcomes if they replace the governments' regulatory function.

In conclusion, the central tension between those who advocate voluntary compliance and development of health and safety standards and those who argue for a strong state actor in developing and enforcing those standards is the compatibility between profit seeking behavior and occupational safety and health.⁵⁴ If making a profit and improved occupational health and safety

⁵³ Canadian Union of Public Employees, *Total Quality Myths: How to respond to new management schemes*, p.11-12.

⁵⁴ Theo Nichols, and Tucker, Eric, "Occupational Health and Safety Management Systems in the United Kingdom and Ontario, Canada: A Political Economy Perspective", *Centre for Research on Work and Society: Working Paper Series*, No.21, March 1999, p.7.

outcomes are complementary then proponents of voluntary compliance are quite right in claiming that improved health and safety regulation could be led by industry based management systems and education aimed at "enlightening" businesses to adopt practices that improve health and safety outcomes. Voluntary compliance advocates contend that the government could then focus its finite resources on companies that have not bought into the voluntary framework.

On the other hand, if improvements in occupational health and safety performance hinder the ability of firms to make profits then it is unlikely that individual firms or third party organizations that are made up of these firms will act in a manner that is contrary to their interest. In addition to a conflict of interest, it may be difficult to measure the actual performance of these firms in abating occupational diseases and these problems do not lend themselves to a quantifiable performance measurement system as the diseases often take time to materialize and may only be partly related to the occupational hazard.

When comparing the voluntary compliance ISO style continuous improvement model to the command and control labour market policy cycle model, one is struck by their similarity. In essence, they are both focused on

measuring performance and learning from mistakes in a continuous fashion. The key differences are the scope and motivations of the actors. A firm that is establishing occupational health and safety practices based on its management system has the power to change its own procedures. A government actor has the power to level the playing field for all firms within a country. A supranational standard such as EU standard has the power to ensure that all firms within its block face the same competitive advantages while improving health and safety outcomes. Therefore, assuming profit maximization as the primary goal of any firm, firm and industry based standards that improve health and safety outcomes are only enacted if they do not result in reduced profits. Arguably, under a globalized economy, nation states face similar constraints but still have the ability to act in a manner that would be contrary to the profit making abilities of its business community.

Chapter 4

Current Trends in Canadian Occupational Health and Safety Legislation

How many workers have to die so the government can test their theory that employers can regulate themselves?

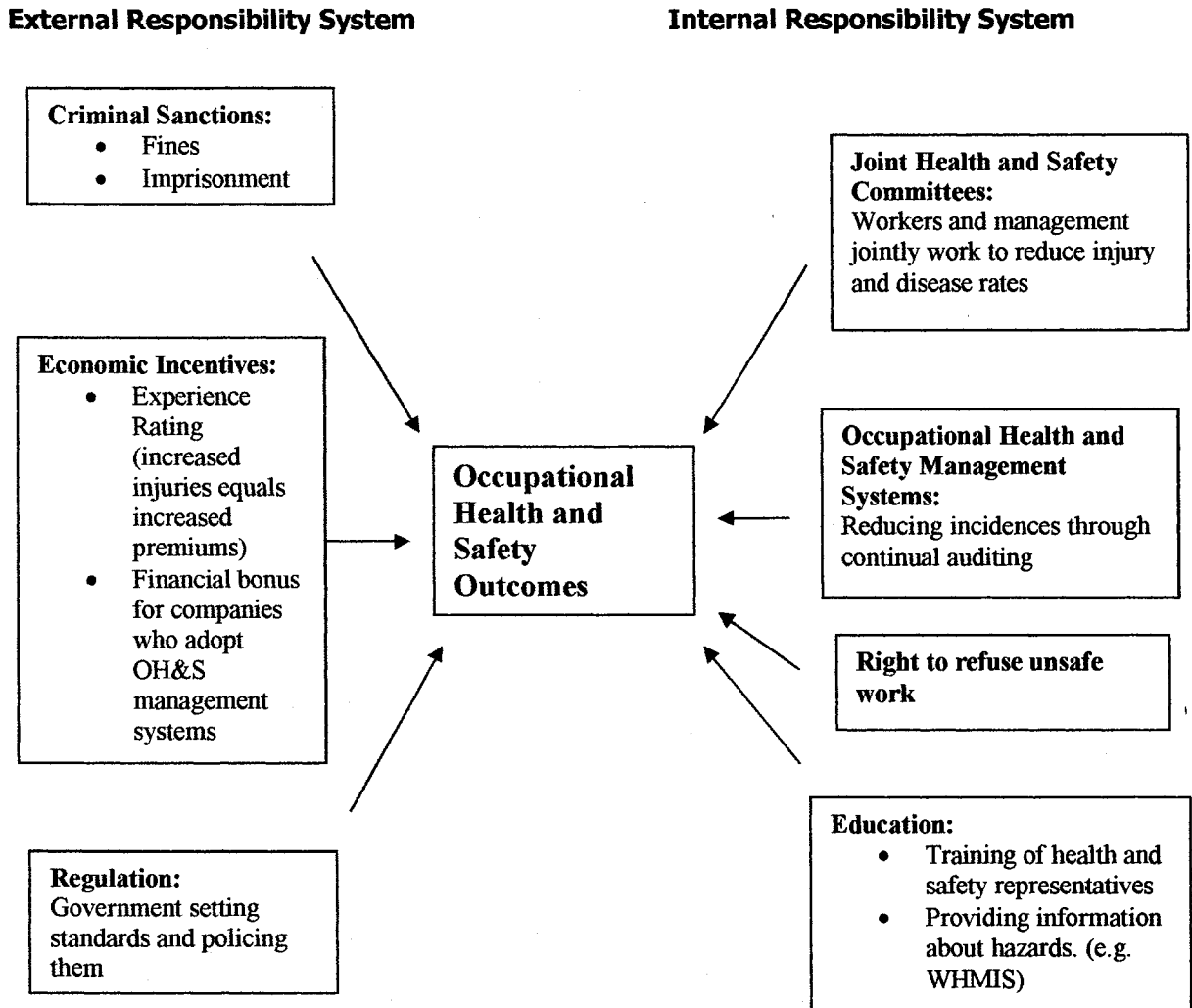
Jim Sinclair¹

As the quote from the British Columbia Federation of Labour President illustrates, the issue of privatized occupational health and safety regulation is rapidly becoming a contentious issue in Canada as well. Provincial governments across the country have been looking at and experimenting with various mechanisms to reduce occupational injury rates. The evaluation of voluntary compliance mechanisms becomes more complex as you move from an examination of the theoretical efficacy to an empirical assessment of Canada's experience with occupational health and safety. This is largely due to occupational health and safety outcomes being difficult to evaluate due to their multi-factorial nature.

Leaving aside questions of efficacy and evaluative tools for a moment, the following model attempts to capture the policy mechanisms that are being employed to reduce rates of occupational injury and disease in Canada:

¹ BC Federation of Labour, *More workers will die if Liberals proceed with changes to health and safety regulations and workers' compensation system*, Media Release, April 18, 2002.

Figure 4.1
Policy Mechanisms Employed in Canada to Prevent Occupational Health and Safety Injuries and Diseases²



As the model demonstrates, there is a multifaceted approach towards occupational health and safety in Canada. The external responsibility system

² Partly based on the following sources:

John O'Grady, "Comparative Approaches in Prevention: What are the Trends?, What are the Issues?, What are the Implications of Changes in the Labour Market?", Presentation to Plenary Session, Fourth International Congress on Medical-Legal Aspects of Work Injuries, Toronto, June 6-9, 1999, p.1-2.

is a set of mechanisms that largely focus on compelling employers to comply with standards or meet objectives. The internal responsibility on the other hand, has mechanisms that largely have the effect of compelling workers to comply with standards and meet objectives.

The right to refuse unsafe work, the right to participate in joint health and safety committees, and the right to know about workplace hazards is fairly universal throughout Canada. The key differences amongst the provinces are related to their use of economic incentives such as experience rating for compensation premiums, their promotion of occupational health and safety management systems and the penalties for non-compliance with provincial occupational health and safety legislation. The following table outlines the differences between the provinces on the structure of their workers compensation premiums and clarifies the central focus of each province's occupational health and safety strategy by outlining the severity of the penalties for non compliance and whether the province is actively encouraging employers to utilize occupational health and safety management systems.

Canadian Auto Workers, *Dupont Safety System Factsheet*, <http://www.caw.ca/whatwedo/health&safety/factsheet/hfsissueno13.asp>, as cited on May 7, 2003.

**Table 4.1
Provincial Occupational Health and Safety Legislation: Policy
Approach Indicators**

	British Columbia	Alberta	Sask.	Manitoba	Ontario	Quebec	New Brunswick	PEI	Yvon Scotia	Newfoundland
Workers Compensation										
Premiums based on claims experience	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes
Collective Liability	No	No	Yes	No	No	No	No	Yes	No	No
Key Indicators of Occupational Health and Safety Strategy										
Active Promotion of Occupational Health Management Systems ³		Yes, Joining Partners in Injury Reduction Program results in up to a 20% reduction in premiums for the firm			Yes, WSIB has a management system entitled <i>OSH For Everyone</i> .		Yes, promotes use of Ontario WSIB's <i>OSH For Everyone</i> management system.			
Maximum Penalties for Non Compliance with the Act	\$1,000,000 + \$50,000 per day that the infraction continues, + up to 12 months imprisonment	\$25,000 + \$10,000 for each day of continued infraction and up to 6 months imprisonment (person) \$25,000 per contravention + \$25,000 per day that the infraction continues (employer)	\$300,000 + up to two years imprisonment	\$30,000 + up to \$50,000 per day that the infraction continues + up to 6 months imprisonment + up to 6 months removal from a supervisory capacity in the workplace	Maximum \$25,000 (Individual) \$500,000 (Corporation)	\$2,000 (Individual) \$50,000 (Corporation)	\$50,000 and up to 6 months imprisonment	\$50,000 + up to one month imprisonment + \$5,000 per day that the infraction continues	\$250,000 + up to 2 years imprisonment + \$25,000 per day that the infraction continues + a fine equal to any monetary benefits gained by the person in committing the offence + the offender may be directed to publish the facts of the case.	\$250,000 + up to 12 months imprisonment (individual) \$250,000 (Corporation) + the offender may be directed to publish the facts of the case.

Source: various provincial Workers Compensation Boards

As the table demonstrates, all but two workers compensation schemes in Canada have undergone a major transformation towards basing their premiums on individual firm experience rather than the collective experience

³ Based on whether or not the relevant government website includes promotional materials on occupational health and safety management systems.

of similar employers (rate group). The Institute for Work and Health outlines the rationale for experience rating in workers compensation.⁴

Experience rating ... links accident records and insurance premiums, assumes that a profit-maximizing firm in a competitive industry will seek to improve safety if it is held individually responsible for the costs of accidents occurring in its workplace. These accident costs can be substantial if one includes the direct costs – insurance to cover health care, benefit and administrative expenses – and the indirect costs – damage to the machinery, employee and machinery downtime, employee loss and retraining costs, and production deficits due to low employee morale. ... Clearly, there is a “business case” for good health and safety, and experience rating tries to underscore this. ... Experience rating aims to distribute the costs of accidents more fairly since organizations and industries that have more accidents and/or higher accident costs are assigned higher rates.⁵

Collective liability schemes on the other hand, involve “employers in each industry class and industry code support each other by paying the same rate of assessment” and do not focus on an individual firm’s safety record.⁶

Collective liability is criticized by proponents of experience rating as providing “less incentive for individual firms to improve safety, since any accident cost reductions achieved by a single employer will benefit all employers in the industry rate group in the form of reduced premiums.”⁷ In

⁴ The Institute for Work and Health is funded by the Workers Safety Insurance Board of Ontario.

⁵ Institute for Work & Health, “Insuring the health of our workforce: a look at experience rating programs”, *Infocus*, Issue 30a, October 2002, supplement.

⁶ Workers Compensation Board of Saskatchewan.

⁷ Institute for Work & Health, “Insuring the health of our workforce: a look at experience rating programs”.

other words, the argument is that there is less economic incentive in a collective liability system to improve safety performance.

Experience rating also has its detractors. It is claimed that experience rating results in a more litigious occupational health and safety system. The argument is that the "first (impulse) to higher insurance costs is not to invest in prevention, but to invest in litigation to fight the compensation claims."⁸ This in turn would result in diverted managerial and financial resources away from prevention to litigation.⁹

It is also argued that small firms might be more adversely impacted under such a scheme as a single claim will cause a relatively larger leap in premiums than would a single claim to a large employer.¹⁰ This was part of the reason for Prince Edward Island's decision to abandon its 1993 pilot project with experience rating.¹¹ Additionally, experience rating is probably ineffective at dealing with incidents where latency or multiple-causation occurs.¹² In short, experience rating may only apply to that which can be readily measured and attributed fully and quickly to a responsible employer. An experience rating system may be effective at providing an economic

⁸ O'Grady, p.7.

⁹ O'Grady, p.7.

¹⁰ O'Grady, p.7.

¹¹ Workers Compensation Board of Prince Edward Island, "Experience rating system delayed", *News From Workers Compensation Board of Prince Edward Island*, Vol.3, No.3, Spring 1993.

¹² O'Grady, p.7.

incentive to an employer to stop using a piece of machinery that results in employees losing their fingers while providing little to no incentive for an employer to stop using a chemical which is correlated with increased incidences of cancer.

The table also illustrates that occupational management systems are not widely promoted by provincial governments. Only one province, Alberta, uses financial incentives to encourage firms to participate in its occupational health and safety management system. Alberta's *Partners in Injury Reduction Program* is also augmented by a partnership audit which involves external independent audits.¹³ Accordingly, Alberta's approach to occupational health and safety is the closest example in Canadian occupational health and safety regulation to the model of privatized occupational health and safety that is being proposed by Charles Redinger and the American Industrial Hygiene Association.

Table 4.1 also demonstrates that there is a wide range of penalties for non compliance with provincial health and safety legislation across the country. While it would seem to make sense to also analyze the enforcement resources assigned in each province, it is very difficult to make apples to apples comparisons between the provinces. For example, British Columbia's

¹³ Dave Bennett, *Health and Safety Management Systems – Liability or Asset?*, Journal of Public Health Policy, Vol. 23, No. 2, 2002, p.154.

Workers Compensation Board shares its enforcement duties with the Ministry of Labour whereas other provinces simply have Ministry of Labour inspectors.¹⁴ Therefore it is very difficult to develop an accurate number of inspectors in a given province. Additionally, measuring the number of inspectors in a given province may lead to false conclusions as provinces have different ratios between relatively safe and unsafe work and as such the number of inspectors required to achieve the same results would vary significantly.

¹⁴ Interview with John O'Grady on May 2, 2003. In a 1999 presentation to the Fourth International Congress on Medical- Legal Aspects of Work, O'Grady had attempted to make a comparison between accident rates and number of inspectors in Canadian Provinces. This aspect of his presentation was hotly contested by conference participants as they argued that the numbers of inspectors were debatable due to structural differences in provincial inspection regimes. As such O'Grady strongly cautioned against replicating such an analysis.

Table 4.2
Number of Accepted Time-Loss Injuries, by Province 1990-2001

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
British Columbia	84,464	79,643	78,890	78,495	79,428	74,881	71,602	72,428	71,502	70,090	70,661	66,076
Alberta	45,869	38,724	32,092	29,602	30,801	30,285	31,835	35,234	36,104	35,393	39,393	38,755
Saskatchewan	13,715	12,701	11,987	12,277	13,337	14,206	13,465	14,345	13,872	13,720	14,945	15,065
Manitoba	21,369	18,095	16,542	15,327	17,740	17,405	17,255	17,738	18,658	18,979	19,721	18,544
Ontario	184,444	155,473	136,936	125,118	125,638	118,812	103,071	101,806	97,190	100,727	104,154	98,359
Quebec	204,734	178,689	146,405	135,411	135,482	129,926	119,633	117,407	116,060	116,797	119,135	112,887
New Brunswick	12,508	11,670	10,018	5,647	4,784	4,310	3,906	4,212	4,729	5,170	5,354	5,162
PEI	2,551	2,250	2,108	2,009	2,094	2,443	2,436	1,794	2,034	2,099	2,066	1,779
Nova Scotia	12,870	12,730	12,181	13,332	13,223	10,463	7,940	8,199	8,159	8,547	9,232	9,082
Newfoundland	10,368	9,421	7,793	6,116	6,646	6,150	5,272	5,295	5,879	6,640	6,609	6,173

Source: Association of Workers' Compensation Boards of Canada (AWCBC), *Key Statistical Measures*, March 2002.

A major problem with evaluating health and safety performance from using the above data is that it does not control for economic cycles. As such, an economic downturn would appear as a reduction in time-loss injuries while not necessarily improving a given worker's likelihood of being injury free in the workplace. Accordingly, the following data is used to control for economic booms and recessions:

Table 4.3
Number of Employed Persons 1990-2001 (thousands)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
British Columbia	1,554.90	1,572.60	1,620.30	1,675.90	1,754.00	1,792.30	1,821.20	1,869.00	1,870.20	1,906.40	1,949.10	1,942.40
Alberta	1,278.50	1,287.30	1,284.10	1,294.80	1,331.60	1,369.30	1,408.40	1,457.90	1,515.40	1,553.30	1,588.20	1,632.10
Saskatchewan	454.3	453.4	448.5	450.8	455.7	459.4	457.5	470	476.3	480.1	485	472.4
Manitoba	515.2	506.8	502.2	506.5	509.5	519	518.6	525.6	535.7	542.7	554.4	557.9
Ontario	5,191.30	5,015.70	4,948.90	4,973.80	5,039.20	5,130.60	5,180.80	5,313.40	5,490.00	5,688.10	5,872.10	5,962.70
Quebec	3,141.40	3,081.70	3,041.50	3,039.90	3,100.60	3,147.50	3,145.90	3,195.10	3,281.50	3,357.40	3,437.70	3,474.50
New Brunswick	299.8	294.3	297.1	301.5	300.2	309.9	306.2	310.7	317.8	328.4	334.4	334.4
PEI	54.8	53.3	53.5	54.4	55.4	57.3	58.9	59.2	60.4	61.3	64.5	65.9
Nova Scotia	386.5	381	370.4	367.9	373.3	377.1	378.1	384.3	398.9	408.6	419.5	423.3
Newfoundland	207.4	204.6	193.5	191.9	192.2	194.3	187	189.3	194.2	204.9	204.6	211.3

Source: Statistics Canada, CANSIM II database.

Combining employment statistics with the total number of accepted time loss injuries allows one to develop a table that illustrates the proportion of workplace injuries that were compensated through either a provincial compensation board or private insurance.¹⁵ The following table demonstrates a significant decline in the number of accepted time-loss injuries throughout the past decade:

¹⁵ O'Grady, p.5.

Table 4.4
Accepted Time Loss Injuries Per 1000 Workers 1990-2001

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
British Columbia	54.32	50.64	48.69	46.84	45.28	41.78	39.32	38.75	38.23	36.77	36.25	34.02
Alberta	35.88	30.08	24.99	22.86	23.13	22.12	22.60	24.17	23.82	22.79	24.80	23.75
Saskatchewan	30.19	28.01	26.73	27.23	29.27	30.92	29.43	30.52	29.12	28.58	30.81	31.89
Manitoba	41.48	35.70	32.94	30.26	34.82	33.54	33.27	33.75	34.83	34.97	35.57	33.24
Ontario	35.53	31.00	27.67	25.16	24.93	23.16	19.89	19.16	17.70	17.71	17.74	16.50
Quebec	65.17	57.98	48.14	44.54	43.70	41.28	38.03	36.75	35.37	34.79	34.66	32.49
New Brunswick	41.72	39.65	33.72	18.73	15.94	13.91	12.76	13.56	14.88	15.74	16.01	15.44
PEI	46.55	42.21	39.40	36.93	37.80	42.64	41.36	30.30	33.68	34.24	32.03	27.00
Nova Scotia	33.30	33.41	32.89	36.24	35.42	27.75	21.00	21.33	20.45	20.92	22.01	21.46
Newfoundland	49.99	46.05	40.27	31.87	34.58	31.65	28.19	27.97	30.27	32.41	32.30	29.21

Source: Association of Workers Compensation Boards of Canada (AWCBC) and Statistics Canada Cansim II Database. Accepted Time Loss Injuries Per 1000 workers was calculated by using the following formula; Number of Accepted time Loss Injuries/ (Number of Employed Persons*1000)*1000.

While it is tempting to compare injury rates between jurisdictions, the provinces have compensation schemes with different levels of comprehensiveness, recognize different combinations of injuries and illnesses, and have different ratios of high risk and low risk forms of employment.¹⁶ Accordingly, a recent review of the performance of the Workers Compensation Board in British Columbia concluded that "due to a lack of useful data from other jurisdictions, the WCB must primarily use its own historical performance levels to gauge its progress in improving

¹⁶ Theo Nichols and Tucker, Eric, "Occupational Health and Safety Management Systems in the United Kingdom and Ontario, Canada: A Political Economy Perspective", *Working Paper Series*, No.21, March 1999, p.6.

performance.¹⁷ The preceding and following tables are therefore best viewed as separate trend lines on individual provincial occupational injury rates.

Table 4.5
% Change in Number of Claims Reported 1991-2001

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL CHANGE 1990-2001
British Columbia	-6.77	-3.86	-3.80	-3.32	-7.74	-5.90	-1.43	-1.34	-3.84	-1.39	-6.17	-37.38
Alberta	-16.15	-16.92	-8.52	1.17	-4.38	2.20	6.92	-1.42	-4.36	8.86	-4.27	-33.81
Saskatchewan	-7.21	-4.59	1.90	7.47	5.66	-4.82	3.70	-4.58	-1.88	7.83	3.49	5.63
Manitoba	-13.92	-7.75	-8.13	15.06	-3.68	-0.79	1.43	3.20	0.41	1.72	-6.56	-19.86
Ontario	-12.76	-10.73	-9.09	-0.89	-7.12	-14.09	-3.69	-7.61	0.03	0.16	-7.00	-53.57
Quebec	-11.03	-16.98	-7.46	-1.91	-5.53	-7.88	-3.37	-3.75	-1.64	-0.38	-6.25	-50.15
New Brunswick	-4.96	-14.96	-44.45	-14.92	-12.73	-8.28	6.27	9.77	5.80	1.70	-3.59	-63.00
PEI	-9.32	-6.66	-6.27	2.35	12.80	-3.00	-26.73	11.13	1.68	-6.46	-15.72	-42.01
Nova Scotia	0.34	-1.57	10.19	-2.25	-21.67	-24.31	1.60	-4.13	2.27	5.21	-2.51	-35.57
Newfoundland	-7.89	-12.54	-20.86	8.50	-8.46	-10.93	-0.78	8.23	7.05	-0.32	-9.56	-41.56
Average % Change	-8.97	-9.66	-9.65	1.13	-5.29	-7.78	-1.61	0.95	0.55	1.69	-5.81	-37.13

Source: Association of Workers Compensation Boards of Canada (AWCBC) and Statistics Canada Cansim II Database

This table illustrates that the difficulty in drawing conclusions about the effectiveness of various strategies to reduce occupational injury rates. For example, in comparing the degree to which injury rates have dropped in the past decade in provinces that employ a collective liability scheme to determine compensation premiums versus those who use experience rating, no clear trend emerges. Specifically, while Saskatchewan has experienced stagnant injury rates in the past decade under its collective liability scheme,

¹⁷ H. Allan Hunt, *Why Not the Best? Service Delivery Core Review Report: Executive Summary*, 2002, p.5.

Prince Edward Island has dramatically reduced its injury rate from 47 per 1000 workers in 1990 to 27 per 1000 workers in 2001 under a collective liability scheme (see Table 4.4).

Measuring the success of provincial use of health and safety management systems is difficult to assess at this point as only one province (Alberta) utilizes economic incentives to encourage employers to use this program. That being said, Alberta has not reduced its injury rates as much as many other provinces have in the past decade. So while the introduction of management systems in Alberta may have contributed to better health and safety outcomes, they do not appear to be a panacea. It is probably too early to draw any firm conclusions about the success of this program however, as the auditing portion of the voluntary system were only introduced in 1999.¹⁸

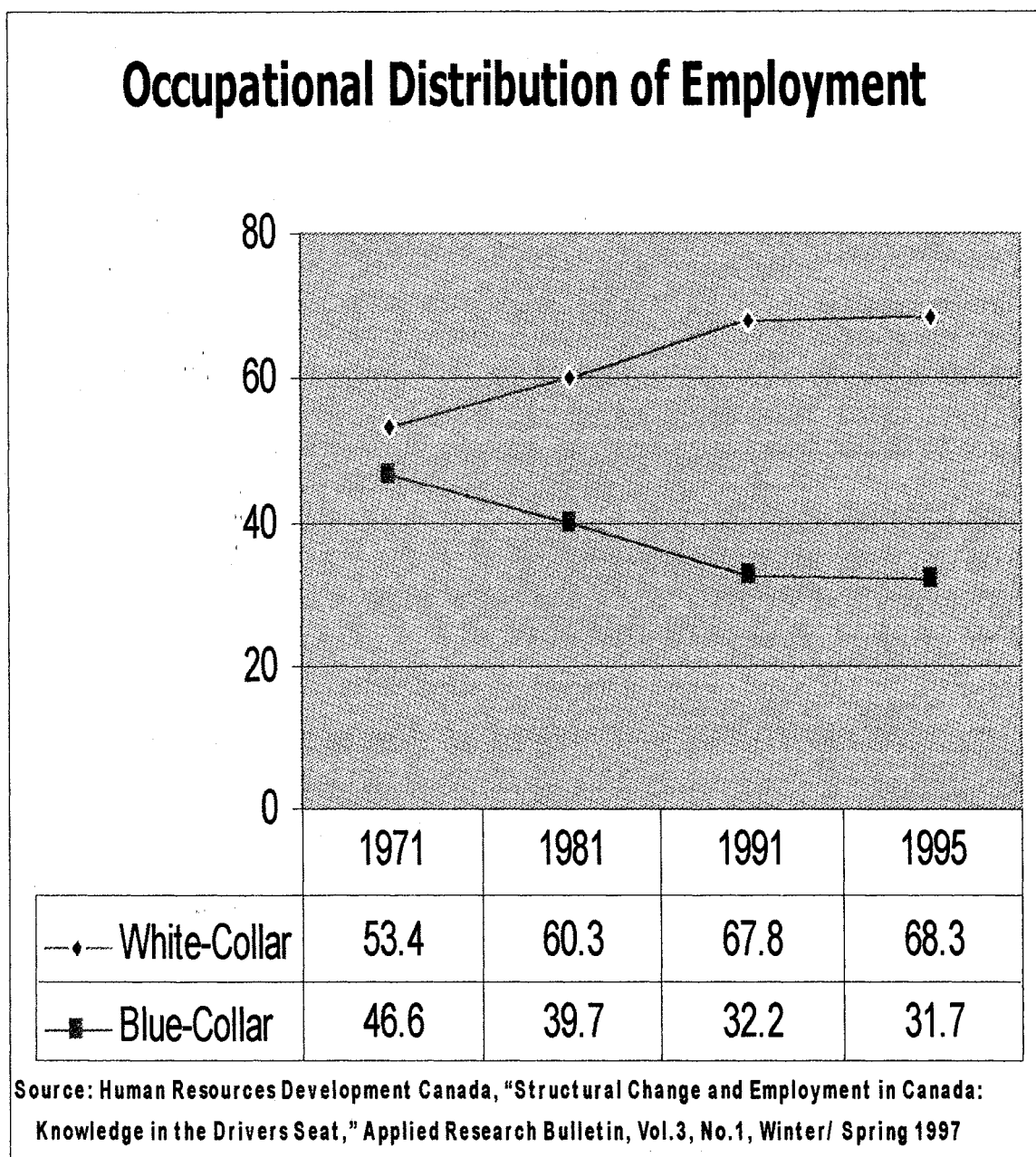
While the voluntary compliance approach in Alberta does not seem to be yielding tremendous improvements in outcomes, outcomes also don't appear to be related to the severity of the sanction for non compliance. For example, New Brunswick with its comparatively weak penalties also has the greatest improvement in its injury rates and Saskatchewan's injury rates have actually worsened in the past decade despite having relatively strong penalties for non compliance. However, some would certainly argue that strong penalties are futile without adequate inspection and enforcement.

While tables 4.4 and 4.5 illustrate a general trend towards reduced rates of injury it is important to note that there are a number of other factors outside of improved safety performance that provide part of the explanation for lower statistics. First, there has been a dramatic shift from blue collar to white collar employment throughout the industrialized world.¹⁹ The following chart demonstrates Canada's shift towards white collar employment over the past three decades.

¹⁸ Bennett, p.154.

¹⁹ O'Grady, p.12-13.

Figure 4.2
Occupational Distribution of Employment



The move from "blue collar" to "white collar" employment may result in a reduced number of compensated injuries due to a change in the types of occupational diseases and injuries that people face. Also, Occupational

health and safety legislation "was predicated on dealing with the conditions confronting a "blue collar" work force", therefore injury rate statistics will tend to reflect those injuries and diseases which are recognized by that legislation.²⁰ Additionally, "Blue collar" injuries are generally more easily recognized than those facing "white collar" workers and as such there would be a reduced number of reported injuries with the real reduction in injury rates being lower to some degree. Whether "white collar" jobs are genuinely safer than "blue collar" work and/or "white collar" injuries and diseases are not adequately recognized, the outcome is a portion of the reduced injury rate that is not related to improvements in occupational health and safety legislation.

Another structural reason for reduced injury rates is the growth in the number of self employed.²¹ The self employed are generally not included in workers compensation schemes and as such would not be included in the injury statistics. Of particular importance is the boom of self employment in the relatively dangerous construction sector which would also have the effect of depressing injury rates.²²

In provinces where experience rating exists, there is also an incentive for employers to challenge claims in courts to prevent premiums from

²⁰ O'Grady, p.13.

²¹ Industry Canada, "Self Employment" *Small Business Quarterly*, October 2002.

increasing. This may have the effect of reducing the number compensated injuries by discouraging claims from employees. Assuming that some of these potential claims are legitimate in nature, the number of compensated injuries will be lower than the number of actual injuries, therefore contributing to an artificial drop in the injury rate.

There are also changes from time to time with what the government regards as compensable injuries or a change in the likelihood that a given condition will be recognized by a given compensation Board. For example, Ontario's reforms to the workers' compensation system led to a reduction in conditions that were considered compensable. In particular, workers claiming work related stress and chronic pain were less likely to receive compensation due to Harris government workers compensation reforms than they would have prior to 1995.²³

In summary, occupational health and safety in Canada has a multifaceted approach towards addressing injury and disease. These approaches include mechanisms designed to compel employers to safeguard the safety of their workers through regulation, penalties, enforcement and financial incentives. A relatively unique aspect of Canadian occupational health and safety legislation is its focus on worker empowerment through

²² O'Grady, p.15.

²³ Nichols, p.15.

having the right to participate in joint committees, the right to know about hazards in the workplace and the right to refuse unsafe work.²⁴

The more recent mechanisms of experience rating and occupational health and safety management systems are designed to quantify and assess individual firm performance in relation to broad occupational health and safety goals. Assessing firm performance relies upon the ability to accurately quantify injury and disease rates and/or the economic costs associated with those injuries and illnesses.²⁵ The reduction in injury rates from 1990-2001 in Canadian provinces do not appear to be directly correlated to whether or not a given province utilizes an experience rating system. This is a point that is reinforced by some proponents of experience rating such as the Chief Economist of the Ontario Medical Association who concedes that "there is no solid evidence ... (that) experience rating programs (are) responsible for declines in overall injury rates in North America."²⁶ Additionally, the evidence from Alberta, though somewhat premature, illustrates that the introduction of voluntary compliance mechanisms such as externally audited occupational health and safety management systems have not resulted in a significant reduction injury rates relative to other provinces.

²⁴ Canadian Auto Workers, *Dupont Safety System Factsheet*.

²⁵ Institute for Work & Health "What Gets Measured Gets Done: The Healthy Workplace Balanced Scorecard", *InFocus*, Special Report, November 2000.

²⁶ Boris Krajl, "External Commentary," in Institute for Work & Health, "Insuring the health of our workforce: a look at experience rating programs", *InFocus*, Issue 30a, October 2002, supplement.

Not only might it be premature to judge voluntary compliance mechanisms based on statistics, the multi-factorial nature of the causation of the injury rates leads to problematic assessments of these policy mechanisms. Because of these factors, and problems with controlling for these factors, it is difficult to provide an empirical comparison at this point in time of the appropriateness of the state or private sector in regulating occupational health and safety as the move towards voluntary compliance is relatively recent and the corresponding administrative statistics that could rate safety performance are inconsistently gathered and jurisdictions are sufficiently different as to make comparisons difficult.²⁷

²⁷ Nichols, p.6.

Chapter 5
Conclusion

Sometimes the connection between job and health is pretty direct. If you work in a noisy or unsafe environment, if you're exposed to toxic chemicals or hazardous materials, or if you do repetitive physical work, it's obviously going to affect your health. But sometimes the connection is more subtle... So if we're serious – if we're really serious – about making Canadians the healthiest people in the world, we have to take a good look at what is going on in our workplaces, and how we can make the quality of work a more meaningful and rewarding experience for all Canadians.

Roy Romanow¹

As Mr. Romanow's comments suggest, occupational health and safety like other areas of health and environmental management requires a multifaceted and nuanced approach that addresses the root causes of illness and injury. The major approach that has been assessed here is the voluntary compliance model. Specifically, the mechanism of occupational health and safety management systems coupled with third party verification and the role of economic incentives such as experience rating systems.

Reviewing the literature on occupational health and safety outcomes, one struck by the small amount of policy oriented research that has been done. Much of the research being done in occupational health and safety is of a technical, historical or sociological nature. There is very little economic and

policy analysis on the efficacy of various approaches to occupational health and safety.

That being said, the literature reveals a number of determinants for occupational health and safety outcomes.

A given worker's likelihood of facing injury or disease is shaped by the following variables:

- Nature of the work performed,
- size of the firm,²
- whether the workforce is unionized,³
- whether their employer has economic incentives to reduce injury and/or disease rates,⁴
- whether a joint committee exists and whether that committee includes a doctor and /or education and training for members of the committee⁵

¹ Roy Romanow, "Connecting the Dots: From Health Care and Illness to Wellbeing," Notes for remarks on the occasion of receiving The International Foundation's Public Service Award, May 8, 2003.

² John O'Grady, "Comparative Approaches in Prevention: What are the Trends?, What are the Issues?, What are the Implications of Changes in the Labour Market?, Presentation to Plenary Session, Fourth International Congress on Medical-Legal Aspects of Work Injuries, Toronto, June 6-9, 1999, p.14.

³ John O'Grady, *The Role of Joint Committees in Workplace Health and Safety: A Review of the Legislation and Previous Studies*, May, 1998, as cited in *Royal Commission on Workers' Compensation in BC*, <http://www.qp.gov.bc.ca/rcwc/research/index.htm>, as cited on October 20, 1999, p.20-34.

⁴ Institute for Work & Health, "Insuring the health of our workforce: a look at experience rating programs", *Infocus*, Issue 30a, October 2002, supplement.

⁵ O'Grady, *The Role of Joint Committees in Workplace Health and Safety: A Review of the Legislation and Previous Studies*, p.2.

- One's status in the workplace (the higher the status, the lower the likelihood of disease)⁶

Unfortunately many of the attempts to quantify the effects of these variables and draw general conclusions across multiple jurisdictions have been fruitless. Accordingly, this analysis is narrowed down to whether or not voluntary compliance is an appropriate occupational health and safety model for Canadian provinces to adopt.

Partly due to this lack of literature, recent occupational health and safety reforms evidenced in Canada might be primarily rooted in ideological beliefs rather than in quantitative and qualitative analysis. In order to assess the voluntary compliance model, a number of key questions need to be examined. First, is improved occupational health and safety necessarily a benefit to a given firm? Second, is a voluntary compliance model likely to reduce non disease related occupational injuries and fatalities? Third, is voluntary compliance likely to result in timely and effective firm or industry based action to reduce occupational disease related injuries and fatalities? Fourth, are third parties an appropriate surrogate for government inspection? And finally, what uncertainties exist, and where uncertainty exists, what form of government action is appropriate?

⁶ Michael Marmott, Whitehall Studies, in Romanow.

Whether or not occupational health and safety is necessarily a benefit to a given firm is an important point from which to qualitatively assess potential outcomes for a voluntary compliance model. In short, if it is always in the interest of businesses to have good occupational health and safety programs, then it follows that the market can regulate occupational health and safety and therefore a voluntary compliance model is appropriate. It also follows that government intervention should be limited to "enlightening" firms as to the benefits that they might enjoy from improved occupational health and safety.

There are essentially two central market mechanisms that are behind the argument that it makes good business sense to have a safe workplace. The first mechanism is publicity. If the firm has a bad safety record, then consumers will not buy the product or rather they will pay for the product they are comfortable with. In other words if the consumer wishes to pay for a product that was safely produced they will pay a premium and/or a firm that runs a poor safety record runs the risk of losing customers.

The second market mechanism is the concept of voluntary assumption of risk. That mechanism assumes that employees consider risks when they become an employee and that the risks are reflected in their salary. Logically therefore, a given worker will demand a premium to do dangerous work. This

in turn results in an incentive for employers to reduce payroll costs by reducing risks to their employees.

Both of these mechanisms have a central flaw. Both are susceptible to market failure related to information for the consumer or worker. In the case of poor health and safety performance leading to reduced popularity of a product or service, it is difficult to imagine that the average consumer will be aware of the employer's performance and it is also possible that the consumer will not make purchasing choices based on a given firm's safety performance. This scenario is particularly likely where latency and multi-factorial causation exists or where the industrial process is a contracted good or service supplying another firm (e.g. primary goods rather than final goods). Similarly it is quite plausible that a given employee does not fully appreciate the risks associated with their employment, and therefore the employee has not voluntarily assumed the risks involved with employment.

The risk factor in Canada is partly borne by the state through its public health care system, and through potential loss of tax revenues and productivity that are associated with occupational injuries and diseases. Therefore the employment relationship in Canada does not simply impact the employer and the employee.

This risk sharing between the state and the employer is one reason to be skeptical of the notion that good health and safety performance is always in the interest of the employer. As figure 3.2 demonstrates, under market regulation the employer only addresses health and safety to the extent that it impacts the firm's bottom line.⁷ Therefore it is not necessarily in the firm's best interest to meet an optimal level of occupational health and safety.

The firm's best interest may also be influenced by the "prisoner's dilemma" phenomena. As illustrated in figure 3.4, if there is an economic benefit to a firm if it chooses to endanger its workforce, then a firm will pursue that course of action or risk being uncompetitive relative to a competitor's firm that chooses to endanger its workforce.⁸

Experience rating is a market based mechanism that is used as an attempt to ensure that firms face an economic incentive to improve occupational health and safety outcomes. This scheme falls under the general rubric of voluntary compliance models in that it sets goals for firms without

⁷ Peter Dorman, *Three Preliminary Papers on the Economics of Occupational Health and Safety*, Geneva, April 2002, <http://www.ilo.org/public/english/protection/safework/papers/eccoanal/index.htm>, as cited on April 13, 2003.

⁸ Dorman, as cited on April 13, 2003.

telling firms how to get there.⁹ Although experience rating might mitigate against an employer's incentive to endanger its workforce, there is still the possibility of an occupational health and safety remedy being more costly to a firm than the premium. Essentially a major problem with getting employers to pay for the costs of the injuries is that it might be in the employer's interest to pay the premium while still endangering its workforce.

Moving from actor motivation to the likelihood of a reduction in non-disease related occupational injuries and fatalities under a voluntary compliance model, a number of key points arise about both experience rating and third party verification. With experience rating, its performance on non-disease related occupational injuries and fatalities are probably related to its ability to accurately quantify firm level health and safety performance. Accordingly, if firms react to experience rating through introducing injury prevention programs rather than suppressing claims through litigious and administrative means, then there will likely be a reduction in non-disease related injury rates.¹⁰ The literature on the efficacy of experience rating has been mixed on whether or not it genuinely reduces occupational injury rates

⁹ Frank Dobbin, Sutton John R., "The Strength of a Weak State: The Rights revolution and the Rise of Human Resources Management Divisions," *American Journal of Sociology*, Volume 104, Number 2, September 1998, p.448,449.

¹⁰ O'Grady, "Comparative Approaches in Prevention: What are the Trends?, What are the Issues?, What are the Implications of Changes in the Labour Market", p.7.

or whether it simply acts to reduce the number of injury claims.¹¹ For example, a 1994 Ontario study "found that while nearly all experience-rated employers engaged in claims management, only 40% of firms pursued accident prevention strategies."¹² As such experience rating may have the effect of obfuscating health and safety outcomes. Furthermore, while the data has significant limitations, the Canadian experience as reflected in figures 4.5 and 4.6 illustrate that there is not a strong connection between a province employing experience rating and its ability to improve its occupational injury rates.

Occupational health and safety management systems coupled with third party verification. While there is very little empirical evidence as to whether or not occupational health and safety management systems are likely to improve performance, the few studies that exist raise some alarm about the application of these systems. For example, a study of South African mines using health and safety management systems resulted in a finding that there was no correlation between the ratings assigned to mines through the auditing process and the mines' actual injury rates.¹³ One possible

¹¹ O'Grady, "Comparative Approaches in Prevention: What are the Trends?, What are the Issues?, What are the Implications of Changes in the Labour Market", p.7.

¹² Boris Krajl, "Employer Responses to Workers' Compensation Insurance Experience Rating," *Relations Industrielles*, 49:1, 1994, in Nichols, "Occupational Health and Safety Management Systems in the United Kingdom and Ontario, Canada: A Political Economy Perspective", *Centre for Research on Work and Society: Working Paper Series*, No.21, March 1999, p.15.

¹³ H.S. Eisner, and Leger, J.P. "The International Safety Rating System in South African Mining," *Journal of Occupational Accidents*, 1998, in Nichols, p.20.

explanation for this outcome is the logical possibility that a firm's poor health and safety performance may be unrelated to how well run its bureaucracy is. A more recent American study has concluded that there is a significant correlation between the use of quality circles and cumulative trauma disorder.¹⁴

Notwithstanding discrepancies between genuine injury rates and compensation rates, evaluation of the voluntary compliance model as it pertains to non disease related occupational injuries and deaths is largely possible due to the ability to readily quantify outcomes. Analyzing whether or not voluntary compliance is likely to result in timely and effective firm or industry based action to reduce occupational disease related injuries and fatalities requires a more qualitative approach.

Experience rating is unlikely to have a positive effect on reducing occupational disease rates because of the inability to readily quantify and therefore penalize employers in a timely fashion. This is due to multiple causation, long periods of latency and difficulties with quantifying

¹⁴ Mark D. Brenner, Fairris, David and John Ruser, "'Flexible' Work Practices and Occupational Safety and Health; Exploring the Relationship Between Cumulative Trauma Disorders and Workplace Transformation," *Working Paper Series Number 30*, (Amherst: Political Economy Research Institute, University of Massachusetts, 2002), p.22-23.

occupational diseases.¹⁵ Likewise occupational health and safety management systems will probably also be a poor tool for combating occupational disease as they also rely on measurement and auditing to evaluate performance.¹⁶ Additionally, as mentioned above, best practices in administration do not necessarily produce better health and safety performance.

While Occupational health and safety management systems and experience rating are often utilized in conjunction with other policy levers to improve health and safety outcomes, the argument being put forth by some proponents of voluntary compliance is that third parties are an appropriate surrogate for government inspection.¹⁷ The first problem with this contention as it applies to Canada is that the state arguably is exposed to more political and financial risk related to occupational health and safety and therefore might be more willing to act to reduce workplace hazards. Secondly, there is a strong potential for corruption of a third party auditor.¹⁸ For example, the Canada Safety Council which is one of the largest third party safety

¹⁵ O'Grady, "Comparative Approaches in Prevention: What are the Trends?, What are the Issues?, What are the Implications of Changes in the Labour Market", p.7.

¹⁶ Yoichi Nishijima, "Standardization of Occupational Health and Safety Management Systems: Globalization of the Economy and Improvement of Workers Welfare," in Schober, *Labor Market issues in Japan and Germany*, (Berlin: Duncker & Humblot, 1998), P.165.

¹⁷ Charles F. Redinger, "A Paradigm Shift at OSHA: ISO-Harmonized Third-Party Registration of Occupational Health and Safety Management Systems," in Redinger, *New Frontiers in Occupational Health and Safety: A Management Systems Approach and the ISO Model*, (Fairfax: American Industrial Hygiene Association, 1996), p.65-67.

¹⁸ Ellen Wall and Beardwood, Barbara, "Standardizing Globally Responding Locally: The New Infrastructure, ISO 14001, and Canadian Agriculture," *Studies in Political Economy*, vol. 64, Spring 2001, p.44.

organizations in Canada has recently come under fire for its position supporting children being allowed to ride all terrain vehicles, and its support for cell phone use while driving.¹⁹ While this is an extreme case, it does raise the specter that third party organizations are susceptible to the whims of their funders.

Interestingly, many Canadian employers and their corresponding associations oppose the imposition of occupational health and safety management systems.²⁰ This opposition is rooted in the increased costs to the employer to implement and maintain the management system and results in a downloading of monitoring costs from the state to the business community.

Moving to a voluntary compliance model to the exclusion of other state regulatory apparatus, results in a reduced state capacity to address uncertainties. These uncertainties include genuine rates of occupational diseases and to a lesser degree injuries, hazardous materials and technology, and costs related to occupational disease and injuries. Accordingly, Canadian provinces ought to seriously consider applying the precautionary principle

¹⁹ CBC-TV, "Taking a hard look at the Canada Safety Council," *Disclosure*, Bowdens Fulfillment Services, January 29, 2003.

²⁰ Nichols, p.22.

when assessing whether or not to allow for the privatization of their health and safety regulation.

The precautionary principle is appropriate in this case as there has been a identification in the literature "of potentially negative effects resulting from" the process of privatization and because "a scientific evaluation of the risk which because of the insufficiency of the data, their inconclusive (and) imprecise nature, makes it impossible to determine with sufficient certainty the risk in question."²¹ Preliminary quantitative evidence from the University of Massachusetts suggests a link between total quality management practices with a higher incidence of occupational injury. Qualitative analysis such as Dorman's micro economic modeling suggests that there are natural market incentives for a given firm to endanger its work force. And a historical examination would suggest that government regulation did not arise out of a vacuum, rather it was a direct result of a failure of the market to produce an occupational health and safety environment that is acceptable to workers. As such, occupational health and safety management systems and experience rating schemes should be appropriately viewed as potentially complementary mechanisms for improved outcomes, but should not be viewed as appropriate substitutes for government action.

²¹ Commission of the European Communities, *Communication from the Commission on the Precautionary Principle*, p.15.

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Vita Auctoris

Liam McCarthy was born on October 7, 1973 in North Vancouver, British Columbia.

Liam graduated from high school in Toronto as an Ontario Scholar in 1995. He then went to the University of Windsor to pursue an undergraduate degree in International Relations. During this time Liam was active in the Windsor Debating Society and competed in three World Debating Championships in Cape Town, Athens and Glasgow. Liam graduated with an honours degree in International Relations in 1999.

Following a run for a provincial seat in the riding of Windsor West, Liam went on to enter into a masters program in political science at the University of Windsor. As a graduate student Liam McCarthy was awarded a summer research scholarship that is given annually to ten top Windsor graduate students and sat for two years as an ex-officio member of both the University of Windsor Board of Governors and Senate.

Liam's particular interest in occupational health and safety policy was piqued by his participation as a treasurer at the Windsor Occupational Health Information Service. Liam plans to continue to work as a professional researcher and is contemplating entrance into a doctoral program.