

The Determination of Occupational Health and Safety Standards in Ontario, 1860-1982: From the Market to Politics to...?

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The author reviews the historical development of the decision-making frameworks within which courts and the Legislature have made choices regarding the allocation of risks to health and safety in the workplace. Arguing that this development has been conditioned by the necessity of satisfying in a capitalist democracy conflicting demands to facilitate capital accumulation and to justify to the electorate the manner in which choices regarding the structure of the processes of production have been made, the author contends that recent pressure to adopt cost-benefit analysis as the basis for health and safety standard setting is mistaken. He considers the failure of cost-benefit analysis to satisfy the demands of legitimation and accumulation, and challenges its adequacy as a normative and a political principle. In setting his criticism in the context of a broad view of the political and historical aspects of legal rule-making, the author can address the limits on present allocations of risk imposed by the structure of society, and discuss the possibility of significant future reform.

L'auteur passe en revue l'évolution du processus décisionnel suivi par la Législature et les tribunaux ontariens dans le choix des politiques de risque en matière de santé et de sécurité au travail. Il prétend que cette évolution a été tempérée par la nécessité, dans une société capitaliste et démocratique, de satisfaire aux demandes conflictuelles de faciliter l'accumulation du capital et de légitimer, aux yeux de l'électorat, la façon de choisir les procédés de production. Considérant mal fondées les pressions actuelles visant à faire de l'analyse coût-bénéfice la méthode de base pour fixer les normes de santé et de sécurité, l'auteur en démontre l'échec, face aux demandes de légitimation et de capitalisation. Il remet en question l'efficacité de cet outil normatif et politique. L'auteur, en formulant cette critique dans la large perspective des aspects historiques et politiques du processus législatif, peut ensuite apprécier à la fois les limites imposées aujourd'hui aux politiques de risque et les possibilités d'une réforme majeure dans l'avenir.

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Introduction

Ontario has recently set seven toxic substance exposure levels under the *Occupational Health and Safety Act*.¹ This is the first time in Ontario that exposure to toxic substances in the workplace has been controlled by legally binding standards.² Proponents of government regulation as a solution to the problem of occupational health and safety may see this step as a long-awaited breakthrough, or perhaps as a disappointment, depending on their view of the adequacy of the regulation. Opponents of regulation may bemoan the fact that we seem destined to repeat the mistakes of our American neighbours. My purpose is neither to celebrate nor to mourn the fact that we now have standards, or the particular standards that we have.

¹Designated substances: Lead—O. Reg. 536/81; Mercury—O. Reg. 141/82; Vinyl Chloride—O. Reg. 516/82; Coke oven emissions—O. Reg. 517/82; Asbestos—O. Reg. 570/82; Isocyanates—O. Reg. 455/83; Silica—O. Reg. 769/83. These Regulations were filed under the *Occupational Health and Safety Act*, R.S.O. 1980, c. 321.

²In the absence of specific toxic substance exposure standards, the Ministry relies on general regulations to the effect that "[a]ll measures necessary to prevent exposure to any toxic substance. . . shall be taken. . ." (O. Reg. 658/79, respecting industrial establishments). Similar regulations can be found with respect to construction projects and mines. This kind of general language can be traced back to *The Ontario Factories' Act, 1884*, S.O. 1884, c. 39, s. 11(3):

Every factory shall be ventilated in such a manner as to render harmless, so far as is reasonably practicable, all the gases, vapours, dust or other impurities generated in the course of the manufacturing process or handicraft carried on therein that may be injurious to health.

In enforcing this general regulation the Occupational Health and Safety Division (OHSD) of the Ministry of Labour relied on data sheets to set exposure standards. Failure to comply could, in theory, be considered a violation of the general regulation, but the vagueness of the regulation probably meant that the data sheets were considered as guidelines rather than as legally binding standards. See Franson & Lucas, "The Legal Control of Hazardous Products in Canada" in *Canadian Law and the Control of Exposure to Hazards* (Science Council of Canada, Background Study No. 39, 1977) 36. More recently the OHSD has issued a document entitled "Exposure Criteria for Potentially Harmful Agents and Substances in Workplaces" (Ontario, Ministry of Labour, May 15, 1981) which suggests criteria designed to assist people involved in the administration of the *Occupational Health and Safety Act* in determining when exposure to a wide range of substances might be considered harmful. Again, these are not legally binding standards, although they may be adopted in the future as designated substance regulations. However, the courts have not treated the failure to comply with these Exposure Criteria as a violation of the *Act*. See *R. v. Windsor Board of Education* (1982) 1 CCH Can. Employment Health and Safety Guide, para. 95-046 (Prov. Ct. Cr. D.).

Rather, I am concerned with recent proposals for regulatory reform which call for a requirement that standards be selected on the basis of cost-benefit analysis. The movement to subject all major government regulations to such analysis has made substantial advances in the United States during the Reagan presidency³ and seems to be gaining support here.⁴

This paper arises out of a concern that the adoption of cost-benefit analysis as a basis for occupational health and safety standards in Ontario would be a serious mistake which could leave thousands of workers legally exposed to hazardous conditions. Because of this concern I have devoted a significant portion of this paper to a review of the technical and ethical objections that have been voiced with respect to economic analysis. I also want to extend the familiar criticisms by placing cost-benefit analysis in an historical and political-economic context, and to explore the links between modern proposals that regulatory standards be subjected to cost-benefit analysis and the nineteenth-century common law of employers' liability. While the institutional framework for determining occupational health and safety standards is clearly different than that which governed employer-employee relations in the nineteenth century (public regulation as opposed to private contract) there are strong ideological similarities between the two approaches to the assignment of risk. This can be seen in their common emphasis on the goal of allocative efficiency, to the exclusion of competing considerations such as distributional equity. These two approaches are also linked with respect to the view they take of the legitimate ends of state activity. Both emphasize its function of facilitating the survival and expansion of capitalism by maintaining conditions favourable to profitable capital accumulation, through, for example, constituting the legal infrastructure for a capitalist labour market.

Beyond this ideological similarity, I also intend to explore the dynamics underlying the selection of decision frameworks within which occupational health and safety standards are determined. For example, why was it that courts in the early to mid-nineteenth century selected employer liability

³In the United States, President Reagan has required all major rules to be subject to a form of cost-benefit analysis, as well as to review by the Office of Management and Budget and the Task Force on Regulatory Relief. See Executive Order 12,291 (1981) 46 F.R. 13193.

However, in light of the United States Supreme Court ruling in *American Textile Manufacturers Institute, Inc. v. Donovan* 452 U.S. 490 (1981) that Congress had already defined the relationship between costs and benefits by placing the benefit of worker health above all considerations save those making the attainment of that benefit unachievable, it is unlikely that the Executive Order will be applied to OSHA toxic substance standards (if any are proposed).

⁴See G. Doern, M. Prince & G. McNaughton, *Living with Contradictions: health and safety regulation and implementation in Ontario* (Ontario Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario, Study Series, No. 5, 1982) 5.6-5.7 (hereinafter Doern).

rules that were contractually-based and infused with presumptions derived from the logic of a capitalist labour market to assign responsibility for injury in the workplace when, by the last decades of the nineteenth century, legislatures had intervened to impose minimum standards enforced by an inspectorate? What do those events tell us about the changing role of the state and the constraints operating upon it in the field of occupational health and safety policy? What does this analysis have to reveal about the likelihood and implications of the adoption of cost-benefit analysis?

In pursuing this line of inquiry I will be drawing upon recent attempts to develop a Marxist theory of the state.⁵ In general, these theories reject the orthodox Marxist-Leninist view of the state in capitalist society as a mere tool of the ruling class, reflexively expressing and enforcing its interests. They also reject the liberal view of the state as a neutral arbiter between conflicting claims of fragmented interest groups, including labour. Rather, they seek to show how the state is relatively autonomous from the capitalist class by identifying both the supports for the independence of state power and the limits on its exercise. At the most abstract level we can examine an economic system (capitalism, for example) and ask what limits it imposes on the structure and policies of the state. To the extent that a *range* of such structures and policies is compatible with capitalism, we can assert the existence of the relative autonomy of the state, in the sense that no particular structural or policy development is determined by the economic system, although some developments are more likely than others. At the next level of analysis we may ask what functions the state serves in a capitalist social formation. If the state performed solely the function of facilitating the accumulation of capital, then one would expect a low level of autonomy. In order to facilitate accumulation the state would take directions from the capitalist class and would act autonomously only to the extent that the capitalist class itself was fragmented or otherwise incapable of organizing itself. However, if the state also has the function of obtaining and maintaining the consent and loyalty of the public-at-large to existing socio-economic arrangements (legitimation), then we may find that its roles conflict, as the policy which best facilitates accumulation from an economic perspective may be politically unacceptable. Thus, at the level of functional analysis, we may find further support for the relative autonomy of the state. The precise nature of the relation between the state and the dominant economic system cannot be predicted in the abstract, but only by an analysis of the political and social forces operating in an historical conjunction.

⁵J. O'Connor, *The Fiscal Crisis of the State* (1973); R. Milliband, *The State in Capitalist Society* (1973); J. Habermas, *Legitimation Crisis* (1975); L. Panitch, ed., *The Canadian State: Political Economy and Political Power* (1977); E. Wright, *Class, Crisis, and the State* (1978). For an excellent review of the literature see B. Jessop, *The Capitalist State* (1982), and *Recent Theories of the Capitalist State* (1977) 1 *Camb. J. of Eco.* 353.

In my analysis of the historical development of occupational health and safety standard-setting from the period of its reliance on a market-based contract model to the point at which it took on a political character, and in my discussion of contemporary proposals to implement cost-benefit analysis, I have tried to achieve a balance between functional analysis at the abstract level and concrete historical determinations. Nonetheless, the analysis has remained somewhat more schematic than I had desired, and it is offered here in the hope that it will be built upon in the future through further historical research.

I. The Contractarian Framework

A. Selection of the Framework

1. Historical and Economic Background

The selection by common law courts in the mid-nineteenth century of a market-based contractual framework for determining conditions of employment relating to occupational health and safety can only be understood in the context of the emergence of a capitalist labour market during this period.⁶ This is not to suggest that prior to industrial capitalism workers were not killed or injured in the course of their work. Obviously there are hazards involved in any productive activity and some activities will be more hazardous than others. What was new in the nineteenth century was the introduction of technologies of production which exposed workers to different and probably greater hazards than were present in pre-industrial work settings,⁷ and the way in which decisions about the distribution of risks

⁶In England the principal cases are: *Priestley v. Fowler* (1837) 3 M. & W. 1, (1837) 150 E.R. 1030 (Ex. Ct.); *Hutchinson v. York, Newcastle, and Berwick Ry Co.* (1850) 5 Ex. 343, (1850) 155 E.R. 150. See generally Ingman, *The Rise and Fall of the Doctrine of Common Employment* (1978) 23 *The Juridical Review* 106.

In the United States the principal case is *Farwell v. Boston and Worcester Ry Co.*, 45 Mass. (4 Met.) 49 (1842). See generally L. Levy, *The Law of the Commonwealth and Chief Justice Shaw* (1957).

In Ontario, the principal case is *Deverill v. Grank Trunk Ry Co.* (1866) 25 U.C.Q.B. 517. For a discussion see Risk, *The Last Golden Age: Property and the Allocation of Losses in Ontario in the Nineteenth Century* (1977) 27 *U.T.L.J.* 199, 233-6.

⁷Records of industrial accidents and disease were not kept until the nineteenth century and so it is impossible to compare statistics in order to prove that the new industrial technologies were more hazardous to workers than the old. Certainly the number of workers exposed to hazards in an industrial setting increased with the growth of the urban working class, and the overwhelming majority of contemporary observers were convinced that the coming of industrial capitalism brought the majority of working people "appalling hardships". For a general review of historical debates about the condition of the British working class in the first half of the nineteenth century, see E. Hobsbawm, "History and 'The Dark Satanic Mills'" in *Labouring Men: Studies in the History of Labour* (1976) 123-40.

amongst groups in society and tolerable levels of risk were made. In order to place the selection of a contractarian framework in perspective it might be useful to compare capitalist relations of production with those that preceded them. Feudal society was organized on the principles of contingent property ownership (tenures) and unfree labour. The basis of productive activity, land, was held in exchange for services and, at the lowest level, labourers were given land to work for themselves in exchange for a proportion of the product or the labourer's time. The proportion of product or time due to the lord was settled by custom. Hierarchical relations of domination and subordination were supported by a matrix of traditional and religious values which imposed constraints on the lord as well as on his subordinates. Of course physical coercion could also be brought to bear if traditional sources of social order proved to be insufficient.

Even as the feudal organization of production broke down and was gradually replaced by wage labour, custom still played a major role in determining the conditions of employment.⁸ Included in this matrix of custom and values was an obligation of the employer to provide reasonably safe working conditions. This obligation had been articulated by the common law courts in the eighteenth century, persisted through the nineteenth century,⁹ and can still be said to exist today.¹⁰ However, the substantive content of that obligation has undergone a number of changes.

Capitalism can be defined as a wage labour system of production for profit. Owners of the means of production hire the direct producers, but keep the product themselves for sale on the market at a profit or loss. The profit or loss can be measured as the difference between the cost of inputs, including labour, and the price that the outputs or commodities fetch. It is crucial to the enterprise that labour costs be minimized. How then are labour costs determined? For capitalism to function labour must be treated as an ordinary commodity. Ownership of the commodity is initially assigned to its possessor, the labourer, and as owner he has the power to enter into contracts for its purchase and sale. The price of the commodity will, as for other commodities, be determined in the marketplace according to the principles of supply and demand. For the capitalist, labour power is a variable input and not a capital asset; that is, it can be hired as needed, provided that a sufficient pool of labour power of the right type is available upon demand. In the absence of such a pool, capitalistic labour relations tend not to develop. Thus, in capitalistic labour markets there tends to be a reserve

⁸See Hobsbawm, "Custom, Wages and Workload in Nineteenth Century Industry" in *Labouring Men*, *ibid.*, 405-35.

⁹See Ingman, *supra*, note 6, 109 and cases cited therein.

¹⁰J. Fleming, *The Law of Torts*, 6th ed. (1983) 478-9; W. Prosser, *Handbook of the Law of Torts*, 4th ed. (1971) 526.

pool of labour, or to put it simply, supply exceeds demand. If workers are unable to gain some control over the supply, labour costs are likely to decline.

At a minimum, a legal framework consonant with capitalism must allow for and protect private property and recognize and enforce exchange through contract. In particular, labour power must be recognized as a commodity which can be sold by its possessor, the potential direct producer. However, capitalist production can occur even if the wage relationship does not exist in its perfect form. Some of the conditions governing the sale of labour power may still be determined by non-market criteria. For example, in industries which still depend on craft skills the measure of what constitutes "a fair day's work" may depend on the custom of the trade. It is with this background in mind that I would now like to examine the selection of a contractarian framework for determining occupational health and safety standards in Ontario.

At the beginning of the nineteenth century capitalism was hardly the dominant mode of economic organization in the territory that now comprises the province of Ontario. Even by 1812 the territory was sparsely settled, with the population probably not exceeding 100,000. Land was readily available and the majority of settlers were engaged in primary commodity production. Wheat and lumber were exported to England under favourable trading arrangements.¹¹ To the extent that employment relations were established they often did not take the form of wage labour, but rather of "personal" labour relations, or forms of unfree labour such as indentured servitude. The shortage of labour was a chronic complaint and under such conditions it was unlikely that wage labour would emerge as the dominant relation of production.¹²

The population continued to grow slowly until 1825. In the next two decades there was explosive growth from immigration, and by 1842 the population had tripled to 450,000, doubling again by 1851. The large pool of labour was absorbed by the construction of a transportation infrastructure to handle the movement of primary products. Canal construction in the 1830's and 1840's and the boom in railway construction in the 1850's were the sectors in which wage labour expanded. Factory production expanded

¹¹This overview of economic developments is derived from secondary sources, the most important being W. Easterbrook & H. Aitken, *Canadian Economic History* (1956) and R. Harris & J. Warkentin, *Canada Before Confederation: a study in historical geography* (1974).

¹²See H. Pentland, *Labour and Capital in Canada, 1650-1860* (1981), particularly ch. 2. From the employer's perspective wage labour will not be preferable to pre-capitalist arrangements unless there is an excess of supply over demand. In its absence, supply of the right quality of labour at the right time cannot be guaranteed and the cost of labour is likely to rise.

as increased population, urbanization and requirements for railway construction combined to generate a steady level of internal demand capable of attracting capital investment. Industrial processes were introduced as manufacture became increasingly concentrated in larger firms and cities. Thus, by 1860, industrial capitalism had firm roots in Southern Ontario and wage labour had become a major, if not the dominant, relation of production.¹³

It is appropriate to remark that workers did not necessarily flock to become wage labourers.¹⁴ As I have already noted, the ready availability of land either in Canada or the United States provided an attractive alternative to wage labour for large numbers of immigrants, and contributed to a chronic labour shortage in the early part of the nineteenth century. Craft producers also resisted the transformation of the labour process. Perhaps the major group to seek wage labour were the Irish immigrants who were fleeing from intolerable conditions in their homeland and had already been stripped of their resources prior to their arrival in Ontario.¹⁵ The emergence of wage labour can be explained by a combination of factors including superior organization of production, economies of scale achieved both by more extensive and more intensive exploitation of labour, concerted political action by the capitalist class to support their economic power, and the relative inability of those who were being drawn into the capitalist labour market to mount effective resistance to the destruction of their way of life.¹⁶

In the absence of statistics,¹⁷ it seems reasonable to assume that the introduction of industrial processes and the more extensive and intensive

¹³For recent discussions of the development of industrial capitalism in Ontario see G. Kealey, *Toronto Workers Respond to Industrial Capitalism, 1867-1892* (1980), ch. 2 and B. Palmer, *A Culture in Conflict: skilled workers and industrial capitalism in Hamilton, Ontario, 1860-1914* (1979). For a critical review of the emphasis of these historians on the role and place of the industrial proletariat in the formation of the Canadian working class see D. Drache, "The Formation and Fragmentation of the Canadian Working Class: A Dissenting View" (forthcoming).

¹⁴For example, the destruction of the economic foundation of the English peasantry pushed them into wage labour or onto poor relief. For a discussion of this process see B. Moore, *Social Origins of Dictatorship and Democracy: Lord and Peasant in the making of the modern world* (1967) 20-9.

¹⁵See H. Pentland, *supra*, note 12, ch. 2.

¹⁶For an excellent review of the process of proletarianization in the United States see D. Gordon, R. Edwards & M. Reich, *Segmented work, divided workers* [:] *The historical transformation of labour in the United States* (1982) ch. 3 [hereinafter Gordon].

¹⁷The first requirement for employers to systematically report injuries to their employees from particular causes (*i.e.* fire, machines) was not introduced until *The Ontario Factories' Act, 1884*, S.O. 1884, c. 39, ss 18, 19. Earlier, concern about injuries to railway employees led the Legislative Assembly to strike a committee which conducted a survey of deaths and injuries to railway employees. See *Report of the Select Committee on Railway Accidents* (1880) Vol. XIII, *Journals of the Legislative Assembly* (Ontario), Appendix 1.

employment of labour combined to increase the incidence of employment-related injuries and deaths.¹⁸ Widows and workers sought relief.¹⁹ One forum to which they turned was the common law courts. This raised the problem of the selection of legal liability rules, which in turn required that the courts select a set of rules for determining the standards against which employment conditions relating to occupational health and safety were to be measured.

2. The Common Law Courts

Of course, Ontario courts did not select legal rules in a vacuum. England and the United States had already chosen a contractarian legal framework.²⁰ Ontario's courts remained colonial institutions even after the *Constitution Act, 1867* and thus, in a formal sense, it could be said that Ontario courts did not select legal rules at all, but merely applied those rules which had been selected in England.²¹ A reading of the reported employer liability cases between 1861 and 1886 (when the Ontario Legislative Assembly adopted a new set of decision rules), reveals that the rules were applied strictly and

¹⁸Some evidence for this assertion may be provided by the reported employer liability cases in which the overwhelming majority of claims arose from injuries or deaths caused to workers involved with mechanical processes. See E. Tucker, "Employer Liability Law in Nineteenth-Century Ontario", unpub. ms. However, factors influencing the selection of litigated cases (see note 19 below) require one to be cautious in inferring that a high proportion of litigated claims reflects a higher-than-average injury rate.

¹⁹It would be interesting to speculate as to the factors which influenced the decision to seek redress in the courts. The availability or adequacy of *ex gratia* payments by the employer or self-insurance might be one factor. As well, a worker who did not suffer serious impairment and was able to resume work with his employer would be unlikely to seek damages as it would probably result in immediate dismissal. Thus, it is most likely that widows and the severely disabled would seek legal redress. Further, unless there were contingent fees or crusading advocates, it is likely that the litigants would come from the better paid segments of the working class.

²⁰*Supra*, note 6.

²¹See generally Roberts-Wray, *Commonwealth and Colonial Law* (1966) 565-7. For a discussion of the attitude of Ontario judges towards English precedents, see Risk, *The Law and the Economy in Mid-Nineteenth Century Ontario: A Perspective* (1977) 27 U.T.L.J. 403, 422 where he states:

For the courts, faithfulness to the precedents of English courts was a constitutional obligation, which was supported by loyalty, habit and convenience.

Evidence of this approach in the area of employers' liability law comes from a case in which the court was presented with American cases which had modified the fellow servant rule. In declining to follow that path Hagarty, C.J.O. tersely stated:

There is a marked difference between English and American laws on the "fellow servant" question. Of course we have to follow the former.

See *Matthews v. Hamilton Powder Co.* (1887) 14 O.A.R. 261, 265 (Ont. C.A.).

with little hesitation.²² The tenor of the judgments suggests that even if our judges had been more independent it was unlikely that they would have chosen differently.

The proposition that an employer was obliged to provide reasonably safe conditions of work was not rejected by the courts. Rather, they developed a number of doctrines which provided strong defences to any employer who was sued on the basis that he had failed to fulfil this obligation. The first defence, that of contributory negligence, went to the issue of causation. If it could be shown that the employee's own negligence had contributed to the occurrence of the accident, then the employee was absolutely barred from recovery. This was not a doctrine that was specific to employer liability law, and, although it did provide a strong defence to employers, it did not directly address the problem of the standard against which the conditions of employment relating to safety could be measured for the purpose of determining whether the employer was liable.

The second defence was based on voluntary assumption of risk, and the selection of this doctrine constituted a fundamental decision about the way in which the problem of employer liability would be resolved. Essentially, the doctrine provided that if employees were aware or ought to have been aware of the hazards present in the workplace, then they were deemed to have assumed those risks as conditions of their employment and could not sue their employer for damages in the event that an injury was subsequently caused by those hazards. The theory articulated by the court in support of this position was that the employee who was aware of hazards would demand a higher wage in order to incur the risk of injury. The contract of employment would provide the mechanism for compensation, not judicial enforcement of customary standards.²³

²²See Tucker, *supra*, note 18, and *Plant v. Grand Trunk Ry Co.* (1867) 27 U.C.Q.B. 78, in which an employee was killed because of brake failure. Liability was denied on the basis that fellow employees had failed to discover and remedy the defect in the brakes and because Mr Plant was contributorily negligent in running down the track to escape injury, rather than stepping to the side. To the widow and children of Mr Plant, Draper, C.J. (at p. 86) could only offer sympathy:

The loss and misfortune to the plaintiff and her children is doubtless very serious and sad, but we must not be drawn out of our path of duty, even by our feelings for the widow and the orphans.

That Ontario judges were not drawn out of their "path of duty" is established by the fact that employees lost seventeen of the twenty reported employer liability cases decided prior to statutory reform of the common law of employers' liability.

²³Mr Justice Shaw in *Farwell v. Boston and Worcester Ry Co.*, *supra*, note 6, and Lord Bramwell in numerous judgments and public statements most clearly expressed this rationale for the selection of the rule.

On this view, the aggregate of market transactions would determine the level of health and safety present in the workplace. If the workers demanded higher wage premiums in order to incur the risks present in the workplace, then employers would choose either to eliminate the risk or pay the premium, whichever was cheaper. Private choices made by autonomous individuals would produce the socially desired level of safety. State imposition of minimum safety standards was an unwarranted intrusion on private property and exchange relationships. Formally voluntary exchange relationships became the measure of justice, or, to put it in more contemporary language, efficiency itself was defined as justice, displacing other conceptions grounded in tradition or moral theory. The market, not the court, determined what was reasonable.²⁴

The fellow-servant doctrine, which held that an employee could not recover damages from his employer where the accident had been, at least in part, caused by the action of a fellow worker, can be viewed as an extension of the voluntary assumption of risk doctrine. One of the risks present in an industrial setting was that you might be injured by the activity of a co-worker. This was presumed to have been taken into account in the wage bargain. Thus, the market would also provide a mechanism for dealing with careless workers who caused injuries to others within the enterprise. If workers demanded a higher premium to work alongside a careless co-worker, employers would take greater care to hire competent workmen, provided the cost of doing so did not exceed the aggregate of the incremental premiums being demanded. The level of health and safety conditions in the workplace would be determined by discrete "voluntary" transactions between workers and their employers, and not by the imposition of external standards generated by courts or legislatures. Although the structure of capitalist relations of production did not require that health and safety conditions be determined by the contract of employment, the selection of the contractarian framework can be said to have facilitated the development of conditions favourable to capitalism. By matching the economic power of the capitalist class to employ labour in hazardous conditions with a legal right to do so, the court generated a legal infrastructure which supported the perfection of wage labour. Further, on the plausible assumption that

²⁴Horwitz, commenting on nineteenth-century employer liability cases, concludes:

Thus, the contractarian ideology above all expressed a market conception of legal relations. Wages were the carefully calibrated instrument by which supposedly equal parties would bargain to arrive at the proper "mix" of risk and wages. In such a world the old ideal of legal relations shaped by a normative standard of substantive justice could scarcely coexist. Since the only measure of justice was the parties' own agreement, all pre-existing legal duties were inevitably subordinated to the contract relation.

M. Horwitz, *The Transformation of American Law, 1780-1860* (1977) 209.

externally imposed standards would have been higher than those that workers were deemed to have voluntarily assumed, the decision not to apply external standards would have also held down the cost of production.

The fact that a legal framework can be said to facilitate the development of capitalist relations of production does not guarantee its selection. That requires the intervention of judges where the matter is initially presented as an issue for the common law. Although the selection of the law for Ontario can be formally explained by its selection in England, the ideological premises underlying the choice seem to have gained widespread acceptance amongst members of the judiciary on both sides of the Atlantic.²⁵

²⁵The ideological framework that I refer to is that of classic nineteenth-century liberalism, which placed the autonomous individual at the center of the universe and sought to maximize the liberty of the individual to pursue his own ends. Thus, Risk notes that the "most powerful and pervasive value [of the common law of Ontario in the mid-nineteenth century] was the facilitation and encouragement of private initiative." See Risk, *supra*, note 21, 417.

Notwithstanding the pervasiveness of these values in terms of the substance of the law, the formalist stance of the Ontario judges inhibited the expression of an ideological world view in their judgments. I have also been unable to find any extra-judicial statements.

In England, Lord Bramwell was not afflicted with such inhibitions. He articulated his ideological premises in judgments, books and testimony before various Parliamentary committees. My favourite quotation comes from Lord Bramwell's testimony before the Select Committee on Employers Liability for Injuries to Their Servants, on May 4, 1877:

1116. . . . Everybody must know (it is a very respectable feeling in one point of view, though I think an erroneous one), that servants will never complain of the conduct of each other to the master. Though I think, upon a more strict view of their duty, they should do so, they do not; they let things go on wrong time after time, and mischief be done and danger be incurred, and they make no complaint at all. I think it is very desirable to guard against that. Then there is another thing which, really, I can speak to of my own knowledge, from the cases which I have tried; the recklessness of workpeople is wonderful, and it is astonishing the risks they run. They get familiarised with them; they forget the old proverb that the pitcher goes often to the well and is broken at last. I think all those considerations go to show that it is really much more the master who requires to be guarded against the negligence of his servants where he is not to blame himself, than it is the servant who requires to be protected against the negligence of a fellow servant. . . .

1157. If the fellow workman in a mine sees that workmen are employed by the employers, and he has no control whatever, neither directly nor indirectly on their employment, would you regard it that a workman should be liable to all the injuries and accidents that persons so employed would cause?—I am very glad you have asked me that question, because it reminds me to say something I have wished to say. Certainly I would give him no remedy. Why does he not leave the employment if he knows it is dangerous? To my mind, it is a sad thing to hear men come into court, as I have heard them, and excuse themselves for not having done that, on the ground that their bread depended upon it, or something of that sort. I should like to see a more independent feeling on the part of workmen, so that they would say, "I will have nothing to do with a man who employs dangerous things or dangerous persons". And, besides, you must remember that when people are engaged in a trade dangerous, either from the nature of the trade itself, or from the means or the persons who are employed, they charge all the more for it, they are compensated, they receive a sort of insurance premium; and it would be

B. The Failure of the Framework and Its Ensuing Transformation

If we are analyzing the success of a legal framework for social decision-making in terms of its functional compatibility with capitalism, we must not only consider the extent to which it facilitates particular kinds of economic activity, but also whether it generates outcomes which are perceived as legitimate on process or substantive grounds. Capitalist accumulation of wealth is not merely an economic phenomenon; it takes place within a set of social conditions, including legal frameworks, which can impede or facilitate the process. Conditions that seem to encourage accumulation because they facilitate a particular kind of economic activity may prove, in the long run, to be unsuccessful for the capitalist because they fail to legitimize the process of accumulation in the eyes of potentially powerful forces. Those forces may then be mobilized and threaten to upset the stability of the conditions of accumulation, either through economic or political action. I will argue that the contractarian framework selected by the courts failed on both substantive and process grounds to legitimate the practice of exposing workers to hazardous conditions without a concomitant obligation to pay compensation in the event of an injury, and as a result was altered within a relatively short period of time.

The expansion of industrial capitalism created in its wake a significant class of proletarianized workers, or wage labourers. These wage labourers tended to be concentrated in location. First, as individual firms grew in size the number of employees literally found under one roof also increased.²⁶ Second, industrial development tended to be concentrated in urban environments, so that working class neighbourhoods began to develop.²⁷ As well,

very unreasonable that they should receive damages as well. Suppose the master said to a servant I will subscribe a shilling a week to an accident fund for you, but I must not be liable for any damage you may receive in my service, surely that would be a reasonable arrangement that ought to bind. Suppose he subsequently said I will give you the shilling, the case would be the same, and that is now the case in effect in dangerous trades.

Reprinted in *Irish University Press Series of British Parliamentary Papers* [:] *Industrial Relations* 19, 196, 198 and 201.

²⁶Examining 1871 census figures for Toronto, Kealey, *supra*, note 13, concludes at p. 29:

The major sectors of the Toronto economy in 1871 then were highly industrialized with large concentrations of workers, extensive mechanization, and an elaborate division of labour.

²⁷Concern with the living conditions of urban industrial workers arises simultaneously with concern about factory conditions themselves. In England there were numerous studies and reports exposing the unsanitary conditions of English cities. Indeed, Engels in his first work, *The Condition of the Working Class in England* (1884), focuses not on factory conditions but on the phenomenon of urbanization. For an interesting discussion see S. Marcus, *Engels, Manchester, and the Working Class* (1974).

workers sharing common ethnic or religious backgrounds were often concentrated within particular firms, industries and regions.²⁸ Shared economic conditions, physical locations and cultural backgrounds provided fertile ground for the emergence of working class organizations which sought to promote working class interests through political, economic, cultural, educational and social activities.

The emergence of an organized working class, however, does not necessarily lead to direct attacks on capitalism itself. Hobsbawm has written that there are two great watersheds in the history of the employment of industrial labour in the nineteenth century.²⁹ The first is when employers and employees learn the rules of the game, the game being a self-regulating market economy. In this context, the common law courts both selected the rules and then proceeded to educate employees as to their effect, making it clear that workers would have to express their risk tastes in the market because the state would not protect them by imposing its own view of what was reasonably safe. The second watershed is the complete learning of the rules so that employees demand what the market will bear, while employers develop better techniques to exploit labour more intensively.

Implied in the proposition that having learned the rules of the game one responds by developing strategies to play it is the notion that either one accepts the rules as legitimate or recognizes that it is beyond one's powers to alter them. Sources of legitimation might include shared ideologies or a perception that one's position is improved by the selection of the rules. For whatever reasons,³⁰ abolition of wage labour was not the major objective of most Ontario labour organizations.³¹

²⁸The influence of ethnic concentrations in the emergence of working class organizations has been discussed by Pentland, *supra*, note 12 and Kealey, *supra*, note 13. Commenting on the Orange Order, a prominent Protestant Irish working class organization in nineteenth-century Toronto, Kealey notes at p. 121:

The Orange Order played an ambiguous role in the life of the Toronto working class. Although clearly dividing the working-class community in two, it nevertheless provided some of its Protestant members with a number of strengths that were usefully carried into the realm of unionism.

²⁹Hobsbawm, *supra*, note 8, 406-7.

³⁰The reasons for the relatively successful integration of workers into the capitalist order, in the sense that revolutionary rejection of capitalism was the exception rather than the rule, are far from clear and require more detailed study. For an excellent discussion of the problem that draws on the history of the German working class, see B. Moore Jr., *Injustice: The Social Bases of Obedience and Revolt* (1978). With respect to Canada, Pentland has argued that an important factor affecting industrial relations was a cultural heritage that emphasized and supported a hierarchical conception of employer authority and employee subordination. See H. Pentland, *A Study of the Changing Social, Economic, and Political Background of the Canadian System of Industrial Relations* (unpub. draft study for the Task Force on Labour Relations, Ottawa, 1968) 19-37. This study is cited with the kind permission of the estate of Professor Pentland.

³¹The Knights of Labour were perhaps the most radical of the labour organizations to gain

Nevertheless, it would be inaccurate to suggest that all aspects of the legal foundation of the accumulation process were accepted by working class organizations or, indeed, by other segments of the population. The contractarian framework for determining workplace conditions was perhaps considered one of the least legitimate of the newly selected game rules. Some evidence of the failure of these rules to gain widespread acceptance is the judicially noted fact that, if employer liability cases were allowed to go to juries, juries almost invariably found the employer liable.³²

Furthermore, the creation of an income franchise for provincial elections in 1824 in addition to the property franchise, and its gradual extension until universal male suffrage was achieved in 1888,³³ provided both a focus and a foundation for working class political activity. Workers developed effective political organizations and by the 1880's they had close ties with the ruling Liberal Party headed by Oliver Mowat.³⁴ Both the Liberals and the Tories continued to compete for the working class vote by advancing issues such as Factory Act legislation and reform of employer liability law. Even though it is unclear what priority those issues had on organized labour's legislative agenda,³⁵ the Provincial Legislative Assembly enacted legislation in the 1880's which drastically changed the legal framework for determining health and safety conditions. The essence of the new approach

substantial support in nineteenth-century Ontario. However, Kealey notes that the "Knights conceived social transformation grandly but shunned conflict". Their popularity lasted for a short period in the 1880's. See Kealey, *supra*, note 13, 215 and generally ch. 10.

³²Where there was insufficient evidence, cases were withdrawn from the jury precisely because of the problem of jury sympathy for the plaintiff. For example, in *Deverill v. Grand Trunk Ry Co.*, *supra*, note 6, 526, Hagarty, J. noted:

To leave such a case to the jury is, as has been remarked by English judges, simply to direct a verdict for the plaintiff, where a railway company are defendants [foot-notes omitted].

³³For a general history of the legislation extending the franchise in Ontario see J. Boyer, *Political Rights: the Legal Framework of Elections in Canada* (1981) 134-6. For a brief discussion of the causes of this extension and of the percentage of males eligible under these statutes see Kealey, *supra*, note 13, 330, 367-8.

³⁴Kealey, *supra*, note 13, 218, remarks that the "[Toronto Trades and Labour Council], the Knights of Labour. . . and their allies throughout the province enjoyed an intimacy with the Mowat government unknown before the 1880's and seldom seen after in Canadian working class history."

³⁵Kealey, *supra*, note 13, makes several references to the presence of factory and employer liability legislation as a labour demand, but does not discuss any concerted efforts that might have been made to have such legislation enacted. Further, employer liability legislation was first introduced by the opposition in 1885. Mowat was caught off guard and, in defence of the failure of his government to introduce similar measures, claimed that workmen's societies had exerted pressure for other legislation, but that there had been no demand for employer liability reform. See *Legis. Debates, The Globe*, February 27, 1885. In view of his close connections with labour organizations his claim merits serious consideration.

was quite simple: the state now guaranteed that no worker could be legally exposed to hazards that *it* judged to be unreasonable.

The replacement of the market by a political process of social decision-making about health and safety conditions in the workplace can be viewed as part of a general transformation of the role of the state in capitalist society. The contractarian rule system selected by the courts was typical of a state whose role was largely restricted to one of facilitating capitalist economic activity through, *inter alia*, the provision of a legal infrastructure which protected the core institutions of private property and market exchange. However, to the extent that the market economy produced outcomes which were unpopular, pressure was placed on the state to expand its functions, both in order to direct the economy so as to avoid economic crises and to secure the loyalty of the citizenry by, for example, ensuring that minimum standards of living were maintained. Through various regulatory mechanisms, which included direct policing, the state increasingly extended its control over areas that were formerly considered private. As one of its earliest acts in this new role the legislature imposed minimum standards of health and safety in the workplace.

Why had the contract model failed to produce politically acceptable results? Perhaps this was a case of classic market failure involving imperfect information and high transaction costs?³⁶ The case for imperfect information is not very convincing. Most problems of this era related to unsafe as opposed to unhealthy workplace conditions, and safety experts have stated that experts know little more about unsafe conditions than do workers.³⁷ Further, in many industries the labour processes remained artisanal; that is, although workers no longer owned the means of production, they still possessed the knowledge of the techniques of production and thus would be as aware of the risks as the employer.³⁸ What about transaction costs? If

³⁶In microeconomic theory, exchange produces allocative efficiency only when there is perfect competition and perfect markets. In order for perfect markets to operate, each individual must have complete knowledge of all relevant factors and be able to engage in costless transactions. In the context of health and safety, imperfect knowledge might exist where workers are ignorant of the actual risks in the workplace. High transaction costs would arise simply by virtue of the fact that it would be time-consuming to bargain with each individual employee. Where information is imperfect or there are high transaction costs the market may fail to achieve allocative efficiency. For a general discussion of the problem see J. Hirshleifer, *Price Theory and Applications*, 2^d ed. (1980) 230-49.

³⁷Mendeloff, *Regulating Safety* (1979) 14.

³⁸Reliance on craft production techniques in many major industries persisted well into the twentieth century. See Gordon, *supra*, note 16, 79-81.

It would not be surprising if we were to find that injury rates were lowest in firms and industries that were heavily dependent on craft production techniques. Workers would have the greatest control over production and organize it so as to minimize risks. Indeed, railways and spinning mills, two industries which did not have to overcome craft traditions, were well represented in the reported liability cases. If this hypothesis holds, it might also explain why

indeed workers and employees were bargaining individually over general terms and conditions of employment, there is little reason to believe that additional bargaining over health and safety would have substantially increased what would have already been high transaction costs. Alternatively, if in reality practically no individual bargaining was taking place, then the problem of marginally higher transaction costs that would be caused by the addition of bargaining over health and safety is purely theoretical, and therefore irrelevant.³⁹

Rather than rely on classic market failure for an historical explanation of the rejection of the contractual framework, I would suggest that the radical inequality in bargaining power between employers and employees produced results that were so unpopular that they threw the framework into disrepute. Attempts to rectify the imbalance in bargaining power through workers' collective action were fiercely resisted.⁴⁰ Even the courts came to acknowledge that the individual employment contract could not be realistically treated as a voluntary exchange relationship.⁴¹ The state responded to the demands of workers, to substantive conceptions of fairness which were in conflict with the market definition of justice, and perhaps to the long term interests of capitalists as a class in not diminishing the available labour power and in preserving social order.⁴² The conflicts generated in the realms of production and exchange were transferred to the realm of the state.⁴³

a labour movement dominated by the crafts would not have employer liability and Factory Act legislation at the top of its political agenda.

³⁹To the extent that the transaction costs of individual bargaining were prohibitive, collective bargaining might have been seen as a mechanism for reducing these costs. Needless to say, employers were not enthusiastic about this solution.

⁴⁰For a good overview of trade union struggles see C. Lipton, *The Trade Union Movement of Canada: 1827-1959*, 3^d ed. (1973).

⁴¹For example, Wilson, C.J., of the Ontario Court of Queen's Bench stated in a rare moment of candour:

It is hard to apply that maxim [*volenti, non fit injuria*] in many cases against a workman when the choice before him is to run the risk or give up his work, or starve.

Dean v. Ontario Cotton Mills Co. (1887), 14 O.R. 119, 128.

⁴²The suggestion that nineteenth-century Factory Act legislation was passed in the interest of the capitalist class as a whole originates with Marx's discussion of English legislation limiting the length of the working day. Marx was concerned with the question of why the Parliament of the ruling class would pass such legislation. His explanation involved several elements, including working class organization, but he also made the point that capitalists were physically debilitating the available pool of industrial labour:

Apart from the working-class movement that daily grew more threatening, the limiting of factory labour was dictated by the same necessity which spread guano over the English fields. The same blind eagerness for plunder that in one case exhausted the soil, had in the other, torn up by the roots the living force of the nation. Periodical epidemics speak on this point as clearly as the diminishing military standard in Germany and France.

K. Marx, *Capital*, vol. 1 (New York: International Publishers, 1967) 239. For similar comments also see 269-70.

II. State Standard Setting in Nineteenth-Century Ontario

A. First Steps

The approach of the early legislation to standard-setting was quite simple: the hazard was identified and the corrective action to be taken was stipulated. The first legislation directed at the regulation of workplace conditions was enacted in 1874 and entitled *An Act to require the owners of Thrashing and other Machines to guard against accidents*.⁴⁴ The Act required that owners and operators of machines connected to a "horse-power" by certain means take specified measures to protect persons working on or near those machines. The next workplace setting to receive legislative attention was the railway. After some delay and study,⁴⁵ the *Railway Accidents Act, 1881* was approved by the Legislative Assembly. The preamble expressed an attitude toward standards that stood in sharp contrast to the thinking that still prevailed in the common law courts:

WHEREAS frequent accidents to railway servants and others are occasioned by the neglect of railway companies to provide a fair and reasonable measure of protection against their occurrence; and whereas a proper construction of railway bridges and certain precautions in the construction and maintenance of railway frogs, wing-rails, guard-rails, and freight cars would greatly lessen, if not entirely prevent, the happening of such accidents. . . [emphasis added].⁴⁶

The Act then went on to specify a series of measures which were to be taken by railroads in order to satisfy the Legislative Assembly's requirement of fair and reasonable protection. These included a provision that there be a clearance of seven feet between the bottoms of overhead bridges and the tops of railway cars and that existing bridges were to be brought into compliance at the owner's expense within a year.

⁴³Although my concern in this paper is with occupational health and safety, it is important to keep in mind that the resolution of other aspects of employment relations were also transferred from the market to the State. Thus *The Ontario Factories' Act*, S.O. 1884, c. 39, ss 4-6, also contained provisions governing child labour, the employment of women and legal limits on hours of work. Minimum wage laws were first introduced in Ontario in 1920 but only applied to women (*The Minimum Wage Act*, S.O. 1920, c. 87). For a somewhat sketchy account of the development of employment standards legislation see P. Malles, *Canadian Labour Standards in Law, Agreement, and Practice* (Economic Council of Canada, 1976) 3-18.

⁴⁴S.O. 1874, c. 12.

⁴⁵An Act to protect brakemen was first introduced in 1875, but failed to get past second reading. In 1877 a return of all railway accidents from 1874 to 1876 was called for and was published in 1878. See Ontario *Sessional Papers* (1878), vol. 10, part 3, no. 14. In 1880 a Select Standing Committee on railways was appointed and its report was published as Appendix no. 1 of vol. 13 of the Ontario *Journals of the Legislative Assembly* in 1880.

⁴⁶S.O. 1881, c. 22.

These early Acts show signs that the move toward a new legal framework was still tentative and that politicians were uncertain as to just what role they should play. Was the Legislature itself going to study each problem in every industry and devise the appropriate technical solution? Indeed, were only the hazards specifically identified by the Legislature going to be dealt with by regulation, while the remainder would be left to be resolved through contract? Most importantly, what mode of enforcement would be selected to implement the decisions being made about standards?

The establishment of a full-time state inspectorate would have involved a significant departure from the facilitative role that laissez-faire capitalism envisioned for the state, in that it entails direct policing of private economic activity. The first two Acts avoided taking that step, and instead relied on enforcement mechanisms which might be of interest to contemporary regulatory reformers. The thrashing machines legislation relied on private prosecutions which were encouraged by awarding the prosecutor half of the fine that was imposed and on a curious provision which barred actions to recover monies owed for services rendered by a machine which did not comply with the statutory requirements.⁴⁷ The only enforcement mechanism provided in the *Railway Accidents Act, 1881* was that, subject to a number of conditions, employees injured as a consequence of the employer's negligent non-compliance could sue for compensation as if they were not employees.⁴⁸ Thus, a rational railway would only comply with the law where their expected losses under the new liability rules would exceed the cost of compliance.⁴⁹

B. The Coming of Age

It was not until *The Ontario Factories' Act, 1884* that the Ontario Legislature committed itself to a regulatory scheme that included both wide-ranging standards and a full-time state inspectorate.⁵⁰ With regard to standards, the *Act* provided special protection for women and children, including a limit on the length of the working day in Ontario, and restrictions on tasks that women and children could be assigned. For factory employees of

⁴⁷*An Act to require the owners of Thrashing and other Machines to guard against accidents*, S.O. 1874, c. 12, ss 2-4.

⁴⁸S.O. 1881, c. 22, ss 7 and 8. Note that a ceiling was put on the amount of compensation that could be obtained under this *Act*.

⁴⁹The reported case law provides no information on the extent to which employers complied with these standards nor on the extent to which injured employees sought compensation under *The Railway Accidents Act*, S.O. 1881, c. 22.

⁵⁰S.O. 1884, c. 39.

either sex and any age, section 14 of the *Act* contained a strongly-worded general prohibition of unsafe and unhealthy work conditions:

It shall not be lawful to keep a factory so that the safety of any person employed therein is endangered, or so that the health of any person therein is likely to be permanently injured. . . .⁵¹

This general penalty provision was supported by a number of more specific provisions dealing with sanitary conditions, machine guarding and fire prevention.⁵² Breach of such a provision was deemed to be a breach of section 14. It must be noted that many of these standards differed substantially from the standards set in the earlier legislation. Rather than identifying a specific hazard and selecting a particular solution, the *Act* tended to set general standards, sometimes qualified by language like "reasonably practicable", and left it to the inspector and/or the Lieutenant Governor in Council (Cabinet) to determine the operative meaning of those standards and how they could be complied with.⁵³ Indeed, with regard to fire prevention, where the *Act* provided more specific standards, inspectors were given authority to dispense with any of those requirements altogether. If section 14 were read to have meaning independent of the surrounding sections, one would have to conclude that the *Act* was internally inconsistent.⁵⁴

With respect to enforcement, the *Act* established a permanent inspectorate to police factory conditions, and this was a major step in the process of transforming the state from facilitator to regulator. However, the line between standard-setting and enforcement is quite blurred under the *Act*. The powers of the inspectors were so varied and so highly discretionary that, in a practical sense, the two functions became merged in a single actor. This phenomenon might be explained on the basis of administrative needs and political convenience. From an administrative standpoint, the Legislature understood that it was no longer competent to determine exactly what

⁵¹*The Ontario Factories' Act, 1884*, S.O. 1884, c. 39, s. 14.

⁵²*The Ontario Factories' Act, 1884*, S.O. 1884, c. 39, ss 11-13, 15 and 16 respectively.

⁵³For example, see *The Ontario Factories' Act, 1884*, S.O. 1884, c. 39, s. 12(1):

In every factory where, contrary to the provisions of this Act, there is any omission, act, neglect or default in relation to any overcrowding, ventilation, drain, privy, earth-closet, water-closet, ash-pit, water supply, nuisance or other matter whereby the health of persons employed in the factory may be affected, the employer shall within a reasonable time take such action thereon as the Inspector, acting under the regulations made in respect to such subjects, notifies the employer to be proper and necessary. . . .

⁵⁴For example, with respect to ventilation s. 11(3) of *The Ontario Factories' Act, 1884*, S.O. 1884, c. 39 requires that "Every factory shall be ventilated in such a manner as to render harmless, so far as is reasonably practicable, all the gases, vapours, dust or other impurities generated . . . therein that may be injurious to health".

If it had not been reasonably practicable to eliminate those injurious conditions would they be tolerated under s. 14?

should be done in each and every circumstance that might be encountered in a factory setting, and chose to take advantage of the availability of a full-time inspectorate by delegating to it the authority to make those determinations. From a political perspective, the Liberals could tell their working class supporters that they had taken action to require safe and healthy workplaces and that responsibility was now in the hands of experts, while at the same time they could tell their industrialist friends that the *Act* was ambiguously worded and would not be likely to impose unreasonable costs.

Once the state begins to assume direct responsibility for determining conditions of employment, relations of production lose their apolitical form, in the sense that they can no longer be said to be governed by a self-regulating market economy. Political struggles in regard to state policy now have a direct impact on the content of those relations. The structure of capitalist relations of production may impose limits on the selection of state policies, but within those limits there is a broad range of possible outcomes. Some outcomes may be more or less favourable to accumulation than others, but the organizational strength of different classes will have more to do with the selection of particular policies than will the economic structure itself. However, the economic structure of a society will have an influence on the strength of different classes in the political sphere. First, a small number of people who control a disproportionate share of the wealth of a society are much easier to organize than a large number of persons who individually do not command much economic power. Second, concentrated economic power has a privileged position within the welfare state. As the state takes over responsibility for steering the economy it is faced with the fact that unless it is prepared to challenge private property, private investment decisions will to a large extent determine economic performance. Thus, the steering function of government often becomes one of providing incentives to capitalists to invest. The public impact of private investment decisions often leads toward an identification of the general interests of business with those of society at large. On the other hand, the claims of the disenchanting and displaced appear as special interests making claims against society as a whole. According to this analysis, the state is not simply a pluralist institution reflecting the competing claims of different interest groups. Rather, there is a structural tendency for the state to favour the particular interests of large private investors over competing claims.⁵⁵

In this context the enactment of the *Factories' Act* should be viewed as an advance for labour, in that it signalled their ability to get the state to intervene in the labour market on behalf of workers, and to expand its social

⁵⁵In addition to the Marxist writings cited *supra*, note 5, an excellent non-Marxist explanation of this phenomenon can be found in C. Lindblom, *Politics and Markets* (1977) 161-233.

welfare functions. This was in part a reflection of their own organizational capacity as well as of the fact that political parties were competing for the newly enfranchised workers. The partial politicization of relations of production created new legitimation problems which could only be resolved if the state met enough of the demands of working class voters to retain their loyalty. However, the advance was limited. The *Factories' Act* was itself inconsistent, the standards it set uncertain and its enforcement was highly discretionary.⁵⁶ These weaknesses in the *Act* were not determined in any simple way by the economic structure of late nineteenth-century Ontario, but that structure affected the organizational capacity of different classes and the weight their interests were assigned by the state in its selection of specific policies.

Over the next thirty years, legislation of a similar character was enacted to regulate workplace conditions in shops,⁵⁷ mines,⁵⁸ construction⁵⁹ and offices.⁶⁰ This legislation remained in force with little or no change until the 1960's.

C. *Note on Employer Liability and Standards*

Regardless of the strength or weakness of the standards or the degree of administrative enforcement, the state had adopted a public regulatory scheme in which substantive decisions about what constituted reasonably safe work conditions were being made. What then of employer's liability? Was the contractarian legal framework still to govern the determination of whether or not an injured workman was to be compensated as a result of a workplace injury? What if the injury was caused by a failure to comply with the statutory standards? What if the employee knew of that failure and still continued to work notwithstanding the violation? Was liability for injuries still regarded as a mechanism in addition to the *Factories' Act* for

⁵⁶Marx, *supra*, note 42, 494, in discussing English Factory Act legislation, observed a similar phenomenon:

What strikes us, then, in the English legislation of 1867, is, on the one hand, the necessity imposed on the Parliament of the ruling classes, of adopting in principle measures so extraordinary, and on so great a scale, against the excesses of capitalist exploitation; and on the other hand, the hesitation, the repugnance, and the bad faith, with which it lent itself to the task of carrying those measures into practice.

⁵⁷*The Ontario Shops' Regulation Act, 1888*, S.O. 1888, c. 33; *The Bake Shops' Act, 1896*, S.O. 1896, c. 64.

⁵⁸*The Mining Operations Act, 1890*, S.O. 1890, c. 10; *The Mines Act, 1892*, S.O. 1892, c. 9 (s. 76 of this *Act* repeals *The Mining Operations Act, 1890*).

⁵⁹*The Buildings Trades Protection Act, S.O. 1911*, c. 71.

⁶⁰*The Factory, Shop and Office Building Act, S.O. 1913*, c. 60 (s. 85 of this *Act* is the repeal section).

establishing conditions of employment? A brief examination of the resolution of these problems follows.

The contractual principles of the common law were largely replaced by legislation imposing negligence rules in 1886.⁶¹ The fellow-servant doctrine was severely circumscribed and the presumption of voluntary assumption of risk was weakened. Thus, employees could recover for injuries caused by the negligence of most fellow-servants and for defects in the production process in respect of which the employer was negligent. The courts, and subsequently the Ontario Legislative Assembly, specified that prior knowledge of a defect by the worker did not give rise to a presumption that she had voluntarily assumed the risk.⁶² Failure to comply with the statutory standards of the *Factories' Act* was held not to give rise to strict liability, but rather provided evidence of negligence to go to the jury. In practice, however, it seemed as if the liability of the employer for injuries caused by violations of the *Act* was strict, although that verbal formulation was avoided.⁶³ In 1899 the Legislature placed the onus on the defendant who was alleged not to have complied with the *Factories' Act* to disprove the allegation if he was to avoid liability for an injury caused by the alleged defect.⁶⁴

How then did employers' liability relate to the establishment of health and safety conditions in the workplace? The dominant view, and the policy expressed in the legislation, was that the issues were separate. The *Factories' Act* required that all workplaces be kept in a safe condition⁶⁵ and provided an inspectorate to enforce those standards. Compensation was payable where the employer negligently failed to provide safe working conditions. The view that health and safety standards were to be determined primarily by the legislature was clearly expressed by Professor James Mavor in his study of the desirability of introducing no-fault workers' compensation in 1900:

If accidents occur which are preventable by means of legislation, humanity would determine that legislation should be passed without delay. But this is not a case of that kind. It is rather a question of the distribution of the costs of accidents which *ex hypothesi* are not preventable.⁶⁶

⁶¹*The Workmen's Compensation for Injuries Act, 1886*, S.O. 1886, c. 28.

⁶²*Dean v. Ontario Cotton Mills Co.* (1887) 14 O.R. 119, 125-6 (Q.B.) *per* Armour, J.; *The Workmen's Compensation for Injuries Amendment Act, 1889*, S.O. 1889, c. 23, s. 7.

⁶³In *Finlay v. Miscampbell* (1890) 20 O.R. 29, 38 (Ch.D.) the Court explicitly rejected the proposition that a breach of *The Ontario Factories' Act, 1884*, S.O. 1884, c. 39 would by itself give rise to liability. Nevertheless, the finding of a breach was considered evidence of negligence: *McCloherly v. Gale Manufacturing Co.* (1892) 19 O.A.R. 117, 120.

⁶⁴*The Workmen's Compensation For Injuries Act, 1899*, S.O. 1899, c. 18, s. 3.

⁶⁵*The Ontario Factories' Act, 1884*, S.O. 1884, c. 39, s. 14.

⁶⁶J. Mavor, "Report on Workmen's Compensation for Injuries" in *Ontario Sessional Papers* (1900) no. 48, 46-7.

Actual practice may have been quite different. The standards established by the *Factories' Act* were uncertain and their enforcement highly discretionary. As such, the actual level of safety in the workplace may have reflected economic rather than political forces. If compliance with the *Factories' Act* was not voluntary or enforced, then the actual level of safety may still have been determined by the minimization of the sum of the employer's accident costs and accident prevention costs, where accident costs include not only lost production time, but also *ex ante* compensation for injury according to the new employer liability rules. The enactment of no-fault compensation in 1914⁶⁷ would have affected the actual quality of health and safety conditions to the extent that it caused a net increase in accident costs, thereby creating an incentive to invest in additional accident prevention.

In sum, the legislative reforms of the nineteenth century only partially politicized the wage relationship, still leaving economic forces a direct role in the determination of health and safety conditions.

III. Interregnum: 1914-1960

This pattern of relatively weak health and safety legislation in conjunction with no-fault compensation stood for nearly fifty years. Why? The question is intriguing, and has been asked more generally with respect to the overall inability of Canadian workers to make significant gains in industrial relations, either through legislative action or collective bargaining, from 1908 to 1943.⁶⁸ There are several factors which would need to be considered in any attempt to provide a comprehensive answer to the question. Many of the early labour groups were organized on craft lines. This was appropriate in a society in which the labour process still relied on skilled workers, even though they were now brought together under one roof. However, by the end of the nineteenth century, efforts were being made to transform the labour process. This transformation involved increasing mechanisation and supervision, so that knowledge of production techniques became vested in the employer as opposed to the skilled labourer. The benefits to an employer were clear. With control over the production process employers were able to increase productivity per worker, eliminate skilled workers (who tended to be unionized) and replace them by "homogenized" labour which could be drawn from the general pool of wage labourers at lower cost.⁶⁹ Craft unions faced with a challenge to their existence fought rear-guard

⁶⁷*The Workmen's Compensation Act*, S.O. 1914, c. 25.

⁶⁸Pentland, *supra*, note 30, 160.

⁶⁹For accounts of the transformation of the labour process in the late nineteenth and early twentieth centuries, see Gordon, *supra*, note 16, 112-35 and H. Baverman, *Labour and Monopoly Capital* [:] *The Degradation of Work in the Twentieth Century* (1975) 85-138.

actions to protect their diminishing membership rather than support industrial unionism.⁷⁰

The growth of a general pool of industrial labourers did give rise to industrial unions, but their organizing efforts were strenuously resisted by Canadian employers. Their relative weakness was reinforced by divisions within the labour movement, and this left the labour movement as a whole unable to respond to management's offensive to gain stronger control over labour in the production process.⁷¹ The onset of the depression hardly created conditions that would be conducive to worker initiatives for safer and healthier work environments.⁷² Rather, struggles for survival dominated labour's agenda until between the two World Wars.

World War II provided a golden opportunity for the labour movement to regain the strength it had developed in the late nineteenth century. The economy was stimulated, manufacture expanded and the domestic civilian labour supply tightened. Union membership doubled between 1939 and 1944 and the number of workers involved in labour disputes dramatically increased between 1937 and 1943. In response to these pressures the wartime Government issued P.C. 1003, which laid the legislative foundations for the industrial relations system that emerged from the War.⁷³ Essentially, the provincial labour relations statutes which followed provided for union certification, an obligation on employers to bargain in good faith with certified unions, and a grievance system for resolution of contract disputes as well as for enforcement of collective agreements.⁷⁴ Under this regime labour was prohibited from taking collective action in the form of a strike during the life of the collective agreement. There was also a tacit acceptance of managerial rights to control the production process, which included choice of technology and direction of the work force. Unions focused their demands on improving wages, benefits and security provisions, leaving management to manage. This basic trade-off, combined with a recession in the 1950's, provide some explanation of the fact that occupational health and safety did not emerge as a substantial demand of labour following the War. Indeed, it was not until the Hogg's Hollow disaster of 1960 in which five workers were killed that the inadequacy of the existing regulatory system was brought to light, both with respect to state enforcement and employer responsibility. The coroner's jury reached the following conclusions:

The death of Pasquale Allegranza and his fellow workers is the inevitable result of the failure to implement and enforce regulations made under the *Department*

⁷⁰See Gordon, *supra*, note 16, 159-60 and Pentland, *supra*, note 30, 116-8.

⁷¹See Gordon, *supra*, note 16, 143-4, 157-9 and Pentland, *supra*, note 30, 120-4.

⁷²See Pentland, *supra*, note 30, 170-91.

⁷³See Pentland, *supra*, note 30, 192-224.

⁷⁴See, e.g., *The Labour Relations Act, 1950*, S.O. 1950, c. 34.

of *Labour Act* governing the protection of persons working in compressed air. . . .

According to the evidence presented, almost all the safety regulations governing this tunnel project were violated at one time or another, and many of the regulations were violated continuously. The attitude of management towards the safety of the individual worker can be described as no less than callous.⁷⁵

IV. The Second Wave of State Regulation: 1961-1980

Increasing state intervention in the workplace is not merely a local event, but has been common in many western industrialized countries, including the United States.⁷⁶ Nor have demands for increased state intervention been restricted to the workplace. The environmental movement is often pointed to as one of the factors that spurred demand for workplace safety, and helped create a receptive political environment.⁷⁷ Since the Hogg's Hollow inquest we have seen state activity in occupational health and safety regulation increase dramatically. There have been numerous Royal Commissions⁷⁸ and much legislative reform,⁷⁹ culminating in the *Occupational Health and Safety Act, 1978*.⁸⁰

The *Act* contains a number of innovations as compared with its nineteenth-century predecessors. These innovations reflect the orientation of the Hain Report⁸¹ and its emphasis on the importance of establishing an *internal* responsibility system to complement the external policing mechanism which was available through government inspection and prosecution. The internal responsibility system consisted of direct accountability of management for workplace safety, and was supplemented by mechanisms that provided for worker contribution and participation in the development of safe work conditions. This was possible through joint health and safety committees, worker's inspections, increased worker access to information and the right to refuse unsafe work. It was thought that health and safety would be best

⁷⁵The verdict of the coroner's jury in the Hogg's Hollow inquiry was reproduced in P. McAndrew (Chairman), *Report of the Royal Commission on Industrial Safety* (Ontario, 1961) Appendix E.

⁷⁶The major legislation in the United States is the *Occupational Health and Safety Act of 1970*, 29 U.S.C. §§ 651 *et seq.* (1970).

⁷⁷N. Ashford, *Crisis in the Workplace: Occupational Disease and Injury* (1976) 46.

⁷⁸J. Hain (Chairman), *Report of the Royal Commission on the Health and Safety of Workers in Mines* (Ontario, 1976) and K. Burkett (Chairman), *Towards Safe Production*, (Report of the Joint Federal-Provincial Inquiry Commission into Safety in Mines and Mining Plants in Ontario, 1981).

⁷⁹*Construction Safety Act, 1961-62*, S.O. 1961-62, c. 18; *Industrial Safety Act, 1964*, S.O. 1964, c. 45. These Acts were amended and consolidated and then replaced by *The Employees' Health and Safety Act, 1976*, S.O. 1976 (2^d Sess.), c. 79.

⁸⁰S.O. 1978, c. 83 as consolidated by R.S.O. 1980, c. 321.

⁸¹See *supra*, note 78.

achieved if the problem of regulation were approached cooperatively by labour, management and the state rather than on a confrontational basis.⁸²

Although it is clear that the actual levels of health and safety achieved in the workplace may reflect discrete bargains that are struck at the level of enforcement, rather than legislative or regulatory standards, more empirical work on the effect of these innovations is required before the utility of the *Act* can be assessed. Furthermore, the internal responsibility system, as its name implies, shifts at least some of the responsibility that the state had previously assumed back to the workplace, thus making the issue of safety standards less public. While this development is significant and will be adverted to later on, it is necessary to remember that the state has still retained ultimate responsibility for defining the minimally safe health conditions which all employers must provide. This is particularly true with respect to exposure to toxic substances, and it is in determining maximum exposure levels that conflicts over the role of the state have been made most visible. In the following sections I will examine the process of standard-setting and debates over appropriate policy in this area, with a particular emphasis on the proposal to adopt cost-benefit analysis as a measure of regulatory reform. The terms of this debate will help elucidate the tensions generated in the modern state by the demand that it simultaneously facilitate capital's accumulation of wealth and maintain its legitimacy by ensuring "fair" outcomes of exchange transactions.

A. *Process*

The distinction between policy and process is particularly sharp in the *Occupational Health and Safety Act*, although perhaps no more so than in other regulatory legislation in Ontario. To put it simply, the *Act* contains no substantive policy content whatsoever with respect to toxic substance exposure standards. A comparison of the Ontario legislation with its United States counterpart should make this point quite clear.

The United States Congress declared that its purpose and policy in passing the *Occupational Health and Safety Act of 1970* was "to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources".⁸³ With respect to toxic material standards, the American legislation directs the Secretary of Labour to "set the standard which most adequately assures, to the extent

⁸²For a recent evaluation of these aspects of the *Act* see Doern, *supra*, note 4, 3.37-3.48, 3.60-3.76, and generally Swinton, "Enforcement of Occupational Health and Safety Legislation: The Role of the Internal Responsibility System" in Swan & Swinton, eds, *Studies in Labour Law* (1983) 143-75.

⁸³29 U.S.C. § 651 (1970).

feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life".⁸⁴ The Supreme Court of the United States has recently interpreted that section in *American Textile Manufacturers Institute, Inc. v. Donovan*:

In effect then, as the Court of Appeals held, Congress itself defined the basic relationship between costs and benefits, by placing the "benefit" of worker health above all other considerations save those making attainment of this "benefit" unachievable.⁸⁵

The Ontario legislation provides no such direction. Employers and supervisors are directed to "take every precaution reasonable in the circumstances for the protection of the worker".⁸⁶ With respect to general regulation-making authority the *Act* provides:

The Lieutenant Governor in Council may make such regulations as are advisable for the health or safety of persons in or about a workplace.⁸⁷

Authority to make regulations with respect to toxic substances is then specifically granted.⁸⁸ Nowhere in the *Act* does the Legislature express a view on the crucial policy issues that must be addressed in regulating exposure to toxic substances in the workplace. What are the relevant considerations in setting standards? What weight should be given to costs? Should Cabinet be risk averse? "Reasonableness" or "advisability" are devoid of meaning in the absence of some evaluative criteria. In sum, the Legislature has delegated an unconfined discretion to Cabinet to formulate its own policy, subject only to the procedural constraints of the regulatory process.

There is no general statutory requirement in Ontario for public participation in the regulatory process similar to the notice and comment procedures in the *Administrative Procedure Act* in the United States.⁸⁹ Further, English and Canadian courts have yet to attach natural justice or fairness

⁸⁴*Occupational Health and Safety Act of 1970*, 29 U.S.C. § 655(b)(5) (1970).

⁸⁵*Supra*, note 3, 509.

⁸⁶*Occupational Health and Safety Act*, R.S.O. 1980, c. 321, ss 14(2)(c) and 14(2)(g).

⁸⁷*Occupational Health and Safety Act*, R.S.O. 1980, c. 321, s. 41.

⁸⁸*Occupational Health and Safety Act*, R.S.O. 1980, c. 321, s. 41(2)(13)-(14).

⁸⁹5 U.S.C. § 553 (1976).

requirements to legislative functions.⁹⁰ Yet, in the *Occupational Health and Safety Act*, the Legislature took steps to open up the regulatory process. Section 22 requires that, prior to designating a toxic substance, the Minister of Labour publish a notice that the substance may be so designated and call for briefs or submissions. Further, the proposed regulation is to be published at least sixty days before it is filed. The *Act* also establishes a standing Advisory Council on Occupational Health and Occupational Safety (ACOHOS) to advise and make recommendations to the Minister. This body represents labour, management, technical and professional persons and the public, and provides another potential source of public input into the regulatory process.⁹¹

The only other procedural constraint on the process is the *Regulations Act* which requires that a designated member of the Executive Council of Cabinet review all proposed regulations. This legislation also establishes a Standing Committee on Regulations in the Legislature with authority to ensure that regulations are not *ultra vires*. The Committee is specifically precluded from conducting a policy review.⁹²

In practice, the Ministry of Labour has developed an even more open process than is required by the *Act*. In particular, a public meeting is held in which the Ministry explains how and why it has or has not responded to submissions by making revisions to the proposed regulation. ACOHOS is then consulted with respect to any changes made after that public meeting.⁹³ Clearly, the setting of designated substance standards in Ontario is a political process, in which the state participates, subject to the conflicting demands to facilitate accumulation and to legitimate the social relations of production. This is not to say that technical expertise does not play a significant role in laying the foundations and establishing the boundary conditions within which choices will be made. However, when it comes to making choices between alternatives, the process seems to encourage bargaining in

⁹⁰The decision of the Supreme Court of Canada in *A.G. Canada v. Inuit Tapirisat of Canada* [1980] 2 S.C.R. 735, (1981) 115 D.L.R. (3d) 1, confirms that the Court is disinclined to impose procedural requirements on the exercise of a delegated power to make general decisions based on matters of public policy and convenience. See also *Momex Realty and Development Co. v. Village of Wyoming* [1980] 2 S.C.R. 1011, (1981) 116 D.L.R. (3d) 1. More recently, the Supreme Court considered the fact that Cabinet had given persons affected a reasonable right to be heard as a ground for not striking down an Order in Council where it was alleged to have been made in bad faith. See *Thorne's Hardware Ltd. v. The Queen* (1983) 143 D.L.R. (3d) 577, (1983) 46 N.R. 91 (S.C.C.). While this decision indicates judicial approval of such a practice, it does not suggest that the Court will be prepared to impose an implied right to be heard. In general, see J. Evans, *de Smith's Judicial Review of Administrative Action*, 4th ed. (1980) 181-2 and R. Reid & H. David, *Administrative Law and Practice* (1978) 97-8.

⁹¹*Occupational Health and Safety Act*, R.S.O. 1980, c. 321, s. 10.

⁹²R.S.O. 1980, c. 446, ss 6, 12.

⁹³See Doern, *supra*, note 4, 3.25-3.27.

which both labour and management are granted concessions. A recent study of the process of setting an asbestos standard described the strategy of the Ministry as one of "splitting the difference".⁹⁴

The politicization of the process of standard-setting is, at its core, a continuation of the developments we saw in the late nineteenth century. However, there are a number of significant changes. First, the Legislature sets fewer specific standards. Indeed, in the present *Act*, the Legislature did not even set a general standard similar to section 14 of the 1884 *Factories' Act*. Instead it set up a process through which general policies and specific standards would be determined. In part this reflects an institutional constraint. The Legislature has neither the time nor the expertise to resolve each particular problem. But political considerations may play a role as well. Even with an open regulatory process, the controversy generated by such proceedings is less likely to receive the same level of publicity as proceedings conducted in the Legislature. For example, the vinyl chloride exposure level was set according to the principle of acceptable risk, which in this instance was defined as 50 excess deaths per 100,000 exposed workers.⁹⁵ One can imagine the publicity and outrage that would have been generated in an open legislative debate over the quantity of excess worker deaths that was "acceptable". Further, in dealing with substances individually without legislatively mandated decision criteria, the Ministry has chosen different criteria for selecting exposure levels for different substances.⁹⁶ This kind of *ad hoc* decision-making may also provide a useful way of avoiding serious political confrontations over fundamental principles.

Secondly, the regulatory process reflects the fact that organized labour has more or less been accepted as a permanent feature of the industrial relations system. Although the state still mediates class conflict, the means by which it does so has shifted: collective bargaining now provides an alternative to direct state intervention in dispute resolution. This is possible because the collective bargaining process, in part at least, rectifies the severe imbalance that was present in the negotiation of an individual contract of employment. Thus, conflicts over workplace health and safety can be fed back into an extension of the bargaining system (Joint Committees), with the state monitoring and mediating through the mechanism of the inspector.

⁹⁴See Doern, *supra*, note 4, 3.32.

⁹⁵O. Reg. 516/82. For a discussion of the analytic process used in setting this standard see Advisory Council on Occupational Health and Occupational Safety (ACOHOS), *Fifth Annual Report* (Ontario, 1983), vol. 1, memo 82-I.

⁹⁶The shifting basis on which maximum levels of exposure to toxic substances are set has been noted by ACOHOS in its fourth and fifth annual reports. See generally ACOHOS, *Fourth Annual Report* (Ontario, 1981) and *Fifth Annual Report* (Ontario, 1982-83).

As well, at the level of formal standard-setting, because a trade union presence has been institutionalized, the state can act as a mediator in a form of industry-wide or multi-industry-wide bargaining between labour and management, rather than appearing as an intervenor after a bargaining process has already failed to reach substantively acceptable results.

Finally, there are many difficult technical and scientific issues involved in toxic substance regulation. If major problems can be said to require scientific determinations rather than political choices, conflict can be minimized. An emphasis on expertise tends to transform effective public participation in the decision-making process into public "education".⁹⁷

B. Policy

So far I have focused on the procedural aspects of standard setting, without addressing the question of substantive policy other than to point out that the legislation itself failed to articulate any particular policy goal(s). But because substantive policy and process are clearly inter-connected, this focus may be distorting. If your policy preference is that each standard be determined through political negotiation mediated by the state, then you would defeat your purpose by stating a preference for one result rather than another in advance of the outcome of those negotiations. Similarly, if you thought that substantive policy should be formulated solely on the basis of technical criteria you might design a process which minimized the opportunities to bring political pressure to bear by, for example, assigning the task to a professional body. Thus, by selecting a generally open regulatory process, the Legislature may have indicated a policy preference: that standards be politically determined from time to time. However, this will not satisfy those who insist good administration requires that future decision-making be guided by some basic policy choices, rather than determined by *ad hoc* political considerations. A policy decision to promulgate the most protective standard feasible, for example, could be applied to particular future cases, without the risk that worker safety would be compromised by concessions to political pressures.

In an attempt to rationalize its own decision-making the Ontario Cabinet has issued guidelines governing the submission of policy proposals and regulations for Cabinet approval.⁹⁸ One of those guidelines calls for the preparation of an economic impact statement, to include an assessment of

⁹⁷Bryden, *Public Input into policy-making and administration: the present situation and some requirements for the future* (1982) 25 Can. Pub. Admin. 81.

⁹⁸*Guidelines for Preparing Cabinet Submissions*, cited in G. Doern, *Rationalizing the Regulatory Decision-Making Process: The Prospects for Reform* (Economic Council of Canada, Regulation Conference, Working Paper No. 2, 1979) 94-6.

the consequences that the regulation is expected to have on job creation and job loss, capital investment, consumer prices, work incentives and cost of compliance to private industry. In addition, the submission requires a statement of the problem, background and options, and must address political considerations such as the source of the demand for regulation and the likely response of those who are to be governed by it. These guidelines seem to indicate a pragmatic approach to Cabinet decision-making which, as we shall see, differs considerably from the approach of advocates of cost-benefit analysis. It should be noted that the Cabinet guideline regarding preparation of an economic impact statement was not followed by the Ministry in preparing its asbestos regulation.⁹⁹

If the Legislature or Cabinet decide to adopt a substantive policy with respect to permissible exposure to risk several options are open. One possibility is the "no-risk" principle, which would ban substances from the workplace unless they could be demonstrated to have no harmful effect. This policy underlies the Delaney Amendment to the *Federal Food, Drug, and Cosmetic Act*¹⁰⁰ in the United States which prohibits food additives found to be carcinogenic in either animals or humans.¹⁰¹ A second alternative is the "safest standard feasible" test adopted by the United States Congress.¹⁰² A third alternative is that acceptable levels of risk should be determined by cost-benefit analysis. This approach has received much support in the United States,¹⁰³ and has its Canadian advocates as well, although enthusiasm for exclusive reliance on this technique is tempered.¹⁰⁴

It is unlikely that any of the above approaches will be adopted formally as government policy in Ontario in the near future. Nonetheless, cost-benefit analysis is of particular interest because it forms part of a strong version of an argument in favour of shifting the direction of state intervention towards greater concern with the creation of conditions favourable to capital accumulation at the expense of workers and other vulnerable groups that some governments are finding persuasive. Further, arguments in favour of such a shift are often presented as if what was at stake was more a question of administrative rationality than of basic political choices over the direction of public policy. My decision to subject cost-benefit analysis to close scrutiny is not only politically motivated; I do wish to provide arguments against

⁹⁹Doern, *supra*, note 4, 3.33.

¹⁰⁰21 U.S.C. §§ 301 *et seq.* (1976).

¹⁰¹*Food Additives Amendment of 1958*, Pub. L. No. 85-929, codified at 21 U.S.C. § 347 (1976).

¹⁰²See *supra*, notes 84-5 and accompanying text.

¹⁰³See *supra*, note 3.

¹⁰⁴See Doern, *supra*, note 4; also see Tuohy, *Regulation and Scientific Complexity: Decision Rules and Processes in the Occupational Health Arena* (1982) 20 Osgoode Hall L.J. 562, 609. While Tuohy is sensitive to the limitations of cost-benefit analysis, he sees a role for the technique as an adjunct to deliberative and participatory processes.

its adoption, but I also believe that the discussion will provide an opportunity to classify and elaborate the issues involved in regulating exposure to unsafe and particularly to unhealthy conditions in the workplace. In the following sections I argue that not only is cost-benefit analysis technically inadequate on its own terms, but that it calls for a radical shift away from the welfare state model that has dominated modern Canadian political practice.

1. The Approach of Cost-Benefit Analysis

Cost-benefit analysis is a technique for evaluating legal rules so that it may be seen if the net benefits flowing from a rule can be said to exceed its costs. The best choice will be the rule which generates the highest net surplus of benefits over costs. In the field of accident liability law, Calabresi has given us the classic formulation of the goal of this technique. He tells us that leaving questions of justice aside, it is axiomatic that a rational goal of accident policy is to minimize the sum of accident costs and accident prevention costs.¹⁰⁵ If we apply this approach to occupational health and safety we would say that higher levels of protection should be mandated only to the extent that it costs less to prevent damage to workers than to allow the damage to occur. At that point resources are most efficiently allocated: additional investment in protective measures would produce as much of a net social loss as would insufficient investment in prevention.¹⁰⁶ While this formula applies with regard to both health and safety, my focus will be on health hazards in the workplace because it is in the context of toxic substance exposure standards that most of the debate has taken place.

a. *The Adequacy of the Market*

It is a touchstone of economic theory that under certain conditions the market will produce an efficient allocation of resources given an initial distribution of property.¹⁰⁷ Under what conditions will the market produce an efficient allocation of resources to health and safety?

¹⁰⁵G. Calabresi, *The Costs of Accidents* (1970) 26.

¹⁰⁶Mendeloff, *supra*, note 37, 7.

¹⁰⁷Adam Smith, in *An Inquiry into the Nature & Causes of the Wealth of Nations* (London: Strahan Cadell, 1793), vol. 2, 181, gave a classic formulation:

But it is only for the sake of profit that any man employs a capital in the support of industry; and he will always, therefore, endeavour to employ it in the support of that industry of which the produce is likely to be of the greatest value, or to exchange it for the greatest quantity of either money or of other goods. . . . [H]e is in this, as in many other cases led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it.

Mendeloff says that the adequacy of the market depends on two assumptions: first, that firms know enough about health to choose the most cost-effective technique of prevention; second, that all production costs are imposed on the firm.¹⁰⁸ The first assumption might be broken down into an assertion about the need for adequate, low-cost information (if not complete, costless information) and a requirement that employers act rationally as profit maximizers. The second assumption requires a mechanism that will impose the full costs of production on employers. That mechanism is the labour market. Other things being equal, workers will demand premiums in order to engage in more hazardous work. The quantum of those premiums will reflect the risk tastes of the employees. If the costs of reducing the level of risk in the workplace are less than the amount that would have to be paid out as risk premiums, then the employer will improve conditions of work (again if the first assumption is correct). Instead of risk premiums, one might also agree to provide *ex post* compensation. The particular arrangement can be negotiated between employer and employee. To what extent are these conditions satisfied by actual markets?

b. Information

Nichols and Zeckhauser identified three requirements which must be satisfied with respect to information if the market is to function efficiently: "the information must be available, it must be transmitted to the affected parties, and individual workers and firms must be able to understand it."¹⁰⁹ In the field of occupational health, problems exist at every level. First, with regard to the availability of information, it is clear that both employers and employees do not have complete information about the health risks present in the workplace. The cost of such information is frequently quite high and the potential for severe free rider problems would serve as a further disincentive to its production.¹¹⁰ Indeed, employers have incentives *not* to produce information about workplace hazards in order to avoid insurance or risk premiums associated with exposure to such hazards. Employees

¹⁰⁸*Supra*, note 37, 7.

¹⁰⁹Nichols & Zeckhauser, *Government Comes to the Workplace: An Assessment of OSHA* (1977) 49 *The Public Interest* 39, 43.

¹¹⁰Free rider problems arise where investments produce public goods, that is, goods that can be enjoyed by non-investors as well as investors. A dilemma is created. A firm that is deciding whether or not to invest will consider the possibility that someone else might bear the cost and that they will enjoy the benefit for free, or that if they bear the cost themselves, others will get the benefit for free and gain a competitive advantage. If these problems cannot be resolved by internal organization the result is likely to be an under-investment in the production of public goods. For a general discussion see Hirshleifer, *supra*, note 36, 561-5. For a classic treatment of the implications of this problem see M. Olson, *The Logic of Collective Action* (1971).

generally do not gain knowledge about health hazards from on-the-job experience in the same way as they gain knowledge about safety hazards. Often there are lengthy latency periods before the effect of exposure manifests itself and then it may be difficult to link the disease to the occupational exposure if there is a fairly high background level of the disease in the population at large. Finally, even if greater efforts were made to identify hazards, it is not clear that we have the scientific knowledge necessary to provide definitive answers about the health effects of exposure to all substances and processes.

Once information is produced, it must be transmitted if market forces are going to respond to it. There are numerous barriers to the transmission of information. The protection of trade secrets may prevent both employers and employees from discovering the chemical composition of the substances being used in the workplace. Beyond trade secrets, producers of toxic substances have other incentives for suppressing information about the health effects of their products. Consumers might switch to less hazardous substitutes and third parties might sue to recover damages. Finally, employers have incentives to suppress knowledge of hazards from their employees, again to avoid having to bear the costs of the consequences of exposure to those hazards.¹¹¹

Even if the knowledge is produced and transmitted, the recipients of that information must be capable of comprehending it. Most of the information about health hazards comes in the form of probabilities. Employees may have difficulty processing the fact that their risk of developing a form of cancer is increased from two in a thousand to four in a thousand as a result of exposure to a toxic substance in the workplace. The sum of these information problems points to the strong possibility of market failure.

¹¹¹One instance of such a cover up was thoroughly documented by P. Brodeur in *Expendable Americans* (1974). It involved asbestos workers in Tyler, Texas who were never informed by local doctors to whom they were referred by the company that their chest ailments might be related to asbestos.

An even more shocking case of industry suppression of information of the effects of asbestos and the concealment from workers of the fact that they had contracted asbestosis was revealed in a series of documents dubbed the Asbestos Pentagon Papers, which came to light in the course of pre-trial discovery proceedings in a products liability action. One of those incidents involved a medical survey conducted by Johns-Manville of workers in one of their Canadian plants. Seven workers were positively identified as having asbestosis but the medical director deemed it inadvisable to warn the men of their peril. See S. Epstein, *The Politics of Cancer* (San Francisco: Sierra Club, 1978) 89-94.

c. *Risk Premiums*

Beyond flawed information are there other defects in the labour market contributing to market failure? One such defect might lie in imperfect mobility. The structure of the labour market might be so fragmented as to impede the movement of workers across trade or sectoral boundaries.¹¹² Workers may not be able to choose the characteristics of their jobs independently of each other, so that risk tastes are not truly reflected in job choices, given the market structure of employment possibilities.¹¹³

Given all of these factors, it is not surprising that empirical evidence on the existence and size of risk premiums is far from conclusive.¹¹⁴ Mendeloff reviewed the literature and found that it offers some weak evidence of risk premiums as a component of wages.¹¹⁵ Gunderson and Swinton, in a more recent survey, found that studies on the whole tend to confirm the existence of risk premiums but that this was not a firm conclusion of all the studies.¹¹⁶ Even if risk premiums exist, most authors are hesitant to draw the conclusion that they are an accurate reflection of workers' risk tastes, especially with respect to health hazards.¹¹⁷ To the extent that the wage bargain does not adequately reflect these concerns, the firm is not being required to bear the true costs of impaired worker health and therefore will be under-investing in protection.¹¹⁸ If the worker is unable to bear these

¹¹²The segmentation of labour markets in the period after World War II is emphasized in Gordon, *supra*, note 16, 170-215.

¹¹³M. Gunderson & K. Swinton, *Collective Bargaining and Asbestos Dangers at the Workplace*, (Study Paper prepared for the Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario, 1980) 4.7. They also discuss the problem of labour immobility in a stagnant or declining economy at 4.8-4.9.

¹¹⁴Although the technical sophistication of the studies far surpasses the kinds of casual observations that were relied upon in the nineteenth century, I am still not sure that the debate has moved much beyond the following exchange with Lord Bramwell that occurred in the course of his testimony cited *supra*, note 25, 201. Lord Bramwell had asserted that risk premiums exist and was challenged on this point:

1164. Will you give me an instance?—*Ceteris paribus* surely the more disagreeable a trade the higher the pay will be.

1165. Give me an instance at the present moment existing of a dangerous employment where the men have better pay?—I give every instance. An agricultural labourer gets less than a miner.

¹¹⁵*Supra*, note 37, 11.

¹¹⁶*Supra*, note 113, Appendix A.

¹¹⁷See *e.g.*, Mendeloff, *supra*, note 37 and Nichols & Zeckhauser, *supra*, note 109, 43.

¹¹⁸It is also possible that structural rigidities in wage rates cause employers to pay too much. An employer who introduces a new technology that reduces the risk of a particular job may find that he is unable to easily alter the existing structure of wage rates within the firm or industry and thus is unable to reduce costs. This could result in a future decision not to introduce safer technology if the only advantage contemplated is a reduction in risk premiums.

costs himself and they are shifted onto society at large then there is an externality with which the efficiency-promoting state will be concerned.¹¹⁹ From the perspective of economic analysis, market failure may justify state regulation provided that such regulation will not simply magnify the problem.¹²⁰

2. The Application of Cost-Benefit Analysis to Occupational Health and Safety Standard Setting

State intervention in the face of market failure can take on a variety of forms. Shifting liability rules (*i.e.* no-fault workers' compensation), imposing injury taxes (*i.e.* penalty assessments) and providing free information to the affected parties are some of the strategies that have been adopted or proposed. In addition to these steps, direct regulation of maximum exposures to unhealthy conditions, and particularly to toxic substances, has emerged as a common instrument of state intervention.¹²¹ However, once the state undertakes to establish standards, the problem of selecting the appropriate exposure level arises. Cost-benefit analysis suggests that the appropriate standard is the one that would have been produced by a well-functioning market and that where the market is imperfect the state should employ its centralized decision-making and planning apparatus as a substitute for the market mechanism. In other words, the state must administratively determine the economic benefits and costs of different standards and select the standard whose application maximizes social wealth. In the following pages I will outline the techniques employed in performing cost-benefit analysis and criticize their technical adequacy.

a. *Estimating the Benefits*

The first problem that arises in estimating the benefits that might flow from a regulation reducing current levels of exposure is that we frequently do not know what the effects of current exposure levels are. This is particularly true with respect to carcinogens. Indeed it is not easily established whether a substance is carcinogenic at all, and, if it is, whether there is any safe level of exposure. The current state of scientific knowledge simply does

¹¹⁹An harmful externality arises where one firm can shift the costs of its activities onto some third party without legal sanction. As a result the price does not accurately reflect the true costs of the activity, resulting in an over-investment or a non-optimal allocation of resources. To the extent that the state is concerned with promoting efficiency, some form of intervention is justified. It is even more likely to occur when the state itself is forced to bear the costs, unless it chooses to subsidize the activity in question. For a general discussion of the concept of externalities and possible responses see Hirshleifer, *supra*, note 36, 532-9.

¹²⁰For an elaboration of a theory of the failure of government regulation, see Wolf, *A Theory of Nonmarket Failure: Framework for Implementation Analysis* (1979) 22 J.L. & Econ. 107.

¹²¹For a survey of Canadian occupational health and safety legislation, see Brown, *Canadian Occupational Health and Safety Legislation* (1982) 20 Osgoode Hall L. J. 90.

not provide us with the information needed to develop accurate damage functions for different exposure levels.¹²² However, this is a problem that is faced in any regulatory approach and is not unique to cost-benefit analysis.

What is unique about cost-benefit analysis is that once we know the health effects of different levels of exposure, we are required to quantify the value of lives saved and health improved. Economic analysts typically measure value in terms of "aggregate consumer willingness to pay".¹²³ Where there is a market for a commodity its value is revealed directly by consumer behaviour. However, in the absence of markets for health and lives, indirect measures of willingness to pay must be found. One could, for example, conduct a survey. But it is easy to see that there would be a strong incentive for workers at risk to misrepresent their preferences so as to inflate the value that policy makers would assign to safer conditions in the workplace. An alternate approach favoured by economists is to find a surrogate market in which preferences will be revealed by actual behaviour. In this area economists have looked to the presence of risk premiums. By seeing how much workers actually demand to be exposed to different levels of risk, one can infer the value that they place on their lives and health. We have already noted the inconclusive character of such studies.¹²⁴ The inadequacy of valuations based on market transactions can be traced to the same problems that created market imperfections to begin with. Risk premiums based on incomplete information are not an accurate indication of workers' preferences. Limited job mobility and other structural problems of the labour market may also distort the analysis of surrogate markets. Unskilled workers may not enjoy a wide choice of jobs and may take hazardous work at relatively low pay. It is not clear that the value assigned to life and health should depend on the socio-economic class of the individual at risk.¹²⁵

¹²²For a review of the current state of medical knowledge about carcinogenesis and the identification of carcinogens, see "Report of the Special Advisory Committee on Carcinogens" in ACOHOS, *Fourth Annual Report*, *supra*, note 96, 143-78. With respect to low dosages, see Ashford, *supra*, note 77, 115-24 and Maugh, *Chemical Carcinogens: How dangerous are Low Doses* (1978) 202 *Science* 37. For a good discussion of the problems involved in epidemiological research and its implications for standard setting, see Cranor, *Epidemiology and Procedural Protections for Workplace Health in the Aftermath of the 'Benzene' Case* (1983) 5 *Ind. Rel. L.J.* 372.

¹²³See R. Posner, *Economic Analysis of Law*, 2^d ed. (1977) 10.

¹²⁴See *supra*, notes 115-8 and accompanying text.

¹²⁵Can we assume that poor people value their lives less than wealthy ones and that therefore wealthier people should be better protected? While such results might be good news to employers in low-paying industries who want to avoid expensive regulations, for others it might constitute an indictment of the distribution of wealth in our society and the appropriateness of ignoring that distribution in formulating policy. For a critique of these econometric studies, see M. Green & N. Waitzman, *Business War on the Law: An Analysis of the Benefits of Federal Health/Safety Enforcement*, 2^d ed. (Corporate Accountability Research Group, 1981) 47-60.

Further, preferences are not formed in a void. Ashford pointed to the problem of socialization patterns that emphasized "machismo" and neurotic risk taking.¹²⁶ While this pattern might translate into a low willingness to pay for improved health, it is also not clear that such behaviour should be relied upon as a basis for assigning value to a worker's well-being.

So far the value of improved health and safety has been measured only in terms of the willingness to pay of workers directly at risk. We also have to consider benefits that may accrue to persons outside the employment relationship. Mendeloff noted that the concerns of a worker's family and friends may not be reflected in his or her own willingness to pay.¹²⁷ Yet, if we wish to assess aggregate consumer willingness to pay, these concerns must be taken into account. Although their preferences are rarely expressed in the marketplace, there are members of the public who would be prepared to pay for the satisfaction of knowing that workers were provided with a healthier environment, and the conclusion that no such demand exists is not justified; rather, it may be that organizational costs and the structure of the market do not readily enable small, widely dispersed demands to be recognized, and there is no shadow market which would allow the state to measure willingness to pay from actual behaviour. If these more remote preferences are to be considered, then the calculation of benefits loses any claim to being a scientific endeavour.¹²⁸ If they are excluded, then market failure is simply being reproduced and the exercise is pointless. This suggests that there *is* no scientific basis upon which damage functions for particular exposures can be accurately calculated. There is no technical solution to the problem of valuing lives and health. A quantification of the benefits of a regulatory standard will reflect policy choices, not technical criteria.

b. Estimating the Costs

Bacow notes that regulation imposes costs on employers in three ways: (1) fines for non-compliance; (2) costs of purchasing and maintaining the technology required for compliance and (3) in some cases, impaired worker productivity.¹²⁹ A number of surveys on the cost of compliance with OSHA regulations have been conducted. A 1973 McGraw-Hill survey found a 26%

¹²⁶*Supra*, note 77, 357-9.

¹²⁷*Supra*, note 37, 67.

¹²⁸Once you accept a broad definition of externalities that goes beyond physical harm, it becomes possible to justify almost any rule on efficiency grounds by giving high valuations to the public's willingness to pay in order to avoid moral outrage, diminution of aesthetic values, etc. For an excellent critique of the liberal use of cost-benefit analysis, see Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique* (1981) 33 *Stan. L. Rev.* 387, and particularly 398-400.

¹²⁹L. Bacow, *Bargaining for Job Safety and Health* (1980) 29.

increase in planned expenditures on health and safety between 1972 and 1973. The National Association of Manufacturers (NAM) surveyed its members in 1974 and their estimates of the costs of OSHA compliance ranged from an average of \$33,000 for firms with under 100 employees to \$7,146,000 for firms of more than 5,000 employees, with a per worker cost which decreases in larger firms. *Dunn's Review*, relying on business sources, estimated OSHA would raise costs in many industries by five to ten percent.¹³⁰

Of course, such studies must be viewed warily. The McGraw-Hill study does not tell us what proportion of an increase is attributable to OSHA regulation. Estimates about expected costs are likely to be inflated for strategic purposes. Mendeloff reports that when the vinyl chloride standard was proposed, industry predicted dire consequences if the regulation was promulgated. A 1976 survey, however, indicated that only two plants had closed and that there had been a six percent rise in PVC prices.¹³¹ Further, costs of compliance with any regulatory scheme are likely to be highest in the period immediately following the introduction of the legislation because of a "catch-up" effect, both with respect to the number of regulations and the historic under-investment in health technology. Thus, the learning curve should reduce compliance costs over time.¹³² Green and Waitzman have reviewed the question of cost extensively and argue that conventional studies fail to properly identify compliance costs as those which are above expenditures that otherwise would have been incurred. As well, they claim that many costs usually associated with regulation, such as declines in productivity and employment, do not stand up under close scrutiny. More stringent health standards, for example, may act as a stimulus to technological innovation which in fact increases productivity. Improved worker health and a more pleasant work environment could lead to less sick leave and absenteeism, which again will improve productivity.¹³³

Although the problems of estimating costs are considerably fewer than those involved in calculating benefits, it is still not a simple matter of plugging figures into a formula. Neutral information about the potential costs of compliance with any standard is notoriously hard to come by, if only because the most knowledgeable people are generally those who will be subject to regulation. Even if we agreed on what costs should be included and on the impact of dynamic effects, reliable information may still be difficult to obtain.¹³⁴

¹³⁰Cited in Ashford, *supra*, note 77, 317-9.

¹³¹Mendeloff, *supra*, note 37, 55-6.

¹³²This effect was noted by Ashford. See *supra*, note 77, 338-9.

¹³³Green & Waitzman, *supra*, note 125, 27-40.

¹³⁴If employers were faced with the real threat that fines for non-compliance with a regulation would be raised to a level that would make compliance the less expensive alternative, the incentive to inflate the estimated costs of compliance might be diminished.

c. *Conclusion*

The performance of cost-benefit analysis has its own costs, and before we decide to subject standards to that analysis, we should decide whether the method can justify its own application.¹³⁵ Of course, there are a number of advantages that make cost-benefit analysis attractive to politicians, but which are not likely to be openly offered as reasons for its adoption. The most important of these is that cost-benefit analysis tends to mask what are essentially political choices as scientific or purely technical calculations. The selection of assumptions regarding the long-term effects of exposures to low levels of toxic substances in the absence of scientific proof is a political choice. The decision to consider third party externalities and the determination of the weight they should be given are also political choices. Yet, where cost-benefit analysis is applied, these political decisions tend to appear to be merely technical and beyond the comprehension of the non-specialist. If the claims of objectivity can be unmasked, then perhaps the popularity of this kind of analysis will decline.¹³⁶ In the following sections I will consider the normative questions and the issues in political economy that are at stake in the decision to adopt a policy of setting standards through cost-benefit analysis.

3. The Normative Assumptions of Cost-Benefit Analysis: A Brief Critique

Early in this discussion of cost-benefit analysis I cited Calabresi's well-known formulation which began, "*Apart from the requirements of justice, I take it as axiomatic. . .*"(emphasis added).¹³⁷ The statement requires some clarification. What compelled Calabresi to begin with that qualification? Can *any* claims be made in favour of wealth maximization as a normative ideal? Is wealth maximization a goal that can be justified independently of the claims of justice? If so, should justice and wealth maximization be traded or "mixed" in pursuit of some conception of the social good? These are fundamental issues which have been the subject of recent debates in the

¹³⁵Not surprisingly, economists who stand to benefit both in terms of employment and status opportunities within government often seem to be the strongest advocates of this kind of analysis.

¹³⁶For an extensive challenge to the objectivity of cost-benefit analysis on its own terms, see Kennedy, *supra*, note 128.

¹³⁷*Supra*, note 105.

law journal literature.¹³⁸ It is clearly arguable that the normative claims for wealth maximization as an appropriate government policy are highly problematic. From a Kantian perspective wealth maximization is objectionable because it fails to respect individual autonomy. It would allow some persons to be made worse off if a net increase in social wealth results. From a utilitarian perspective wealth maximization fails as a principle because there is no necessary correlation between increases in total wealth and increases in total happiness or utility. Indeed, once wealth is separated from happiness it becomes extremely unclear what value wealth represents, unless it is an end in itself, and one becomes what Dworkin has aptly identified as “a fetishist of little green paper”.¹³⁹

But let us assume that we are fetishists, or that wealth maximization is tied to some undefined bundle of values we want to increase. There may be normative constraints on our fetishism, and some actions taken to maximize wealth can have the impact of decreasing the total bundle of values we wish to maximize. With this in mind Calabresi chose to qualify his formulation of the goals of accident law policy and to state recently that “an appropriate blend of efficiency and distribution is highly instrumental towards, and closely correlated with, achieving what many would view as a just society”.¹⁴⁰ Thus, according to Calabresi, distributive criteria are also a component of justice that might impose constraints on policies designed to maximize net social wealth.

Against this background, let us now turn to the most ethically troubling aspect of cost-benefit analysis of occupational health standards: reliance on the market to determine the value of lives saved and health improved. Calabresi and Bobbitt pointed to two “ethical” difficulties involved in leaving allocative decisions about tragically scarce resources to the market. First, they noted a problem with respect to the “costs of costing”:

The present problem reflects, instead, the external costs — moralisms and the affront to values, for example — of market determinations that say or imply that the value of a life or some precious activity integral to life is reducible to a money figure.¹⁴¹

¹³⁸The principal articles are: Posner, *Utilitarianism, Economics, and Legal Theory* (1979) 8 J. Legal Stud. 103; Dworkin, *Is Wealth a Value?* (1980) 9 J. Legal Stud. 191; Kronman, *Wealth Maximization as a Normative Principle* (1980) 9 J. Legal Stud. 227; Posner, *The Value of Wealth: A Comment on Dworkin and Kronman* 9 J. Legal Stud. 243; Posner, *The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication* (1980) 8 Hofstra L. Rev. 487; Calabresi, *About Law and Economics: A Letter to Ronald Dworkin* (1980) 8 Hofstra L. Rev. 553; Dworkin, *Why Efficiency? A Response to Professors Calabresi and Posner* (1980) 8 Hofstra L. Rev. 563.

¹³⁹Dworkin, *Is Wealth a Value?*, *supra*, note 138, 201.

¹⁴⁰Calabresi, *supra*, note 138, 558.

¹⁴¹G. Calabresi & P. Bobbitt, *Tragic Choices* (1978) 32.

Second, they point to the dependence of the market on the existing distribution of wealth, and argue that decisions made under such conditions generate social costs such as outrage. Thus, we do not allow indentured labour notwithstanding that, given certain conditions, individuals might choose it:

The willingness of a poor man, confronting a tragic situation, to choose money rather than the tragically scarce resource always represents an unquiet indictment of society's distribution of wealth.¹⁴²

Economists might label this concern mere paternalism, but that response is not an adequate answer when the question is whether concern about the well-being of others should be counted in the formulation of public policy. It is not inappropriate for individuals to care about others and for policy makers to take those concerns into account.

Kelman has recently published a critique of cost-benefit analysis that develops the first line of ethical objections noted by Calabresi and Bobbitt.¹⁴³ He argues that utilitarianism is an insufficient moral position in that it fails to accommodate the view that certain values and rights are *prima facie* morally valid, independent of their costs and benefits. Thus, the "right to a safe work place" may be analogous to the right of free speech, and the moral weight attached to such a right must be considered independently of costs and benefits, without ignoring these important factors.

We have already explored some of the technical problems that beset economists' attempts to measure willingness to pay for non-market things such as lives and health in order to monetize all values. Kelman highlights some of the ethical difficulties in this valuing process. First, there may be a distinction between how people value things in private transactions and how they would wish those things to be valued publicly. Private transactions may not capture the true range of individual preferences and ethical judgments. Other-regarding behaviour embodying "higher" values is more likely to be expressed in the political process than in private market transactions. Cost-benefit analysis, by relying on market valuations, implicitly denies the legitimacy of these expressions of "higher" values.

Further, the very act of monetizing non-market things may, by itself, reduce the value of those things. When we declare life and health to be priceless, we are not necessarily saying that we would be willing to trade an infinite quantity of other goods to preserve a single life another day. Rather, it is a statement about non-economic values upon which we do not want

¹⁴²*Ibid.*, 39.

¹⁴³Kelman, *Cost-Benefit Analysis—An Ethical Critique* (1981) 5 Regulation 33-40 (January/February).

a market price to be placed, precisely because it would undermine those values to do so. While we will continue to make decisions that have the effect of valuing lives, the refusal to do so in advance by pricing human life as an input into cost-benefit analysis preserves the value we place on life and forces a confrontation between conflicting social values.

The second ethical problem noted by Calabresi and Bobbit relates to the question of wealth distribution. If the existing distribution of wealth cannot be judged to be fair, then Pareto-superiority may lose much of its force as a moral justification.¹⁴⁴ True, one party may be better off while the other is no worse off, but the position of the weaker party may be such that the conditions for voluntary exchange between autonomous individuals do not exist. Thus, we might say that individuals do not normally sell their lives and health unless they have no other resources. A person in that position is motivated more by compulsion than by free choice,¹⁴⁵ and, after the transaction is completed, there is little left of the autonomous individual. A moral system that claims to respect human autonomy cannot tolerate social conditions which induce individuals to enter into agreements that substantially reduce their autonomy.

Cost-benefit analysis, in relying on ability and willingness to pay, takes the existing distribution of wealth as a given. It therefore favours those who are already better off, since by definition their ability to pay is greater than those worse off than themselves. Wealth effects may also result in an increased willingness to pay for certain goods.¹⁴⁶ Thus, a corporate executive of an asbestos mining corporation may be willing and able to spend considerably more to have asbestos insulation removed from his office so as to reduce his risk of contracting cancer or asbestosis from 0.05% to 0.01% than a miner would to have ventilation improved so as to reduce his risk from 0.5% to 0.1%. The willingness-to-pay criteria suggests that it might be appropriate to set higher standards of safety in the workplace for corporate executives than for miners. I think many might share the judgment of Kronman:

Even if there is no justification for making those who are already wealthy share what they have, there is something offensive in the suggestion that their wealth is a reason for giving them even more.¹⁴⁷

¹⁴⁴A Pareto-superior transaction is one in which at least one party believes himself to be better off and no one believes himself to be worse off. For a simple and clear explanation, see B. Ackerman, *Economic Foundations of Property Law* (1975) xi-xiv.

¹⁴⁵As noted earlier, even the common law courts of the nineteenth century came to recognize that fact. See *Dean v. Ontario Cotton Mills Co.*, *supra*, note 41.

¹⁴⁶For a discussion of wealth effects in cost-benefit analysis, see Kennedy, *supra*, note 128, 423-9.

¹⁴⁷Kronman, *supra*, note 138, 240.

4. The Political Economy of Cost-Benefit Analysis

The doubtful status of wealth maximization as a normative ideal might be relied on in framing a broader challenge to the ethical foundations of capitalism. Indeed, the logic of capitalist accumulation seems to lead to the fetishism of little green papers and to support of the principle that the holder of accumulated wealth is entitled to more than one without accumulated wealth.¹⁴⁸ However, I do not intend to pursue this line of critical analysis. Rather, in this section I wish to focus on the constraints that the state is under when selecting particular policies and on why the logic of accumulation, as expressed in cost-benefit analysis, has been unable to gain a monopoly as the criteria for selecting state policy. Further, I will argue that the adoption of cost-benefit analysis would portend a fundamental re-orientation of the role of the state.

I might begin by briefly summarizing the argument I have been making. The role of the state began to be transformed in the nineteenth century, from one of constituting the conditions for, and facilitating the development of, capitalist production and market exchange to one of substituting itself for the market, both with respect to the co-ordination of economic activity and the maintenance of social integration. This process of transformation has continued in the twentieth century, reaching unprecedented levels. However, these roles are potentially in conflict and the conflict becomes increasingly manifest in a stagnating economy.

The Canadian economy was never *laissez-faire*: from the outset the state played an active role, both in planning and providing a technical infrastructure when private capital was unavailable.¹⁴⁹ Regardless of our starting point, the role of the state in organizing the economy has expanded substantially. The planning of fiscal and energy policy, the provision of investment incentives, the supervision of marketing boards, as well as direct involvement in government purchasing are only the beginning of a list of economic functions assumed by the state. Yet government planning still takes place largely within the limits set by private ownership and freedom of investment. The government of the day finds itself in the unenviable position of being held politically responsible for the management of an essentially private economy. It is therefore limited in its selection of economic policies by the continual threat that business confidence will be undermined, leading to a decline in investment and a downturn in the economy.

¹⁴⁸Of course, some defenders of capitalism are not only prepared to concede that this statement is accurate, but in fact would argue that fetishism and inequality should be viewed as virtues. See Gilder, *Wealth and Poverty* (1981).

¹⁴⁹Panitch, "The role and nature of the Canadian state" in L. Panitch, ed., *The Canadian State: Political Economy and Political Power* (1977) 3, 14.

Because the government has assumed responsibility for steering the economy, such results leave it politically vulnerable to charges of economic mismanagement and weaken its electoral support amongst those who have suffered as a result, and this includes workers.

In addition, the market has proven itself unable to fulfill a social integration or self-legitimation function. While capitalism undermines traditional bases of the social order, the ideology and practice of exchange of equivalents or wealth maximization does not seem to be an adequate replacement upon which a social order can be built.¹⁵⁰ Some market outcomes seem to produce harsh consequences which engender politically effective responses. The state increasingly takes on the responsibility of compensating for the failure of the market to produce outcomes that are in accord with widely-held beliefs about social justice that are not rooted in market conceptions of justice. Thus, another constraint is placed upon the state policy selection process. Policies must be judged to be legitimate on the basis of some non-market criteria of fairness or equality. Regulation of occupational health and safety conditions was one of the earlier state interventions motivated largely by legitimation concerns. It has been observed that while the Canadian state played an exceptionally active role in steering the economy, it has been a laggard in the provision of welfare benefits.¹⁵¹ Nevertheless, the welfare role of the state has expanded and the demands being made on the state seem to be increasing. Aside from occupational health and safety, there are demands for state regulation of environmental quality, consumer transactions, housing quality and price as well as straightforward economic demands for higher and more comprehensive benefits under a variety of income security programs.

Failure to respond to these demands, at least to some extent, leaves the government vulnerable at elections and also creates the possibility that unsatisfied demands will destabilize basic social and economic arrangements. Yet, if the state is to satisfy these demands it runs the risk of impeding accumulation. The imposition of regulations may impose costs on industry that cannot be passed on to the consumer because of competition. Faced with a potential decline in profits, investment may decline. Further, the party in power (assuming it is not a socialist or labour party) is likely to lose the support of many of its financial backers.

Given these constraints, cost-benefit analysis, if it is to be successful, must produce regulations which satisfy the requirements of accumulation

¹⁵⁰For a recent analysis of the effects of capitalism on culture and the social order, see C. Lasch, *The Culture of Narcissism* (1978).

¹⁵¹Panitch, "The role and nature of the Canadian state", *supra*, note 149, 22.

and legitimation. From the perspective of accumulation, cost-benefit analysis may provide the most attractive basis on which to have standards set, short of de-regulation.¹⁵² As we have already noted, the goal of cost-benefit analysis is to replicate the allocation of resources that would have resulted in a well-functioning market given the existing distribution of wealth. In a society in which there is great inequality in the distribution of wealth, the willingness and ability to pay of the less well-off for health and safety is likely to be fairly low, which will lead to a low quantification of the value of improved worker health in cost-benefit analysis. A lower benefit function would result in the setting of higher permissible exposures which would be less costly for employers to comply with, and lower production costs increase profitability.

If cost-benefit analysis will provide policies that are consistent with accumulation, can it also provide policies that satisfy demands for legitimation? Legitimation becomes increasingly important once the decision framework is a public one in which policies must be consciously fashioned. Legitimation deficits produced in the realm of exchange not only stimulate the transformation of the state but, once that transformation occurs, continue to restrict the selection of specific state interventions. It is necessary to consider therefore, the potential bases for the legitimation of cost-benefit analysis as the cornerstone of standard-setting.

One source of legitimacy for cost-benefit analysis might be found in the market itself. If we take the position that government regulation should only occur in response to market failure based on high information and transaction costs, then a technique which tells us how to mimic the outcome of a well-functioning market would surely be desirable. However, the legitimacy of the technique can be no greater than the legitimacy of the market itself. If, as I have suggested, it is not classic market failure but the underlying distribution of wealth which has generated pressure for government intervention, the market can offer almost no legitimation for government policy because it itself produces the deficit which requires correction.

A second potential source of legitimacy for cost-benefit analysis would rest on the claim that it is a neutral tool of rational administration. On the surface, such a claim seems plausible. It is difficult to argue with the proposition that the benefits of a particular policy should outweigh its costs. However, as I have tried to show, the selection of assumptions that must be made in order to conduct cost-benefit analysis of health standards involves inherently political (as opposed to merely technical) decisions. Moreover, a decision to set standards on the basis of cost-benefit analysis involves

¹⁵²De-regulation would be attractive to industrialists because the burden of market failure is carried by the workers themselves or by the state, but rarely by the employer.

a decision to ignore wealth distribution in that process. However else one might describe that decision, it does not appear as a theorem of rational administration.

A variation on this theme would be a version of Posner's consent argument.¹⁵³ If cost-benefit analysis aims at wealth maximization, then everyone should consent to such a rule provided the winners pay off the losers. But this is just another attempt to rationalize the market outcome where all workers are implicitly compensated *ex ante* for exposing themselves to risk, where there has been a "voluntary assumption of risk". If the problem with the market stems from the distribution of wealth, then notwithstanding the fact that employees receive *ex ante* compensation, they will not consent to the market solution either under a contractarian framework or under a state regulatory framework, because neither addresses the source of their dissatisfaction. This raises again the problem of the doubtful normative status of wealth maximization principles.

In practice, the major source of legitimacy for cost-benefit analysis rests with its ability to disguise politics and ideology as economic science performed by sophisticated technicians. However, this source of legitimacy has proved rather weak. We have remarked the large body of academic literature debunking the claims of cost-benefit analysis.¹⁵⁴ Organized labour in the United States, with the support of the Occupational Safety and Health Administration (at least prior to the Reagan administration) has persistently opposed the imposition of a cost-benefit requirement for toxic substance exposure standards, and the Supreme Court has interpreted the *Occupational Health and Safety Act of 1970* as imposing a feasibility standard.¹⁵⁵ Presumably the feasibility standard will in most cases be more protective than the cost-benefit standard.¹⁵⁶ If Ontario were to adopt a policy that produced consistently less protective standards than those in the United States, one doubts whether the supposedly scientific character of the process supporting the policy would prove to be a strong source of legitimation to those seeking the benefit of regulation. If the outcome of a decision-making

¹⁵³Posner, *The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication*, *supra*, note 138.

¹⁵⁴Aside from the critical articles I have already cited see Baker, *The Ideology of the Economic Analysis of Law* (1975) 5 *Phil. and Pub. Aff.* 3 and P. Self, *Econocrats and the Policy Process: The Politics and Philosophy of Cost-Benefit Analysis* (1975).

¹⁵⁵*American Textile Manufactures Institute, Inc. v. Donovan*, *supra*, note 3.

¹⁵⁶In theory it is entirely possible that cost-benefit analysis would lead to a standard that was not economically feasible, in the sense that it would require an entire industry to shut down. See Morrall "Cotton Dust: An Economist's View" in R. Crandall & L. Lave, eds, *The Scientific Basis of Health and Safety Regulation* (Brookings Institute, 1981) 93, 98. Of course the economist finds that in this case the feasibility standard was more stringent than the cost-benefit standard.

process can be evaluated against criteria that are external to the process itself, the legitimacy that adherence to the process can confer on the outcome may be limited.¹⁵⁷

The same considerations that led to the rejection of the contractarian framework for setting the level of occupational health and safety in the workplace should lead to the rejection of cost-benefit analysis as a guide for government standard-setting. Both models fail to satisfy the criteria of legitimacy, the former by producing undesirable consequences in the form of unacceptably low standards, the latter by mimicking them. Perhaps the better alternative to standard-setting would be a direct and massive re-distribution of wealth. This would address the underlying problem directly. In the meantime this is not on the agenda (at least if we are talking about a more egalitarian re-distribution); regulation of the workplace is. Loss of efficiency has its costs, but so too does loss of legitimacy. This is the cost-benefit analysis that has guided the selection of state policy.

Conclusion

The theme of this paper has been that the development of occupational health and safety standard-setting can be best understood by analyzing the contradictory demands on the state in capitalist society to facilitate capitalist accumulation while at the same time legitimating the social relations of production. The state must ensure that citizens are provided with minimally acceptable levels of economic well-being, which includes minimally safe conditions of work. Policies that fail to satisfy this requirement of legitimation, such as market-based contract rules or public regulations that mimic the outcome of a health market discovered through cost-benefit analysis, are unlikely to prove successful. It is for this reason that the Government of Ontario has avoided adopting a substantive policy with respect to standard-setting and instead has chosen to rely on an *ad hoc* bargaining procedure. The enforcement of standards also takes place to a large extent in an *ad hoc* manner, which permits employers to strike discrete bargains with employees through the internal responsibility system. External policing is only brought into play in the event of a breakdown in the bargaining process.

¹⁵⁷I do not deny that process values can serve as a source of legitimation. As Mashaw notes in *Administrative Due Process: The Quest for a Dignitary Theory* (1981) 61 B.U.L. Rev. 885 at 888, "[w]e do distinguish between losing and being treated unfairly." My point is that, if under a particular process one group always seems to lose, they are quite likely to question the fairness of that process. If the substantive justification for the process is that it is scientific and not that it affords participation, the foundations for that claim would have to be beyond dispute. Further, if the result was indeed scientific, it would have to be shown that the scientific perspective was the only valid one. I do not think cost-benefit analysis of occupational health standards comes close to satisfying these conditions.

The balance between legitimation and accumulation is not determined in the abstract, nor is it a direct reflection of the structural requirements of capitalism. Rather the balance is the product of a specific historical context, in which the organizational capacities and powers of different classes are brought to bear. Thus the appearance of *Factory Act* legislation and the reform of employers' liability law in the 1880's can be explained to a large extent by the emergence of politically active workers' organizations at that time, and by competition for workers' votes. Continuing this development, the NDP has been instrumental in the most recent wave of legislative reform, serving as an instigator of organized labour's concern with occupational health and safety issues, and as a vehicle for the expression of this concern.

The ability of the state to be successful in juggling competing demands for accumulation and legitimation may have depended in part on rapid economic growth. Large increases in total economic wealth allow for overall improvement in the conditions of employment, without significantly eroding conditions favourable to capital accumulation. However, where the economy is stagnant or shrinking, the pressure on the state to develop and implement policies that will improve the environment for private investment tends to increase. As well, the labour movement is likely to find its strength decreasing as it is forced to direct resources toward the protection of past economic and political gains, while at the same time its membership is declining due to unemployment in organized sectors of the economy. Under such conditions the balance of forces is likely to shift so that state policy increasingly favours demands to facilitate accumulation.

Thus, even though the standard-setting process that is in place is essentially a political one, it operates under the influence of a legally sanctioned, but largely uncontrolled, exercise of concentrated economic power. The threat that this power will be exercised by shifting investments to other jurisdictions or countries in response to the imposition of standards that are costly to comply with is real. The organizational capacity of the working class is relatively weak: less than forty percent of workers are organized by trade unions, and unorganized labourers lack effective representation in the political process. It is unlikely that substantial progress will be made through existing regulatory processes, unless effective strategies are developed for enhancing the political power of workers and their allies.

A more radical approach to the problem of the distribution and allocation of risk in production would require that those who are involved in the production process decide democratically what levels of risk they are willing to incur. This goes far beyond the limited freedom of employees to choose between alternative jobs that the labour market currently offers, and would involve worker ownership and control of the productive enterprise

itself. Under such a regime the question of allocation of resources does not disappear. Trade-offs between productivity and safety will still be necessary. The difference is that decisions will be made by the individuals who stand both to benefit directly by increased productivity and to suffer exposure to the risks of production.¹⁵⁸

Aside from the sporadic establishment of workers' cooperatives, there are few signs on the horizon that a decentralized socialist economy will emerge in Canada in the near future. Reforms within the existing framework of capitalist relations of production that will give workers more control over production (such as a requirement that workers approve, or at least are consulted about, the introduction of new technologies and substances in the workplace) would be a step toward the kind of structural reform necessary to implement more equitable approaches to the determination of occupational health and safety standards.¹⁵⁹ However, such reforms will only take place where the political capacity to impose them is present, and will necessitate a transformation of Canadian society that is at present not easy to anticipate.

¹⁵⁸This approach has been developed by Abel in *A Socialist Approach to Risk* (1982) 41 Md L. Rev. 695.

¹⁵⁹For a stimulating and seminal contribution to the problem of developing strategies for social change in Western capitalist societies, see A. Gorz, *Strategy for Labour* [.] *A Radical Proposal* (1967). See also Wright, *supra*, note 5.